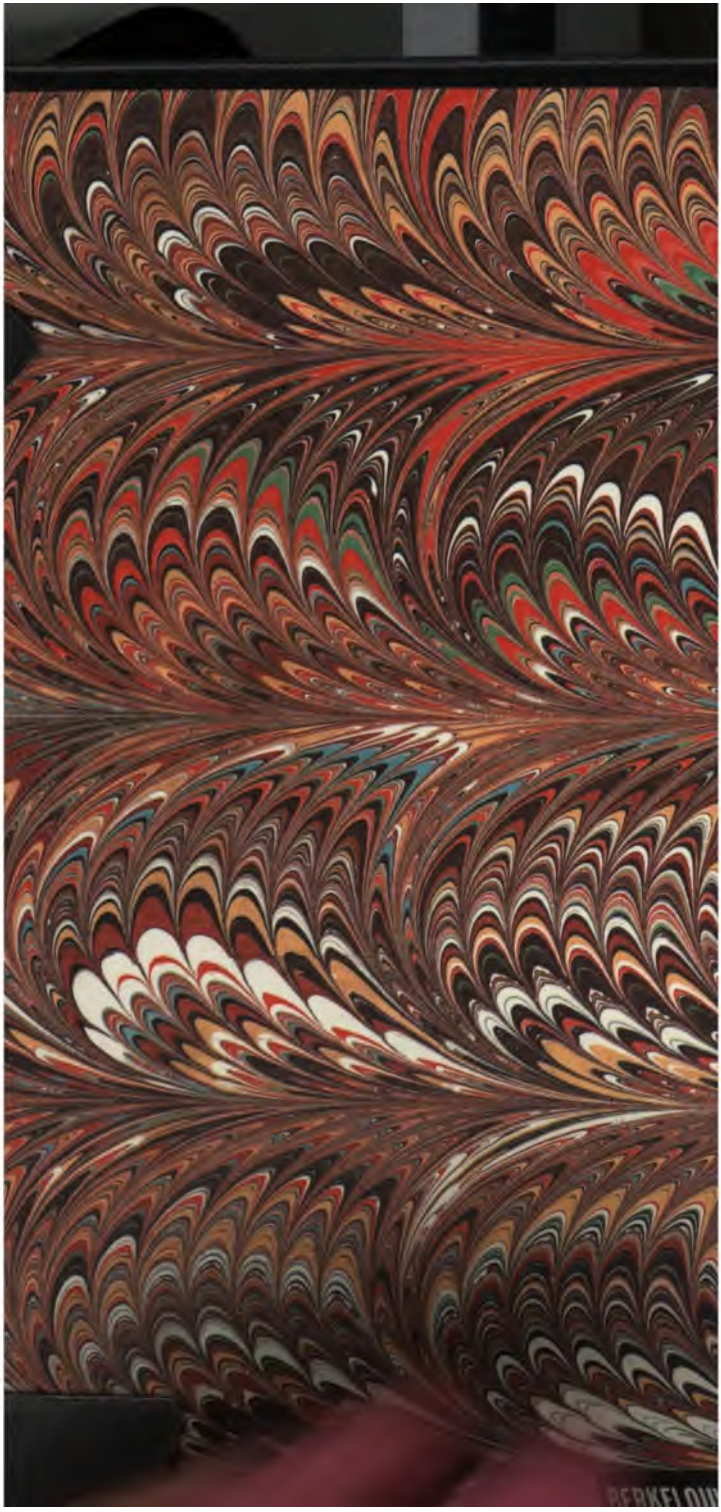

THIS SPECIAL EDITION OF

BOERHAAVE'S

APHORISMS:

CONCERNING

THE KNOWLEDGE AND CURE

OF

DISEASES

HAS BEEN PRIVATELY PRINTED

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Concerning

The KNOWLEDGE and CURE

OF

DISEASES.

Tranſlated from the laſt Edition

Printed in *Latin* at *LEYDEN*, 1715.

With Uſeful Obſervations and Explanations,

By J. DELACOSTE, M. D.

LONDON,

Printed for *B. Cowſe*, and *W. Innys*, in St. *Paul's* Church-Yard. MDCCXV.

TO

HANS SLOANE,

Physician in Ordinary to Her late MAJESTY Queen *ANN*, and also to His Present Most Sacred Majesty;

AND TO

John George Steygerthale,

Professor of Physick in the University of *Helmstad*, formerly Physician to *George William* Duke of *Brunswick* and *Lunenburg*, and now Physician in Ordinary to the King's Most Excellent MAJESTY;

BOTH

Members of the ROYAL-SOCIETY *and Fellows of the College of Physicians in* LONDON.

Gentlemen,

IT is not meerly through Matter of Form, that I address you; but 'tis chiefly a regard to your conspicuous Parts and the real Respect I bear your Persons, that put me in Mind of acknowledging it in this manner to the World.

And as your Merit is so clearly illustrated by the *Royal Favour and Trust*, that now *again* distinguishes you, so is your great *Candour* and *Generosity* no less manifested to all, as have the Honour and Advantage to know you.

Upon these Assurances, I have presum'd to ask your *Patronage* for the following Treatise; And hope, that altho' they bear the Stile and Stamp of a *Foreigner*, (yet they may obtain some *favour*, and doubt not, but, if supported by your *Approbations*, they'll more effectually promote that *Publick Good*, I chiefly did propose to my Self by it.

'Twou'd be very improper here to mention the *Worth of my Author*, or the Reputation he hath gain'd in the Learn'd World, wherein your selves make so great a Figure; all I shall add is, That as your Sagacity will easily discover, so I am confident, your Goodness can as easily Pardon the Defects of,

Honoured Sirs,

Your most Obliged and

most devoted humble

Servant,

Frith-street, Soho,
May 1st, 1715.

J. Delacoste.

The AUTHOR's

PREFACE.

YOU have here a little Book, tho' small in Bulk, yet weighty as to its Contents, and whose Birth is due to no small Labour. This is an ampler Edition, and in some Places more clearly expressing my Meaning than the former. It promiseth Rules, by which you may unfold the Causes of Diseases, and assist Nature in carrying them to their Issue. The Industry of the Ancient Greeks, *the Diligence of the succeeding* Arabians, *and the Exactness of a few among the late Moderns, have supplied us with Experiments altogether necessary to the finishing of this Work. But Anatomy and Mechanics, both better and more universally understood in our Days have laid the Foundations and spun the Thread of our Reasonings; Both of 'em sure! Whatever*

some Ignorant or Invidious Men may clamour. † They *hate and revile Things only for being above their reach; and therefore hurt no body but themselves by their noisie Ignorance: But when they Indulge themselves in their Humours of Calling this Method Paradoxical, and alledge its Novelty for a Crime and Dangerous to be embraced, They only move Laughter and Mirth in such as know better. Whoever is acquainted with the Ancients, and compares their Anatomy and Theory of Physick with that of the Late Moderns, will see what Improvements have been made; And it is only those, that I allow to be able Judges of this Controversy. And I desire them, for whom I have a particular Value, to consider, that these Aphorisms were only design'd for my private Lectures, and thence they'll know the Reasons both of their Brevity and Order. I rather chose to quote no Authors at all, than to crowd this short Treatise with many, which I cou'd not have avoided, to do every Body justice. Nor have I been guilty of*

† Dr. *Boerhave* points here at Dr. *Le Mort*, Professor of Chymie at *Leyden*, who wrote a very foolish Libel in a very scurrilous Stile, against the Mechanical Method, *&c.*

giving

giving Magnificent Titles to any Simple or Compound Medicine. For I do not know any one Thing, which is either more Prejudicial to the Noble and Generous Art of Physick, or more Able to expose it to Reproach or Contempt of such credulous People, as are always ready to try every Thing, that is cried up, and then find by their own Experience that they were deceiv'd. And, I cannot admit that any other Qualification doth recommend and raise the Price of one Medicine above another, but the Proportion, wherein each is more properly, seasonably, and prudently applied according to all the peculiar Circumstances both of the Patient and the Disease; And in this, I conceive, and speak it without blushing, I have been extreamly clear and positive, at least, I have taken much Pains to be so, Thinking it the very Characteristic of a good Physician to make a true Indication.

To be short I Conclude, begging the Reader to Consider, that this Treatise is wrote in a Stile adapted entirely to the Subject; not with the Elegance of the Augustæan Age,

which might have pleased some People better, but must have puzzled a greater Number to find out my true Meaning, and wou'd have required more time, than what I can spare from more Important Business. Reader Farewell.

THE PREFACE OF THE TRANSLATOR.

I Hope all *Englishmen* in general will be pleas'd to see in their own Language the Treatise of an Author, whose Reputation is at the greatest Height not only abroad but even here, where a great Number of Physicians think (and with reason) to recommend themselves highly by letting the World know, that they were Dr. *Boerhave*'s Disciples: And as Self-Love is an irresistible Argument in most People, they'll still be better pleas'd, when they shall know, that he is a great Admirer of all the famous *English* Worthies of the last and present Age. Whoever looks into his very late Dissertation, *De Certo comparando in Physicis*, he'll find him there extolling the never to be forgot *Verulamius Baco*, proclaiming him, *Virum*

ad

ad omnia, quæ Scientia humana comprehendi poſſunt, indaganda facile principem. Et de quo dubites, Utrum Conſilio, an Exemplo, Labore vel Liberalitate major fuerit in inſtauranda de formata Phyſica. And he adds, that whatever Improvements have been made in Natural Hiſtory from the Beginning of the Laſt Century to this preſent Day, is altogether owing to the Admonitions, Precepts, and Experiments of that great Man; Who thought it no ſmall reproach to his Age, that all Mechanic Arts were every Day advancing, and the Sciences at a Stand, and this from an Over-regard and reverence for Antiquity, and for a few great Men amongſt them. Next to the Lord *Bacon*, he alſo expreſſes his Value in the moſt ſignificant terms for ſome but lately deceaſed, and ſeveral yet Living great Mechanics in *England*, placing Sir *Iſ. Newton* at the Head of theſe, and *the great Boyle* in the Front of the others.

And as there is no Country like *England* in *Europe*, where (notwithſtanding the Number of good Phyſicians, who have ſpared no Pains both Abroad and at Home to acquire all the Neceſſary parts of Knowledge, and for that reaſon are more reſpected and generally better rewarded, than in any other Parts) ſo many Surgeons and Apothecaries do practice Phyſick, and adminiſter Remedies without the Advice of a Phyſician, chiefly in the Country

Country Towns, and at Places diſtant from ſuch as Phyſicians have thought it worth their while to ſettle in; I hope thoſe Gentlemen will not take it amiſs if I declare, that it is chiefly for their Sakes, that I have taken the Pains to render this excellent Treatiſe into the *Engliſh* Tongue, the like whereof was never yet publiſh'd. For though ſeveral, perhaps many, might be capable enough of reading it in the Original *Latin*; yet I believe the Majority will be glad, I ſaved them the Pains of ſtudying Words, when they'll be ſure to meet with Matter enough to employ all the Attention they are Maſters of: And beſides, The *Latin* and Stile of our Author is ſo Conciſe, that a Reader ought to be ſomewhat uſed to it; Which is my Caſe, having had the happineſs to have been Dr. *Boerhave*'s Diſciple for two Years together; I was the more ready to undertake it, leſt ſome other might mangle, diſguiſe it, and even have the Front to Publiſh it in his own Name, as ſome body did not long ago his Inſtitutions. When I ſaid, that no Treatiſe, like to this, had ever yet been Publiſh'd, I chiefly intended to ſhew, that none of the moſt celebrated Authors had yet began their Syſtems in this natural and eaſie Way; From the Simpleſt Body, eaſieſt underſtood, and viſible firſt to the Microſcope, and then to the Eye, riſing gradually in the ſame Order to the leaſt, more and moſt compound, always in a continued Chain,

Chain, acquainting his Reader first with those things, which wou'd stop him by the Way, if the contrary Method had been taken; Whereas you'll see the Generality of other Systems to observe indifferently any and even the Contrary order, just as it first comes into their Heads, and only fit for a Reader consummate already in the Art, and consequently of little or no use: Some begin with the most difficult Diseases of the Head and all its Parts, go on with such as are common to the Thorax and its Contents, than to those of the Abdomen, the Limbs, the Skin, *&c.* treating of Fevers under a particular Head, as if they were Diseases not to be ranked under any of those Classes. Others begin with the Diseases of Mastication, Deglutition, Concoction, Chylification, Sanguification, Secretions and Excretions, *&c.* *Quot Capita tot Sensus!* And as to the Method of writing Aphoristically, *Baglivi* complain'd a few Years ago of its having been neglected since the Ancients, and Enumerates the Reasons why it is preferable to all others, shews the Way to it in some Examples, wishing it may be follow'd for the Improvement of the Art; But even he is far short of our Author; For though he saw the Truth, we may say, he saw it as through Clouds, which Dr. *Boerhave* has happily dispers'd for the good of Mankind, So that henceforth the Reproach of *Ars Longa* will be changed into the Encomium of *Scientia Certa & brevi paranda.*

I have

The Preface of the Translator.

I have publish'd it with the Numbers and the repeated Quotations of the Numbers of Aphorisms, thereby to make it Necessary to the Reader, (according to the Author's intention) to read every thing over and over again, and not to run it off like a News-Paper, which wou'd or might have happen'd, if I had filled up every thing with the References of the Author; besides that it wou'd have swell'd the Book to more than twice the bulk, and enhanced the Price above what abundance do care to bestow on Books at once.

If the Language is not the purest, I hope that may be forgiven to a Stranger, who but eleven Years ago did not understand one word of *English*; and lest it should be too faulty, I desired and obtain'd of a judicious Friend of the Profession to overlook my Translation, and to alter what he thought necessary. I have follow'd his Directions thankfully, but where I thought him not well grounded, which happen'd chiefly from his not being so well acquainted with the way of thinking and expressing of Dr. *Boerhave*'s as my self.

I have done the Author that justice, not to confound my own Thoughts or Observations with his Text; I have taken care to distinguish the one from t'other by Comma's in the Margin, except only where I give but a short

Para-

Paraphrase of the Author's Words, and that mostly such a one, as I can produce in a Manuscript taken from his own Mouth at his Lectures in *Leyden*.

I have transposed the Chapter of *Rhumatism* from the End of the Work immediately after that of the *Gout*; which I am sure the Author would have done himself, if he had thought to treat of it separately before it was near finish'd, or had not been unwilling to take the Pains to alter all his Numbers and References in the following Chapters, which Trouble I have willingly taken for Orders sake. There is but seldom occasion to be of a contrary Opinion to the Author's; If any, it is mostly upon account of the different Climate, or Way of Living and Dieting, which has made it Necessary to apply different Means, or the same Means in another Method, than what he sometimes adviseth; But I dare speak it, *He is never out in his Indications*; As they are built upon the clearest understanding of the Animal Œconomy, The texture of the Parts, Motions of the Fluids, and the Power, which other Bodies have to cause Alterations in any of these; Besides as great an assistance of Observations and the History of Diseases, as any Physical Authors whatever, tho' of ten times the bulk; It is no wonder, if we think him acquainted with the Origin of Diseases, and affirm, that he has made the surest Steps towards their Removal:

moval: Which is all that Dr. *Mead* requires of the beſt Phyſician, and which every impartial Judge, though unacquainted with Mechanics, and conſequently therefore no great Lover of 'em, will readily give his Conſent to.

Thoſe Gentlemen, for whom I chiefly deſign'd this Tranſlation, will here in a ſmall Space of Time and with ſome application learn to avoid Confuſion, and to build upon ſure Principles, to ſpeak a plainer Language than they have hitherto uſed, and (which is no ſmall Advantage) they'll be enabled to judge of the true Merit of Phyſicians, and to diſtinguiſh between thoſe, who are forced to hide their Ignorance and confuſed unſettled Thoughts under the Cloak of a Jargon, which they themſelves do not underſtand, or who have no other Merit than the noiſy Clamour of *Oxford*, *Oxford!* their Equipages, or the Cunning ſly way of engageing Nurſes and ſome ignorant Women in their intereſt; Not to mention their affected Cant, of naming Providence and God's Bleſſing upon all Occaſions; as if the Almighty cou'd be ſuppoſed to alter the Mechanical operation of ill-applied Medicines to ſhelter them from blame.

Surgeons will not be diſpleas'd to ſee a great Phyſician own, that Internal Diſeaſes depend on the right underſtanding of External ones of their Province, and that no Phyſician can be a compleat one, unleſs he has built upon the Foundation of *Surgery*.

Apo-

The Preface of the Tranſlator.

Apothecaries cannot be ſorry to meet with plain Rules to direct 'em in their Intentions (generally their weak Side,) when they ſhall be concern'd alone either with internal Diſtempers, or upon ſome emergent Occaſion are obliged to act the Part of Surgeons.

And I hope both they and the generality of Phyſicians will be convinced of my good Intentions, when they ſhall conſider, that I have not increaſed the Number of Pretenders and Quacks by a Multitude of Receipts.

If theſe my Endeavours for the Publick good meet with tolerable Succeſs, it may encourage me to embrace more Opportunities to further the ſame.

A TA-

A TABLE of MATTERS;

The Numbers denote the APHORISMS, where each begins.

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INDEX.

Of

INDEX.

Dr. BOERHAVE'S
Practical Aphorisms.

The INTRODUCTION.

1. WHatever State of the Human Body doth disorder the Vital, the Natural, or even the Animal Functions of the same is call'd a *Disease.*

2. And that part of the Science or Art of Physick, which teacheth how to find out the Disease actually afflicting the Patient, and how to cure the same, is called *The Practice of Physick.*

3. Whosoever therefore is unacquainted with what is requisite to perform well all vital, natural and animal Functions; and consequently is ignorant of the Causes of Life and Health; can never discern and know rightly the Defects, that is, the Diseases of them.

4. *A Cure* therefore is the *Changing* of a Disease into Health: and consequently supposeth a Knowledge of what is just now mentioned (3.) and con-

ſequently the Knowledge and the Cure of Diſeaſes require the Knowledge of thoſe Doctrines which expound what it is, which is ſtrictly termed *Life* and *Health* in Man, *viz.* the Inſtitution of Phyſick, or the Animal OEconomy, or the Theory of Phyſick.

5. This *Change* (4.) occaſions, or directs a certain Motion by the *Application* of ſuch Inſtruments as the Phyſician ought to know and direct: And ſo we ſuppoſe the knowledge of all what belongs to Dieting, to Medicines and Surgery, and alſo the different ways of preparing and applying all thoſe means.

6. The *Application* of theſe means (5.) is governed and directed by a fore-knowledge of their Effects: which requireth a general knowledge of the Laws according to which thoſe actions are perform'd: which ſheweth the Doctrine of the Signs and the Method of Phyſick to be neceſſary Sciences. So that whoever deſigns to lay down Rules for the Practice of Phyſick, ought firſt to be well acquainted with all the parts of the Theory and Inſtitutions of Phyſick. Theſe therefore we ſhall now ſuppoſe not only known, but alſo demonſtrated in another place.

7. A Diſeaſe (1.) when preſent in a Body muſt needs be the bodily effect of a particular Cauſe directed to that Body.

8. Which Effect being entirely removed, Health is recovered.

9. It may be removed by correcting the Illneſs it ſelf in particular, *viz.* by the application of Medicines to the particular diſeaſed Part, or by ſome

ſome Remedies which operate equally upon the whole; The firſt we'll call *a Particular*, the latter *a General* Cure.

10. The way to both is diſcovered either by *obſervation* or by *comparing* one caſe with another; or by a true *reaſoning* from 'em both.

11. Obſervations are taken: 1. From an exact Hiſtory of Diſeaſes, giving an Account of the Cauſes, the Nature, and Effects of the firſt Ill. 2. From a moſt nice Account of all ſuch Things, which have proved beneficial or hurtful, whether they were given the Patient deſignedly or by chance. 3. From the Inſpection of open'd Bodies the Diſeaſes whereof were very well taken notice of before Death.

12. He concludes from Similitude, who reaſons on the Nature and Cure of an unknown Diſeaſe from the Compariſon of the preſent obſcure caſe before him with the foregoing Obſervations.

13. Thirdly, *He* who doth with the greateſt exactneſs imaginable, weigh every individual thing that ſhall or hath hapned to his Patient, and may be known from the Obſervations of his own, or of others, (11.) and who afterwards compareth all theſe with one another, and puts them in an oppoſite view to ſuch Things as happen in a healthy State; and laſtly, from all this with the niceſt and ſevereſt bridle upon his reaſoning faculty riſeth to the knowledge of the very firſt Cauſe of the Diſeaſe, and of the Remedies fit to remove them; *He*, and only *He* deſerveth the Name of *a true Phyſician.*

14. Now the beſt Method for to give a good and uſeful Hiſtory of Diſeaſes, and to teach which way to cure them, muſt needs be that, *which*,

1. Sets down every particular Diſeaſe's each individual Signs and Attributes, ſuch as are peculiarly belonging to the ſame, or common alſo to other Diſtempers, and which performs this from a Self-knowledge, with deliberation, in its proper place, and above all with the exacteſt truth.

2. Which ennarrates all things, that have befall'n the Patient during that particular Diſeaſe from ſuch things, as either he did, took, kept, voided or had applied to him.

3. Which expounds and ſets forth the ſeveral Helps which a proper Diet or Surgery, or Medicines do afford, together with the true Method of applying them, whether known by Chance, or from the true and well reaſoned rules of the Art of Phyſick.

4. Which forms it ſelf thoſe Rules as certain to be followed in the whole Practice from the Three juſt mentioned and laid down as granted, with all the Conditions mentioned and required in a true Phyſician in the 13th Aphoriſm.

15. Diſeaſes are ſo many, that it makes the ranging of them into a particular order more difficult.

16. But it is the moſt natural to treat of them firſt. 1. Which are moſt thoroughly known. 2. Which in their Nature are the leaſt Compound. 3. Which are eaſieſt cured. 4. The knowledge of which is neceſſary to underſtand another.

17. According to which Rules we ſhall proceed in the following order.

18. We

18. We shall therefore treat first of *the several kinds of the least Compound Diseases*, and their Cure.

19. *The Diseases of the Solids consequently*, and their Cure claim the first place.

20. And among these, *the Diseases of the most simple and solid Fibre and their Cure* ought to be the first.

Distempers of the solid simple Fibre.

21. Those Parts (which being separated from the fluid contained in the Vessels, are applied and sticking to each other by the strength of the living Body, and make the least Fibre) are the least, the simplest, earthy and hardly changeable from or by vertue of any Cause, which are found in our living Bodies.

22. Hence the reason, why in them, separately considered, no one Distemper was ever observed by Physicians, or mentioned as having been cured.

23. But in the least Fibre, grown from the Conjunction of those Parts (21.) the following most simple Diseases from 24. to 38. deserve to be taken notice of: for they are frequent, and lay the foundation for understanding of others; notwithstanding they have hitherto been overlook'd, or not well enough understood. * Baglivi *has publish'd a Treatise with the Title*, De fibra motrice & morbosa.

Distempers of a Laxe and Weak Fibre.

24. *The weakness of the Fibre* is that cohæsion of the minutest Parts described (21.) which is so

loosly linked, that it may be pulled asunder even by that degree of Motion which is requisite in healthy Bodies, or not much exceeding it.

25. The same *is preceeded*, 1. By the conversion of the Aliments into the Nature of healthy vital Juices obstructed; which is owing to the too great consumption of good Fluids, and to the Sluggishness of the powerful strength of the Solids over the Fluids; Or to the too great toughness of the Aliments overcoming the Powers that should alter them in the Body. 2. By the too weak application of one Part (21.) to the other, which proceeds from the too weak motion of the Fluids, and this again mostly from a Want or a Defect of the Muscular motion. 3. By a too great pulling of the Fibre, being near to a Breaking.

26. The Weakness *produceth* easily a Stretching and a Breaking of the small Vessels made up of those weak Fibres (24.) and consequently abates of their power over the Fluids therein contained; from which distensions arise Tumors; from the stopping or extravasated Fluids Putrefactions; and farther all such innumerable Ills, as are the Consequences of them both.

27. From what has been said in (24, 25, 26.) one may surely know when any Distemper from weak Fibres is present, past, or coming on; the Effects thereof may be foreseen, and what is necessary towards the Cure is surely known.

28. The Cure must be obtained; 1. By such Aliments as abound in such matter as is described (21.) and which be almost so prepared beforehand as it is in a strong and healthy Body;

dy; Such are Milk, Eggs, Flesh-broaths, Panadoes rightly prepared of Bread that was well fermented; and rough Wines. All which must be given in small quantities, but often. 2. By encreasing and invigorating the motion of the Solids and Fluids by means of frictions with a Flesh-brush or with Flannel; of riding on Horseback, and in a Coach, or being carried in a Boat; and lastly, of walking, running, and other bodily Exercises. 3. By a gentle pressure or bandage upon the Vessels, and a moderate repelling of the Liquids therein contained: 4. By Medicines both acid and austere, but applied with great caution and gentleness. 5. By any means as will remove and remedy the too great pulling of them.

29. *That Fibre is said to be Laxe and Loose* whereof the Parts are in that degree of Cohesion, that the same Fibre may with very little pains and pulling, be made longer than it was before; from whence it appears, that this is that Sort of weakness as in (24.) and that the aptness to bend doth depend from hence; and consequently, that all these Effects, as well as *the lessen'd Elasticity of the Fibre* are clearly understood from what has been said from (21 to 28.)

30. And even from thence Answers are ready to all the following Difficulties objected, *viz.* Why watry and fat Aliments occasion a weakness in the Fibres? Why the same Fibres are weak in People of a cold Constitution, in young People, such as move little, and such as are still growing? Why earthy Aliments, and such as have a moderate roughness strengthen the Fibres? Why People of

a hot Conſtitution, and ſuch as exerciſe much, have ſtrong Fibres? Why the Fibres have an Elaſticity proportioned to their Strength?

Diſtempers of the Stiff and Elaſtick Fibre.

31. *The too great ſtiffneſs of the Fibre* is that ſticking together of the minuteſt Parts (21.) which cauſes them to be link'd ſo cloſely together, that they will not, or cannot give way to that power of the Fluids, which in a ſtate of perfect health ought to overcome their reſiſtance.

32. *The ſame is occaſioned* by all thoſe Cauſes, which have been mentioned (28.) as neceſſary to cure the weakneſs of the Fibres, if thoſe means are applied or continued too long.

33. The effects of that ſtiffneſs (31.) of the Fibres are to cauſe the Veſſels made up of them to be leſs flexible, narrower, ſhorter, too much reſiſting and hindring the free motion of the Liquids, and occaſion all the Diſaſters mentioned in (50, 51,52,53.) by a neceſſary Conſequence.

34. From which one may know this Diſtemper (31.) when preſent, and alſo foretell the Conſequences; nor is the Method of Curing the ſame leſs apparent.

35. The Cure is effected 1. by ſuch Meat and Drink as is thin and watry without any roughneſs, chiefly the continued uſe of Milk-whey, of the ſofteſt Herbs and Sallads, and unfermented Liquors. 2. By avoiding of Exerciſe, and dwelling in a moiſt cooliſh Air, and taking long Sleeps. 3. by the taking or outwardly applying watry, lukewarm, taſteleſs Medicines, and ſuch as contain the lighteſt and ſofteſt Oyls. 36.

36. From hence is understood *the too great Elasticity* of the Fibre, and likewise how to cure the same, as being generally the Companion or the Effect of the too great stiffness.

37. And also, why Childrens, Womens, and idle Peoples Fibres are generally lax and loose; and on the contrary, why the Fibres and generally all the solid parts of full-grown People, of the Male-sex, of laborious People and such as exercise much, are mostly stiff and rigid: And why in those, when afflicted with a Palsie, there is a strong contraction of the affected Parts.

Distempers of the less and larger Vessels.

38. The Diseases of the least Vessels made up of the simplest Fibres (21. 22.) (either by an Application or a twisting of several together) proceed from the same Causes, have the same Nature and Consequences, and require the same Cure; and consequently may be learn'd from (21. to 30.)

39. The larger Vessels made up of the small ones by the application or twisting of several together, are subject to two several kinds of Diseases. The first of these depends on the Diseases of the smallest Vessels, which make up this large one; so that the Rise, Nature, Effects, and the Cure thereof must be taken from thence. (38.) But the latter Sort depends, 1. From the strength with which the Fluid running through this large Vessel doth press upon the sides of that Vessel in extending the same: Which Sides, being made up of the *smaller Vessels*, are by this pressure de-

prived

prived of their Fluid; and if continued they grow together, and into a ſolid Fibre, but in a larger Sort than that deſcribed (21. 23.) Which Effect may alſo be propagated to the next adjoining ſmall Veſſels. 2. From the nature of the Fluid which thickens and ſticks to the ſides of its proper Veſſel.

40. From hence may clearly be underſtood, how Veſſels are ſaid to be weak, laxe, ſtrong, ſtiff and elaſtic; whereof the Ignorant talk much without any true Meaning. And the Subject is ſo noble, that it deſerves being treated of more at large.

Diſtempers of weak and laxe Entrails.

41. The weakneſs of the Veſſels and Entrails we call that coheſion of the Parts, conſtituting the ſame, which may be broke with ſo ſmall a Motion as to make them incapable of performing, what not only a living but a healthy ſtate of Body doth require of them.

42. Which are different according to the different Age or Sex.

43. This Weakneſs proceeds, 1. From the weakneſs of the Fibre and the Cauſes thereof. 2. From the weakneſs of the ſmalleſt Veſſels, and its Cauſes. 3. From the ſluggiſhneſs of the Liquid flowing through the larger Veſſels, which may proceed from its Quantity being leſſened, or the increaſing of its watry unſpirituous Nature; or laſtly from the muſcular Motion being grown ſlower and duller.

44. From

44. From the said (41.) Weakness occasioned by the Causes just mentioned arise many Diseases; which are falsly attributed to a bad Constitution, or supposed to be born with the Patient. The chief are, 1. An easie Dilatation of the Vessels and Tumors: An easie Compression of the same and emptiness: A stagnation of the Liquids: A more difficult and even resisting Motion of the Heart: A crudity of the Liquids, which were to acquire a farther degree of Coction there: A Putrefaction of the same succeeding thereon: An incapacity thereupon of performing the vital, animal or natural Functions: And consequently, all the Mischiefs that must follow from these; which as they are infinite in Number, so be they most difficult to cure, and very fruitful in producing new and unheard of Distempers; and chiefly these two general ones, which are noted by the Names of Κακεξια and Κακοχυμια. An easie dissolution or breaking of the Vessels, either from inward or outward Causes, being either sharp or acted violently; from thence an effusion, a stagnation, a corruption and emptying of the Liquid, which is necessary to life and health: An interception of the Motion of the Fluid, through the broken Vessels, and their Putrefaction; which were preserved entire by means of those Fluids moving through them: These again are many; and chiefly Φθίσις, Εμπύημα, ὕδρωψ, and ατροφία. x *Consumptions, Imposthumes in the Cheast, Dropsies, falling away and loss of Flesh.*

45. Which if any one accurately considers, he shall not only know the Origin, the presence and

the

the event of this (41.) but alſo of an infinite number of other and very difficult Diſeaſes, and he alone can have ſucceſs in the finding out and applying of ſufficient and ſafe Remedies.

46. And as for the application of thoſe, the very weakneſs of the Part commands to take Time for the Cure; for in no other Caſe is a ſudden Change more pernitious.

47. Therefore Remedies ought to be adminiſtred ſlowly, cautiouſly, and riſe by degrees in the very efficacie of 'em: And after the Veſſels ſhall be ſtrengthen'd by their uſe, then and no ſooner let the Muſcles be put into a vigorous and ſtrong Motion, till it appears from every Particular, that now the Veſſels and Entrails are become ſufficiently compact, ſolid and healed without a fear of breaking there anew.

48. From hence it appears, that what is reported of the Power of Aliments is falſe in one Senſe and true in another. That the exerciſe of the Muſcles doth ſtrengthen the Fibres; That the exerciſe of Riding doth diſſolve the thickned Humors, ſtrengthen the laxe Parts without diſſipating bodily Strength or the Spirits: That the very Blood of the ſtrongeſt People is very thick, ſoft and kind; that of the weakeſt and tendereſt on the contrary, broken, light, and ſharp: That a number of Diſeaſes, in appearance very different, may yet be Branches of the ſame Tree, the Root of which being cut they are all cured of courſe.

49. From the ſame Principles may be known and cured the laxneſs of the Veſſels and Entrails.

Diſtempers

Distempers of the too strong and stiff Entrails.

50. The too great stiffness of the Vessels and Entrails is that cohærence of the Parts of which they are made up, as will not give way to that degree of Motion, which was to change and move them, that all such Things might be performed, as in a living and healthy State did depend upon, and were occasioned by that Change.

51. It proceeds, 1. From all the Causes that occasioned too great a stiffness in the Fibres (32.) 2. but chiefly from the Fibres being strongly pressed upon each other by the overpowering strength of the strongly moving Fluids. 3. From the growing together of the sides of the small Vessels deprived of their Liquid by that strong pressure, by which the vital Liquid of the Arteries presseth the sides of the larger Canals; which Effect is most commonly produced and carried to a height by any violent exercise of the Muscles. 4. From a Vessel which with its proper, thickned, dried up and coagulated Juice is shut up and grown into a Solid.

52. Where this takes place in Vessels, the Effects are, 1. Resembling or the same with those that proceeded from too stiff a Fibre. 2. It occasions a strong Labour; So that the Fibres endeavour to bring themselves from the circumference of the Vessel to its center; to make its hollow narrower; to press, to squeeze, to repell and even to expell its Fluids; and consequently to hinder their protusion from the Heart, and also the action of the Heart it self; So that they hardly remove

move again to their proper extent; from hence interrupt the even Motion and Circulation of the Blood, and consequently the several Secretions; they lessen the quantity of Blood which the Heart ought to send forth at each beating; they hinder the Heart from emptying itself entirely; they produce Polypusses from that very remaining Blood, which being squeezed and robbed of its Fluid Parts, the Polypus grows harder and bigger, which at last produceth Choakings and sudden Death. 3. In Vessels wounded it occasions great Gaps, because of the great strength wherewith the several Parts of the Vessels do pull towards their fastnings: And when they are cut asunder entirely, the Cavity is much lessened at both ends, or sometimes entirely shut up.

53. From these set down in 31. to 37. and 50 to 52. and clearly apprehended, any intelligent Body may frame to himself Rules, by which he must understand the past, present and future stiffness, elasticity, and power of the Vessels, their present or approaching action, and the proper Cure for all.

54. For this is effected, 1. By all the Remedies which were set down as proper to cure the stiffness of the Fibres (35.) 2. And chiefly by all such as lessen the quantity, the thickness and the pressure of the Blood. 3. By such as suspend the Motion of the Muscles. 4. By all such, as moisten, soften, open, dilute, resolve and cleanse.

55. From all these, *viz.* 21. to 55. are sufficiently understood and a Method shewn for curing all the Diseases which are peculiarly belonging to the

the solid Parts of the Body: And from thence also appears what must be answered to the following Queries. Which be the difference of the Structure of the Solid Parts in the different Ages of Life? Why Man grows, continues for some Years of the same height; and afterwards in old Age grows shorter again, and less? Why he is sometimes of a loose texture, sometimes of a strong and stiff one? Why he is sometimes Moist and full, at other times Dry? Why he dies a natural Death, and must needs die when he is come to a pitch of old Age? And then of what illness he most commonly dieth? What Distempers are most common to each particular Age? What Diet, what sort of Life, what Medicines are the most adapted to the several Seasons of Life? How far one ought to believe, and of what use it is, what has been said about the stiffness or laxeness of the Solids, *&c.*

56. We ought now after the most simple Diseases of the Solids to treat of the Wounds (16.) But as they always bring along with them Diseases of the Liquids as from their own Nature, we chuse to treat of those things first, which ought to be known before a compleat History of the Wounds be given.

57. So that we shall treat first of those Distempers of the Fluids, which naturally befall them, either when they are left to themselves, without being any ways affected from their Vessels, or when they are put into too violent, or too sluggish a Motion.

Of

Of the most simple Defects of the Fluids and such as come of their own accord.

581 The several Humors which are to be found in a living Man, are either yet crude, retaining the Nature of such Aliments as were lately taken, or have through the Power of the Natural Functions, and the mixture with the other pre-existent humours in Man, acquired a Nature very like unto them.

59. The first mentioned are generally taken from Plants, or from the Flesh of other Animals.

Spontaneous Diseases from an acid Humor.

60. Our Liquids made up from mealy Plants, or Garden Fruits, either raw or fermented, if they overcome the Power of our innate Juices and of Life, acquire in us that nature and disposition, as they owe to the Nature of their Producers when fomented in a moist and moderate heat. From hence chiefly we must derive the *acid Acrimony*, and the more hurtful *glutinous Fat*. The first proceeds chiefly from fermented and not fermented Juices; The latter from *mealy (unfermented or boyled)* Aliments.

61. This acid Acrimony is generally the Product 1. Of mealy Aliments, juicy Acids, as are new, crude, actually working, or of such Vegetables as have fermented already. 2. Of a want of good Blood in that Body which takes the forementioned Food. 3. Of a Weak texture of the Fibres in the Vessels and Entrails (24. 29. 41.) 4. Of a Defect of the Animal Motion.

62. It

62. It first takes its Seat in the first Digesters, such as the Stomach and the Duodenum, from thence it advances with a slower pace into the Blood, and at last taints all the Humors of the Body.

63. It occasions sowre belchings, hunger, a gnawing pain in the Stomach, most terrible Colicks, with Wind and even Convulsions in the Guts; a sluggishness of the Bilis, and many changes and alterations of the same; it renders the Chyle sowre, and the very Excrements by Stool stink sowrish: These are its Effects in the Stomach and in the Guts.

64. When got into the Blood, it causeth it to look pale, and turns the Serum newly come out of the Chyle sowre; it makes the very Spittle sowre; from hence Itchings, Obstructions, Pimples, Ulcers, Coagulations of the Blood made unable to circulate; afterwards prickings of the Brain and the Nerves, from whence Convulsions, the whole Circulation of all the Humors interrupted, and lastly Death it self.

65. From these described from 60 to 65. one may have a certain Knowledge, when this acid Acrimony is present, coming, or past; hence also are seen its Effects; and may the Cure be conceived.

66. Which is effected, 1. With Aliments as destroy Sourness whether taken from Animals or the vegetable Kind. 2. With Juices like unto well-conditioned Blood, which one may find in Birds of prey. 3. Strengthners. 4. With a strong Motion. 5. With Medicines as do absorb and

ſoak in the Acids, as dilute them, as blunts the Edges of them, and changes 'em.

67. Whereof the Choice, Preparation, Doſe, and timely Application are known to the Phyſician from the knowledge of the Diſeaſe, its Seat, the Patient's perſon and conſtitution, and many more Circumſtances.

68. From hence it appears, why the Diſeaſes of this Kind are ſo common to Children, to Slothful people, to Poor people and certain Tradeſmen; whereupon conſult *Ramazzini de Morbis artificum.*

Diſeaſes from a ſpontaneous Glew.

69. The Glutinous fat Humors from Vegetables is occaſioned, 1. By crude and mealy Aliments, and by unripe rough Fruits. 2. By a want of good Blood. 3. By a Weakneſs of the Veſſels, of the Entrails and of the Choler. 4. By the leſſening of the Animal Motion. 5. By a diſſipation of the moſt fluid Parts of the Blood through the relaxed ſecretory Veſſels. 6. By the Retention of the thicker parts of the Blood and Humors from the weakneſs of thoſe Veſſels and Inſtruments as ſhou'd thruſt them out.

70. It appears firſt in the firſt Digeſters, from hence it flows into the Blood, and afterwards in all the other Liquids that are derived from the Blood.

71. In the firſt Paſſages it occaſions a proſtrate Appetite, a feeling of Fulneſs; a Nauſeating, Vomitings, want of Digeſtion; a ſluggiſhneſs of the Choler, its growing ſlimy and conſuming; it breeds naſty Phlegms in the Stomach and Guts; binds

binds up and swells the Belly; hinders the making, the perfecting and the separating of the Chyle into the Milk-vessels.

72. In the Blood it produceth a toughness and a paleness, making its Circulation almost impossible; in the Vessels Obstructions, Concretions; a pale Urine with scarce any Smell; a slow Spittle; a white Swelling; and almost all the animal Secretions obstructed; a defect of the finest Juices; and from all these the smallest Vessels do shut up and grow together.

73. From hence are all the Coctions, Circulations, Secretions, Excretions, all the Vital, Natural, and Animal Motions disorder'd, from whence Choakings and Death.

74. From these (69. to 73.) appear the Diagnostic, the Prognostic, and the remembrance of this Disease; nor can it be difficult to conclude what must be necessary towards the Cure.

75. Which may be obtained, 1. With using a Diet of things that have fermented well, and are seasoned with Salt and Spices. 2. With Broath made of Volatiles. With whatever may strengthen the Vessels and Bowels. 4. With a gradual increase of Motion and Exercise. 5. With diluting, resolving, stimulating Medicines, such as carry along with them wherewithal to supply the want of Choler, and are of a soapy Nature. 6. With Frictions, Heat, Baths, and Blisterings.

Distempers of a Spontaneous Alkali.

76. Some Plants abound in a matter, which, if putrefied of *its own* accord, doth not turn into

an acid Subſtance, nor run together, but melts away into a ſtinking fat Alcali : Such are moſt all aromatick Plants as have a very ſharp taſte : But it's very ſeldom that ſo much is taken of them as will from its peculiar nature create an illneſs : But if it ſhou'd happen, that Diſeaſe ought to be ranked among thoſe occaſioned by a ſharp and oleous Alcali.

77. Our Juices formed from the feeding upon Meat muſt vary, 1. According to the Food as the Beaſts were fed with. 2. According to the different parts we eat of them.

78. For thoſe Animals which feed upon Herbs and Water make a Chyle either ſowriſh or eaſily turning ſo, and conſequently give Milk of the ſame nature, which being taken for Food by us, muſt needs preſerve the ſame Nature as if we our ſelves had fed upon thoſe Herbs and Waters, and creates commonly in our Stomachs, and firſt Paſſages, a ropy Matter like unto new Cheeſe.

79. Thoſe that feed upon Animals of another Kind, their Juices turn eaſily into an Alcali.

80. When Aliments with the ſtrength of our Bodies are ſo far attenuated as to be converted into Liquors, ſuch as have been found in healthy and ſtrong Bodies in four and twenty Hours from the taking of Nouriſhment; If the ſame are left to themſelves in a warm place undiſturbed, or are violently ſhook, they'll always acquire the Nature of that beginning Putrefaction.

81. But in Aliments from other Animals this diſpoſition to a ſudden Putrefaction is there already

dy of its own accord without needing that alteration which they undergo in our Bodies.

82. This Corruption indicates that ſtate of the Humors, which obligeth the watry Parts to exhale; the ſaline Matter being attenuated, deprived of its Acid, or even altered, to grow ſharp, volatil and of an alcali Nature; The oily Part alſo being thinner in one Part, deprived of its Earth, mixed with that ſharp Salt, groweth harſh, volatile, and ſtinking: But t'other part of the Oyl being moſt firmly united with that Earth, which was deprived of its Water, Salt and the firſt mentioned Oyl turns into black, thick Dreggs incapable of flowing.

83. Inſects, Fiſhes, amphibious Creatures, Birds, Beaſts of all Kinds, and Reptiles, and even Man himſelf do of their own Nature, when dead, all turn into that Corruption juſt now deſcribed.

84. The Cauſes which makes this Corruption to follow are, 1. Aliments from living Creatures (except the Milk of grazing Cattle) chiefly from Inſects, Fiſhes, Birds of prey, and ſuch Vegetables as are apt to turn into an Alkali. 2. A fulneſs either of good Blood, or of ſuch as was already tending to Corruption. 3. A great ſtrength of the Veſſels, of the Bowels and of Choler. 4. A ſtanding or ſtopping of the Fluids, or too great a hurry of the ſame at the animal Motions being either too quick or too ſlow.

85. In the firſt Paſſage it occaſions Thirſt, loſs of Appetite, ſtinking Belches; it fills the Mouth, Tongue, Palate and Throat with bitter ſtinking Filth; it creates nauſeouſneſs and vomitings of

corrupt bilious Matter; a ſtinking Crudity; a Looſeneſs with much Choler, inflammatory iliac Pains, and a very troubleſome Heat.

86. When carried into the Blood it occaſions it to be diſſolved into a putrid Maſs, it creates there an Alcali, oleous, volatil Acrimony; it renders it unfit for nutrition, it makes it apt to conſume, deſtroys the leaſt Veſſels, and ſo on; diſturbs, confounds and undoth all the Functions of the ſolid and fluid Parts; ſo that the circulation, ſecretion, and excretion of Humors keep no longer their Courſe; and there ſucceeds burning hot Fevers, the Urine and all the ſeparated Juices become fætid and rotten, comes on Inflammations, Impoſthumes, Gangrenes, Mortifications, and at laſt Death it ſelf.

87. From what has been ſaid (from 76. to 86.) one may again know, prognoſticate, and even find out the Method to cure this Diſtemper eaſily.

88. The Cure may be obtained by, 1. Aliments as will ſpeedily grow ſowre, or ſuch as are acid already; ſuch are all ſorts of mealy Eatables boyl'd in Water, or being left to ferment till they begin to corrupt; Milk and all that can be made from it, carrying along with it the Quality of the Herb; all ripe Fruits, the Juices thereof whether raw or fermented and ſowred; ſuch as Cyder and Perry. 2. Acid Medicines from the raw Vegetables, or fermented, or from Salts and Brimſtone converted into Acids by the ſtrength of Fire. 3. Such Salts as do devour the Alcali, as Sal Gem, Sea-ſalt and Nitre. 4. Watry Diluters. 5. Such as gently do blunt, as Emulſions made of the

the Seeds of Vegetables, or Decoctions of the same. 6. Soapy cleansing Medicines mix'd of Acids and Oyls; Oxymel, and acid Conserves and Extracts. 7. Lastly by Rest, Sleep, Steam-bath or Fomentations.

89. From whence it appears, where and why sowre Belchings are good succeeding stinking Belches. Why and what recovering People do complain of a troublesome Taste of Salt Ammoniac? Why it is a good Sign in accute Diseases when the Patients Sweat smells sowre? What sort of Acrimony it is, which ought to be called Acid, which are Alcaline, Bilious or Oleous?

90. Hence lastly may be known, what harm doth the too great or the too little Motion of the circulating Fluids; and how much its Consequences and Effects vary according to the variety of Places, where they stop, and of the Humours upon which it operates: What Damages from a stopping Humour, and what from extravasated and lurking.

91. Having considered all the several Diseases of the Solids and the Fluids (as were the Simplest) severally; follows now to treat of those, which occur together both in the Solids and in the Fluids, beginning also with the Simplest.

Of Diseases acknowledging no other Cause besides the too quick circulatory Motion.

92. All the Fluids which are contained in any Vessel, that has its rise from the great Artery, are separated from that Blood only, which a little while before was thoroughly united and mixed in

the right and left Ventricles of the Heart, carrying no other Face than of one even and homogeneous Liquor.

93. It has notwithſtanding already in thoſe very Places ſome Globules greater than others, of a particular Size, of a changeable Figure, of a red Colour; and a tranſparent Water, lighter, thinner, of ſmaller Particles, but becauſe of their tranſparency hardly diſtinguiſhable from each other. The firſt is called *Gore*, and the latter *Serum*. Magnifying-glaſſes have demonſtrated both.

94. The red Gore being ſettled and ſeparated from the Serum in another Veſſel, is from its lying ſtill only, and the looſneſs of its Parts reſolved alſo into Serum, which ſeems at laſt to be the true firſt Principle of the whole Maſs of Blood.

95. The Serum being long kept in a moderate warm and moiſt Air, from lying ſtill, and the looſneſs of its Texture is reſolved into a thinner, lighter, and more tranſparent Liquid. Which is

ſhewn from the change of the Chyle, Milk and Blood, and is confirmed by the Obſervations made with Microſcopes.

98. The increaſe of the Motion of the Blood through the Veſſels, proceeds from the Heart's being oftner and ſtronger contracted.

99. The Heart is oftner and ſtronger contracted. 1. When the Brain and its production the little Brain are ſo ſtrongly preſſed as to ſend forth too great a Quantity of the nervous Juice, as it hapneth in the paſſions of the Mind or in Pains. 2. When the Heart it ſelf is irritated by occaſioning the returning Blood through the Veins to run quicker than uſual, being puſh'd on by rubbing or the action of the Muſcles; or by ſome ſharpneſs being preſent in the Blood, whether aromatic, ſaline, acid, alcali, purulent, ichorous, or putrefied.

100. The Motion of the Blood being increaſed in the Veſſels, occaſions the Blood to run ſtronger upon and towards the Veſſels, which are to receive the ſame; a ſtronger reſiſtance of the Veſſels againſt the Blood; a ſtrong preſſure of the Blood upon the ſides of the Veſſels, a violent rubbing of the Veſſels and the Blood againſt each other; a ſtrong rubbing of the ſeveral parts of the Blood among each other; a greater Heat of the whole, a drying up of the Blood from the diſſipating of the moſt thin watry Particles; a growing Toughneſs of the ſame, eaſily ſettling and inflaming; a breaking of the Blood into ſharp and volatil Salts and Oyls; The Mouths of the Veſſels at their beginnings becoming wider, a forcing of the

thickned

thickned Juices into the ſmaller Veſſels: The following Obſtructions of the ſame hereupon, Deſtructions, Inflammations, converſion into Pus, Gangrenes, Mortifications, or if in glandular Parts, into hardneſſes called Schirri, and innumerable more Ills, which follow from all theſe.

101. The increaſe of the Circulation therefore is known from its Cauſes (99.) and its Effects (100.) but chiefly from a quick Pulſe, and a hard beating of the Artery; from a ſwift and laborious breathing, and a great Heat.

102. The Remedies therefore for to reſtrain the too violent Motion of the Humours are the ſame, as are able and muſt needs leſſen the too frequent and ſtrong Contraction of the Heart.

103. Whereof the firſt regard the Mind, the latter the bodily Faculties.

104. The firſt are ſuch as will allay and moderate great Paſſions by reaſoning, by either cauſing contrary Paſſions or Diverſions from the ſame by any Method.

105. The latter operates by cauſing the Muſcles to keep quiet, by looſening the Veins in all ſuch Manners as have been mentioned (54.) by aſſwaging the ſharpneſs of any kind with proper Remedies, either diluting or blunting the edges of it (66, 67, 68.) and by removing the Cauſes of Pain.

Of Diſtempers from the defects of Circulation and a Plethora.

106. The Diſeaſes proceeding from the defects of circulation in the Humours, are very near the ſame

ſame with ſuch as were occaſioned by the ſpontaneous ſtopping of the ſame from (58, to 80.) ſo that one muſt look back to them for to know them and to obtain a Cure. And from all theſe one may eaſily underſtand what is meant by a *Plethora*, and know its Cauſes, Effects, Signs, and Remedies, chiefly if the following Things be well minded,

α. A Plethora is a greater quantity of well conditioned Blood, than what will undergo thoſe Changes, which in Life are unavoidable, unleſs Diſtempers intervene, and diſturbs them.

β. The ſame is created by every thing as maketh a great Quantity of good Chyle and Blood, and at the ſame time hindereth their attenuation, conſumption and perſpiration through the Pores of the Skin.

γ. Hereto refer a great power of the Bowels which are employed in the Chylification to ſtrain themſelves, which is alſo in the Heart and Arteries; and at the ſame time a looſer Texture in the Veins and other ſmall Veſſels: Hereto contribute alſo ſuch ſoft Aliments as are eaſily converted into Chyle; much Sleep; an eaſie Mind; a reſt of the Muſcles, a habit of Bleeding, whether naturally or with the Launcet.

δ. The Effects of a Plethora proceed altogether from that ſort of inward Motion of the Blood and Juices, which doth not come up to a Fermentation, and which we call a *Rarefaction*, and from the Heat occaſioned thereby: From hence a Dilatation or a widening of the Blood and lymphatic Arteries; the change and interruption of the Secretion,

cretion; a compreſſion of all the Veins, both them as carry back the Lympha, and ſuch as carry the Blood; a ſtifling of what ſhou'd circulate; Inflammations; a breaking of the Veſſels; Impoſthumes; Gangrenes and then Death.

ε. So that it is eaſie to know when this Diſeaſe is preſent, and to foreſee the Effects of it.

ζ. The Cure is performed, by letting of Blood; Exerciſe and Waking; by a more ſharp Dyet after due Evacuations; and leaving them off gradually.

Diſeaſes the leaſt Compound, Obſtructions and Wounds.

107. An Obſtruction is the ſhutting up of a Canal, and denying the Paſſage to a Liquid which ſhould go and flow through the ſame; whether it be vital, ſound or depraved; proceeding from the ſize of the Matter that ſhould paſs, exceeding the Cavity of the Canal through which it ſhould be let paſs.

108. Which may again proceed from the narrowneſs of the Veſſel, the bigneſs of the preſenting Body, or both happening together.

109. The Veſſel may become too narrow if outwardly preſſed; if it contracts it ſelf, or if the ſides of the Veſſel grow thicker.

110. The bulk of the ſmall Bodies grows too big, either by the ſlymineſs of the Fluid, or by having miſtaken their Paſſage.

111. When theſe two meet together, the Obſtruction is the more obſtinate and difficult to remove.

112. The

112. The Vessels may be pressed outwardly.

1. By a neighbouring Tumor from fulness, which is inflamed, full of Matter, Schirrous, Cancerous, Pituitous, pufft up in the form of a Bottle, from a distended Arterie called *Aneurisma*, or a Vein called *Varix*; by knobs in the Bones or Callosities, or some Slyme or Stones.

2. By some hard and solid Parts, such as Bones being broke, disjointed, distorted, or drawn out of their natural Position, and so pressing upon the neighbouring softer Parts, as must give way.

3. By any Cause, which draws the Vessels too much and makes 'em longer, whether it be a Tumour, or the pressure of a part out of its due Position, or any external pulling Agent.

4. By external Causes out of the Body, such are too narrow Cloaths, Girdles, the weight of the Body resting too much upon one Part, Ligatures, *&c.* Here also belongs the moving, the rubbing, the embracing of other Bodies too eagerly with some particular Part.

113. When that Contraction which is peculiar to each Vessel is increased, chiefly such as have winding Fibres, and also such as have them long, the cavity of the Vessel is made narrow, and proceeds 1. From any cause which doth increase the elastick power of the Fibre, of the Vessel and of the Bowel, mentioned (31, 36, 40, 50, 51.) 2. From a Tumour of them lesser Vessels, out of which the sides of the large ones and the Canals are form'd, when too much filled.

3. From the lessening of the Cause, which extends the Vessels, whether it be emptiness or

sloath-

fulneſs: From whence follows that the Canals being cut aſſunder will ſoon ſtop the running out of their proper Fluid.

114. The thickneſs is encreaſed in the very Membrane of the Veſſel, 1. By any Tumour (112. No. 1.) in any of thoſe Veſſels whoſe union and contexture makes up the Membrane. 2. By Calloſities grown there; whether cartilagineous, membranous or even oſſeous (51.)

115. The bulk of the fluid Parts is increaſed to that Degree as to be incapable of flowing, 1. Either by changing their ſpherical Figure into another, preſenting it ſelf in a larger Size to the Mouth of the Canal. 2. Or by the joining together into one ſeveral, which were ſingle before.

116. The Figure is chiefly altered, when that even preſſure of the ſmalleſt Particles, now left to their own elaſticity, which uſed to work and to preſs from all ſides together and equally, is ceaſed; that is when Motion is become languid, or the Veſſel looſened, or the quantity of the Liquid is leſſened.

117. The ſmall Particles run into one, by too great a reſt, cold, froſt, drying, heat, a violent circular Motion, and the preſſing of a ſtrong Veſſel; by an acid, auſtere, ſpirituous or abſorbing Coagulum, by a Slyme or an Oyl.

118. The Particles of Fluids having miſtaken their Paſſage are ſtopt, when a ſmall Body of them runs into the dilated Mouth of a Canal, the Extremities whereof they cannot paſs. This Dilatation is chiefly created by a fullneſs, an increaſed Motion, a rarefaction of the Fluid, a relaxation of

of the Vessel; and most of all, if these have preceeded, the contraries most commonly follow soon after. *Which is the most immediate Cause of all Colds.*

119. Hence are manifest the causes and nature of all Obstructions whatsoever.

120. Which happening in a living Body hindreth the Passage of such Matters as shou'd flow on; they stop as many as runs in upon 'em; they receive their shock; the thinnest Parts are squees'd out; the thicker run into one Mass; the Vessel is extended, dilated, made thinner, dissolv'd; the stagnating Liquor is thickned; the function depending from the regular flux of the Liquid is destroy'd; the Vessels which were to be supply'd from thence run empty, and dry; the Vessels are less and less able to transmit their Liquids: The quantity of Liquids in the Vessels free from this Obstruction increases, and so doth the quickness of the Motion; and consequently produces all the Ills which may be occasioned thereby.

121. Hence according to the difference of the Vessel obstructed and of the Matter causing the Obstruction do those Effects (120.) appear accompanied by different Symptoms.

122. In arterious Blood-Vessels are produced Inflammations of the first Kind: In the lymphatic Arteries dilated Inflammations of the second Kind; in the larger Lymphatics pituitous Swellings; in the lesser Lymphatics Pains without any apparent Tumour; and different are the Effects of Obstructions in the producers of Fat, in the Vessels of the Bones, of the Marrow, of the Nerves, and of Choler.

123. So

123. So that whoever knows what has been ſaid from 107, to 723. of the nature, the matter, the cauſes and effects of Obſtructions, he cannot be ignorant of the Signs of an approaching or already preſent Obſtruction and the Effects thereof.

124. And if once he knows the different Sorts thereof, it will not be very difficult for him to find out the proper Cure and the Means thereof.

125. For that Obſtruction which ariſeth from an external Preſſure (112.) requireth the removing of whatever is the cauſe of that Preſſure, which, were it poſſible, muſt be taken from its Deſcription to follow hereafter.

126. But that, which ariſeth from the increaſed contraction of the Fibres, is known from the Signs, which ſhew the contraction of the Bowel, of the Veſſel and of the Fibre (34, 36, 40, 50, 53.) And ſo is that known, where that Contraction proceeds from the ſecond Cauſe (113. No. 2.) *viz.* Tumours in the ſmall Veſſels which conſtitute the Membrane of the Canal; and alſo the latter, which is occaſioned by a contracting of the Veſſel, after a great loſs of Blood or Fluid proper to the Veſſel.

127. This Obſtruction deſcribed (113, 126.) is cured, 1. By ſuch Remedies as will correct the too great contraction of the Fibre, of the Veſſel and of the Entrail. (35, 36, 38, 54, 55.) 2. Chiefly if they can be applied to the very Part affected, and their Virtue communicated; and chiefly by Steams, Fomentations, Bathings, Liniments, or Plaiſters. 3. By ſuch helps, as will empty the Veſ-

Veſſels of the Membranes, when too much diſtended and fill'd. Whereto belong all Evacuations in general, but chiefly ſuch as can be applied to theſe ſame Veſſels; Such are the looſening, diluting, reſolving, attenuating, cleanſing, evacuating Medicines. 4. By ſuch as are capable to melt and diſſolve a Calloſity already created.

128. But this latter Sort of Obſtruction can ſeldom if ever be cured. Emollient and opening Medicines are the Chief: from whence it follows that the Animal cannot avoid dying; And that it is matter of very great difficulty to procure a long Life even with the help of the moſt proper and beſt applied Medicines.

129. When the Fluid is become incapable of paſſing through, which proceeds from the loſs of its Spherical Figure, it is known from looking into the Cauſes thereof (116.) for they are moſtly apparent to the Eye, or the helping Glaſs.

139. This Obſtruction is cured with the help of ſuch Remedies as do reſtore that Figure to the Fluid; which are ſuch as increaſe their Motion through the Veſſels and Bowels; Such are alſo moſt all ſtimulating and ſtrengthning Medicines; And laſtly, an increaſe of the animal Motion.

131. And whereas the too great thickneſs of the Liquid, and its tenacity proceeds from ſo many and ſo widely different Cauſes, (117.) They require therefore different Methods of Cure, and different Remedies according to their Nature; which difference being enquired into in each par-

ticular Diſeaſe, will indicate its proper and peculiar Remedies and Applications.

132. But the thickneſs of the Liquids in general is remedied, 1. By inducing an alternative Motion in the Veſſels. 2. By diluting. 3. By an attenuating Liquor being carried into it, mixed and moved with it. 4. By fetching out or evacuating the Cauſe which did coagulate, and thicken.

133. Thoſe things will bring an alternative Motion in the Veſſel, 1. Which do temperate whatever occaſioned the too great diſtenſion of the Veſſel. Such is Bleeding. 2. Which do ſtrengthen the Veſſels (28, 29. 45, 46, 47. 49.) 3. Rubbings, and the Motion of the Muſcle. 4. Stimulating Medicines.

134. *Diluting* may be performed by warm Water chiefly if drank in great Quantity, if injected by way of Glyſters, or the Steams thereof be received, if applied outwardly to the Part, and as much as poſſible be drove to the Part where the Obſtruction is, and wants to be removed. Hereto belong ſuch as turn another way, as draw on, and puſh forwards.

135. The following Things do *Attenuate*, 1. Water. 2. Common Salt, Sal Gemm, Armoniac, Nitre, Borax, fix'd or volatil Alcali. 3. Natural Soaps conſiſting of an Alcali and an Oyl; or compound, ſooty, volatil, fix'd, or Choler it ſelf. 4. Mercurial Preparations. Which may be convey'd to the place affected, by ſuch as turn the Humor another way, ſuch as draw and puſh towards it.

196. The

136. The Coagulating and Thickning Cause is fetch'd out by drawing of another Liquor whose drawing power is stronger. Thus the Acids work upon the Alcalis, the Oyls upon the Alcalis, *&c.* which are chiefly found out from Experiments in Chymie.

137. But when a Liquid is got into a wrong and strange place, and cannot clear its Passage, and so forms Obstructions, then are many and very malignant Diseases created; so that this Ill ought and deserveth to be most carefully minded.

138. We know this to be the Case. 1. If we are acquainted that its Causes (118.) have preceeded, which are generally easily noted. 2. That the Contrary Operations have soon after followed. 3. If we see its Effects very distinctly, as set down (120, 121, 122.)

139. And it is also easie to foretel what will be the Consequence of this Ill, if we look back to 120. to 123.

140. The Cure is perform'd, 1. By pushing the obstructed Matter backwards by a retrograde Motion into the larger Vessels. 2. By resolving the same. 3. relaxing the Vessel. 4. or suppurating the Matter it self.

141. This Matter may be brought back again from its Prison, 1. By evacuating the Liquor, which is pressing in upon it and driving it in closer; *viz.* a large, and sudden opening of a Vein, which will occasion a Straining in the very Vessel obstructed, and so the Matter will be push'd back again. 2. By Rubbings from the Extremities to the Mouth of the Vessel.

142. It may be resolved by Medicines named above from (133. to 137.)

143. The Vessels may be made looser by means mentioned in (35, 36. 54.)

144. Of the Manner of promoting Suppuration, or the turning into Pus or Matter, we shall speak more at large when we come to treat of Inflammations.

Of Wounds in General.

145. A Wound is the Separation of the Union of soft Parts by hard and sharp Bodies.

146. The sensible and mechanical Cause therefore is the hardness, the sharpness, and the motion of the wounding Instrument.

147. The Receiver must be a soft Part, consequently a knot or contexture of Blood-vessels, Lymphatics, such as are adipous, nervous, membranous, tendinous, and lastly full of such little Bladders as are made of them.

148. In which Receiver the Instrument causes a Separation of what was united, and the shedding of the contain'd Liquids.

149. So that it disturbs the Actions, which depend from the integrity, wholeness of those Parts, and from a determin'd Course of those Liquors through the Vessels.

150. All Wounds therefore as invade such Parts, whereof the wholeness is necessary to make Life subsist, are call'd *Mortal.*

151. Of these there are such as occasion Death unavoidably.

152. Others

152. Others, if left to themselves, occasion Death; But may so far be remedied by the Art of Surgery, that the danger of Death ceaseth.

153. Lastly, some Wounds may become or be made mortal, which were not so of their own nature when neglected, or when wrong Applications are made to 'em.

154. According to the different Actions, which were before performed by the whole and unwounded Parts, do arise the several other Effects of Wounds, and acquire from thence their several Names, which are seldom unknown to any one acquainted with the Functions of the several Parts of the sound Body.

155. Nor is the difference of Names, Forms, and Effects of the several Wounds less, from the different Cause or Weapon occasioning or giving the Wound, from the difference of its Shape, manner of Assault, either by pointing, cutting, hewing, or by moving to and fro; from the degree of Strength in driving in and removing out of the Wound, the time of its remaining there, and the poisonous quality of the same.

156. These again vary according to the difference of each Part receiving the Wound, its hardness, softness, connexion, situation, effect, the several Liquids thereto flowing, and the great change in its Shape.

157. Though it is necessary to know exactly well all the many and different Beginnings of it, yet is there little occasion to dwell here upon a nice History of its several Names.

158. If a Wound is made in a healthy and ſtrong Body, in a viſible place, not containing any large Artery; nor very tendinous, the following Symptoms ariſe.

1. The Parts, between which the wounding Inſtrument has been thruſt, do part gradually more and more aſunder, notwithſtanding the Inſtrument be removed; unleſs it be a very ſmall puncture.

2. The Blood runs out at firſt with Violence, and ſtops afterwards gradually of it ſelf.

3. Then grows a bloody cruſt in at the hollow of the Wounds.

4. And a thin Liquor, ſomewhat reddiſh and faint-colour'd flows out of the ſeparated Fibres.

5. Now begin the Lips of the Wound to grow red, hot, painful, to ſwell and to turn back.

6. At the ſame time the Patient grows ſenſible of a little Fever, with heat and thirſt.

7. About the third or fourth Day, ſooner or later begin to appear in the Wound a ſticking Liquor, white, fattiſh, even, which we call *Pus* or *Matter*.

8. At the ſame time you find the redneſs, heat, pain, ſwelling, the drawing or turning of the Lips, and the Fever either to ceaſe entirely or to relent.

9. And by degrees the hollow of the Wound is fill'd with growing Fleſh from the bottom upwards, and from the circumference to the Center; the Brims getting together by means of a white, bluiſh, ſoft and even Subſtance.

10. Laſtly,

10. Lastly, the Wound is dry'd up, and cover'd over with a Scar.

159. If an Artery (not of a very large Diameter) not too near the Heart, is entirely cut asunder, it shrinks back and hides it self among its neighbouring Solids, and so stops up its own self, and then follow all what has been mentioned (158.) just now.

160. If the same is wounded a-cross but not entirely cut asunder, the Wound is made wider through the pulling of the Fibres, from whence an incessant Loss of Blood, and after that is stopped, an *Aneurisme* from the thinness of the Skin growing over the Wound, which for that Reason gives way, and is extended into the shape and nature of a Bag.

161. If a large Arterie be entirely cut asunder, there follows an incessant bleeding until Swooning or Death; the Parts below the Arterie fall away, and are at last consumed by an ugly but slow Gangrene.

162. If any Nerves be entirely cut asunder they shrink back, hide themselves, draw the Branches that are a little above the Wound, stretch them, create in the neighbouring Parts Obstructions and Pain; and as to the Parts below the Wound, they become insensible, immoveable, and waste away.

163. Nerves that are prick'd or half cut asunder, create Pains which at first are sometimes dull and sometimes very quick and acute; first in the wounded place it self, and then in all the adjoining and neighbouring Nerves; from hence Heats,

Tumours, Redneſſes widely ſpreading, Fevers, a Delirium, Convulſions, an Inflammation; an opening of the inflamed Part with a running of a ſharp, thin, and often copious Serum; afterwards follow the loſs of Feeling, a Stiffneſs, a Drying up, and Unmoveableneſs of the Part, or otherways a Gangrene and Death.

164. All which (162, 163.) with very little difference happen in the wounded Tendons.

165. And the Membranes are ſubject to the ſame Diſaſters, as being moſtly Compounds and Products of Nerves and Tendons.

166. What Lymphatic Veſſels, ſuch as contain Fat, and the Veins and ſmall Bladders do undergo in Wounds, what they will occaſion, is eaſily underſtood from the Laws of Circulation, and by conſidering the nature of their Neighbourhood.

167. If the Wound lyeth open to view, it is ſoon known to be, and its Nature is alſo ſoon underſtood. 1. By the Sight it ſelf, having removed what covered it, and having ſtop'd the running and loſs of Blood. 2. By having an Anatomical Knowledge of the neighbouring Parts.

168. But the preſence of a hidden Wound and its Nature are known, 1. From Anatomical Knowledge, from the poſition the Patient was in, when he receiv'd the Wound, from the manner and ſtrength wherewith it was given. 2. From the defect of the Function following the Wound. 3. From the diſcharge of the Wound, whether within or without the Body. 4. From the conſequent Symptoms, ſuch as Pain, Hiccough, Convulſion, Tumour, *&c.*

169.

169. From knowing (167, 168.) it is easie to foretell the Events.

1. Whether the wounded Patient will live or die.

2. Whether the Cures be possible or impossible, entire or only in part.

3. Whether the Cure be easie, or difficult, like to be long or short.

4. What effects from the Wound will remain after the Cure; whether a wasting, numness, stiffness and unmoveableness, the Figure spoil'd.

170. Unavoidable Death from a Wound follows from five Effects, and consequently before a Jury such must be called mortal Wounds,

1. As cut off the Influx of the nervous Juice from the hind Brain to the Heart. α. The Wounds of the little or hind Brain called *Cerebellum*, and such of the Brain as are deep enough to inflict a great Wound in the long marrow *Medulla oblongata*. β. The Blood-Vessels within the Skul being broke with an effusion of Blood, which kills either by pressing hard or by putrifying there, when it cannot be taken out by means of Trepanning by reason of the Place where that Operation cannot be performed; which are chiefly the *Fontanelle* of the Head in Children; the Sutures, the superciliary Sinus, the Temples, the inferior parts of the Head, &c. γ. Deep Wounds in the Marrow of the Back-bone near the Neck. δ. And lastly, such as cut off the Nerves of the Heart, call'd *Nervi Cardiaci*.

2. Such as occasion the Blood of the Heart to rush forth through the Orifices of its pierc'd Ventricles

tricles: So that all Wounds of the Heart deep enough to penetrate into either of its Ventricles are mortal.

3. Such as turn off the Blood from the Heart, from the Brain and little Brain, either into the Cavities of the Body or out of the Body it ſelf, and cannot be healed becauſe of their Situation. Such are the large Wounds in the Lungs, Liver, Spleen, Kidneys, Pancreas, Meſentery, Stomach and Guts; of the Womb in pregnant Women, of the Bladder near its large Arteries; of the Aorta, the Carotick and vertebral Arteries, and other Arteries and Veins of the like Importance and difficult Acceſs.

4. Such as intercept Reſpiration or Breathing intirely, as the cutting of the Larinx when the ſeparated Pipe is withdrawn; large Wounds of the Bronchia, of both the Cavities of the Cheſt letting in the Air, of the Diaphragme penetrating

2. Wounds of large Arteries or Veins situated so as to admit the Hand and Application of the Surgeon.

3. Wounds of Bowels, where the Hand and Medicines may not only be applied but also retained long enough to heal them.

4. Such as kill by letting out their Liquids into such Cavities from whence they may be taken out without endangering Life; as the Chest, the lower Belly, the Ureters, Bladder and some Wounds of the Guts. *N. B.* 'A Cure of this 'last mentioned was very lately per- 'formed by a Surgeon * of St. *Anns* 'Parish, *Westminster*, on the Body of a Captain 'of his Majesty's Guards.

* *Brownhill.*

172. One may foretell a Wound shall be mortal, which was not such of its own Nature, from these Causes,

1. From omitting the cleansing and taking out of extravasated Pus, from whence a Wasting; or the leaving of extravasated Blood in such Cavities, where it must needs putrify.

2. From Errors committed in the Non-naturals; of which see our Author's Institutions at large, lately made *English*.

3. From a neglect or a mistake of the Surgeon.

4. From the natural or sickly Constitution of the Patient.

173. From these may be fetch'd Depositions of Surgeons concerning Wounds, and judge of the Time within which they'll prove mortal or kill actually.

174. Hence a Declaration may be made on Wounds, and a probable Estimate given of the Time of their *mortality*.

175. But the different Symptoms (159, 159.) as to their Causes are easily known to any one, who understands how and with what Instrument the vital and animal Functions are perform'd. Look back to what has been premised of the Diseases of the Solids and Fluids.

176. When the outward Coat of an Arterie (the inward remaining entire) is either prick'd, cut, bruised, drawn asunder, or corroded, the Arterie through the force of the Blood is dilated and forms a Purse or Bag, which by degrees will grow to the bigness of an Egg; acquireth Sides or Membranes, which at length grow callous; the same beats strong, in proportion to its Size; shines with a reddish Colour; if squeezed it disappears, the Blood retiring into its natural Channel the Arterie, and comes again when pressing is discontinued; it makes its Arterie wider; and the neighbouring Vessels, by pressing upon 'em, narrower: This is call'd *a true Aneurisme* (160.) whereof the Cause, Signs, and Effects are plainly discovered.

177. If an Arterie is wounded by the same Causes, and is not well enough consolidated, the same Effects will follow as in (176.)

178. When from the same Causes all the Coats of an Arterie are broke at once, and let out its Blood into the next extended Parts without voiding the same; there is soon made a Swelling from the collection of the extravasated Blood still encreasing without measure, which Swelling is soft, hardly beating, the Skin livid, scarce giving way when pressed, soon rottening, and soon occasion-

ing

ing a Gangrene of the adjacent Parts. This is *the Spurious Aneurisme.* (160.) whereof the Cause, Signs and Effects are easily known from this very Description.

179. Other effects from the cutting of a large Artery are soon known out of the Physiology as well as the Signs and Effects which appear immediately upon the cutting of a Nerve asunder, (161, 162.)

180. But that we may have just and clear Notions whence the stupendous Effects proceed of he prick'd or half-divided Nerves, as in (163, 64, 165.) We must consider what follows, tch'd from the knowledge of Anatomy and the imal Œconomy.

181. Every Nerve that is visible is a small ndle of less Nerves ty'd together by small ns, Arteries, Veins, and interwoven Lymatics, which afterwards are all covered over th one common Membrane. Through all se little Vessels as make up the Nerve, there ws continually a Liquor proper to each Chan-, from the Heart, Brain, *Cerebellum* and the *edulla Spinalis.* All these have ever a pretty ong power of contracting themselves.

182. Therefore the Parts of a Nerve entirely asunder, do shrink back from the place where Wound was given, towards the firm Parts which they are annexed; they hide themves among the adjacent and surrounding Solids, y are kept under by their pressure, their Orinces shut up together with those of all its Vessels; so that no other damage follows than what was said in (162.)

183. But

183. But if the Nerve be ſo cut or prick'd, that only ſome of the ſmall Nerves be ſeparated whoſe connexion made up the ſaid greater Nerve, Then the ſeparated Parts going backwards (182.) will draw the ſmalleſt Fibres which did tie the ſmall Nerves and Veſſels together (181.) ſo that there will be in them a continual ſlow tearing, and conſequently a continual great and acute Pain : Now muſt the Parts that are ſtill united ſuſtain alone the whole Power which they did before in conjunction with the former, ſo that they muſt be more pull'd aſunder, and tore, ſo that they muſt ſuffer very acute Pains, and being ſo violently pull'd they'll be ſqueezed ſo, as to let none of the Juices paſs. While the ſeparated Parts on one hand, and the coherent on the other are thus affected, the Veſſels between both are ſqueezed alſo ; ſo that all is ſtopped in their Paſſage, Blood, Lympha, and Spirits ; which are drove on and heap'd up ; ſo that all round the Parts are produced Inflammations of the three Kinds ; the Bloody, the Lymphatic and Spirituous. Hence are all the neighbouring Nerves, Tendons, and the Sheaths of thoſe Nerves, their Muſcles, Veſſels, *&c.* extended, ſtretch'd, preſs'd, and even convuls'd, from whence the Skins as cover the Brain, little Brain, and backbone Marrow, ſuffer by pullings and vellications, which diſturbs all the Actions of the Brain.

From whence follows unavoidably the black liſt of all thoſe terrible Symptoms ſumm'd up in (163, 164, 164.)

184. And

184. And it is understood which and why the pricking, tearing, and wound of the Nerves be so fatal? And also, why the Membranes, Tendons and some Vessels are subject to the same ill Symptoms.

185. That a Wound may heal, it is necessary,

1. To remove out of the same all what being left there would hinder its uniting, whether they be Liquids or Solids, corrupted, or parts of the wounding Instruments, or any other Bodies thrust in there, *&c.*

2. To supply the loss of Substance by procuring the growth of new.

3. To Unite the sever'd Parts, and to contain them in that union.

4. To close up the Surface of the Wound by the production of a Skin most like unto the former, and endeavouring not to leave a greater Scar than needs must be.

186. Fragments of Metals drove into a Wound, or of Stones, of Wood, of Glass, or Bullets, congealed Blood, dead Flesh, or Skins, broken Bones or Splinters; All these ought first of all to be removed, if advantageous.

187. It will be plain to the Surgeon, from the nature of the Wound duly consider'd; of the wounded Part, of the Matters therein driven, from the Strength of the Patient, from the Symptoms which may or must thereupon follow; whether he ought to leave them there till a fitter opportunity, or take 'em out.

188. From the same Circumstances doth it appear with what Instruments, and after what manner they ought *to be removed.*

189. The Wound thus cleans'd, if any thing has been taken away from the Subſtance of the Body, it ought to be fill'd up again with a Subſtance like unto the former. This may be done, 1. If the ſmall Arteries, lymphatick Veſſels, and Nerves are thus again placed and faſtned as to receive their own proper Juices and to tranſmit them. 2. If that ſound and natural Liquid flows in a due quantity and with a due force into thoſe Channels.

190. For hereby (189.) will the Canals and Veſſels, as were wounded, drawn back, ſhut up, ſqueezed, and moſt dried up, be fill'd again, moiſtned, extended, lengthned, applied to ſuch others of the reticular Plexuſſes as are nearest; Laſtly, they are glew'd together by means of good Juices.

191. And whilſt all theſe Things are doing, (190.) from all the points of the hollow of the Wound, and with an equal Strength from both Sides and altogether, the Cavity of the Wound fills from all Sides to the Centre with a Liquid and Solid matter, like unto that which was loſt.

192. Hereto therefore is required, 1. A good and convenient Diet, that the Chyle, the Serum of the Blood, and the nutritious Matter be ſoft, glewiſh, and not eaſily putrifying; but of an eaſie digeſting, and converting into a good Subſtance. Such are chiefly Decoctions from crude or fermented mealy Seeds; Emulſions, Milk, Pottages, ripe Fruit boyl'd, ſoft and taſteleſs Garden Herbs.

193. The

193. The known constitution of the Patient; the consideration of the Weather, Season or Custom; the nature of the Concomitant Illness, shew which of these, and which way prepar'd ought to be chosen.

194. Every thing whose Acrimony or Sharpness doth encrease too much the Motion of the Liquids, is to be avoided. So that Salts, Aromatics, Acids, poignant Herbs and Wine, are not allowable to wounded Patients.

195. Of the same hurtful nature are all such things as are easily putrified or rotten: So that too thick and strong Broaths, and Herbs of an alcaline Nature are obnoxious, such as Radishes, the several sorts of Cresses, Cabbages, and the like.

196. Such Things also as are not easily convertible into Chyle and Blood: that is, Those things that have been salted and dried either in the Air or Smoak; or such as have much Fat, as Lard or Pork, and fat Fishes, *&c.* Lastly, such as are Slimish, as most of the coarse Peas and Beans, and crude mealy Vegetables.

197. To the same end (189.) contribute such Medicines as remove the impediments of Consolidation (190, 191.) and are mostly given in the form of Decoctions or Apozems. Those are to vary according to the Nature of the Obstacles which arise in the course of Cure; Nor is there any one yet thought of nor to be supposed, which is able to answer all Occasions, whatever some Quacks may boast of.

198. So that according to the ſeveral Occaſions they are made up of attenuating, thickning, mitigating, quickning Medicines; of ſuch which correct by a peculiar and ſpecifick Quality, as open, looſen, or bind; and are conſequently often of contrary Virtues.

199. The known Nature of the Patient's ill diſpoſition, and the titles of theſe Remedies ſhew, which of them all are the propereſt in each particular Caſe.

200. A dry Air with a moderate Heat, is the Beſt.

201. Let the Body be kept open, by uſing emollient, looſening or purging Medicines.

202. Sleep ought to be procured with Anodynes, a moiſt ſoft Diet or Opiates.

203. The Patient ought to be chearful; To abſtain from all Venereal acts, and to be as quiet as poſſible.

204. To the end the Canals may remain in that due condition deſcribed (190.) And that the Liquids may not putrify in the Wound, whereby they would dammage the Action mentioned (189, 190, 191.) The Air ought to be kept from it; the whole Wound ought to be fomented with ſoft balſamick vulnerary Medicines, and to be filled up with Tents dipped in nervous Ointments, taking care not to make them ſo hard as to make a great preſſure. *NB.* "Some Surgeons among the Moderns have omitted entirely the uſe of Tents as pernicious, and chiefly *Belloſte*, in his *Hoſpital Surgeon*, condemns them.

205.

205. For the which (204.) to retain in their proper places, Plaisters are of use, and that hardly in any other Sense than as they stick, and thereby keep the Lips of the Wound from going asunder.

206. The Liquids flowing towards the Wound, and falling into it, half-dead Fibres, obstructed Canals, and tumefied ones, create in the Wound *Pus*, a thin ill-natured ulcerous Juice called *Ichor*, nasty Matter, or spongy Flesh.

207. Which are remedied by Digestives, cleansing, corroding or drying Medicines, and often by Compresses and Squeezing.

208. These are to be applied or administred until a white, soft, glewy, smooth, and even-temper'd Pus appear, from under which all nasty Matter has been cleans'd; Bruises and Swellings have been consumed; Those that were corrupted by the Air separated; the Hollows fill'd, and the divided Parts healed up again.

209. Besides such Medicines ought to be applied, as have been of Old; and yet by many, though erroneously, said *to create Flesh*; of which kind are Gentle Digestives.

210. But if after having done all that answers the first Intention (185.) and (186. to 188.) it be found that there is no loss of Substance, the Lips of the Wound ought to be join'd so, that the Parts which were naturally united before their Separation may be again applied and stick to each other, and be retain'd in that Position.

211. The first of these is obtain'd, 1. By putting the Part in that Position, as it has naturally

out of action. 2. By a gentle and even compreſſion of the Parts towards each other: So that they may be contiguous in their whole Surface, and remain ſo.

212. They may be retain'd in that Union, 1. By ſticking Plaiſters cut in the ſhape of Fingers to ſtick on ſeveral parts, without covering the whole Extent. 2. By ſuch as are fixed upon the ſound Parts at ſome diſtance with Loops ſticking out, through which Threads are put, to draw the Lips of the Wound to each other without preſſing upon them; which are moſtly uſed in long cuts acroſs the Fibres of the Muſcles and the Skin, or of looſe Parts.

213. 2. By applying of Bolſters or Compreſſes, and retaining them with the ſeveral Sorts of adapted Bandages; ſo that the widely gaping mouths of the Wounds may remain quiet in an even degree of preſſure, and may ſo unite; which is eaſily obtain'd by a certain and proper direction of the Preſſure: This obtains particularly in Wounds which are along, not acroſs the wounded Part.

214. 3. By Sutures with Steel Needles, which may be ſtrait in ſmall, but crooked in Wounds of a great depth and hollowneſs, their Steel muſt be ſharp-pointed, and their Head ought to have an eye through which the Thread or String is run, and its ſides ſhould be like a ſmall Guttur for placing of the waxed Thread, *&c.* they ought to be ſtuck in at ſome reaſonable diſtance from the Wound, and as deep but not deeper than the bottom of the Wound, and is to be run through the

the oppofite Side from within outwards, having firft tied the Lips of the Wound together with a Thread at feveral Diftances, and gathering at laft all the Stitches together by means of a very fmall Linnen Bolfter : This Operation muft be repeated from either the middle, or one extremity of the Wound to t'other, as occafion requireth. Then are the Lips to be anointed with Balfams, having put feveral fmall Linnen Bolfters at each knot : Laftly, the Wound is to be covered over with a Plaifter.

215. This ought to be practis'd in a green and bloody Wound, yet free from a great Hemorragie; in fimple, full, clean, crofs, oblique and angular Wounds.

They ought not to be practis'd in Wounds where there is a great flowing of Blood, nor in fuch as are old, fanious, purulent, foul, bruis'd, dangerous from the dammage of larger Veffels, robb'd of its proper Subftance, cover'd over with Crufts, fuch as are too deep, much inflamed, poifoned, or fituate in fuch Parts as muft continually move.

216. 4. By a Needle remaining fixed through the Lips of the Wound, and having a Thread tied round about it, fo as to hinder their going afunder, but on the contrary joining them. Which Operation is proper in great and gaping Wounds of depending Parts, fuch as the Hare-lips, *&c.* See *Dionis's Chirurgic Operat.*

217. The laft end is obtain'd by taking care, that each Part do anfwer its oppofite as exactly as it was in health, and be fo kept, that they be

neither too much preſſing upon each other, nor too looſe; avoiding all burning, Stipticks or adſtringent Applications; and above all, by preſſing moſt evenly and equally upon all the ſides and parts of the Wound. All which may be obtain'd by doing all what has been premis'd, and afterwards applying a gently drying Medicine, and concluding with cleanſing the Cicatrix with ſpirituous Fomentations to ſolidate the Skin, *&c.*

Of Hæmorrhagies.

218. If much Blood doth iſſue out of the Wound occaſioned by its Cauſes (159, 160.) it is ſtopp'd, 1. With a hot Iron. 2. With Cauſtics or Corroſives. 3. Adſtringents. 4. Tying the Veſſels with a Thread. 5. Cutting them aſunder. 6. With Bandages and Bolſters upon the Veſſels, cloſing their Channels.

219. A Revulſion here is of no uſe, unleſs the

222. So that the acutest Pain can be but short in the same Part; but a small one may last long, and increase and decrease by times.

223. The Cause therefore of all Pain is that, which can occasion that Extension.

224. To which refer 1. The Natural Power of contracting being bore but by a few Fibres, whilst the others as should have bore their share are separated (183.) 2. All that distends a Vessel made up of interwoven nervous Fibres by too much repletion; hereto refer Obstructions, full Habits; abounding ill Juices; and the increased circular Motion. 3. Whatever pulls aside violently, as Disjointings, Tumors, or External force. 4. All Wounds and Corrosives.

225. Hence one may know the many different causes of Pain in Wounds.

226. And its Effects, as Restlesness, Tossing, Waking, Fever, Heat, Dryness, Convulsions, and Gangrene are as plain.

227. And how to give Ease is known from looking into the difference of the Cause.

228. The Cause of Pain is removed, 1. By loosening the Fibres. 2. Resolving what was coagulated. 3. Lessening the Motion and Quantity of the distending Matter. 4. Remedying that uneven and violent pulling. 5. Softning the sharp Humors. 6. or discussing the same. 7. Taking out whatever doth separate or cut the Fibres.

229. The Sense of Pain may be removed, though its Cause subsists, 1. By making the Nerve incapable of feeling, by a pressure, cut-

ting, or burning of the ſame. 2. By blunting the very head and fountain of all Feeling with Opiates: Which alſo remove ſeveral Effects proceeding from the Senſe of Pain, (226.)

Of Convulſions.

230. All violent, forced or involuntary as well as alternate repeated contraction of a Muſcle, is call'd *a Convulſion.*

231. Whereof the Cauſe is whatſoever doth puſh the nervous Juice alternately in the convuls'd Muſcle.

232. Which therefore may exiſt and have its place in Wounds, whether it be a foreign Sharp irritating Matter, or the State of the very Nerve it ſelf being wounded, as deſcrib'd in (163, 164, 175. 183, 184.) or from a Loſs of too great a quantity of Blood.

233. No leſs do we know its Effects, which are the Diſorders of all Functions in the Body.

234. The Cure is perform'd, 1. By removing whatever doth irritate, by the skilful hand of a Surgeon (187, 188.) 2. By ſoftning the ſharp Acrimony, or diſſipating it. 2. By changing the condition of the Nerves with means deſcrib'd in (228, 229.) 4. By filling the Veſſels again with a ſoft, friendly, and liquid Aliment, given in a ſmall quantity, but often, 5. by ſtopping at the ſame time the loſs of Blood.

235. If the Wound tumefieth and inflameth a little it is a good ſign; but if much and ſtill encreaſing it is bad. In this caſe do avail bathings, fotuſſes, anodynes, and applications of nervous Medicines

Medicines to the wounded Part, or to the whole Body of the Patient; of which hereafter when we come to treat of Inflammations and their Cure.

236. If Blood is fallen out of the Wound into any Cavity of the Body, it ought to be taken out forthwith, by placing the Body in a convenient posture for it; by sucking it through Pipes, if it be fresh, and not yet coagulated; And by either dilating the Passage towards it, or making a new and more convenient one for that purpose.

237. If the Wound penetrates into firm and adhering parts of the Body, a passage must be made to void all foul and heterogeneous matter by Pressures, Washings, Ligatures, making a new Orifice, or dilating the old one.

238. The Wound may be dilated with a Knife, putting in Lint, a Sponge, a piece of *Gentian* Root, and such like dry Things tied to a String lest they fall into the Cavity; which dilate the Wound as they imbibe the Humors and swell with them.

Of the Wounds of the Head.

239. The Wounds of the Head either injure only the outward and common Teguments; or also the *Periosteum*, the Skull, the *Dura Mater*, or even the *Pia Mater* at the same time; Or the Vessels, Substance, Cortex, Marrow and Ventricles of the Brain it self.

240. That only the outward Parts are wounded may be known, 1. From the wounding Cause and its Figure. 2. From the slightness of the

Blow

Blow or Thruſt, *&c.* 3. From the circumſtances of Solidity, but chiefly Figure of the wounded Part. 4. From the ſlight Symptoms. 5. By looking upon and examining the ſame with 6. a Probe.

241. Notwithſtanding they ſeem Slight they often become Dangerous, becauſe of their being near ſome Muſcles, Tendons, Sutures, the Perioſteum, the Skull, Nerves, Veſſels, Brain, *&c.* and alſo from the contracting Power of the wounded Part.

242. Chiefly if there be any conſiderable Bruiſe near it.

243. Or if under a ſmall Orifice the offended Part be large and gathers foul Humors.

244. For the gathering of extravaſated matter occaſions wonderful Tumors, St. Anthony's Fires, pituitous Swellings, Pains, Convulſions, Putrifactions of the Bones and Perioſteum, Fevers,

246. But if the Symptoms of (241.) be present, the Cure and Medicines ought to vary according to the difference of the Wound and of the Part.

247. Whatever is bruised here, must be carefully digested by means of such things as either can dissipate or help Suppuration, but such always ought to be chosen as are advantageous to the Nerves and Membranes (204. 207. 245.) or they must be cut away.

248. If there is a gathering of Matter, the Wound must be dilated with the Knife, and to be cleans'd. (238. 207, 208.)

249. If the *Pericranium*, or Hairscalp, be so much wounded, that it discover the Bone for a long while, or that it putrify; the Bone is deprived of the Vessels of the *Periosteum*, and consequently of its own; the Liquor in them Stagnates, and being putrified separateth a Scale, after which the Bone grown yellow, dusky, and black, doth deposite a Leaf.

250. The Causes whereof are the Continuity of the Vessels being broke off, or the pressing of cold Air, which also dries up the Ends of the small Vessels in the Bone; No occasion therefore to accuse it of Malignancy.

251. The Effects are an Increase of all the Ills in (249.)

252. The Cure is effected, 1. By piercing the Bone as deep as its middle with a little Trepan applied to several, but near adjoining places, whereby the Exfoliation is prevented, and the Periosteum is made to grow again. 2. By pressing

from

from thence all Pus, foul Matter, and keeping out fat watry Things and the Air; and applying ſeveral Bolſters dip'd in Tinctures of Maſtich, made with Spirit of Wine. 3. By dreſſing the ſame ſeldom and quickly.

253. By which Method there ariſeth out of all theſe Perforations and from all ſides in a ſmall time, as it were, a new fleſhy Subſtance; and afterwards the reſt heals, as from (245. to 248)

254. If the Skull is wounded, according to the different Cauſes it may be fiſſur'd, fractur'd, bruis'd, depreſs'd or robb'd of its Subſtance either with or without Splintering; and all theſe may reach either one or both the Tables of the Cranium.

255. That the Caſe is thus, may be known, 1. From knowing the Strength of the Blow. 2. The Largeneſs of the Wound compared with the Figure of the Part. 3. Probing. 4. Putting Ink

5. A corruption of the Integuments of the Skull and Brain, Convulsions, Sleepiness, a Palsie, an Apoplex and Death.

257. From which (254, to 256.) any body may know this Accident, and prognosticate the Event thereof.

258. The Indications toward a Cure, are 1. The uncovering of the wounded Part. 2. Its Cleansing. 3. The Trepanning of the Bone through. 4. The re-engendring of its *Periosteum.* 5. The healing up the Wound.

259. The Part is uncovered, 1. By cutting the the Integuments through to the very Bones, and making the Incision either strait, or in the form of an V, or perpendicular, or cross-ways, or in the form of a T. This ought to be done cautiously when it is upon the fractured or loose Splinters, choosing a different way according to the difference of the place and of the hurt. 2. By separating the incided Teguments exactly with a Launcet. 3. By filling up the space with Lint.

260. The Blood, Pus, bloody matter and foulness, are suck'd up by small Sponges; the Fragments, Splinters, Scales of the Bone, if small, loose from every side of the Membrane, and lying bare to the Eye, all these are removed with Pincers, or cut away with Scissars: This you may call *an artificial Cleansing.*

261. If these are too large, sticking too fast to the quick-parts, and seated too deep, they must be left there; for they'll either separate of themselves, or grow again to the quick and whole parts. This is *the natural Cleansing.*

262. If

262. If the Bone appears bruiſed, white, tawny, livid, or fiſſur'd, it muſt be bored through, making ſeveral little holes here and there, as ſaid in (252.) for through theſe the Live parts iſſue forth, very ſoon driving the Dead ones before them.

263. From which follows a ſpeedy growth of a new Perioſteum.

264. How to cure what remains in this caſe, has been deſcribed from (245, to 248. and 253.)

265. From hence it is manifeſt, why a ſmall Fiſſure of the Scull is often more dangerous than a large Bruiſe, (256.)

266. And it appears alſo, that this Method is preferable to the Burnings, Launcings, and Trepannings of the Ancients, in all theſe caſes mentioned in (249. 254. 256. 262.)

267. When the Scull is depreſs'd in Children, or in grown People after a Fracture the Brain is ſqueezed; and according to the different places of it thus preſs'd, the different bigneſs, depth, ſharpneſs, and pricking of the preſſing Body; are produced, a Dimneſs, Drowſineſs, Vertigo, Tinkling, Cloudineſs, Delirium, vomiting of Choler, Head-ache, Convulſions, Palſie, involuntary Stools and Urine, Apoplexies, Fevers, and Death.

268. And alſo when the Brain it ſelf is thus offended, and thence corrupted by an Inflammation, Suppuration, Gangrene, Fungus, or great loſs of Blood; The ſame Ills as juſt now mentioned are the neceſſary Conſequences.

269. That the Caſe is ſuch, you may know by feeling, ſeeing and removing the Integuments.

270. The

270. The Removal of the Pricking, the Restitution of the pressing Body in its natural State, the keeping it in that State absolves the Cure.

271. Therefore the soft and first uncover'd Scull of the Children is lifted up by means of a sticking Plaister; and in grown People, if too solid for that Purpose, it is raised with an Elevator; if the Bone gives way and is unfit for Trepanning, the Scull must be perforated next to the Fracture, so that the loose and depressed Bone may be lifted up with a proper Instrument: During the Operation it will help the Patient to sneeze and hold his Breath.

272. It will keep in this Situation by avoiding all pressing from without, by means of a convenient Bandage.

273. If in a Fissure, Fracture or Contusion of the Scull, any broken Arteries, Veins or Lymphatick Vessels have let out their Humors; These by pressing the Brain will produce the Disorders of (267.) then putrifying into Pus, or watry Blood, they infect the tender adjacent parts of the Brain, from whence again the same Effects. These Vessels by running from the Scull into the *Dura*, and from that into the *Pia mater*, from thence into the Substance, Sinusses, and Ventricles of the Brain, occasion during the Cure many and sundry ill Symptoms more or less dangerous, according to the importance of these places.

274. A violent Convulsion of the Head will produce the same Symptoms, by breaking Vessels

ſels in the Brain, or by preſſing the ſame; Although the Scull very often be left entire.

275. Theſe Diſaſters are known from their Cauſe, its force, the place receiving its impreſſion; from vomiting Choler, the leſſening of Sight, Hearing, Smelling, Taſteing and Feeling, the ſame being depraved or entirely gone; from a Vertigo, Dimneſs, Fall, Sleepineſs, Snoaring; Palſie, Convulſions, Delirium, Lethargy, Apoplexy, ſtanding of the Hair; increaſe of Fever, Blood coming and guſhing through the Mouth, Noſtrils and Ears; and a redneſs of the Face and Eyes.

276. What place within the Scull is hurt may be known, 1. From the outward Appearances (249. 254 to 256. 262. 267. 269.) if there be any. 2. Having found out the affected part of the Scull by the Method in (255.) 3. From the ſwelling and redneſs of the Skin, made bare upon the application of Plaiſters. 4. From the ſpontaneous Motion of the Patient's Hand towards the affected place, whilſt he is Speechleſs. 5. From the Symptoms when one Side is paralitick, and t'other convuls'd.

277. Then 1. ought the extravaſated Blood to be taken out immediately. 2. The infected Parts to be cleans'd. 3. The ſmall Bones, which may ſtick into the Brain, to be pull'd out.

278. The extravaſated Blood may be taken away; 1. By ſucking it back. 2. Diſſipating. 3. Trepanning of the Cranium.

279. It is ſuck'd back again, if by a Large bleeding in the Arm, and its Lieutenant a Purge, it

it is drove back again into the empty'd Veins by the helping strength of Life.

280. So that both these Evacuations are immediately to be made, and that to the utmost of the Patient's strength; and if useful they are, as occasion serves, to be repeated, and again, if you find the Symptoms to grow milder and fewer.

281. The attenuated Blood is entirely dissipated, 1. By sucking back part of what is to be dissipated. (280.) 2. Attenuating by watry Dilutors, and drinking resolvent Medicines hot. 3. Applying to the shaved part Plaisters, Cataplasms, Fomentations made of nervous and cephalick Discutients. 4. Applying the same to the Ears and Nostrils.

282. Which if they do not immediately carry off or lessen the Symptoms considerably, but on the contrary, either continue as bad or grow worse: The operation of the Trepan must instantly be perform'd, to make an opening for to let out the Humors (273. 277. 1°.) and to have room for cleansing (277. N°. 2.) and pulling out the Fragments. (277. N°. 3.)

283. The place where the Trepan is to be applied, is known from the Discovery of the offended place, where it is much fitter to do it, if no Circumstances forbid it.

284. Forbidding Circumstances are, 1. Sutures. 2. Many Muscles. 3. Cavities of the *Os frontis.* 4. A large Artery inserted into the Bone. 5. The depending situation of the place. 6. A wagging of the fractur'd, bruis'd or rotten Bone. 7. The Unevenness of *the Scull first rais'd* and then sunk and *hollow.*

285. The next beſt place for Trepanning is the neareſt to the known offended place.

286. And even if urgent Symptoms command as (273. 275.) though no certain place cou'd be aſſign'd (276.) Yet the Trepan muſt be applied firſt on one, and then on t'other ſide of the Scull, to the end mention'd in (277.)

287. The place being well marked out, and the hair ſhav'd off, the Teguments muſt be cut away and parted from the Scull, the Lips of 'em muſt be rais'd up, the Bone dry'd, cover'd over with Lint, the Blood ſtopp'd (218.) by which the Pain is eas'd, the Inflammation prevented, and if there be no urgent occaſions, after the Bandage is aptly laid on, the Dreſſing is left on till next Day.

288. Then having ſecured the Head from moving, ſtopp'd up the Ears, and warm'd the air of the Room; the Trepan is applied to the cleanſed Bone, together with its Pyramid to fix it, and it is moved with an even and equal turning with the top reſting upon the Forehead of the Surgeon, till he hath entred it about half a Line deep.

289. Then taking out the Pyramid continue to ſaw equally, carefully cleaning from time to time both the teeth of the Trepan and the circle made in the Bone, till the Blood breaking out, the ſoftneſs of the Bone, the change of the Sound in ſawing, tells you that you are arrived to the diviſion of the two Tables; which ſometimes is not diſcernible, and therefore look'd for in vain.

290. Then

290. Then, having wash'd away the Blood, or made it run together with hot rectified Spirit of Wine, and taken out the Saw-dust carefully, turn the Trepan with the utmost Care, slowly, patiently, one or two turns round, and at every motion taking out the Sawdust, look constantly whether the Colour changes in the rased Circle, and whether you have penetrated equally on all sides; then leaning a little more on the least penetrated side, according to the different colour shewing it self, loosen the Bone equally evenly, so that it may cohere but a little.

291. When the Colour turns blewish and appears the same all round the Circle, and the shaking of the Piece tells you that the Scull is most entirely perforated, take out the piece with the Leaver, the Myrtle Leaf or a Spoon.

292. Then smooth the Circumference of the perforated Bone with the Lenticular, take out the Saw-dust, make way and facilitate the exit of the Blood and foul Humors, which will flow out on its Surface by stopping the Nose and Mouth of the Patient, causing him to sneeze and to hold his Breath; and by repelling with the utmost Caution, and not too often, the *Dura Mater* against the Brain with the Lenticular; and then fill the Hole, and cover it over with a thin and soft Linnen, soak'd in Medicines of the nervous kind, and applying over all this a Leaden Plate, resting on the Surface of the Cranium with its Ears.

293. And afterwards the same Things are applied as were set down in the Wounds of Membranes, (from 183, to 239.)

294. And thus do the Margins of the hole in the Bone exfoliate within 40 or 50 Days, ſooner or later, according to the age of the Patient, and the ſize of the Fracture; every Day fleſh grows filling the Hole, which by degrees grows harder, and at laſt acquires the Solidity and the Shape of a calloſity in Bones, either hollow or overtopping; In which there generally remains ſome Weakneſs and Pain.

295. The Inflammation, Impoſthumation, Gangrene, or the excreſcent Fungus of the Membrane, or of the Brain it ſelf, are remedied by the ſame Means as have been ſaid to be proper in theſe Caſes, and by the application of Antiphlogiſtics, detergent, ſuch as prevent Putrifactions, by tying or cutting the laſt, and applying over them the Leaden Plates to keep that Proud-fleſh under. Moreover, the Wounds of the Head are deem'd malignant, 1. From their place, which when in the hind-part of the Head, or the top, or the fore-part of the Head in Children, or on the Sutures, are the worſt. 2. From their Symptoms, ſuch as a Fever with Cold after the ſeventh Day and with a ſhaking, if the Wound looks pale, dry, livid, the bone rough, yellow; if a Palſie of one Side enſueth or Convulſions. 3. From the Patient's Age. 4. His Conſtitution, 5. And the Seaſon of the Year.

296. If there appears under the *Dura Mater*, after the boring through of the Cranium, any Blood, Pus, or Foulneſs, the Surgeon muſt boldly cut through it to let thoſe out.

The

The Wounds of the Thorax.

297. The Wounds made in the Chest, but not penetrating into its Cavity, are known to be such by Inspection, the Probe, the air no ways flying out, the returning of warm Water when injected into it, the Situation of the Body in the same posture as when the Wound was receiv'd, by certain and sure Signs that the Lungs do adhere to that part of the Chest where the wounding Instrument has pierc'd.

298. If these Wounds descend obliquely above or within the Ribs, it often happens, that the Pleura being eat through, they'll let down Pus into the Cavity of the Thorax, and chiefly if by any Means its passage outwardly is hindred: Thence an Empyema, which produceth many Ills.

299. A Surgeon therefore in the Cure of such a Wound ought to abstain from Tents or Pledgets, drawing Applications, or such as make too strong a Pressure; But on the contrary ought to dress the Wounds with cleansing, balsamick Medicines, Bolsters, and a gentle Bandage and recommending an apt position of the Body to the Patient.

300. We know that the Wound doth penetrate into the Cavity of the Chest, 1. By comparing the Instrument with the largeness of the Wound. 2. By probing into the Wound after having placed the Patient in the same position as he received the Wound. 3. By bidding the Patient to draw his Breath strong whilst the Wound is kept close;

and then ſhutting his Noſe and Mouth cloſe, to force the air out, as in breathing out and opening the orifice of the Wound, out of which it will then iſſue forth often with making a Sound from its being agitated in the hollow of the Cheſt. 4. By Injection. 5. By diſcovering an *Emphyſema*; that is, an Inflation like that of Beaſts which are blown up after they are kill'd. 6. By the coming out of Blood made frothy by the aïr, which mixes with it, and makes a Noiſe at its coming out of the Wound.

301. The Effect of ſuch a Wound is often, 1. A preſſing of the air got into the Cheſt upon the Lungs, from whence they become unfit both for Breathing or Circulating of the Blood. 2. An effuſion and accumulation of Blood into the Thorax. 3. Its Putrifaction when extravaſated, heated, ſtirr'd about, and ſhut up on all ſides. 4. From hence a waſting, eating out, corruption and ſtench

303. The same ought forthwith to be drawn out, 1. By putting the patient in such a Posture, obliging him to make such Motions, as together with some straining of the Body, will expel the Blood. 2. Sucking through a bending Pipe open at the Sides but obtuse at the End. 3. Injecting a diluting, resolving and cleansing Liquor. 4. Dilating the Wound. 5. Making another opening between the third and second Rib from below, at the distance of about four Fingers breadth from the Vertebres, and from the Lower corner of the Shoulder-blade, with a cutting Instrument in a parallel Line with the Ribs about the middle distance from them, holding the Edge downwards.

304. If these Wounds are not distended with Tents, are seldom open'd, the air kept from them, and that which was got in be expell'd by means of sucking and breathing out to the utmost at the same time, and that care be taken not to let any cold come near them, they are soon and very well cured, unless they be incurable.

305. And then may all those terrible Symptoms (301.) easily be prevented.

The Wounds of the Abdomen.

306. The Wounds of the Abdomen are known not to penetrate into the Cavity of it, 1. By Probing and inquiring into what posture the Patient was in when the Wound was given. 2. Injection. 3. Knowing the wounding Instrument and the Nature of the Wound.

307. If they have penetrated almoſt as deep as the Peritoneum, and the Teguments being thereby much weaken'd, they may be the Cauſe of Ruptures in robuſt People.

308. Therefore Care muſt be taken of theſe by proper Sutures and Bandages; and afterwards the common Cure to all Wounds will be ſufficient.

309. But that they penetrate into the Cavity will appear, 1. From Probing and knowing the Poſture. 2. Injection. 3. Knowing the Inſtrument and the Nature of the Wound. 4. Examining the Nature of things coming out of the Wound.

310. If then all the Symptoms are ſlight, there be no Fever, Pain nor Inflammation, no Blood comes out of the Wound when the Patient lyeth down upon it; The injected Liquor comes out again not altered, we conclude that none of the Entrails are hurt.

311. The Air muſt immediately be kept out, That which got in, muſt be forced out by Sucking and breathing out ſtrong; the Integuments muſt be ſowed together again by the operation of the Suture of the Belly; the Tents muſt be removed; and the Cure will be quite performed by anointing the Lips of the Wound with Balſams, lying upon the Wound, and very quiet; a ſoft, moiſt and ſpare Diet, and Dreſſing ſeldom.

312. If the Pain is acute, and there be Signs of a Fever and Inflammation; if Blood, watry Blood, Eatables, Drinkables, Chyle, Choler, Pus, Urine,

Urine, Ordures, Stench, do issue out of the Wound; If the wounding Instrument, the posture of the Patient in receiving the Wound and its Nature, Paleness, a cold Sweat, Restless, fainting Fits, and a deficient Pulse, are known and observed, the Surgeon knows certainly that the Bowels of the Lower Belly and which of 'em are wounded.

313. Then follow innumerable ills, partly, 1. From the Nature of the Bowels, consisting mostly of tender and many Vessels, not many Muscles, wherein the Humors and Liquids circulate with much difficulty, and not but when the Abdomen is close and whole. 2. From the interrupted function of the Bowel. 3. The quantity of spil'd Blood and its Corruption. 4. The action of the Air entred at the Wound, which is much rarify'd and consequently presseth much upon all the contain'd Parts.

314. From whence they often prove Mortal. But if the Wounds of the Guts are large and at hand, they must be sowed; if small, they are to be left to heal of themselves, and the rest must be followed as in (311.)

315. If the Gut unwounded and unhurt gusheth out of a large Wound in the Belly, let the same be fomented with live Animals cut through the middle, or some other nervous Fomentation; then let it be put in again, and the rest perform'd as in (311.)

316. If the same coming through a small Wound, swell'd up with Wind, an Inflammation, or Excrements, cannot be reduced; let

it

it be done by the help of a Fomentation, pricking the ſame to let out the Wind, or by dilating the Wound.

317. If Part of the Pipe of the Gut is carried off by a Wound, an Impoſthume, or Gangrene; the Surgeon muſt ſow the upper Part at hand or skilfully brought thither to the hole which the Wound has made.

318. If the Caul has got out, and is yet moiſt, warm, and red with Scarlet Blood, it muſt be put in again, as in (316.)

319. If the ſame be dry, cold, livid; whatever is ſo, muſt be either cut off or tied off with a String; and the reſt being cured by good Fomentations, muſt be reduced again in its place.

320. Large Bleeding, Glyſters in the beginning if the thick Guts be unhurt, a good Diet, and gentle breathing, Reſt and lying down, are the chief Remedies in theſe Caſes.

Of Contuſions.

321. When a blunt Body hath broke at once ſeveral Veſſels by its motion, reſiſtance or preſſing, That hurt is called *a Contuſion.*

322. Which raiſeth the Idea of an Accumulation of ſmall Wounds, with a rubbing or wearing away of the Solids and ſmall Veſſels.

323. The Effects therefore are, a tearing Solution of united Parts, a bruiſing Deſtruction of many, an Effuſion of their Liquids into the neighbouring empty places whether naturally there, or occaſioned by this very accident; and innumerable more ills which may proceed from *theſe.*

324. But

324. But the worst of these is, when the external Coats or Integuments being whole, the internal Parts are thus bruised, that the Liquids are stagnated, gathered, putrified; from whence an Ecchymosis, a spurious Aneurisma, a blewness in the Skin, an Ulcer, Gangrene, rottenness in the Bones, and in the Glands a schirrous Tumor and a Cancer.

325. It often hurts the Bones, and then follow all the Symptoms describ'd from (249, to 257.) and an offence of the Marrow, from whence Ulcers, Fistules, Caries, Putrifactions; for the Marrow will be affected in the Bones, as we have seen the Brain to be in the Wounds or Bruises of the Scull, (273. and 274.)

326. And also sometimes the Muscles, from whence large Imposthumations, Gangrenes, Palsies and stiffness of the Parts.

327. It often spoils even the very Entrails, so as to occasion therein Inflammations, Suppurations, Gangrenes, schirrous Tumors and Hardnesses, and to deprave their Functions.

328. So that from (322, to 327.) duly considered, it is easie to explain so many wonderful and dreadful Diseases which usually follow Contusions; and may be foretold innumerable acute as well as chronical Diseases.

329. It is known to be present and what part it affects, 1. By Inspection and Feeling. 2. By the Effects of pain, numness, heaviness, and the Colour being changed from the natural into a red, tawny, leaden, black, yellow, or green; by the loss of Blood or succeeding Gangrenes. 3. By

comparing

comparing the wounding Inſtrument and its Figure with the Shape of the wounded Part.

330. And it is well known, 1. That an inward and large bruiſe of the noble Entrails is altogether incurable, and muſt needs occaſion ſeveral Diſeaſes and Death. 2. That a bruiſe of the Bones is very dangerous, very difficult to cure, chiefly about the Joints and the Marrow. 3. That the contuſion of the Cranium is the worſt of all, as has been ſeen, becauſe of the nearneſs of the Brain. 4. Thoſe of the larger Glands, near or behind the Ears, under the Armpits, in the Breaſts, the Pancreas, Groins and Womb, to threaten Schirrous Tumors and Cancers, and all the Diſaſters that follow them.

331. In curing Contuſions, Endeavours ought chiefly to be uſed to reſolve them, to prevent Impoſthumations, but above all a Gangrene.

332. A Reſolution is obtain'd by removing all extravaſated Humors without any farther breach into the Veſſels.

333. And this is perform'd, 1. By rendring thoſe extravaſated Liquors fluid again. 2. By looſening the neighbouring Veſſels. 3. By forcing thoſe Fluids back again into the Veſſels, by emptying them, or rubbing them.

334. So that letting Blood largely; giving inſtantly a ſtrong Purge, but of the cooling Kind; applying to the Part a penetrating, looſening, and reſolving Fomentation; hot rubbing upon the Part, internal reſolving, ſweating and diuretic Medicines are alſo of great uſe.

335. The

335. The Method whereof, the necessity of repeating and Doses are known from (334.) and the Danger of the Case.

336. A thin Diet of things that do not putrify easily, is also requisite.

337. But if the same will not admit of a Resolution because of its Largeness, and is accessible to the hand of the Surgeon; a Scarification, Opening and Imposthumation may obtain the Cure, doing at the same time all what was said in (334.) But if the Mischief is so great that the Part be already mortified, it must without delay be extirpated, if practicable according to the Rules to be laid down in (464, to 475.)

338. Yet more may be done by the Method laid down (from 331, to 335.) than is almost credible; Nature being always disposed to lend a helping Hand in separating and expelling its Foës.

Of Fractured Bones.

339. If the parts of a Bone are violently parted and divided into large Fragments, it's call'd *a Fracture.*

340. Which if alone, is call'd *a Simple* one; but if accompanied with a Wound, a Bruise, an Inflammation, an Ulcer, or several Fractures, the same is call'd *a Compound Fracture.*

341. It's also call'd a transverse, oblique, or oblong Fracture from its different place; And according to the Fragments resting upon each other, or lying next to one another, or raised with some Splinter

Splinter ſticking out, they differ in their Names, Nature, and Method of cure.

342. The Effects are different according to the different Nature of the fractur'd Bone, the variety of the Fracture it ſelf, the variety of Fragments as to their Situation, Figure, Number, and Largeneſs; and laſtly, the variety of the Place wherein, or of the adjacent Parts about which the Fracture has happen'd.

343. The chief Effects conſequently are, The deſtruction of their Office, of upholding, bearing and directing the Muſcles: The contraction of the Muſcle, and throwing them out of their natural Place; The ſhortning, writhing, and deforming of the Limb; The tearing, bruiſing, and corrupting of the external Perioſteum, of the ſmall Veſſels filling up the Cells, of the internal Perioſteum, the Membrana Medulloſa, and the Medulla it ſelf: An overgrowing of the Veſſels of the Bones, from whence the Callus grows unequally and with a Tumor deforming the Limb; A Diſtraction, Laceration, Irritation, Compreſſion and even Convulſion of the Membranes, Tendons and Nerves; An alteration of the adjoining Veſſels, their Deſtruction, Obſtruction, Inflammation, Pain, Ecchymoſis, Waſting, Suppuration, Gangrene, Death of that Part, and often of the whole; As for a Contuſion, that ſeldom, if ever fails.

344. Which (342, 343.) being duly weigh'd, inform the Surgeon of the preſence and the condition of a Compound Fracture; and the Diagnoſtic will ſtill be plainer, if he feels the Fragments;

ments; hears their cracking against each other; seeth how the Limb or the Bone suffers in its Shape, and Motion; and understands at the same time what the Instrument was, with which, or against which the Bone was fractured, the manner and strength of the Blow, together with the concurring coldness of the Winter, which is said to make the Bones more brittle than they be naturally.

345. But an oblong Fracture is not easily, nor till after some time discovered; The pain, swelling, increasing, bigness of the Part, its unevenness, stinking matter breaking through the Muscles, all this compar'd with the strength of the Blood will give great Light.

346. That the Cure will be easie, difficult, slow, quick, entire or only partly perform'd may be foretold from the Figure, Simpleness, Composition, and Time of the Fracture; from the Number, Figure and Largeness of the Fragments; from the place of the wounded Bone, the nature of the adjacent wounded Parts, the Season of the Year; the Age and Constitution of the Patient.

347. The Cure requireth,

1. A restitution to the natural Situation, by Extending or Setting it again in its proper place.
2. To retain the same in that Situation by Bandages and Machines.
3. To Unite and Consolidate them by procuring a Callus.

348. If the fractured Bones have remain'd in their proper Situation, the first Requisite or Indi-

cation ceaseth. If

If they have gone aſide but a little, a very ſmall Extenſion will do.

But if they be ſo far pull'd out of their place, as to be entirely parallel to each others Sides, then there is occaſion for a very large Extenſion; ſo that all intercepted Bodies may be removed, and that they may be reſtor'd to a requiſite Length, and fit each other as before.

349. The Extenſion is perform'd, 1. by apprehending the Bone near the Fracture with the Hand or with Cords in the form of Snares. 2. By placing and keeping the Patient in a ſteady Poſture. 3. Diſpoſing the Part in the natural Situation. 4. A ſlow, ſtraight pulling, ſuch a Strength of the fractured Parts, and to ſuch a Diſtance as the ſtrength and the power of the contracted Muſcles do require. 5. By the power and application of Mechanical Inſtruments, if the Hands want ſtrength to perform this.

350. Which (348, 349.) (as they hardly ever can be done without Violence and Pain, when the Parts are already inflamed) ought often to be deferr'd till the Inflammation be allay'd. Otherwiſe the Patient will die Convulſive, or of a Gangrene.

351. If the Fragments are free and looſe, they muſt be taken out, if it can be done eaſily. If the ſticking out Splinters forbid their taking out, and they are bare to the Sight they muſt be cut out, if they are covered over, an Inciſion muſt be made tocut them out.

352. The Reſtitution is perform'd by turning the Part after a due extenſion (349.) and preparation

ration (351.) so cautiously, slowly, and softly, that at last one extremity of the Bone may meet t'other in its just place, the withdrawn Muscles be restored to their former Seat, and that nothing be intercepted between the Bones.

353. This is known from Anatomy, the comparing of the wounded Part with the like sound Part, the removal of Pain, and the return of the Part to its Length and natural Figure.

354. The Retention in this Seat is secur'd by Swaddlings, Bolsters, Splents, procuring rest to the Channels, and hindring or directing the action and motion of the Muscles.

355. Bandages laid on too tightly occasion Tumors, Suffocations, and Gangrenes; from whence innumerable Ills: So that they must be wound up so softly, that they may render the Part steddy, and secure the Vessels in their proper places, but very gently.

356. If there be Wounds, they must be cured according to the Rules of Art laid down from (185. to 239.) laying the Bandage on at distan- The same ought to be understood of In- ations, Pains, Tumors, and other Sym-

. Then doth it grow together, and the also, sooner or later, according to the hickness of the Bone, the weight of what- is bound to bear, the difference of and Weather, between twenty and seven-

Of Luxations.

358. A Luxation is the Removal of the Extremity or head of any moveable Bone out of the hollow, in which it was wont to move; and its losing thereby its moving power.

359. Which is either entire, or only in part, from whence the first is a *Disjointing*, and the last only a *Wrench*.

360. The worst is that which happens to *Epiphyses* being loosen'd from the Bones, to which they ought to stick closely. " Of which *Epi-* " *physes* see an exact History in the Second Le- " cture of *Dionys* upon the Osteologie.

361. The *Cause* of these Luxations or Wrenchings may be *External*, from any power capable of Extending, Writhing, or Expelling.

362. Or may be *Internal*, from a foreign Matter grown and gathered in the Cavity of the Ar-

Wastings and Death of the Part, and even of the whole Animal.

365. From the knowledge and observation of which Phænomena, the Signs of a present Luxation are apparent.

366. And having weigh'd the bigness, figure, situation of the Part which is thus pressed and intercepted; the duration, concretion of the disjointed Parts, their Pain, Inflammation, Convulsion, and other Symptoms; what Parts whether smaller or thicker do surround them, what Ligaments are destroyed or only lengthned, what Muscles are annexed, and from such like the Surgeon may prognosticate, whether the Cure is like to be entire or defective; quick or slow; easie or difficult.

367. To which is required, 1. The Resetling or reducing of the disjointed Parts. 2. And their Retention in their natural Seat till the Cure is perfected.

368. The Reduction is obtain'd, 1. By placing and keeping the Patient in a steady posture. 2. Moving the Part so as to make it answer its Cavity exactly. 3. Placing it therein by turning, thrusting, or even beating it in.

369. The Retention is secured by keeping the Parts steady with Bandages, and ordering the Patient to lie very quiet, with the Parts in their most natural Position.

Of Inflammations.

370. Inflammations and Phlegmons having the same Causes and the like Effects, take their Name

from *Fire:* and likewise, St. *Anthony's* Fire, *&c.*

371. And it is an attrition of the red arterial Blood, stagnating in the smallest Vessels *occasion'd* by the Motion of the Blood circulating with the greater force in the larger Vessels.

372. Which therefore may take place either in the Extremities of the smallest Arteries, or in the arterial lymphatic Vessels, being incapable of transmitting the red Globules receiv'd by their dilated Orifices through their Extremities.

373. So that its Seat is in every part of the Body where there is a tissue, that is, abundance of Arteries dispersed in the manner of a Net, and wherever the lymphatick Arteries have their beginning.

374. So that all Arteries, Veins, Nerves, Membranes, Muscles, Glands, Bones, Cartilages, Tendons, Bowels, and most all the Body are subject to the same; But no part so frequently as the fat Parts, " wherein also they are more difficultly " cured, because of the extream smallness of its " Vessels, *&c.*

375. This Stagnation (371.) is occasion'd in the smallest Arteries, 1. By whatever makes the Ends of the Vessels in their Cones and Cylinders so narrow, that the Diameter of their Orifice be made less than the Diameter of the Globule of the Blood, whether it be by pressing upon the outside of the Vessels, or distracting, turning, breaking, bruising, burning, gnawing, or curling the same. Whereof the Causes may be Heat, a violent Motion, foreign Bodies stuck in, Ligatures, Weights, the taking or application of sharp Bodies,

Bodies, sharp Cold, too great Rubbing; all the Causes of Wounds, Bruises, Corrosions, Fractures, Luxations, and Obstructions.

376. The same is, 2dly, produced by every thing that shuts up the Passages, and at the same time applieth to them either inwardly or outwardly such acrimonious Bodies as are both oily and saline.

377. Thirdly, By all such things as occasion the Blood to settle and coagulate in the Body; as too violent Motions, a draining of the thinnest Parts by Sweating, Urine, Spitting, Loosness, serous Eruptions, and all such as curdle; whether Medicines or Poisons.

378. In the Lymphatic arterial Vessels the same is occasioned, 1. By all the Causes which stretch their wide Mouths so as to give entrance to the course parts of the Blood, which being drove in deeper, meet with narrow Passages which give way; where then happen all what is said in (377.) The same will follow from the too easie giving way of the Vessel at its beginning, and the too strong Motion of the arterious Liquid. 2. By all the Causes of Inflammations in the Blood-Vessels (375, 376.)

379. So that the same Disease may take place in every conic Vessel, wherein the Liquor doth flow, from the wide to the narrow End; for as the red part is in the Blood, so probably there is in the Lympha some part thicker than the rest.

380. From whence may truly be discern'd wherein differ Phlegmons, St. *Anthony*'s Fire,

watry and ſchirrous Tumors from Inflammations.

381. But as often as theſe Cauſes from (375, to 379.) have occaſion'd that Stagnation deſcribed in (371, 372. 379.) and in the Veſſels mentioned in (372, to 374. 378. 379.) then doth the power of the Blood, puſh'd on by the remaining vital Strength, occaſion ſome Effects; which are at the ſame time Signs of a preſent Inflammation.

382. 1. The ſmall Arteries, hardly viſible, being obſtructed are now enlarged by the diſtending Blood; whence a red Tumor. 2. The Lymphatic arterial Veſſels, pellucid before and inviſible, undergo the ſame Fate; whence an encreaſe of the Tumor. 3. The diſtended ſmall Veſſels are near breaking in the ſmalleſt Fibres; whence a pricking pungent Pain. 4. The Liquids and Solids are much preſſed upon each o-

freely enough through the Veins (they still growing wider and wider) but in its Passage through the Arteries is often interrupted, *The Pulse beats quicker*; Whence a Fever, Drought, Heat, Watchings, Weakness and Uneasiness.

383. This is the History of Inflammations in its Beginnings or Infancy.

384. If then Blood be let out of a Vein with a full Stream, out of a large Orifice into a Bason or Porringer, as soon as it cools it forms on its Surface a white, tough, thick, stiff Skin, not unlike a Hog's Skin.

385. If the Disease increaseth, you'll see the same Symptoms as from (382 to 384.) but of a worse Nature; the Lympha being squeez'd out is separated, and the red part of the Blood grows still closer and thicker.

386. If the flowing Humor be soft, its Motion be sedater, the Obstruction be small, and its Seat chiefly in the Arteries or the beginning of the Lymphatics, the Canals be yet moveable, a diluting Vehicle be given with such Medicines as are able to reduce the coagulated Humors to their fluidity, and make them move that were stagnated. In this Case the Inflammation may be cured *by Resolving*.

387. If the flowing Humor be soft, but the Motion quick, the Obstruction great, nor capable of being resolved, the Symptoms increased, the distended Vessels being broken with Pain, Heat, beating and swelling, let out their Liquids, break and in a small degree corrupt the same; These will wear away and dissolve the tender So-

lids, mix their Substance with the Fluids into one homogeneous white, thickish, glewish, and fat Humor, call'd *Pus*: And this is what is call'd *a Suppuration*, or an *Impasthumation*, and is another Method, by which an Inflammation may be cured and terminated.

388. If the Humor be sharp, in a great Motion, the Obstruction great, the Vessels stiff, all the Symptoms of (382. 386, 387.) be violent, then do the small Vessels break suddenly, the Liquids putrify; the watry Blood creeping under the Skin, gathers into small Bladders looking reddish, like the Washings of raw Flesh, or like yellow Matter; which by degrees turns into an ash, pale, tawny and black Colour; the redness of the Part, the Pain, Heat and Pulsation, and Swelling leaving the same, remove to the adjacent, and the Part affected dieth: This is called *a Gangrene*; and is a third End into which ter-

391. And soon pass into a Mortification.

392. If the inflamed Part be Glandular, the internal or external heat be great, the impacted Matter be sluggish and thick, the Emunctories of the Glands be obstructed, the Folliculi and the Sides of them be distended, there grows a hard Tumor in the Gland free from pain; its called *Schirrus*; which is a fourth End of an Inflammation.

393. The Cause, the affected Part, the Greatness, Depth Quickness and Symptoms of the Inflammation and the Constitution of the Patient, compared with the Signs and Effects thereof do make the Prognostick easie.

394. It is also evident, that a different Method of Cure is necessary according to the different State and Conditions of this Disease.

395. For if any of the Causes (from 375 to 379) has in any part (372. 373. 374. 379.) produced an Inflammation as in (371) with the Symptoms of (382. to 384.) and the Circumstances be as in (386.) The following Indications are necessary.

1. To hinder any farther harm to the Vessels.
2. To remove that which they have already received.
3. To procure fluidity and softness to the obstructing matter, and preserve them in that State.
4. Or if that cannot be obtained, to drive the same back into the larger Vessels.

396. A farther Harm is prevented.

1. By removing and correcting the known Causes mentioned (from 375 to 379)

2. By

2. By leſſening the power and influx of the arterious Liquor by bleeding and purging.
3. By leſſening with the ſame Remedies the quantity of the Liquids.
4. By making a Revulſion of the Blood, cauſing the ſame to flow more ſtrongly towards other parts, by Suction, Friction, Plaiſters and Bliſters, Fomentations, Bathings, Iſſues, Setons, and ſtrong Purges.
5. By making the Air of the Room cooliſh and dry; quieting wholly or in part the Paſſions; natural or artificial Reſt, a thin, liquid, and cooling Diet, both in eating and drinking; and by Medicines no leſs cooling than diluting.
6. By appeaſing the Motion in the very part, with the application of cooling, repelling and adſtringent Medicines outwardly, mixing with them ſome Anodynes, or ſome o-

ſtending Liquid, letting blood, repeated ſtrong Purges; or by ſtimulating the Fibres with ſome thin aromatick Liquor drank hot; with Fomentations, Frictions, dry Cuppings, or Scarifications.

2. By drinking ſome new thin, watry hot Liquor, and thereby diluting the ſtagnating Bodies.

3. By uſing ſuch attenuating and reſolving Medicines as are at the ſame time of a nature oppoſite to that of the obſtructing Body, and this either outwardly or inwardly in the form of Decoctions, Bathings, Fotuſſes, Steams, Poultuſſes, Plaiſters, or Oyntments.

399. The ſame Matter may be ſoftned by drinking thin watry Liquors and eating nothing that has any ſharpneſs or acrimony of any kind, by ſoft diluting Medicines as are able to blunt the Spikes of that Matter, or which are endowed with a particular ſharpneſs juſtly fitted to deſtroy the ſharpneſs of the peccant Matter, which is commonly called *a Specifick.*

400. The Matter is drove back again.

1. By letting blood copiouſly out of one or more Arteries or Veins at a time.

2. By looſening the Fibres.

3. By artificial Frictions with Bruſhes or Cloths, *&c.*

401. Hence is underſtood what is meant by a *Reſolution* in all inflammatory Diſeaſes whether internal or external, and which the Phyſician ought always to endeavour at; for that may be

called

called a perfect Cure when obtain'd without a Crisis, as in (386.).

Of Impostumations.

402. If those things from (395. to 400.) have been done without success, or have been neglected, or done too late, then doth an Inflammation proceed to an Impostumation (387.) and is known by the Signs there set down. The Indications then are.

1. To change the crude Matters forthwith, and to ripen them into one homogeneous Liquor.
2. To soften both them and the adjacent parts.
3. To draw them outwardly.
4. To procure an opening to the ripened Pus for its discharge.
5. To cleanse the place.
6. To heal the rest as all common Wounds.

403. The Ripening is hasten'd by the application of such as,

1. Increase the Motion in the Part by fomenting, stimulating, and heating with such as do actually or by their innate virtue, afford warmth, and do this throughout the Body; so that there follows a little Fever as an unavoidable consequence thereof.
2. Such as bound that rais'd Motion and Heat within the Part it self, hindring the too great exhalation and dissipation by glutinous Plaisters that shut up the Pores, and by the softning of the too great Acrimony.
3. By such as moderate the Motion and the Nature of all the vital Fluids, so that the

the ſame be neither too Sluggiſh, nor too Lively.

4. By leaving the Part cloſe till all the Parts inflamed, which are incapable of being Reſolved be turned into Pus. And this is the Method to procure laudable Matter.

404. And unleſs the inflamed Matter be thus changed, the Impoſthume cannot be open'd Safely or to any Advantage.

405. The ſoftneſs of the Part, the floating of the Tumor upon preſſing, the Whiteneſs, the leſſening of Pain, heat, redneſs, tenſion, throbbing, fever; the top of the Tumor pointing, the part being ſenſible of Heavineſs, all theſe do plainly ſhew that the Pus is perfected, and fit to be let out.

406. If the ſame be after this left any conſiderable time ſhut up in the Part, it grows thinner, ſharp; it putrifies, encreaſeth, conſumeth and eats into the neighbouring Parts, and by its bulk, weight and motion creates Sinuſſes and Fiſtules, which differ in their Nature according to the different places wherein they happen, and are worſt of all when in the lower Gut, call'd *Rectum.*

Or the ſame, after the diſſipating of the thinneſt Part, grows hard and occaſions hard Tumors chiefly about or in the Glands.

Or laſtly, It is taken back into the Lymphatic Veins or the Blood-Veins, through their corroded Orifices, and ſo is mixed with the Blood; ſpoils the ſame, and being collected in the Bowels it corrupts the ſame by making therein Gatherings of the worſt Kind, diſturbs their Functions, and

con-

conſequently produceth innumerable and moſt terrible Diſeaſes.

407. By the ſame Means as in (403.) the Integuments of the Impoſthume may be ſoftned above and below, attenuated and looſened as well as the adjacent Parts.

408. And even by theſe Means the Pus may be thruſt or drawn Outwards, having firſt leſſen'd the reſiſtance of the ſaid Integuments by the ſuppurating Method in (403.)

409. Then ought to be applied things of a moderate Acrimony, with Emollients mixed together with fattiſh Ingredients, that ſo the ſenſeleſs Integuments may be open'd eaſier and without Pain.

410. Then having preſſed the Pus duly towards the pointing Tumor, let the Launcet be ſtuck into the whiteſt, ſofteſt, the moſt pointing, the moſt depending Part, until the Pus coming forth tells the Surgeon that he has launc'd deep enough; Then let the ſame be raiſed again, making a Large but even opening in its way, or driving its point at once into the oppoſite proeminence of the Tumor cut all the Integuments between theſe two Openings, skilfully avoiding all Fibres or Veſſels that are whole, then let the Pus be ſqueezed out gently and by degrees, avoiding to admit much Air or Tents into the Openings.

411. Then let it be cured with Cleanſers, ſuppurating, Digeſtives, balſamick, detergent, and drying Medicines, altering and ordering them according to Circumſtances, and the Doctrine of Wounds in general (from 192. to 220.)

412.

412. If the Patient be possessed with a trifling fear of the Launcet, let a Caustic be applied to the Part, as in (410.) the Eschar softned with Butter separated, and the Cure be finished again, as in (410, 411.)

Of Fistules.

413. From hence are easily understood the Origine, Cause, Nature, Place, and Effects of Sinusses, and Fistules. (406.)

414. Such as are open are easily discern'd; Those that are inclosed easily discovered and traced by feeling the soft and yielding Cavity.

415. They are cured by cutting asunder the lowermost part, filling up the Cavity with melted Digestives according to the present Circumstances, injection of Detersives, and with Ligatures pressing gradually from the Head to the opening of 'em: But much quicker by cutting the Integuments with either the Incision-knife, or with Scissars guided by the hollow Probe, *&c.* " Which Operations see at large described in the " Fourth Demonstration of *Dyonis* his Chirur- " gical Operations.

416. From the preceding Doctrine of Inflammations and Impostumations thus far, a skilful Physician or Surgeon may learn how to know to prognosticate and even to cure Bubo's, Swellings behind the Ears, Furuncules, Plague Sores, Carbuncles, Boils, St. Anthony's Fires, Measles, Small-Pox, and red Spots in Fevers.

417. Nor can it be difficult henceforth to know the event of Inward Imposthumations, to which the

the helping hand of the Artiſt cannot attain; for many and great are the ills (406. 413.) proceeding from the accumulation of Matter in the ſeveral Cavities of the Body.

418. For if the Neceſſity of the Part be ſuch that the Animal can either not live, or not be in health without its Integrity, the future Events are eaſily foreſeen, and how difficult the Cure muſt prove.

Of Gangrenes.

419. If upon an Inflammation (371, 372.) there follows a Gangrene, (388.) another Method is neceſſary for the Cure thereof. For by the Name of *Gangrene* goeth, that ſtate of a ſoft Part, which tends to Death; But a *Sphacele* is that ſtate which has already deſtroy'd all Life in the affected Part, when the adjacent are yet Living.

420. So that a Gangrene moſtly rages in, and ſeldom reacheth farther than to the fleſhy Membrane under the Fat of the General Integuments all over the Body, whereas a Sphacele penetrates every thing to the very Bones; this is generally a Conſequence of the former, unleſs it took its riſe from a Corruption of the Bone of the Medulla, or the Perioſteum.

421. So that the Cauſes of a Gangrene and a Sphacele are the ſame, differing only in Violence, Duration and Place.

422. So that, 1. all the cauſes of Inflammations, (375, to 379.) (if the Liquids do ſtagnate entirely, and the circulating Blood doth with violence

violence run against the Part) do hereto belong. α. A strong Ligature of the Veins. β. A Compression of the same from any Cause, such as Tumors, *&c.* γ. A great Cold. δ. The perspiration obstructed in a Phlegmon by Adstringents; fat, cold, repelling, and stupifying Applications; chiefly, if the internal Juices be sharp, or if any acrimonious Ingredients be mix'd up with the external Means. ζ. Wounds, Bruises, Luxations, Fractures, chiefly if the Bandages be laid on too tight. η. Sharp oleous Medicines applied to sound or sick Parts. θ. The Lying of the Patient upon inflamed Parts. ι. Ruptures not timely reduced and strangled, either with their proper Contents or from without in the narrow Processusses.

423. 2o. All things as give an edge to the Liquids, and thereby enable them to cut through and destroy the Vessels; Such are α. A long continued Stagnation of an enclosed and warm Humor, whence the Acrimony of (80.) a Corrosion, whence the Blood gathers into an Aneurisme, the Pus into an Imposthume, a gathering of Water in the Cranium, Chest, Abdomen, Scrotum, *&c.* Bruises and Wastings of Liquors own the same Cause. β. An ill-natured, diseased and sharp Disposition peccant through the whole, and falling upon the affected Part, as a Lymphatic Juice flowing for a long while about tendinous Parts, the watry and malignant Blood of Cancers, the Bloody-Flux, the putrified Waters in Dropsies; the flowing of febrile, pestilential, variolous or scorbutic Matter towards fleshy Parts, and chiefly the Gums.

424. 3°. Such as occaſion the Death of the Extream Parts by the defect of the vital Juice; as the long continued poſture of ſitting or lying down in old People, or an extream Weakneſs.

425. 4°. Poyſons, the Nature of which is more the Object of our Admiration, than of Mechanical Knowledge.

426. The Signs of an approaching Gangrene are plain from the Knowledge of its Cauſes (from 422. to 425.)

427. But the Signs of its being already preſent are, 1. The Phenomena of Inflammation, ſuddenly abſent without having firſt removed or corrected its Cauſes. (Compare 383. 385. with 422. to 425.) 2. The dulneſs of the Feeling. 3. The Colour being changed from red into a paler firſt, then into an aſh, tawny, livid, and laſtly a black Colour. 4. The ſoftneſs and wi-

the ſame being cut, prick'd, and burn'd feel nothing, but be only ſenſible of a weightineſs. 3. A livid, tawny, black colour. 4. A ſoftneſs, withering and coldneſs of the Skin and its being looſe, and at laſt dry and hard. 5. A cadaverous Stench. 6. A Corruption communicating its killing poyſon and eating every adjacent part very deep even to the Bones.

430. The great and haſty danger of this Diſeaſe requireth a true and exact Prognoſtication.

431. Which will be ſuch, 1. If the Patients Age, Conſtitution and Strength, and the Violence of the Diſeaſe be rightly conſidered. 2. And the Quickneſs of the ſame. 3. If the Internal and External Cauſes be known. 4. The Seaſon of the Year. 5. The Part affected, ſo far as it is more or leſs neceſſary to Life, or according as it is of a moiſt, ſinuous or dry Compoſition.

432. Hence the following plain Rules.

An ill-natur'd inſuperable Gangrene terminates in a Sphacele.

From a Sphacele enſueth the death of the part and a ſudden infection of the neighbouring parts.

A Gangrene requireth a ſpeedy help.

A ſphacelated Part muſt be ſuddenly extirpated.

A Gangrene of the Brain, of the Bowels and Bladder is mortal: and if the ſame doth happen in acute Diſeaſes it occaſions Death in a ſhort time, though the noble and greater parts ſeem hardly injured.

A Gangrene of the inſide of the Mouth, Lips, Noſtrils, and of the Genitals, is hardly curable.

A Sphacele of the Extremities, and of tendinous Parts is mortal in aged People.

A Gangrene to Consumptive, Dropsical and Scorbutick People is of a very dangerous consequence, and most times a Fore-runner of Death.

A Sphacele mounting upwards occasions Wakefulness, Deliriums, Swoonings, Belchings, Hiccoughs, Convulsions, Pains, cold Sweats with a Drowsiness, all which forebode Death.

A Lividness, Blackness, a Dryness round the Ulcers, signify that a Gangrene, a Mortification and Death it self is at the door.

433. The Indications to cure a Gangrene are, 1. To preserve the vital Strength. 2. To hinder the corrupted Matter from returning into the Veins, *&c.* 3. To put a stop to the Putrifaction present, and to confine it as much as possible.

434. The vital Strength is preserved and confirmed by giving. 1. All that is capable of over-

procuring a Vent to the same on the outside of the Body, which may be done with Fomentations, Cataplasms made of diaphoretic, emollient, and loosening Ingredients; by Scarifications, Cuppings, Leeches, or even actual Fire being held very near the Part.

436. A beginning Putrifaction is corrected. 1. By removing its apparent Causes (422. to 425).

437. 2. By correcting its nearest and immediate Cause, *viz.* the stagnation and heat. α. By pickling as it were the stagnating Liquids against that putrifaction. β. Fencing the Solids against the same. γ. Procuring motion to the corrected stagnating Fluids through these fenced Vessels.

438. The Liquids are preserved by the use of Salt, Vinegar, Wine and Aromatics.

439. The same will be a Defence to the untainted Solids.

440. Motion may be procured to the stagnating Liquids. α. By great Draughts of warm watry Liquors, or the same outwardly applied. β. stimulating the Arteries with such as are of a contrary nature to the Disease. γ. Moving the Juices with Heat, Frictions and Cordials. δ. Lessening the Quantity which kept the Vessels too much distended.

441. These (from 434. to 440.) being soon done, often repeated, will very often cure a beginning Gangrene by a successful Correction, or a gentle Diaphoresis.

442. But if the Liquids are already putrified, and their most moveable Parts are exhaled, and

the Channels are deſtroy'd, the Diſeaſe will not be conquer'd by theſe Remedies; nor will the offended Part be reſtored to its perfect ſtate again, but the adjacent will even be much conſumed by the motion of ſuch living Particles as are not capable of exhalation.

443. So that in this Caſe the ſole intention ought to be to ſeparate forthwith the dead part from the living.

444. This ſeparation is obtained always by the ſtrength of the vital Liquid running to the extremities of the gangren'd Eſchar which is there ſuffocated, and there forced to ſuppurate, by which Mechaniſm thoſe Fibres are looſened which connected the gangrened and ſound Parts together.

445. So that it appears that the art conſiſts 1° in doing thoſe things which are laid down (from 433. to 440.) 2° In haſtning the Suppuration. 3°. In ſoftning the Eſchar.

449. Parts as hang loose, dead, separated, and the sofned Eschars ought to be taken away with Pincers or Scissars.

450. On the whole affected Part ought continually to be applied hot Cataplasms whereof the heat be always kept up to encrease their virtue; which must be made of emollient Diaphoretics and Anodynes.

451. It will also be of use to uncover or take off the Dressings seldomer than is usual.

452. After these (from 446. to 451.) have been done, the Eschar begins to be contracted, the scarified parts to be moistned, the Edges of the sound parts to swell, to grow red, to suppurate, and the dead part to be loose; it is a sign that the separation of the dead part from the living is near done, that the creeping Ill stops its current, and that the part will soon be cleansed.

453. Then ought to be applied soft, anodyne, Balsamics and Digestives; the Ulcer is but seldom to be uncover'd; all things avoided, which occasion a stiffness in the Fibres; the Part must be kept quiet and easie, and the Cure must be finished according to the Rules relating to Ulcers in (411.)

454. If the Gangrene has been occasion'd by a hard Frost and Cold (427. N. 6.) the Part must be covered over with Snow or with Linnen made wet in ice-cold Water, until the Points of the Frost being drawn into the Snow or Water, the same begin to be loosen'd by the return of the vital strength.

455. If another Method be taken, by applying heat to the Part immediately, the ſame will ſuddenly putriſy, for the Points will thereby be put into a violent Motion, but not be drawn out of the Part.

456. Which (454.) being duly done, the Patient muſt be ſtrengthned and reviv'd by warm Cordials, and even put into a Sweat.

Of Mortifications.

457. If a Gangrene is already converted into a Sphacele, whatever is infected muſt be taken off.

458. Which is done different ways according as the Part is wholly, or only in part mortified, or according to the Seat and Nature of the Part affected, which ſometimes cannot be wholly extirpated; ſuch as the Buttocks, *&c.*

459. If therefore a part is not corrupted to the bottom, or cannot be extirpated; The Surgeon muſt endeavour, 1. To ſtop its Progreſs. 2. To take off what is corrupted already.

460. Its progreſs is ſtopp'd, if the Communication between the dead and living Part is cut off.

461. This is done, if in the neighbourhood of the corrupted and the ſound part (but always taking in part of the ſound) a Boundary is marked out with Cutting, Burning, or Cauſtics, and that every where deep enough.

462. The corrupted parts are ſeparated, if after having firſt ſtopp'd their progreſs, or at the *ſame time* of doing it, the whole part be burnt

and

and cut down to the ſound bottom, and is afterwards conſumed by a hot Application of a very ſharp Lixivium, till it be entirely got away by Eſchars, which are continually to be ſoftned and removed till you are come to the quick. Avoiding very carefully the Parts that are quick and ſound.

463. And when afterwards the Signs are preſent not only of the Parts being alive, but ſound alſo; then ought what remains to be treated like an Ulcer or a Wound.

464. But if an extream Part ſphacelated to the very Bone can be taken off without endangering Life, the ſame ought to be extirpated together with the Bone; which being once diveſted of its Fleſh and Veſſels, can neither be nouriſh'd nor kept alive.

465. This Extirpation (when in the Fingers, Wriſt or Inſtep) is performed with a Hammer and Chiſſel.

466. But in greater Limbs and Bones, ſuch as the Thighs, Legs, Shoulder, or Arm, there is occaſion for more troubleſome Labour, which will be known from what follows.

467. The place, where the Extirpation is to be performed, is choſen by theſe Rules;

1. The ſound Part muſt be preſerved as much as poſſible and convenient.
2. The corrupted Part muſt altogether and at once be taken off with the greateſt exactneſs.
3. The moſt commodious Uſe muſt be procured to the remaining part of the Limb.

468. So that in all the Limbs, except the Legs, the *Amputation ought to be* made in that ſound Part,

Part, which is nearest to the diseased, (from the Reasons given in N°. 1, 2. of 467.) But in the Legs the Amputation ought always to be made a little below the Knee, although nothing but the Foot shou'd be sphacelated. (See N°. 3. in 467.)

469. For to perform the Amputation, and to know the future Consequences thereof, it is requisite to have regard,

1. To the Preparation.
2. The Performance it self.
3. The Cure of the intervening Symptoms.
4. The Consolidation.
5. The Supplying of the lost Limb.

The Preparation is accomplish'd,

1. By a Compression of the large blood Arteries, by means of pyramidal Bolsters, and by twisting the Ligature to be placed over them on the Sound part near the Diseased.
2. By drawing the Muscles of the Part strongly and equally by means of a Leather Bandage, made with Loops and Strings to pull by.
3. By keeping the whole body of the Patient, and the part to be amputated very steady.
4. Bending gently the part, that the Muscles may hang loose, and may not be cut beyond the place of Extirpation.
5. Giving a cordial sleeping Draught to the Patient sometime before the Operation.

470. The Operation is perform'd after this foregoing Preparation.

1. With a sharp, strong, crooked Knife, obtuse on *the Back*, well temper'd, which is thrust under

der the Leg, and remounting by the Inside till it comes to the place where the Operator began, which makes a circular Incision, cutting all the Flesh to the very Bones, not forgetting the Periosteum; which is soon done if the Operator cuts with all his strength, and equally. *Dionis. Demonstr. IX.*

2. If there be two Bones in the Part, instead of the Knife, the Surgeon takes the Penknife to cut the Flesh betwixt the Bones exactly, and even repasseth the said Penknife around the Tibia to cut the Periosteum, if not already well separated.

3. The separated parts ought to be drawn from each other by some Servants, or by means of some Linnen put between the Lips of the Wounds, to make the more room for the Saw, that the same may not touch the Flesh.

4. Then is the Bone divided with a sharp, fine, strong, and strait Saw; which is to be moved first gently, till the Saw be fixed in, but then strongly and equally, and always perpendicularly; beginning to saw the smaller Bone first, and afterwards the biggest (when there are two) for fear that otherways the weakest shou'd fly out into Splinters by the falling of the Saw upon it.

5. During all the time of Sawing, some Servants ought to bend the Bones to make more way for the Saw.

471. The chief Symptom which follows after this Operation is the Loss of Blood, which requireth *immediate Help.*

1. The

1. *The Veſſels*, whoſe ſituation is diſcovered by the ſtreaming of the Blood upon the ſlacking of the Ligature, muſt be taken hold of with Pincers that have a Spring, or are held by a Servant, and being pull'd out towards the Kneepan, are ſecured by running a Thread through them, and tying them cloſe with it, *if large:* Or elſe we ſhut the Veſſels up by means of a Thread run in at both Sides of 'em, and threaded in two crooked Needles.
2. The Hemorragie may alſo be ſtopp'd by applying red hot Irons to the Veſſels, which makes 'em ſhrink, *&c.*
3. Or with Bolſters impregnated with Vitriol to the Parts; as alſo other adſtringent and abſorbing Medicines outwardly applied.
4. The Muſcles and Parts which were drawn back and kept aſunder (469, N°. 2.) are looſen'd and pull'd over the Bone as far as they can go, to cover the ſame.
5. The Stump well lay'd over with two Stopples, and charg'd with Adſtringents is forced into a Bladder ſlit on purpoſe for that end, and alſo furniſh'd with adſtringent Pouders.
6. Then is a very firm Ligature lay'd all over this.
7. The Patient ought to be kept quiet, well Dieted, and have Sleep procured him by proper Means.

472. The Bone is heal'd, if ſpeedy care be taken of the Exfoliation, and a Putrifaction or a Caries is prevented, which is effected, if there be *immediately* applied ſmall Bolſters duly ſoak'd in *tincture of* Maſtich.

473. The

473. The Flesh is heal'd by the same Means as other Wounds, about which consult (from 189. 192. to 210.)

474. If the Patient, who thus loses a great Limb, happens to have strong Bowels, and consequently to make a great deal of Chyle and Blood; There often will ensue the Effects of a Plethora describ'd in (106.) Which to remove, the Patient ought to be bled some times, as occasion requires, and to be kept to a moderate Diet.

475. The damage sustain'd by the loss of the Limb, is made up in part by fixing or adding to the Body an Instrument made in imitation of the lost Limb. About which consult, *Aquapendente. Hildanus*, *van Solingen.* and *Ambr. Paré.*

Of Burnings.

476. When a Fire-coal, or any thing containing a great heat is applied to our Body, there ensueth a Destruction of small Vessels, and an extravasation of Humors, which vary according to the difference of the Cause, of the time during which it is applied, and of the several Parts thus affected.

477. The different Degrees of these various Effects are like to those which have been observed in Inflammations, beginning from the slightest to its greatest and worst Effect, a Mortification. (See from 370. to 464.)

478. So that the Phœnomena, Diagnostics and Prognostics are the same.

479. Nor doth the Cure differ in any thing material.

480. A Burning or Scalding, which is ſtill within the pale of an Inflammation which admits of *Reſolving*, (386.) is to be cured by ſuch Means, as pickle or preſerve the Liquids, puts them into motion; as free the Veſſels and keep them entire: Which is obtained by applying to the Part a moderate Fire, warm Fomentations and Cataplaſms. (395, to 402.)

481. A Burning which tends to a Gangrene, known from the Skin being already ſhrivell'd and corroded with Veſicules; requireth the ſame Cure as an Inflammation in that degree, with Fomentations, Cataplaſms, Emollients and Digeſtives. (402, to 454.)

482. A Burning which has already proceeded to a compleat Gangrene, or to a Sphacele, is known and cured like the Diſeaſes from (419. to 476.)

483. No where is more occaſion for procuring a ſmooth and even Cicatrice than in theſe Caſes. (217.)

Of a Schirrous Tumor.

484. A Schirrus (392.) may be occaſioned by any thing which is able to coagulate, thicken and dry the Juices in the Glands: Its Seat therefore is any Kernel, but chiefly ſuch as contain a Liquor which thickens eaſieſt, or becauſe of its Situation occaſions the ſame to ſtagnate moſt. So that this Diſtemper is moſt common in the Eyes, Noſtrils, Mouth, Breaſts, Armpits, Groins, the Pancreas, Meſenterium and the Uterus.

485. So that the ſame may be produced by an *Inflammation* in thoſe Parts; by Milk ſtagnating, contain-

containing too great a proportion of caseous Matter, hardned, and coagulated: by Contusions (322.); by violent Motions and Attritions of those Liquids; by Plague Sores, Bubo's; Ulcers closed too soon; by the Blood being over-charged with black Choler carried thither, or black Choler it self, and chiefly when at the same time the Menstrua or hæmorroidal Fluxes are suppress'd; by Matters growing stony, thick, rough, and like Plaster; by a sorrowful life; hard living; or this vicious habit being deriv'd from Parents.

486. The Effects of a Schirrus, when made, are, to occupy the adjacent Parts by their increased bulk, to squeeze, and even to lay a great force upon 'em; to hurt and damage the Function both of the schirrous Part, and of the adjacent; whence Inflammations, Imposthumes, Gangrenes, Palsies, Wastings, Sphaceles, Barrenness, difficult Labours, Iliac Passions, and the like Ills are produced, whereof the immediate Cause is easily known from the Nature, Offices, and Seat of the damaged and of the compressing Parts.

487. Their Presence is known from their Causes (484, 485.) Effects, (486.) Phænomenas. (392.) the affected part (484.) compared with the Constitution of the patient.

488. From the same the Event of 'em is foretold, and chiefly considering the time of their Duration and their Effects. Of it self a Schirrus is harmless enough, but becomes Malignant, if by any means you put its Cause and Body in Motion.

489. Which

489. Which Motion being ſcarce avoidable, occaſions continual Uneaſineſs and Fear.

490. So that he that attempts the Cure of 'em, ought to obſerve :

1. That if a Schirrus be recent, good natur'd, ſeated in a convenient place, not yet quite hardned, the Patient be of a very good conſtitution and ſound Juices ; That in thoſe Caſes he may attempt to *Reſolve* it by gentle and emollient Means; whereto belong the Steams of Acids directed to the Part by means of a Funnel, " but chiefly the uſe of Mercury given " inwardly in ſmall but often repeated Doſes, " and outwardly mixed with cooling and emol- " lient Medicines.
2. If it doth not give way to thoſe Means, and that the Place, Situation, the Adjacent parts, Moveableneſs, the degree of Ill, the Strength and healthy Conſtitution of the Patient will bear it, The ſame ought forthwith to be cut out with a Knife.
3. If it is of an old ſtanding, and from its colour, hardneſs, unevenneſs, itching and beginning pain known to be malignant; if from the Seat and adjacent Parts there is reaſon to fear, if it is adherent to ſeveral Veſſels, and in an ill habit of Body, Then is it impoſſible to Extirpate it : Then ought all things to be avoided, which may increaſe the Motion there, that it may not turn into a Cancer. So that all emollient, ſuppurating, eating, cauſtic and diſſipating Medicines or Applications are here forbidden.

4. But

4. But only those are of use mention'd (490. N°. 3.) that is, Anodynes, such as quiet Motion, Medicines made of Lead and very gentle Mercurials.

491. If at the same time the Patients Constitution be bad, that ought above all things to be corrected by proper but gentle Means.

Of Cancers.

492. If a Schirrus by long standing, increasing, and motion of the adjacent Parts is thus moved, that the neighbouring Vessels around its edges begin to inflame, it's become malignant, and from its likeness to a Crab, is now called a *Cancer*, or *Carcinoma*.

493. In which we discover the Conditions of the first Degrees of Malignancy, from the light Degrees of Inflammation all round it, from an exuberancy of a putrid Acrimony in the very Part; from the use and dignity of the same Part, from the number and condition of the annexed Glands; and lastly, from the ill habit of the Patient.

494. If it be still contain'd within its proper Skin, it's an *Occult Cancer*; but if that Skin be already broke through by an Ulcer, it's called a *Manifest* and an *Ulcerated Cancer*; this last is the offspring of the former.

495. The Cause of a Cancer is all that produces a Schirrus. (484, 485.) A Sharpness convey'd into and mix'd with the Schirrus; An alteration in the Circulation of Humors, from the Menstrua, Hæmorroids or any other Hæmorragy being *suppress'd*; *Barrenness*, abstinence from all

Venereal Acts; the leaving off of Child-bearing from the Age of 45, to 50; An auſtere, ſharp or hot Diet; the ſeveral and even contrary Affections of the Mind, whether Melancholy or Anger, and the like; Any external irritation of the Schirrus by it's Motion, Heat and Acrimony; or Medicines which by their emollient, ſuppurating, cauſtic or bliſtering qualities will produce the ſame Effect, whether outwardly or inwardly applied.

496. Its Seat is the ſame with a Schirrus. (484.)

497. The preſence of an *Occult Cancer* is known from the Signs of a Schirrus (487.) having preceeded; and as an Addition, there is a titillation, tching, heat, redneſs, a tearing, burning, and poinant Pain; if the Colour changeth from reddiſh, to red, to purple, blue, livid and black; f it is grown very hard, uneven and rough with

subtle, sharp, stinking, cadaverous Matter, preying upon the surrounding and eating through the next adjacent Parts, still gaining ground all around, and shooting its malignant Roots every where deep into the adjacent Muscles and Vessels, by means of which it fastens it self; The Lips swell, are turn'd up, and of a frightful Aspect. Now the Pains begin to be insupportable, burning, pungent, and gnawing; the Colour is of ash, then livid and black; Occult Cancers now begin to communicate themselves to other distant places in the Body; at last come on Hæmorragies, Convulsions, slow hectic Fevers, a wasting of the whole Body; it becomes void of Stench or any Odour, there grows painless Callosities in the Ears, the Patient faints away frequently; so that when all the Substance of the affected Parts are eaten through, and the whole Body is consumed, Death follows as a necessary consequence.

500. In People of a sound habit of Body, an occult Cancer unprovoked may easily be bore; but if they meddle with it, you may foretel what was just now mentioned.

501. A small, beginning, loose Cancer, seated in a convenient place, not adhering to large Vessels with its Feet, occasion'd by an external Cause, in a youthful and healthy Body, without having any other Companion in the Body, ought forthwith to be either pull'd out, or the Part, in which it is, to be cut off.

502. All Emollient Medicines therefore, such as shut the Pores, suppurating, sharp, excoriating, vesicating, and Caustics are to be avoid-

ed, for their Application certainly doth convert it into an ulcerated Cancer.

503. A large Cancer, an old and adherent one, situated in places unfit for Extirpation, grown to large Vessels, or lying close upon them; arising from an internal Disposition and Cause, in an old Body of an ill habit, enclin'd to breed Cancers, when there are already some other Cancers in the same Body; ought not to be meddled with at all, neither by Cutting nor Physick.

504. For unless it can be rooted out entirely, with all its Roots and Seeds, it will grow more ill-natur'd, turns upon some inward Parts, begets more, and enlargeth those already produced.

505. The Cause of the Cancer ought to be removed with the Cancer, or even before it be taken out.

Unless it can be taken out entirely it ought to be relinquish'd.

Those of the Uterus, of the Throat, of the Palate, of the Armpits, and of the Groins, are incurable; those of the Lips very difficult to Cure.

506. If therefore the Case is as in (503.) we endeavour at Two things: 1. The keeping of the Evil dormant and quiet. 2. The assuaging of the Symptoms.

507. It is kept quiet, 1. By defending the place from all external Injuries by Lead Medicines and Opiates. 2. By lessening, correcting, or diverting the known Cause: whereto belong gentle Purges from Vegetables or Mercurial Preparations given often, but in small Doses. 3. By diluting

diluting and gentle opening Medicines and moderate Alcali, as Testaceous Powders, and the like. 4. By avoiding every thing which might be a supply to the inward Cause, whether applied outwardly, or inwardly taken.

508. The Symptoms may be asswaged by the same Means, and acute Pains require Opiates in pretty large Doses.

509. An ulcerated Cancer, unless it may be extirpated, requireth for Ease to be cleans'd often, and to have the softest cooling Preparations of Lead applied, besides the use of what is contain'd in (507, 508.)

510. The Extirpation is perform'd, 1. After having first prepar'd the Patient with a strengthening Diet and Medicines, and such as are contrary to the Cause. 2. By cutting out the whole altogether and at once with all its Roots, having run a strong Thread through the Body of it, or holding it up with a Fork thrust underneath it, or having laid it bare, and separated its Integuments from the adjacent Parts and Vessels by lifting up the same by a Thread run through it, and at last loosening the whole on all sides with much caution. 3. The Wound then remains to be cured, which ought to be done by laying on a Bandage very gently, and dressing it but seldom, having first squeez'd the Blood out of all the surrounding Parts.

511. After this, the Patient ought to continue very long the same Diet and Medicines as if he had still a Cancer. And from the precedent Aphorisms it is plainly enough foreseen what ills

must be expected from a Cancer ſituate in places unfit for Extirpation.

Of the Diſeaſes of the Bones.

512. The very Bones are ſubject to the like Diſtempers as we have been hitherto deſcribing as incumbent to the ſofter Parts.

513. For the Interſtices of theſe are cloath'd with a thin Membrane, endow'd with the ſame kind of Veſſels, and moiſt'ned with the ſame ſort of Liquors continually convey'd thither.

514. And as thoſe Diſtances are greater, ſo do the Bones come nearer to the Structure of a ſofter Part.

515. And are therefore more apt to ſuffer the ſame Diſeaſes as the ſofter Parts are moſtly ſubject to.

516. Such is the wider part near the Joints, whereas the Bone is cloſer in the Middle, and has

520. The Bones have on their outside a Periosteum embracing and covering their convex Part, conveying the arterial Vessels into those Cells and into the Marrow receiving the Veins; which are some large, some small, but infinite in Number.

521. Hence the Third Class of Diseases in the Bones.

522. The Bones have another Periosteum on their inside, surrounding, and covering the concave receptacles of the Marrow, distributing the arterial Vessels into the medullar Vesicules, receiving the Veins; And they also are large, small, and infinite in Number.

523. Hence the Fourth Class of Diseases in Bones.

524. The Bones have in their Cavities infinite Vesicles full of medullar subtil Oyl, preserving the same, distributing the same not only mutually amongst themselves, and between the interstices of the Plates, but also in the Cavities of the Joints, and through the straight Pores. These Vesicules have Arteries, Veins, Lymphatic Ducts, Channels to convey Fat, small Nerves and Membranes.

525. This constitutes the Fifth and last Division (in this Kind) of the Diseases in Bones.

526. If the Medullar Oyl doth stagnate in its Vesicules, conveying Vessels or in the interstices between the Plates of the Bones, it becomes sanious, sharp, and rotten by its heat and vital Motion; it puts a Stop to a fresh Secretion, it will close the conveying and secreting Vessels, it will

inflame its Vesicule, bring it to a Suppuration, or corrupt both Liquids and small Vessels into a gangrenous Putrifaction; hence the very Substance of the Bone being robbed of its Vessels, depriv'd of its vital Liquid, eaten through by acrimonious Juices, is turned as it were into an Ash-colour'd Chalk, where it is thinnest, that is in the Cells of the Processes; from whence follows, a Pain, Heat, Throbbing, Swelling, Impostume and a Rottenness of the worst kind. This Stagnation may proceed from any Obstruction (see what has been said about them). But if it comes from an internal Disease, then doth it almost deserve the Name of a *Spina Ventosa*, the worst of all Diseases the Bones are capable of.

527. It appears that the Signs of this Disease and its State as in (526.) are the Signs of a deep Inflammation, not shewing itself on the Surface of the flesh nor discernable by feeling,

528. From the difficult separation, cleansing, absterſion, *&c.* many Ills may be foreseen and the Cure be pronounced very difficult.

529. The Cure is best of all attempted, 1. By filling all the Vessels copiously with Decoctions made of such as do penetrate powerfully, are very cleansing, and resist putrifaction. 2. Then by putting all the Humors in a strong motion by occasioning a profuse Sweating by means of Spirit of Wine set afire and directed to the Body of the Patient at a convenient distance under the Bed-cloaths, or any other way. 3. And at the same time while the Patient is sweating, by directing *the strongest* motion towards the Part affected by *topical* Fomentations of hot Steams. 530.

530. If this be long continued, it often doth a great deal of service, chiefly if at the same time the Patient observes a small Diet, directed against the oily Putrifaction.

531. If the arterial, nervous, and likewise the lymphatic Texture be obstructed through the defect of new Liquids, or the stoppage of those already convey'd, the same Diseases will again ensue as in (526) differing only in rank and order of Succession.

532. Of which consequently the Diagnostic, Prognostic and Cure are the same as in (529) (530.)

533. And it is plain that the difference of Danger is chiefly from the difference of Place where the first Cause of the Distemper is grown and seated: Which having first denoted, the Rules will be easier understood.

534. 1. That Inflammation of the Bone will be the mildest, which is occasion'd by the Inflammation of the external Periosteum, whereof the Causes are numberless (see the whole History of Inflammations) and its Effects are known.

2. It is known from the Signs of a deeply seated Inflammation, which upon a pressure encreaseth.

3. A great many Ills are foreseen, unless soon cured.

4. The Cure is like that of an Inflammation, chiefly by taking care, that the whole mischief may be drove out from the Bone to the Surface of the Body, which is obtain'd by Fomentations *and sometimes by* Incisions to the very *Bone.*

535. That

535. That such an Inflammation is tending to an Impostumation is apparent 1. from strong Signs of a violent Inflammation before. 2. a Throbbing, a Fever, and by fits great Tremblings and Shiverings with the Hair standing an end. 3. The absent Signs of a Resolution (386.)

536. That the Impostumation is already present is manifest from the Signs of a Suppuration lying deep under the Surface (see 287. 405.)

537. The Consequence thereof is, that the Pus having gnaw'd the Periosteum through, doth uncover the Bone, robs it of all its Vessels there, and soon corrupts it, (see 406.)

538. Wherefore the Impostume is to be open'd immediately, the Pus to be let out, the Ulcer to be cleans'd (403. 404. 469. to 411.) and then ought the Bone to be treated by the same cautionary Rules as in the Case of the Wounds of the Head when the Cranium is laid bare (See 252. 3. 259. 260. 262. 266.)

539. That this Inflammation is tending to a Gangrene of the Part, is known, 1. From the Signs of a precedent excessive Inflammation. 2. The ceasing of Pain without any good reason for it. 3. A thick, slow and very little painful Tumor of the incumbent Muscles and Parts.

540. That the same is already present is known from (539.) and from the pale, ash and livid Colour of the incumbent Parts.

541. Then is the Bone now become bare and depriv'd of its vital Liquid, consumed into a Caries by the sharp, putrified, gangrenous Matter, and spreads quickly infecting all around it.

242. So

542. So that the Place ought immediately to be laid open to the very Bone, and to be cleans'd; As for the Bone it is again to be cured as in (248, 249. 252. 258. to 266.)

543. If the inward Periosteum (522.) be inflamed, it acknowledges the same Causes as (534.) and, as to the inward side of the Bone, the same Effects; it ends either in an Imposthume or a Gangrene, but of a much worse Sort, because no parts of the Evil can be made to exhale; whence the whole Marrow, and the whole Bone must unavoidably perish, with a most stinking and horrid Caries.

544. Whence it also appears, that whether this Membrane be first seised with an Inflammation, or whether it received the Harm from the Marrow it self originally inflamed and communicating the same, That the Distemper call'd *Spina Ventosa*, must soon follow with all its dreaded Effects; which hitherto has mostly proved incurable. (See 526.)

545. This Disease is known, when it yet continues within the Bounds of an Inflammation, 1. From the general Signs of Inflammations. 2. From the depth of its Situation. 3. From an obtuse fix'd, long continued Pain, yielding to no Remedies whatsoever, nor encreasing at the pressure of the Hand. 4. Which however encreases after a Motion of the Muscles.

546. It is cured, 1. By the Method used in all Inflammations (from 395. to 401.) and then as soon as the Signs of a Beginning resolution appear. 2. *By the Method* proposed in (529.) being *strictly persued.*

547. But

547. But if either a Suppuration or a Gangrene enſueth, and is certainly known from the Signs of a preceeding ill-natur'd inward Inflammation, and from a fixed, deep and obtuſe Pain; Recourſe muſt be had to the Method in (529.) for if that doth not, nothing will Cure.

548. For the whole inward Subſtance of the Bone being then rotten, and the inward Bone being tumefied, inflamed, and carious, the outward Perioſteum is inflamed, pull'd aſunder by the Tumor, and gnaw'd through by the Acrimony; The incumbent Parts being ſpoil'd by a ſlow Contagion grow ſpongious, tumefied and painful; The whole Limb is loſt. Nothing is left for it but Extirpation.

549. A pocky, ſcorbutick, and ricketty Quality is often the Cauſe: Hence may be underſtood, what is a *Gumma Gallicum*, Venereal Tophi, Nodes, Excreſcencies, Impoſthumes, what a Caries of the Bone, and a Spina Ventoſa.

550. Hence we know, why a carious Bone doth ſo often change its Colour, from a blewiſh, white, into a fattiſh white, into a yellow, aſh, livid, and black Colour. And what degree of corruption is indicated by each of them.

551. From the ſame Reaſons it is plain, why a Carious Bone grows by degrees firſt uneven, then rough; ſpongious, friable, ſoft, and very brittle.

552. And alſo why the ſame exhales a Stench like to ruſty Bacon.

553. And why in an ulcerated Part occaſion'd by a Caries underneath the incumbent Fleſh is

ſoft,

oft, flagging, fungous, bloated, and swell'd; the ips of the Ulcer turn'd up; the ulcerous Matter e clear, thin, somewhat glewish, stinking, and ill of little black Scales; Why the same doth lways break out again without any external Cause, id obstinately refuses to be conquer'd by all Re-edies, which never fail of curing Ulcers of ano-er Kind.

554. And also why a Caries from an External ause is easily cured; that from an Internal Diffi-lty, from the great Pox more difficulty, and at from a Spina Ventosa the most difficult of .

555. Lastly, Why a Caries in the solid part of e Bone be bad? worse in the Spongious part, and e worst in the Joints? Why the first be slow, e next quicker, and the last the quickest of all? hy the same gains quick in Children, and is so ficult to cure? And why the Spina Ventosa th most times shew it self in several places at ce, or successively? " As I have known in a worthy Minister of the Protestant Church of *Rochel*, who since his being a Refugee at *Ley-den*, lost both his Arms successively.

556. Whoever adds to these (from 512. to 556.) at has been said of Contusions (from 249. to 7. and 325.) and of Luxations (from 358. to o.) and of Fractures (from 339. to 358.) and o what has been said of the Wounds in the ead where the Bone was offended (from 249. 297.) He may safely think he possesseth the ole History of the Diseases incident to Bones, d almost all the Methods to cure them. Chiefly

if we add to them what may be ſaid of the *Anchyloſis*, which is an immoveableneſs of the Joint with a hard Tumor, owing its origin chiefly to the Callus of a Bone broke near the Joint, or to the thickned Liniment of Havers, or to the ſhrinking of the Ligaments or Tendons, or a Protuberancy near the Joints. The Cure whereof is very difficult, and requireth different Applications according to the difference of the Cauſe.

557. *Whoever* now has underſtood all the Diſeaſes hitherto deſcrib'd, and has been an Eyewitneſs of 'em, ſo that he hath well and duly weigh'd the Cauſes of 'em, their Nature, Effects and Cure; and hath afterwards applied all theſe to the internal and hidden Parts of the Body, compar'd them with the Action of the entire and whole Parts, and at laſt with the Phenomena of internal Diſeaſes; *He* will find that the internal Operations agree exactly with what he has ſeen in the external Parts: That therefore a Syſtem of Phyſick ought to begin with the Chirurgical Diſeaſes; and that no other Method can lead ſo well to the plain and eaſie Knowledge of truth in Matters of Phyſick.

OF

OF INTERNAL DISEASES, AND *Of FEVERS in GENERAL.*

558. AND now is the most Natural Time to treat of a Fever which is a most common Distemper, an inseparable Companion of Inflammations, the Cause of a great many Diseases, of Death, and often the most effectual Means to recover some Diseases.

559. And whereas it is a most common received Notion, that its Nature is hid and unconceivable; so we ought with all our Prudence to avoid falling into any Error in the Search after it.

560. And yet it is very easie to be mistaken herein, because of the many and various Symptoms which usually attend a Fever, and without which notwithstanding the same may be and subsist.

561. To avoid Error therefore, it will be necessary to chuse of an infinity of Symptoms, those only which are always present in all Fevers, and whose presence perceiv'd, makes the Physician sensensible that there is actually a Fever, and which being absent, do inform him again that his Patient is free from any Fever.

562. Then from the Discovery and due Consideration *of these the individual* and specifick Nature

ture of a Fever is to be found out and known.

563. In every Fever produced by an intern Cauſe, there are to be obſerved at ſome time, ar in ſome degree, a Shivering, a Quick Pulſe, ar a Heat.

564. The Fever in which theſe three Phæn mena are quickly run off and with Danger, call'd an *Acute Fever.*

565. Where they do run off ſlowly, either wi or without endangering the Patient, that Fever call'd a *Slow* one.

566. Both of 'em may either be Epidemic or common to the Generality of People at a ce tain time, or only particular to this or that Man

567. Diſeaſes which the Fever (in 564.) do accompany, are called *Acute febrile* Diſtempers thoſe as have that (of 565) are call'd *Chronical.*

568. So that the nature of a Fever in gener ought to be known before one treats of them

572. So that the proximate or nearest Cause of this quickness is also the nearest Cause of a Fever hereby discover'd.

573. That is, a quicker than the natural contraction of the heart.

574. Consequently a too quick reciprocal Influx of the nervous Juice and that of the Cerebellum into the Muscles and the Ventricles of the heart.

575. Almost every Fever which has hitherto been taken notice of, which proceeded from an internal Cause, begins first with a sense of Coldness, Shaking, Shivering greater or less, longer or shorter, inwardly or outwardly apparent, according to the different temper of the Patient, or the various Cause of the Fever itself.

576. At which time the Pulse is quick, small and often intermitting, the Extremities are often pale, cold, stiff, trembling and void of feeling.

577. From whence it appears, that then the bloody Humours do stagnate at the ends of the Capillary Vessels, and that there is notwithstanding at the same time some Cause that irritates the Heart.

578. Whence (577.) the Cause of all the then present Phenomena is understood.

579. In all Fevers, after the Symptoms of (576. to 577.) there ariseth a Heat, which is greater or less, of a long or short duration, internal or external, general all over the Body, or particular in some part, according to the variety and differences of Fevers.

780. Which Heat, as it follows the preexiſtent Fever, ought rather to be taken for its Effect than for its Cauſe or Nature.

581. So that the too quick contraction of the Heart, with an increaſed reſiſtance at the end of the Capillary Veſſels is ſufficient to compleat in us the Idea of all acute Fevers.

582. And either of theſe two may be occaſioned in a living Animal by Cauſes infinite in number and variety; and they may happen both at once or ſingly; and when the one is produced the other ſoon follows.

383. So that the neareſt Cauſe of a Fever acknowledges numberleſs Cauſes for its neareſt.

584. Which however are divided, as they are either ſingular to each, or univerſal and common to many; which laſt are generally owing to the ſame Air, Diet and Way of Living.

585. So that the Cauſes of Fevers are Singular or Epidemical.

586. The nearer Singular Cauſes may be reduced under ſome Heads. α. The things received or conveyed into the Body being ſharp and pricking, whether called Meat, Drink, Medicines, Preſervatives or Poiſon, when endow'd with that propriety that they cannot be digeſted, moved, nor evacuated; or when taken to ſuch a Quantity as to irritate the Stomach, to choak up, to obſtruct, and to putrify within the Body. β. The things retain'd in the Body, which uſed to be evacuated each their proper Way, and that becauſe of ſome Cold, Unctions, Vapours, ſome thick and fat *Meat, Drink*, Medicines, Poiſons, or Air; too

long

long continued Rest, some usual Exercise omitted, Obstructions and Compressions from either the contain'd or surrounding Bodies. γ. The Gestures; as the too great disturbances of the Mind or Body, occasioning heat and tossings. δ. External Applications that are sharp, pungent, gnawing, tearing, burning, or inflaming. ε. Those that change the Humors and their Motions much, which abundance of Externals as well as Internals will do; Hunger, great Evacuations; Collections of Pus, Water and watry blood in Dropsies and Empyemas, or sharp Serum; Choler being inflamed and burnt; Suppurations, Gangrenes, Cancers, too much Waking, too intense Studies of any Kind, and Excess of Venery.

587. The Effects of a Fever are, A too quick expulsion and propulsion of the Liquors; too great an Agitation of the stagnating, and a Mixture of all; an overcoming of what resists, and its Coction; a Secretion of the concocted Matter, and a critical Evacuation of what had occasion'd the Fever by its Coagulum and Irritation; a change of the sound Liquors into a diseased State; a change of the sound Parts into a condition able to bear many things which the Patient was not used to before; an Expression of the most liquid and thin Juices; a Thickning of the Remainder; a Drought, Heat, Pain, Anxiety, Weakness, Weariness, Heaviness, loss of Appetite, and Nauseousness.

588. The sooner the stagnating Liquids are to be resolv'd and the Irritation is to be allay'd (577.) so much the slighter and shorter will be the Fever and *tending to Health*; and so on the Con-

trary: and the Fever will alſo vary according to the different Degrees and Concourſe of both.

589. And thence one may learn that a Fever may often be a Medicine very inſtrumental in the Cure of other Diſeaſes. Such as the Palſie, *&c.*

590. Hence the beginnings, the increaſe, full heighth; the declenſion, criſis, changes and cure of Fevers are various in the very acute ones, and even in the Singular Kind.

591. A *Fever terminates* in Death, another Diſeaſe, or into Health.

592. *In Death*, through the fault of the ſolid parts being deſtroy'd by too great violence; or from the Liquids being ſo far deprav'd, as that they obſtruct the Vitals, or thoſe Parts through which new Liquids muſt needs paſs, to ſupply the room of the waſted. Hence Inflammations, Suppurations, febrile Gangrenes in the vital Bowels, the Heart, Lungs, Cerebellum: Or Aphthous Ulcers in the Stomach and Guts, which by ſhutting up the Lacteal Veſſels, ſo as not to admit of either Nouriſhments or Medicines for a conſiderable time, muſt needs prove Mortal.

593. *In another Diſtemper*, As the ſame doth hurt the Veſſels through too great an Agitation, and by diſſipating the thinneſt Liquids thickens the reſt; Or as it is not able to reſolve entirely what it has firſt occaſion'd to coagulate; Or by depoſiting its Critical matter in ſome obſtructed, dilated, or broken Veſſels; hence the red and ſcarlet Spots, Puſtules, St. Anthony's Fires, Meaſles, Small Pox, Phlegmons, Buboes, Swellings behind *the Ears, Impoſthumes, Gangrenes, Sphaceles, Schirrus Tumors, &c.*

594. Into

594. *Into Health.* 1. Whenever it overcomes with its own power the material Cause of the Fever, doth break it, makes it moveable, drives it out by the insensible Perspiration, and at the same time lays asleep its own violence by re-establishing an equal Circulation of all the Liquids. This is the Method of Resolution, which is very near the same in a Distemper of the whole, as it was shewn in a Disease of a particular Part (See 386.) 2°. Or if the Matter of the same Disease being overcome by the power of the very Fever, be loosen'd and render'd Moveable, yet has retain'd one particular quality, which will hinder an equal Circulation, and yet stimulates and irritates the Vessels, and is for that reason drove out by some sensible Evacuation which it occasions; such as Sweats, Spitting, Vomitings, Diarrhæas, and Urine, after the Coction and height of the Fever, when the Crisis is compleated almost within the fourteen Days.

595. Lastly, a Fever terminates into Health; If the matter of its Cause being overcome by the strength of the Fever, loosen'd, made moveable, and made again like unto the sound Liquids, flows without any Crisis, or any other Distemper succeeding.

596. The Genius, Danger, and Duration of an acute Fever, if well taken notice of from its beginning, increasing until the height, will instruct the Physician, how the same will go off, change and terminate.

597. So that from all these (from 558. to 597.) the general Heads of the Diagnostic and Prognostic *in Fevers* may easily be drawn.

598. The beſt Method to cure a Fever in general, is to be learn'd from theſe Rules, 1. Chief care muſt be taken to preſerve Life and vital Strength. 2. The ſharp irritating Cauſe muſt be amended and expell'd. 3. The tough ſluggiſh Humors muſt be diſſolv'd and expell'd. 4. The Symptoms muſt be mitigated.

599. Life and vital Strength is preſerved by a fluid Diet of ſuch as are eaſily digeſted, are contrary to Putrifaction, and to Thirſt; as are apt to uphold or increaſe the Appetite, and in all reſpects are contrary to the known Cauſe of the Diſeaſe.

600. Nouriſhment ought to be given when the Fever is either off, or when it remits and is leaſt violent.

601. And then in moderate Quantities but the oftner repeated, that the Bowels may not be put to too great Labour, or be thereby altered.

602. The Quantity to be given, and their degree of Strength is determin'd, 1. From the foreknowledge of the Fevers ſhort or long Duration (588. to 590. 596, 597.) Whether 1. 4. 7. 9. 11. 14. 21. 30. 40. 60. Days. For ſo much ought to be given as will ſuffice to carry the Patient through not only the Coction, but alſo the Criſis. The ſhorter the Diſeaſe is like to be, ſo much the leſs in quantity and weaker in quality, ought to be given, and ſo on the Contrary. 2. From the known Age of the Patient; for all Animals bear Hunger the leaſt, as they are nearer their Birth or very old Age. 3. If the ſtate and violence of *the Diſeaſe* are known, different Diet as to quan-

tity and quality ought to be allow'd; In the height give the least and the lightest Food; at the increase or decrease give so much the more, and so much more nourishing as you are distant from the heighth of the Disease. 4. From the Country as the Patient is of, or which he actually inhabits; for those nearer the Æquinoctial-Line, bear much easier a spare and thin Diet than those nearer the Poles, whether North or South. 5. From the Season of the Year, for the Summer requireth very thin, but the Winter more substantial Food. 6. From the Custom of the Patient, and his natural Constitution; for he who in health has been used to high Living, and a very nourishing rich Diet and bore it well, the same when ill, has occasion for more Food, than another Man, because his Vessels and Bowels are used thereto. 7. From the lying easie or heavy, agreeing or disagreeing of the Things given to the Patient.

603. Sharp irritating Bodies when known to be outwardly adherent to the Body (such as the acute Fragments of Glass, of Metals, Wood, Stone, or Bones, or the Applications of stimulating, redning, gnawing, blistering, caustic, putrifying or poyson'd Bodies, are to be removed forthwith; then the Place where they were affixed, and has received Damage thereby, ought to be fomented with soft, mucilaginous, kind, oyly, anodyne and opening Medicines.

604. An irritating sharpness being within the Body (such as is all acrimony from a sharp and stagnating Lympha, Pus or Ichor, producing Inflammations, *Suppurations*, Gangrenes, Sphaceles,

Cancers, and rottenness in the Bones) ought either to be removed or to be corrected, according to the Rules heretofore laid down in the History of those several Diseases.

605. An irritating Acrimony brought and mixed in the very Liquids, may and must be either removed or corrected by the Use of the six Non-naturals, using different means according to the different Nature of the said Acrimony.

1. What came from too much motion requireth rest of the Body and Mind, and to be corrected with moistning, diluting, and kind softning Medicines and Diet.
2. That which was occasion'd by the too great heat of the Air, is cured by temperating the same with cold Springs, some certain Plants fit for this purpose; giving the Patient water to drink somewhat acid and impregnate with Nitre, together with a little mixture of tart Wine; Meat somewhat sourish, gently softning, a little saltish, and Medicaments of the same Class.
3. That from too moist an Air is corrected by making large Fires with aromatick and resinous Wood, and Exhalations, and Fumigations of aromatic Herbs and Plants.
4. That from a sharp and putrifying Air is mended by firing Gun-powder, Nitre, Steam of Vinegar, and strewing common Salt upon live Coals.
5. That from Affections of the Mind by quieting the same, by reasoning or Perswasions, by raising contrary Passions, offering different and various Objects, by Anodynes and Opiates.

6. That

6. That from acid sharp Meats, by diluting that sharpness, asswaging, absorbing, and changing into a compound Salt: This is also effected by the continued use of watry Eatables; Jellies of animal Juices, oleous and cretaceous Food, all sort of Cockle and Shell-fish, Stones of Animals, fat Earths, Alcaline fixed Salts, volatile, simple and compound. (See from 60. to 69.)
7. That from sharp salt Meats, by diluting that Acrimony with watry Roots and Herbs, and evacuating them at the same time; softning with smooth and oleous Food, and correcting them with Lixivious Broaths or Decoctions from Quick-lime.
8. That from sharp, aromatic and hot Meats by diluting, correcting with Acids, resolving and cleansing with acid and soapy Medicines and softning with mild Jellies. And whereas the alcalious Acrimony belongs to this Class, it is easie to adapt the Rule to them.
9. That, from Meats taken from the most easily putrifying Parts and Kind of Animals, is removed by those described (from 76. to 91.)
10. That proceeding from an over-eating, by which the Stomach is ty'd up, is remov'd by diluting them with large Quantities of warm Water, by Fasting, Vomiting or Purging.
11. That from stale fermented, or yet fermenting new Drink, acid, oleous, aromatick, distill'd, or in its natural simple State, that Acrimony, I say, once convey'd into the Blood is removed by the same Remedies as are set down in the *Numbers* 5, 6. 8. of this *Aphor.*

12. That

12. That from too much waking is cured by the ſame, as in N°. 1, 2, 3, of this *Aph.*

13. If an alcalious, an acid, oleous or putrify'd ſaponaceous Acrimony is occaſion'd by the retaining of Excrements in the Body; thoſe ought to be made to flow, the Ways are to be made ſlippery for 'em; the Emiſſaries to be open'd, the expelling Faculties to be ſtimulated, increaſed; all which muſt be done both by External and by Internal Means.

606. The Outlets or Emiſſaries are open'd, by looſening what was ſticking faſt, relaxing the obſtructed Veſſels; which is accompliſh'd by Bathings, Fomentations, Rubbings, Shaving of the Hairs, and Cleanſing of the Skin. (See from 107. to 144.)

607. That which ſtagnates at the Extremities of the Conic Veſſels, from the two great quantity of Blood, by which the Veſſels are preſs'd on their out-ſides, is made to flow and circulate again by means of opening a large Vein: This is known from the Signs of a Plethora (in 106. and 107.)

608. Whatever ſticks at the ends of the Capillary Veſſels, becauſe of their Fibres being contracted by a Cramp or convulſive Motion, and hence made narrower, is looſen'd by relaxing the Fibres, (See 53. to 55.) and by carrying off the Sharpneſs which occaſions that Contraction, (See 35, 36. 54. 66, 67. 88. 102. to 105. 127, 128.) from whence you may borrow all that is neceſſary here.

609. That which ſticks becauſe of its own natural Slymineſs and Sluggiſhneſs, may be looſen'd many

many ways, whereof the Chief is to moderate the strength of the Fever thus, that it may be able to dissolve that Coagulum, (587. 589. 593, 594.) And therefore it is requisite that its Violence be thus temper'd, α. That the same may not produce Inflammations, Imposthumes, Gangrenes, or Sphaceles, (592.) the Danger of which to be at hand is learn'd from the vehemence of the Symptoms, chiefly of Heat, compared with the resisting power of the Vessels. β. That the Liquids may not be dissipated by too much Motion; which is foretold by the dryness of the Nostrils, Eyes, Throat, and Tongue, by a Hoarsness, dry Skin, paucity of Urine, a small, quick, and unequal Pulse. γ. Nor that the Motion be too much abated before the Coction of the febrile Matter, which wou'd disable the Blood from overcoming, moving, separating and driving out the Matter of the Disease: That there is Danger of this is known from the vital Actions becoming altogether languid, without the apparent Signs of a Coction.

610. If then the Motion is perceiv'd to be exorbitant, it is moderated by Abstinence, thin Diet, drinking of Water, a cool Air, quieting the Mind, Bleeding, cooling Glysters; by soft, watry, glutinous, cooling, anodyne, and opiate Medicines, (See 92. to 106.)

611. If the Motion be too slow, it may be quickned by the help of cordial Meat and drinking of Wine, by a warmer Air, by raising the Passions of the Mind, by stimulating Medicines, such as are *volatil, aromatic*, and fermented; by

Frictions,

Frictions, Heat, muſcular Motion, Bathings and Fomentations.

612. After the firſt Remedy in (609.) which removes the Viſcidity, the next is to reſtore to the Veſſel its Elaſticity, which is obtain'd by leſſening the quantity of the Liquid, by letting a great quantity of Blood flow quickly out of a large Orifice made in a great Vein; and afterwards or even then increaſing the Motion by ſtimulating Means.

613. Thirdly, that ſame Viſcidity is made fluid by diluting it with Drink, Bathing, Fomenting, Glyſters, and watry Means and by Frictions at the ſame time.

614. This will be the better accompliſh'd if the Patient takes the watry and ſalt Means as hot as he can drink 'em, or the bitter, aromatic-milky Herbs cold.

615. Which that they may well, quickly, ſafely and powerfully act, a Bleeding ought to be pre-

ſions, Sweats, Looſneſs, and Inflammatory Puſtules.

618. All which ariſing from the Fever (581. 587.) as its Cauſe, if the ſame be removed (594, 595. 598. to 617.) will ceaſe of courſe; and therefore if they can be bore without indangering Life, they ſcarce require a particular Cure.

619. And even ſometimes they proceed from an effort of Life, diſpoſing it ſelf for a Criſis, or an evacuation of the Critical Matter; The which Excretion they precede, accompany and follow, and ought not to be interrupted.

620. But if the ſame come out of time, if too violent to be overcome or bore by the vital ſtrength or the patience of the Patient, or are like to produce ſome greater Ills; Then ought each of 'em to be allay'd by their proper Means, having always an eye to the Cauſe and the State of the principal Diſeaſe, the Fever. (590.)

Of the Cold Fit in Fevers.

621. The Cold which happens in the beginning of acute Fevers ſuppoſeth a leſs attrition of the Liquors againſt each other and their Veſſels; the leſſening of the circular motion; a ſtagnation of the Liquids at the Extremities; a leſs Contraction of the Heart, a leſs quantity of Blood forced out of it; and the animal Spirits flowing leſs from the Cerebellum to it.

622. It occaſions, if continued long in a great degree, Polipous Concretions in the larger Veſſels and about the Heart; and in the leſſer Veſſels by emptying their Liquids produces Evacuations;

cuations; whence great and many evils in both.

623. Hence it is evident what denotes, what it doth foretell? And why the Fever is more dangerous in proportion as the cold Fit has been violent? Why in the beginning of a peſtilential Fever the cold Fit is in the greateſt degree of violence, and on the contrary the heat is as violent when the ſame is farther advanced.

624. This Cold when attempted to be removed by all kinds of ſtimulating means under whatſoever Title or Denomination, though of the moſt powerful kind, yet has often produced an inſuperable and incurable Inflammation. So that in this Caſe all ſaline-ſharp, aromatic, oleous, bliſtering and ſuch like Remedies ought to be avoided.

625. But it is beſt cured by drinking hot Water with ſome Nitre, Honey and Wine; by the uſing of Bath, Steams, Fomentations and Lotions with hot Water, and by moderate and continued Frictions,

626. Which being immediately applied upon the firſt Invaſion of the cold Fit, have often cured at once moſt dangerous and acute Diſeaſes.

Of Febrile Shaking.

627. The ſhaking ſuppoſeth, A Wavering of the Muſcles between their Tone and their Laxneſs; Cauſes now extending and ſoon after looſening them, and theſe motions ſucceeding each other ſhortly upon one another without the will of the Patient, and even againſt his will; The Influx of the arterial and nervous Juices ſometimes *abſent* ſometimes preſent; and conſequently ar-

gues

gues in the beginning of the Diſeaſe a reſt of both thoſe Liquids; towards the end often too long an abſence of the ſame, after an extravagant expence of the one or both.

628. If long continued it occaſions Impediments in the circulation of Humors, and the Defects thence proceeding.

629. Hence muſt the diagnoſtic and prognoſtic of this Symptom be fetch'd: and hence it's apparent why ſhaking and cold go together (621.) Why a violent ſhaking is ſo pernicious? Why great paſſions of the Mind occaſion Shakings? Why great Tremors about the approach of Death? Why from too large Evacuations of any kind? Why from an Exceſs of drinking any ſort of Liquors?

630. The ſame is cured by reſtoring the equal flowing and preſſure of the arterial Liquor in the Arteries of the Cerebellous (that is Nervous) Liquor into the Fibres of the Nerves: This ought chiefly to be endeavour'd in the beginning of the Diſeaſe by the uſe of ſuch things as do cut and attenuate the ſluggiſh Humors, and reſtore ſtrength (606. to 617.) But towards the end of the Diſeaſe by means of ſuch which ſuddenly reſtore and ſupply the loſt Liquids, and corroborate the Fibres and the Bowels.) See from 46. to 49.)

Of the Anguiſh in Fevers.

631. This Anguiſh is occaſioned by the Blood being ſtopp'd in the very Heart, and conſequently hindred from paſſing through the Lungs or the Aorta; *whence a Cramp* of the contracted Veſ-

ſels,

ſels, or an impoſſibility to the enflamed Matter of paſſing through them: We have ſeen the ſame Effect from the Blood being hindred in its paſſage through the *Vena Portarum* in the Liver from the ſame Cauſes; Whence, when all the Venous Blood, brought hither by the Cœliac and Meſenteric Arteries, cannot return, but ſtagnates, extends the Veſſels, reſiſts the approaching Blood convey'd through the Arteries, and conſequently produces all the Evils bred and deducible from thoſe Cauſes: It is apparent, that both theſe Cauſes of Anguiſh in all acute Diſeaſes ought to be obſerv'd very diligently, and with all poſſible ſagacity, and well aſſured aſſoon as poſſible.

632. If therefore ſuch (631.) an Anguiſh continues long, it muſt needs produce about and near the Vitals polypous Concretions, Inflammations, ſudden Gangrenes, with an intolerable ſenſe of narrowneſs, and Death ſoon thereupon ſucceeding: But if the Seat of the Anguiſh is in the Hypochondria, then doth it create a moſt exquiſite ſenſe of Sickneſs and Pain at the Stomach, while the other Bowels are leſs ſenſible of Pain; then ſudden Putrifactions of the Blood in thoſe large Veſſels of the Liver, which have a leſs elaſticity and contracting power than thoſe of other parts; whence Gangrenes, a rottenneſs of the Liver, and from that ſame a mortal Bloody-Flux.

633. Hence the Phyſician may exactly know the Nature, Cauſe and Event of this Anguiſh (631. 632.) and at the ſame time will diſtinguiſh an Anguiſh only occaſioned by a diſorder upon *the Nerves* without a preceding Fever from that

which

which owes its origin to an acute Inflammation, which then has shewn itself by its proper and peculiar Signs; and thence comparing these with the violence, duration, and Seat of this Evil, he'll be able to form a true Judgment of 'em all. Why doth *Anguish* almost in all Diseases perform the last part of the Tragedy just upon the point of Death? Why is the Nervous Anguish little, but the Inflammatory one extreamly dangerous? Why are Restlessness, Tossings, Sighing, Panting for Breath and Constant Wakefulness the Forerunners and Foretellers of Death in most Inflammatory and Imposthumating Diseases?

634. Hence also it appears, what different means are requisite to allay the violence of this Evil, which however are all known and usefully applied, assoon as the nature of this Symptom is known. For when it is plainly discovered that it is a Nervous Case, The Cause is removed by softning the irritating sharpness (603, 604, 605.) expelling the same with Vomits, Purges, Sweats, Diuretics, Absterfives; Diluting the same with warm and watry means; Quieting the passion of the Mind; Relaxing the Fibres, Vessels, Bowels; (35, 36, 54, 55.) Restraining the power of the nervous Juice, with Anodynes and Narcotics. But if the same proceeded from an Inflammatory toughness, that ought to be resolved, diluted; the Vessels to be loosen'd, the violence of the flowing vital Liquid to be bridled; This end may be answer'd by giving the Patient large Draughts of warm Water with Honey, Oatmeal, Nitre, Juice of Oranges *or Limons*, with a small Proportion

of the leaſt hot Spices; By Fotuſſes, Cataplaſms, Epithemas, Plaiſters applied to the affected Part, which make of Diluents, Looſening, Emollient, and Anodynes; By Glyſters often, but at the ſame time given in ſmall Quantities, and kept as long as poſſible, which make of the juſt now mentioned; By Steams of hot Water with ſome emollient Ingredients in it, which direct ſo as to let the Patient receive the ſame by his Noſe and Mouth, and thence be conveigh'd towards the Lungs.

635. And indeed if any where, here doth the violence of the Evil require a ſpeedy and ſafe Cure.

Of Thirſt in Fevers.

636. Thirſt owns for its Cauſes a drineſs of the Liquids, and their inability to flow; a ſalt, alcaline, or a bilious and oleous Acrimony.

637. So that the ſame generally argueth the preſence of one of them mentioned (in 633.)

638. And conſequently is an Index that thoſe Evils are coming on, which may be produced from the Cauſes ſaid to be exiſtent in this Caſe. (See 636, 637.)

639. So that the ſame always requireth preſent Remedies, chiefly in acute Diſeaſes.

640. The ſame are, 1. Drinking of thin, watry, ſouriſh, nitrous, ſoftning Liquors, and them warm, often repeated but in ſmall Quantities. 2. Fomenting the Noſtrils, Mouth, Throat, with the like Liquids, Waſhing and Gargarizing alſo. 3. Laying about the Hypochondria Cataplaſms,

Fotuſſes

Fotusses and other outward Applications of the like Matters. 4. Injecting Glysters, and getting them to be retain'd long, and made of things of the like kind.

641. But if the Patient is at the same time very droughty and very weak, then ought winy, and spirituous Liquors to be mixed with the latter (640.) and then are Cordial Juleps given with a great deal of Success, and Safety.

Of Loathings in Fevers.

642. A Loathing infers vain reachings to vomit with a sense of Dread; Its nearest Cause is therefore a slight Convulsion of the muscular Fibres of the Jaws, the Gullet, the Stomach, Intestines, and abdominal Muscles: Which is occasion'd, 1°. From a sharp, putrid, bilious Matter derived into the empty Stomach, rising towards the Jaws, pricking and twitching both, whence the other Parts follow the same Motion; It's known from Fasting, a strong stinking Breath, foulness of the Mouth, Tongue and Jaws; Or 2°. Is produced by a sluggish, viscid and floating Matter, which by watring those Parts doth also twitch 'em, and is discern'd by the Signs of a glutinous disposition of the Liquids having been first observ'd; Or, 3°. From the Stomach, Gullet, Intestines, and the neighbouring Entrails being slightly inflamed; which is discern'd by its peculiar Signs. 4°. From the remembrance of Things which formerly when taken used to occasion the like Loathings. 5°. Lastly, From the inordinate Motion *of the nervous* Juice, no matter whence

arising; It's known by a Delirium, Convulsions or Catchings, Vertigoe's and Tremors.

643. If it continues long, it occasions loss of Appetite, an abstinence and aversion from Drinking and Medicines, and afterwards Vomitings; and a great many Evils which follow from those, the chief whereof are a Weakness, a putrid alcaline Acrimony, and Drought.

644. The Loathing produced by the first Causes is amended by using Acid, Salt, watry Drink, Food and Medicines; by giving gentle cooling Purges; such as *Acton*, *Epsom* or *Shooters-hill* Waters with the Purging Salts; by such acid and austere Medicines, *&c.* as do strengthen the Fibres; Or even a Vomit if it cannot be overcome with the others. But such Loathings as are occasion'd by the second Cause, are carried off with diluting, attenuating, purging or vomiting Medicines. And if from the Third kind of Causes

to Flesh, Eggs, Fish, and on the Contrary do covet Water, sour or tart Things, Summer Fruits, and cold Things? Why Medicines are of no Service to the Patient, unless you have first removed these Loathings and their Occasion? Why this Symptom be often incurable? Why sometimes these Distempers go off with a sudden, unusual and wonderful Appetite succeeding them.

Of Belchings and Winds.

646. Belchings owe their birth to an Elastic Matter, which by the heat, effervescence and fermentation is made able to swell and dilate, which in one moment is retain'd, and in the next having loosen'd or broke its Prison, is push'd out with a sound and impetuous Noise.

647. So that the Air, Salts of an opposite Nature, Summer Fruits, putrifying Humors, and such of the Vegetable Kind as are apt to ferment, supply the matter for Belches and Winds, whereof the Noise and Stench doth differ according to the different Nature of its Producer.

648. Nor will all these occason any noisy sound, if they have a free passage to exhale at; Whence it appears, that the Contractions of the Sphincters of the Gullet, Stomach, of the superior and inferior Orifice of the Stomach and of the Intestines, do always meet together, and are again loosen'd together; Whence Belches, Winds, Farts, and the Frog-like croakings of the Guts.

649. If these two Causes (of 647, and 648.) do meet and act powerfully and last long, then doth the *Elastic Matter* being by heat, motion, and

its own proper Strength ſtirred up to a Dilatation, and impriſon'd in a Cavity whoſe Fibres being by Convulſions contracted, do dilate the cloſing Membranes, ſtretch them, makes 'em painful, compreſſeth and ſqueezeth the adjacent Parts; whence ariſe intolerable Pain and Anguiſh, which ceaſe inſtantly upon the letting out of the Winds. (See 220. to 227.) and 631. to 634. And if to this is join'd a Fever, there enſue moſt inexpreſſible Torments.

650. The Cure of this Evil is effected, 1. By carrying off the Matter (647.) with Diluters; warm diſſipating Waters gently Aromatic; ſuch as break the ballance of the Salts to a requiſite overplus: Such as correct Putrifaction; and as do ſubdue or leſſen Fermentation. 2. By ſuch as allay Convulſions, ſoften Acrimonies; Refrain the Motion of the Spirits; whereof the chief are Opium and gentle Antihyſterics. 3. By Glyſters,

Of Vomitings in Fevers.

652. Vomiting, which at first is a violent Expulsion and throwing up of the Contents of the Stomach, and afterwards also of the Guts, and lastly of the Bowels emptying themselves into the latter, acknowledgeth for its nearest cause a Convulsion of the muscular Fibres of the Jaws, Gullet, Stomach, Intestines, Diaphragme, and of the abdominal Muscles; And for its remoter Cause, whatever doth stimulate the described Fibres by irritating them, or the Bowels which are easily convuls'd.

653. So that it sometimes happens by the defect of the Stomach which is convuls'd, inflamed, imposthumated, schirrous, and cartilagineous, together with an acute Fever; it is obstinate and of a long Duration, and it may be known when the Causes are such; nor is it cured, but by the Removal of them, of which hereafter.

654. By the defect of the Bowels and of the surrounding Parts being affected in the same manner, and irritated by the distended Stomach full of Aliments or other Matters; in which Case a very stubborn Fit of Vomiting will often invade together with a Fever.

655. By all the Causes of very great Loathings (642.) whence it may be known, be managed, and cured.

656. If it continues a long time, it occasions Wastings, Iliac Pains, Convulsions and the Effects of great and stubborn Loathings (643.)

657. If from the Causes (in 653. 655.); the Cure must be fetch'd from the History of those Diseases.

658. If from the Cause (in 642, 655.); then ought the Remedies (of 644.) to be applied without any loss of Time; chiefly Opiates; and strengthening, drawing outwardly, and dissipating Fomentations incorporated in Lint or Crums of Bread, *&c.* "The following I have very often "experienced to be efficacious: ℞ *Theriac. An-* "*drom.* ℥ss. *Ol. Nuc. Muscat. Laud. Liquid.* āā "*gutt. xx. Lanæ Cotoneæ q. s. ut in forma boli* "*applicetur ad scrobiculum cordis, superimponen-* "*do emplastrum Stomachicum Magistrale.*

659. Hence the reason is plain, why it is so difficult to put a Stop to Vomitings in many acute Fevers; and also the Falshood of that Rule too generally and unwarily embraced by the heedless or ignorant of Art, *That Vomitings are cured by*

Of Weakness in Fevers.

660. The hindrance of the Influx and Pressure of the nervous Juice into the Muscles, is follow'd by an extream Weakness.

661. Which hindrance may proceed from the Emptiness of the Vessels, from the Liquid being spent, or its being unable to flow, from the Obstruction of the Canal, or its being press'd and squeez'd by an outward Cause; chiefly about its beginning in the Brain and Cerebellum; and from the Weakness of the Heart.

662. That it is the first Cause, is made evident, from the Symptoms, which are the consequences of large Evacuations, when they have either preceeded, or are actually existing; such are the long continuation of the Disease; Losses of Blood whether occasion'd by the Disease it self, or artificial by the hand of the Surgeon; Sweats, a Diabetes, Salivation, Diarrhæas; From the want or weakness of the Aliments, whether not retained, or not well digested, or not duly assumed by the the Lacteals into the Channel of the Blood. From a Paleness, Leanness, little Pulse, the falling of the Veins and Vessels, and from the flagging and shrivelling of the Muscles.

663. That the glutinous Liquid doth or cannot flow, or is inflamed, may be known from the Signs laid down (from 69. to 74.)

664. That the Channels are obstructed by looking back (from 107. to 144.)

665. That the Compression of the Brain and Cerebellum *is the Cause* of the present Weakness,

is known, when at the ſame time we obſerve thoſe Functions weakned and damaged, which we certainly know to depend from their being entire; that is, when we ſee the Patient delirious, doſing, trembling and complaining of a Vertigo and Noiſe in his Ears, at the ſame time as we perceive his great Weakneſs.

666. But we know the ſame to be occaſion'd by an immediate weakneſs of the Heart, when we perceive the Signs of a deficient Circulation (See 106.)

667. Liquid Aliments, of a like Nature with the Blood, digeſted by Art, Gelatinous, Soft, from either Animals or Vegetables, Winy, and Aromatics, mixed up according to Art, given often, in ſmall Quantities, with gentle Frictions of the external Parts; all theſe repleniſh the moſt ſafely and conveniently, chiefly if at the ſame time care be taken, to let all theſe be of a contrary Nature to the Diſeaſe it ſelf.

668. If the Weakneſs proceeds from the Liquids being unable to flow, then ought the Remedies of (75.) and (from 132. to 137.) to be applied: For no other Means will do in this particular ſort of Weakneſs.

669. As to that occaſion'd by the Obſtruction of the Channels, its Cure is deſcribed (from 124. to 144.

670. But that, which proceeds from the Compreſſion of the Cerebrum and Cerebellum, is generally cured by thoſe Means, which being applied to thoſe Parts, do remove whatever by its *ſticking faſt* did obſtruct (124. to 144.), and are

able

able to draw the Shock to other Parts. This is done by moistning the Nostrils, Head, Face, Mouth and Neck, by gentle Fomentations; and by applying Blisters to the Feet. *NB.* " No able " Physician in *England* will hesitate one moment " to put Blisters on to the Neck and even on the " Head in this Case before us; But in *Holland*, " and other Countries beyond Sea, they have been " backwards in attempting this Remedy: And " *Baglivi* has wrote a small Treatise about the " Use and Abuse of Blisters, wherein he accuses " them very wrong of some ill Effects, which " they seldom or never do occasion, and which " ought no ways to come into a competition with " the many wonderful Benefits that are reap'd " from their bold and constant Use in all Cepha- " lic and many other Cases.

671. The Weakness from a weakn'd Heart is seldom remedied, but by very gentle and consequently slow Means. And in this Case, those general Remedies are mostly of use which are set down (from 667. to 671.)

672. From all these (660.) it appears how ill the generality of People judges commonly of the Nature of Cordials, in acute Diseases; applying strong, hot Things promiscuously in all Cases, and even in such where Evacuations wou'd prove greater Cordials, than all the fine Things powr'd down their Throats, whether brew'd at Home or at the Apothecaries: And it is also hence apparent, how very often in Fevers, Weakness is an insuperable Evil.

Of

Of Heat in Fevers.

673. *Heat* in Fevers is known outwardly by the Weather-glaſs, and the Senſe or feeling of the Patient; But the inward Heat from the Redneſs in the Urine.

674. It always argueth a greater quantity of Fire in that Part, which it heats the moſt.

675. Which oweth its Origin to an unuſually ſtrong rubbing of the fluid Parts among each other, againſt the Veſſels, and of the Veſſels againſt the Liquids.

676. This violence ariſeth from the great Motion of the Parts puſh'd forth from the Heart, and from the ſtrong reſiſtance of the Veſſels againſt the Heart.

677. The great Motion of the Blood thruſt from, and by the Heart is meaſured by the Thickneſs of it, and by its quick or ſlow running through the Veſſels.

681. That the Liquids to be moved are too bulky, is known from the Signs of a Plethora (106.), of a Cacochymie, or of a sudden Solution of those Liquids, which just before were stagnating, as it happens in fat People: But this appears most of all to be the Case, when the Veins are much swell'd, and at the same time the Arteries are quick and full.

682. That but a small number of Vessels lets through the Liquids may be concluded from the History of Obstructions (from 107 to 124.) or of Wounds (from 145. to 331.)

683. The narrowness of the Vessels is understood by seeing, feeling, and knowing the dry Constitution of the Patient, whose heat increases greatly upon the least encrease of motion.

684. The unmoveableness of the Channels, which do resist greatly their being dilated, is known by all the Signs of the stiff Fibres, Vessels and Bowels. (See 32. to 34. and 50. to 53.).

685. From so many proximate Causes (674. to 685.) doth depend and arise the febrile Heat; of which again there may be numberless and different more remote Causes.

686. But it may arise from the increase of only one of those Causes, in which case the said increase of heat keeps pace with the increase of its Cause.

687. If again two Causes increase together, then will the increased Heat be as the Product of the Increments of those Causes if multiplied by each other.

688. Which

688. Which ſame Computation may take place as to the reſt.

689. Heat increaſed doth diſſipate the moſt liquid parts out of our Blood, that is, the Water, Spirits, Salts, and ſubtileſt Oils; it drieth the remainimg Maſs, thickens it; cauſes it to run together into an unmoveable and not reſolvable Matter: it freeth the Salts and Oils, attenuates and makes 'em ſharper, exhales and moves 'em; conſequently it wears the ſmalleſt Veſſels out and breaks 'em; dries the Fibres, makes 'em ſtiff and ſhrivell'd; hence produces ſuddenly many, quick, dangerous and mortal Diſeaſes; which may eaſily be accounted for, and derived from the firſt effect of heat mention'd here.

690. And from theſe may at length well be underſtood what is requiſite to moderate this Heat, and how many various Remedies do hereto belong.

691. If this heat proceeds only from an increaſed quickneſs, every thing which leſſens that will be its Remedy. The chief are, a Quiet of Mind and Muſcles, letting of blood, a gentle and ſhort Compreſſion of the Veins by making Ligatures in the Joints; an inward and outward ſlow and gentle application or aſſumption of cold things, and Paregorics uſed very prudently.

692. If it proceeds from a thickneſs that will be remedied by the juſt mentioned, as leſſening the quickneſs; and beſides by drinking of Water and Oxymel, and uſing ſuch as looſen the Veſſels.

693. The bulk of the Liquids is ſoon overcome and put in motion, when from a Plethora,

by

by what is ſaid in the 106th Aph. at the Letter ζ.: when from a Cacochymie by evacuating ſlowly and at ſeveral times, and by correcting; but the difficulty is very great when that Fat has been diſſolved which was ſtagnating before in fat People; then are of great uſe watry, and acid Medicines with the mixture of Honey, Yolks of Eggs, Sugars, and withal Evacuations all along, tho' moderate ones.

694. When Obſtructions create Heat, its Cure is learn'd from the Cure of Obſtructions (125. to 144.) and of the Evils coming upon the loſs of ſome Veſſels in Wounds.

695. When from the narrowneſs of the Veſſels, there is occaſion to dilate them by ſuch means as relax (54.)

696. By which ſame means that heat is alſo cured which proceeds from the too great ſtiffneſs of the Fibres.

697. But as often as an Exceſſive Heat comes from ſeveral joynt Cauſes, as often is it neceſſary to joyn the ſeveral mentioned Remedies (from 690. to 697.) together.

698. From this whole Doctrine of Heat (from 673. to 698.) it may be underſtood why a very hot Fever is an acute one, quick, and of a putrid kind? and even peſtilential when in its higheſt degree of heat? Why the heat of a Bed, of a cloſe Air, of hot Medicines and Aliments are ſo prejudicial in thoſe Fevers? Why a Heat about the Heart and the Sides of the Belly is ſo injurious and of an ill Omen?

699. The

699. The Origin, Nature, and Effects of Dryneſs may alſo clearly be known from hence, and its Cure may be directed, which is perform'd by Drinking, Fomenting, Bathing, Glifters and Gargariſms of watry, ſouriſh, looſening Liquids, with ſome Honey, *&c.*

Of Light-headedneſs in Fevers.

700. A *Delirium* is that Production of Ideas which doth not agree with the external Cauſes, but only is the Effect of the internal diſpoſition of the Brain, together with a Judgment following from thoſe Ideas and a Paſſion of the Mind, according to which the Body moves it ſelf in its ſeveral Parts: And from theſe increaſed by degrees, either ſingle or combined, are created ſeveral ſorts of Deliria.

701. It ſuppoſes therefore always a diſeaſed Affection of the medullar Brain, which may ariſe

tentimes; a thin Diet, a quieting, diluting Drink able to remove, or to help to remove Obstructions; Applications to the very head of emollient, light and anodyne Medicines; Bleeding in the Foot; An opening of the Hæmorroidal Veins; Procuring the Menses to flow, or the Cleansings in Women brought to Bed.

Of Dosings in Fevers.

703. A *Coma* is a continual propensity to sleep in Fevers, sometimes with a real Sleep, and often without it: It always supposes that State in the Brain, from whence the free exercise of the Senses and Animal Motions is hindred; which may arise from a Defect of the nervous Juice derived to the Brain, or from its Circulation through the Brain, or from the Separation of Animal Spirits from the Blood into the Nerves being obstructed; or from those Spirits being denied their free Passage to and fro through the Nerves.

704. So that several, different and often contrary Causes, may produce this Symptom in Fevers; such as all violent and great Evacuations or Repletions; all the too great thicknings of the Blood, whether by glutinous Fat, or inflammatory Matters and Causes; all that will compress the Brain it self, of whatever Nature it be; which same Causes will produce the same Effects, if they act immediately upon the Nerves themselves.

705. Whence it appears again, That the Physician ought very exactly to inquire into and find out the *particular Cause* of this Effect, before he

determines with himſelf what to preſcribe or what to do: For ſometimes ought the very contrary things to be done, of what has ſucceeded in ſeemingly the like Caſe; and often will a Coma after a long and obſtinate Continuance, after all Means have been try'd in vain, go off at laſt of it ſelf, when the Coction of the febrile Matter is perfected.

706. But in general, thoſe things are proper here that were ſaid to be uſeful in Deliriums (702.) chiefly Fomentations to the Head and Neck.

707. But if there be Signs of a great Inflammation, it ought to be cured as the chief Diſeaſe directs; of which hereafter.

Of the obſtinate Wakefulneſs in Fevers.

708. The oppoſite Evil to the foregoing is the conſtant and obſtinate Wakefulneſs, whence its Nature may eaſily be underſtood; and its Cauſe is generally the firſt beginning of the ſlighteſt Inflammation in the Brain, which if encreaſed generally turns into a Coma, its oppoſite.

709. This is cured by procuring Reſt to the Muſcles, quieting the Mind; by removing all Objects from the Sight and other Senſes; by cooling the Patient moderately; a moiſt Air, a ſoft and emollient Diet; by ſoft whiſpering or making a conſtant but grateful Noiſe imitating the ſound of ſmall Bells; by mealy Medicines that contain cooling Oils, are moiſtning and ſoftning; by making the Patient ſmell to Plants or Flowers that *have a* narcotic Faculty; by the uſe of Anodynes,

Parego-

Paregorics, and Opiates try'd by degrees; Doing first all things which are able to cure Inflammations and to prevent its Increase.

Of Convulsions in Fevers.

710. Convulsions heretofore described (from 230. to 239.) in this Case do always proceed from a defect of the Brain, which is either affected by some Matters, being convey'd thither through the Nerves, (627. 631. to 633. 642. 648, 649. 652. to 654.) and thereby twitch'd; or they proceed from the unruly arrival, transflux and issuing forth of the Animal Spirits, which may arise from every one of the Causes, which is able to create a Delirium, a Coma, and obstinate Wakefulness; which shews the great Variety of them, and the Necessity of very different Cures.

711. If the same continue long, because of the mutual Intercourse of the Nerves, the Evil soon spreads to the whole System of the Nerves, whence innumerable Ills.

712. If Convulsions follow the Signs of an Inflammation of the Brain, they are almost Mortal. The worst Sort is, when the Patient first makes thick Urine, then watry and transparent, which is follow'd by a Convulsion: If Convulsions come upon great Evacuations in Fevers, they also prove mostly Mortal: and also such as happen in a perpetual Delirium.

713. In order for a Cure, The Physician ought first to enquire into the singular Cause, (710.) and the place chiefly affected, whence those Convulsions *have their birth*; and then he ought

forthwith to apply ſuch Medicines, which be able to ſoften the acrimonious, to reſolve the impacted Matter, and to looſen the contracted Parts. So that theſe Convulſions are generally cured by Diluting, Relaxing, Revulſions, and ſoftning both the Fluids and the Solids: For it wou'd be a folly to rely here on the Medicines which by their pompous titles of *Antiſpaſtics* and *Antihyſterics* promiſe a Specific Cure.

714. But if it appears that the Head be chiefly affected, then the Cure is to be directed as in (706.)

Of Sweats in Fevers.

715. Sweats in the beginning of an acute Fever, whereof the Cauſe is more than commonly ſtubborn, owns for their Cauſe a looſe Weakneſs of the extream capillary Veſſels, a violent Circulation of the Blood, and an eaſie Separation of the thin watry part of the Blood from its other parts.

716. If they continue, they deprive the Blood of its diluting Liquor, thicken the Remainder, and occaſion mortal Obſtructions, becauſe the Blood afterwards will hardly admit of being either Diluted or Reſolved; Whence may be produced almoſt all the ſeveral Kinds of acute Diſeaſes.

717. They ought therefore always to be ſtopp'd and broke off, unleſs there be much reaſon to conclude, that the morbifick Matter is ſo thin, as to be carried off with the very firſt Sweating. " *NB.* Againſt this Rule do err almoſt all pre-
" *tenders* to Phyſick, and People who of their

" own

" own accord do take a Sweat in all beginnings
" of great Colds and Fevers; which not only
" kills Abundance, but renders the Distempers
" hardly conquerable by the ablest Physicians.

718. Sweats are broke off by bidding the Patient to get out of Bed; by a Sitting posture; lessening the Cloaths; letting in a cool Air; abstaining from hot or heating Liquors; drinking a good deal of soft, mild and coldish Liquor, so as to supply quickly and replenish the Vessels; and by bridling the too quick circulation of the Blood, and Humors, by the Means assign'd from (102. to 106.)

Of a Loosness in Fevers.

719. The Matters, which occasion, and are voided in a Diarrhæa, are a Mucus, Lympha, Glew, Pus, watry Blood, and Blood it self, all coming from the Nostrils, Mouth, Jaws, Gullet, Stomach, Liver, Gall-bladder, Pancreas, the Guts themselves, and the Mesentery; The Causes of their working themselves off in the Form of this Disease are such a powerful force as carry them violently into the Guts, while the contracting force of the said Guts is much weakned; or Impediments in the absorbing Vessels of the Guts, such as the Lacteals, hindring the Inlets of some of those Matters through them into the Channel of the Blood.

720. So that it appears, that a Loosenes in Fevers is manifold as to its Matter, Cause, Effects and Consequences; and consequently is often incurable *altogether*; *That* the Colliquative Loose-

neſs is not very common, but when come it hardly ever admits of a Cure.

721. If it continues long, it diſpoſes the Bowels of the Lower Belly more and more to this Diſeaſe, it weakens, excoriates, inflames them; and it drains and dries the other Bowels and Veſſels. Whence a want of Nouriſhment, Leanneſs, Weakneſs, Bloody-Flux, a thickning of the Fluids through the whole habit of the Body, a Laxeneſs of the Solids, a Loſs of the Fluids, a pituitous Bloating all over, a Dropſie and a Conſumption.

722. The Cure is perform'd by the ſoftning of the irritating Arimony; by the Expelling of the ſame with Vomits, Purges, and Glyſters; By corroborating the laxe and looſe Veſſels and Fibres of the Guts; By appeaſing their violent Motions with Narcotics; Diverting the peccant ſharp Humor another way, either towards the

rence of those Causes; so that several Fevers take their Names from thence, being called, Erysipelatous, Scarlet; Red, Petechial and Purple, or morbillous and variolous from the Measles and Small Pox.

724. Of the three Last, it is usual to treat separately; But of the three First, the Diagnostic and Prognostic are easily made.

725. The Cure is not very difficult, they seldom requiring any thing but that the Matter be kept moveable and moving, by giving great Quantities of thin Liquors, and that the power of Life be constantly kept in a just Ballance; neither too high, so as to raise too much Fever; nor too low, so as to depress the Spirits, and rendring them unable to drive out or resolve the Matter: By which Method the said Pustules or Spots soon vanish together with the Skin, which peels off and makes room for a new one grown underneath.

726. The same Symptoms happen here as in other Fevers, and require the same Cure, provided the Physician has still a particular regard to the main Disease.

727. Hence it appears, what we ought to think about the variety of acute Fevers; For all such as do carry the Febrile motion, when once raised, to its very end at one Shock, Them we call *Continual Fevers:* Such as now and then do relent and renew their force, without ceasing entirely, Them we call *Continual Remitting Fevers*; and such as do so far relent as to leave the Patient without any Fever at all between the Fits or Paroxysms, Them we call *Intermitting Fevers.*

Of Continual Fevers.

728. The leaſt Compound of Continual Fevers is the Ephemera, *of one Day*; which doth begin, increaſe, arrive at its highth, and decline within the ſpace of four and twenty hours. For its Cauſes it owns only a too violent motion occaſioned by ſome Error committed in the Nonnaturals, and has ſcarce yet any Matter. It is known from the ſlightneſs of its Cauſe, a clean well conditioned Habit of Body; light and gentle Symptoms, a quick Criſis; and from the Pulſe being entirely reſtored to its natural State ſoon after the Fever is gone off. The Cure is eaſily perform'd, by Abſtinence, Reſt, and Diluting.

729. If the ſaid Fever laſts ſeveral days, it is called a *Continual, not Rotten Fever:* Its Cauſes, Signs, and Cure are the ſame, and chiefly require a large bleeding and cooling Diet and Medicines.

Of a Continual Putrid Fever.

730. The Greeks have given the Name of Συνοχω to that ſort of Fevers which are continual without any diſtinct Paroxiſms or Remiſſions; and is diſtinguiſh'd from the preceding Συνεχης by its being *Putrid:* It proceeds from Cauſes exceding ſlight Inflammations, an Obſtruction of the Bowels, an Obſtipation of the Pores of the Skin, a Stoppage of almoſt all the Capillary Veſſels, and to a very ſharp Acrimony.

731. Its known by a Heat affecting even the feeling Finger or Hand of the Phyſician, a Feveriſh Pulſe not only but both unequal and inordinate; thick,

thick, red, turbid Urine, and crude without any Sediment; from a hot and sanguine Constitution, Age, and Complexion.

732. This Fever is divided into three Sorts; the one is called *Homotonos*, which keeps up in one degree of strength and violence; another *Epacmastica* or *Anabatica*, which still increases; and the Third *Paracmastica*, which continually decreases and grows milder.

733. The first sort is commonly curable; The second is full of danger; The third the least dangerous.

734. This Distemper is deemed the more dangerous and mortal as the *Pulse* is weaker, quicker, more unequal in strength, more irregular as to time, and more intermitting in its strokes; as *Breathing* is more difficult, frequent, short, with a great motion of the Nostrils, the more painful about the Vitals, and the more unruly in its time; as *Weariness* and *Weakness* are greater, the *Tossing* of the Body more frequent; as the Patient chooses more *to lye* flat upon his Back with his Limbs fully extended; as his *Reason* and Passion are more disturb'd, his *Appetite* more prostrate, his *Digestion* more difficult; as the *Urine* is higher colour'd, thicker, muddier with the least Sediment; or as the same is thinner, more watry, more sparing and kept difficultly; as the Patient *trembles* and shakes more, chiefly in his Hands and Lips, is shy of being felt, doth play with his Hands and Fingers, and as it were *catches* at Flies, or some things he fancies to see upon *the Bedclothes* and about him; and as his

Eyes

Eyes look more ſorrowfull and moiſt with involuntary Tears.

735. But when the Patient labours much in his ſleep, and wakes worſe after it, when either purple or livid Spots do deform the body, the Sides of the Abdomen are ſtiff and blown up, then is he very near dying.

736. The Cure heretofore aſſign'd according to the various Indications, Violence of the Symptoms, the Condition of the Patient, and the State of the Diſeaſe itſelf prudently managed and varied require here nothing peculiar.

737. Theſe call'd by the Antients συνοχοι, the Modern Phyſicians have call'd *Continentes*, becauſe there is no remiſſion of heat in them, *&c.* See (727, 728.)

Of Ardent Fevers.

738. Among which the Καυσος or the burning hot Fever deſerves to be ſeparately treated of, becauſe of its frequency, danger, and difficulty to cure.

739. Its chief Symptoms are, a moſt ſcorching Heat, unequal in different places, moſt burning about the Vitals (at the Extremities often more moderate, and even ſometimes a Coldneſs there.) and firing almoſt the very Air breathed out; a dryneſs all over the Skin, the Noſtrils, Mouth, and Tongue; a thick, labouring, and quick Breath; a dry, yellow, black, burnt and rough Tongue; an unquenchable Thirſt, ſometimes going off ſuddenly without any other good Sign; *an averſion* to all ſort of Aliments, a Nauſeating,

Vomiting,

Vomiting, Anguish, Uneasiness, a great Wearinesſ; A little Cough, a Hollow Voice, a Delirium, Phrenſie, obſtinate Wakefulneſs, Doſing, Convulſions; and on the odd Days a renewing and increaſe of the Fever.

740. Its Cauſes are, Too hard Labour, Overwaking, The heat of the Sun long ſuſtained and received on the Head chiefly; Too long bearing of Thirſt; The uſe of heating, fermented Liquors and of ſharp Aromatics; The too much indulging to Venery, an exceſſive Fatigue chiefly in the Summer, *&c.*

741. Its Courſe is as follows; It very often kills on the Third and Fourth Day, it ſeldom gets over the Seventh, if it be a perfect Cauſus; It often goes off with an Hæmorragie; (which, if but ſmall on the Third and Fourth Day, is mortal) This may be foretold, from the Patient's complaining of a Pain in the Neck, Heavineſs at the Temples, dark Dimneſs, a working and labouring of the Heart and Lungs without any ſenſe of Pain, involuntary Tears without any other mortal Sign, a redneſs of the Face, an itching of the Noſtrils; and is the moſt advantageous if it happens on a Critical day: This Fever will go off alſo on a Critical day with a Vomiting, Looſneſs, Sweating, much Urine, thick Spittle; If the Fit reneweth on an even Day, it's very bad if before the ſixth Day; In this Caſe black, ſpare and thin Urine, is mortal; Spitting of Blood, mortal; Piſſing of Blood, mortal; Defective and troubleſome Swallowing, bad; Coldneſs of the Extremities, *very bad*; The Face being red and

Sweating,

Sweating, bad; Swelling behind the Ears not ripening, mortal; The Belly too Loose, mortal; When the Patient begins to tremble he grows delirious, and then dieth; This Fever often changeth into an Inflammation of the Lungs with a Delirium; That is the worst, which begins with very great Torments in the Belly; *Goes off Critically with a cold shaking.*

742. Which being understood, it will not be very difficult to know this Disease, when present; nor will there be any dispute about its Proximate and the Cause next to that; For it proceeds from the Blood being depriv'd of its softest and most liquid Part, by means of an Inflammation raised all over the Body while the Patient was in a full strength and health of Body: Nor is it difficult to make pretty sure Prognostics from thence.

743. For the Cure of this Disease, it is necessary to procure, a pure, cool *Air*, often renew'd by opening of the Windows, by cooling Plants fresh water'd, *&c.* The Bedclothes ought to be thin and light, that the Patient may neither complain of their heat nor weight; He ought to be set up often; to drink plentifully of watry, soft, gentle, somewhat acid Liquors rather hot than cold, though he shou'd covet the contrary, as most times happens; The Aliments be Light, Meally, of Barley, Gruel, and tart Fruits, such as boyl'd or roasted Pippins, and other Apples or Prunes, *&c.* Let him be let blood *in the beginning* of the Illness, if there be the Signs of a Plethora or of a particular Inflammation, the Heat be intolerable,

the

the Sweats too great, a Revulsion be necessary, the Symptoms very urgent, and harldly to be master'd by any other Means; In these Cases bleeding is of an absolute necessity: According to the violence and degree of Heat, the drineſs of the Guts and its consequent Costiveness, the Necessity and the Nature of a Revulsion indicated, Gentle Diluent, Loosening, Antiphlogistic, and Cooling Glysters are to be repeatedly given: The whole Body ought to be moist'ned by receiving into the Nostrils the Steams of warm Water and the Air thereby temper'd, washing the Mouth, and the Throat; bathing the Hands and Feet in lukewarm Water; fomenting with warm wet Spunges those Parts whereof the many Vessels are the most accessible and outward; by exhibiting Medicines of the watry Kind, as are soft, nitrated, of a pleasant Taste, as gently loosen the Belly, promote Urine and supply the same with Matter, as by their Bulk and Quantity will be a Vehicle to cause easie and relieving Sweats, but not by their Acrimony or Stimulus; By all such in a word as do relax the contracted Fibres, and dissolve, dilute, and temperate the sharp Acrimony and the thickness of the Liquids. " See here *a* " *Drink* recommended by the Author and truly " commendable in this Case, which I copy'd " from his own Mouth at *Leyden*. ℞. *Hord.* " *Mund. ad crepatur. coct.* ℥iv. *Tamarind.* ℥ij. " *Coque ex aquæ Putealis Congio* j. *Decoctionis* " ℔iv. *adde Acetosell. Citri recent. express.* āā ℥ij. " *Syrup. diamor. & Ribesiorum* āā ℥j. *Nitri* ℥ij.

" M.

M. sumat pro Lubitu. See here one of the *Clysters* he chiefly recommends in this Case. *℞. Ol. rosac. Amygdal. dulc.* ãã ℥j. *Mell. rosac.* ℥j. *Exacte permistis affunde, Seri Lactis* ℥x. *Nitri* ʒj. *M.*

144. To which whoever doth join what has been laid down for general Rules in the Cure of acute Fevers and their Symptoms, and what is to follow, when we shall treat of acute Fevers which Bide and tend to the Destruction of some particular Bowel, he shall clearly apprehend all that is necessary and Useful in the Cure of any ardent Fever.

145. Nay, the singular remaining acute Fevers from these sufficiently understood, or are reducible to some of the particular Symptoms, or the Effects of some other acute Disease.

Of Intermitting Fevers.

146. The Definition of an Intermitting Fever

748. And they even in the beginning of the Autumn do exactly imitate the Nature of continual Fevers in their long and increasing Paroxisms, though their Nature differ vastly, and require a quite different Cure.

749. They begin with a yawning and stretching, a wearinesS, weakness, coldness, shaking, shrivelling, trembling, a Paleness of the Fingers and other Extremities, a very difficult Breathing, an anguish, nauseating, vomiting, a quick, weak and small Pulse. As these Symptoms are greater and more numerous at once, so much the worse is the Fever, so much the greater the subsequent Heat, and all other Symptoms worse: And this is the first Degree of this Fever, answering to the Increase of the continual Fevers, and much more dangerous than the other States, " for it is known " from Observations, and it is consistent with Rea- " son, that almost all who dye of this sort of Fe- " vers do dye in the cold Fit. The Urine made then is generally Crude and Thin.

750. This first State is soon overtaken by the next, beginning with a Heat, redness, strong, great and freer Breathing; a less Anguish, a greater, and stronger Pulse; a great Thirst, and a great Pain in the Limbs and Head, the Urine most times red: And this State answers to the height of continual Fevers.

751. Then generally at last succeeds a great Sweating, and a remission of almost all the Symptoms; The Urine is thick, its Sediment like unto Brick-dust: The Patient falls into a Sleep or Slumber; *the Fever goes off* quite, and he finds *himself weary and much* weaken'd. 725.

752. They often change into continual Fevers and very dangerous ones, which is moſtly owing to the giving of too hot Things, by which a ſtrong Motion is occaſion'd, not eaſily ſubdued again.

753. An Intermiting Fever in the running over its three Stages, doth force the Fibres of the Veſſels and Bowels very much, by ſtagnating, obſtructing, coagulating, driving, reſolving, and attenuating; whence the Veſſels are weaken'd, the Liquids become diſeaſed, and chiefly acquire that ſort of Defect, which thoſe Parts have, that have been inſufficiently aſſimilated to, and mixed with the well concocted Blood; from which at the ſame time ariſes an Acrimony; So that from all theſe there is a great diſpoſition to profuſe Sweats that very much weaken, the very viſcous parts of the Blood being apt to paſs through the Pores; Then is the Urine wondrous thick, turbid, like unto Mares Piſs, and Fat; ſuch is the Spittle; hence is the weak, diſſolved, ſcarce coherent Blood deprived of its beſt Part, the remainder being rough and thick alſo: So that from this laxeneſs of the Veſſels, and the thickneſs and ſharpneſs of the Liquids, theſe Fevers do generally throw the poor Patients (when they continue long) into Chronical Diſeaſes; ſuch as the Scurvy, Dropſie, Jaundice, white Bloatings, Schirrous Tumors of the Lower Belly, and all the Diſorders flowing from them.

754. But otherwiſe, if they are not Malignant, they diſpoſe the Body to a long Life, and cleanſe *it of old* and rank Diſeaſes.

755. So

755. So that after a due examen of the whole History of Intermitting Fevers (from 746. to 755.) it must be concluded, that their proximate Cause is, A viscosity of the arterial Liquid, upon which succeeds any one of the Causes of the too strong and quick Contraction of the Heart, and a Resolution of what had stagnated.

756. And therefore, as the Order set down in 749, 750, 751. always takes place in Intermitting Fevers, it seemeth plain, That whosoever can overcome the first State (749.) and the first Cause (755.) That he can also overcome and prevent the whole Fit of this Fever.

757. And whereas innumerable Causes, and they pretty slight, may produce the first State (749.) of a perfectly Intermitting Fever (727. 737.) and its proximate Cause (755.) And that several of 'em may be bred in the very Body, grow there, and in some time become ripe, as doth happen in all Liquors either produced or separated in the Body; It is more difficult to distinguish the really true one, bred out of so many possible ones, than to fancy a possible one, from which, being laid down as granted, Reasons be given of the periodical Paroxisms agreeing with the Rules of our Animal œconomy; which will be plain to any one who makes the tryal.

758. The Cure therefore requireth the Use and Application of opening Salts, of Alcalies, Aromatics, Minerals, Diluents, soft oily Medicines, of Heat, Motion, Fomentation, and Frictions, when the Fit is either entirely off, or in the first State.

759. Nor is a Purge or a Vomit, to carry off the Filth out of the Stomach and Guts, leſs uſeful, being given at a ſufficient diſtance before the expected Fit, ſo as to have finiſh'd its Operation. That this ought to be done, the Phyſician judges from the Patient's way of Living, Diſtempers, and Symtoms as have preceeded, from his nauſeating, vomiting, belching; ſwelling, ſmelling and foulneſs of the Tongue, Throat and Palate; from the loſs of Appetite, bitter taſte of the Mouth, and a dim Giddineſs; Giving after the Operation is over, an Opiate to the Patient to quiet the Motion before the coming on of the Fit.

760. Which Medicines are even Commendable as they do ſtimulate and thereby may conquer the firſt Cauſe, that is the Viſcoſity of the Blood and Humors: "For it is commonly obvious that "repeated Vomits to ſuch as cou'd bear 'em has "frequently cured Intermitting Fevers, when all "other Remedies had proved ineffectual; and "chiefly in the Northern Climates.

761. But ſometimes they do harm, as they weaken, force out the thinneſt Liquids, diſturb Digeſtions, which above all things are neceſſary to be promoted here; and ſo they prolong the Diſeaſe, or even occaſion Death. The cold Fit and the Fever are often ſucceſsfully removed by a Sweat. For which the Patient is prepared ſome Hours before the certain time of the approaching Fit, with ſome Liquor, that is opening, diluting, gently Narcotic, and given him in great Quantities; after which about one Hour before the Fit the *ſweating* Medicine is given him, and its Operation

is

is encouraged and continued for about two Hours after the time of the Invasion of the Fit. " The " laying on of Bottles with hot Water or hot " Bricks in Flannel to the Feet and in the Bed " next the Patient, doth promote Sweating won- " derfully, together with the drinking of large " Draughts of Sage or green Tea, *&c.*

762. So that letting of Blood is in it self here very prejudicial, though it has done Service now and then by chance; as also a thin and regular Diet.

763. When the Fever is in its second State (750.) Then give the Patient warm Water, with some acid, opening and nitrous Mixture, or the Juices of the several Sorts of Succhoree, and such like kind opening Vegetables; Let him lie quiet, and keep him in a moderate Warmth.

764. When the Fit goes off with the critical Sweats, as in (751.) then are useful, Ptysanes with a little Wine, Flesh-broths, temperate Decoctions of some Plants and Roots, to supply the Blood with Matter for Sweats and Urine; so that they ought not to be forced with any additional heat of Medicines nor Cloaths, but to be promoted kindly, with the pouring in of Quantities of kind Liquors, and they continu'd long.

765. We must besides help the urgent Symptoms according to the Rules laid down in acute Diseases, (from 617. to 726.)

766. When the Fever is entirely suppressed, then ought the Patient to be set up again with a nourishing Diet of an easie Digestion, and strengthening Medicines, and when his Strength is pret-

ty well return'd, then ought he to be purged a few times. *NB.* " Here we have seen the Method " of curing Intermitting Fevers before and with- " out the Use of the Jesuits Bark, which is yet " pretty much follow'd in *Holland*, and other " Places, where the same is neither so common, " nor its Vertues so celebrated as here in *Eng-* " *land*, *France* and *Italy*, partly through the Ig- " norance of the People, or the Shiness of the " Physicians.

767. But if an Autumnal Ague be violent; the Body be already weaken'd by it; the Distemper has been already of some standing, and there be no Signs of any internal Inflammation, nor of any Collection of Matter, nor of any Obstructions in any of the Bowels; Then ought the Physician immediately to have recourse to the Peruvian Bark, which according to the Fancy of the Patient, he may give in Pouder, Infusion, Decoction, extract or boyl'd up into a Syrup; joining proper Specifics and Antidotes according to the different Symptoms, or its way of operating; " for some People " it will Purge violently, and others it will Bind; it ought to be given between the Paroxisms when the Fever is entirely off, and then at convenient Distances, in a convenient Dose, taking care to prescribe a good regimen at the same time. *NB.* " There is scarce a Physician of any Practice " now in *England*, who has not given the Bark " in *Remitting Fevers*, but surely none who has " not measured his Distances between each Dose " by the time between the Paroxisms; For in a " *Quartan* it will be sufficient to give a Dose

" about

" about each sixth or fourth Hour; In a *Tertian* " every third Hour; but in a *Quotidian* every " second Hour, and even during the Fit, with- " out any manner of Danger.

768. Nor will outward Applications to the Stomach be useless, nor Anointings of the Back-bone; nor the Drinking of adstringent Decoctions.

769. For to cure each particular sort of Intermitting Fevers, let it be observ'd, 1. That such as are truely intermitting go off the sooner, as the Fits come on quicker, and so on the contrary. 2. That they also come so much the nearer to the Nature of continual Fevers, and are easily changed into them. 3. That perhaps their Cause is much more moveable, and greater in quantity. 4. Which is the reason, why Spring Agues go off of themselves, as soon as the Summer Heat advances. 5. And also why the Autumnal increase as the Winter and Cold Weather draws near. 6. Hence it appears, which of these Fevers require Medicines, and of what Sort.

Of acute Diseases with a Fever.

770. Now come on the acute Diseases, which being accompanied with an acute Fever, yet do induce a singular Inflammation to this or t'other Organ, from whose Function depraved, the Name is given to the whole Disease. Such are the Phrensie, Coma, Carus, Quinsie, Peripneumony, Spitting of Blood, Pleurisie, the Inflammation of the Breasts, of the Diaphragm, Stomach, Liver, Spleen, Mesentery, Guts; (The Dysentery, Iliack Passion, Twisting of the Guts, Tenesmus, Piles, and

billous Cholics.) Kidneys, Bladder, Ureters, Womb, of the Joints as in Rhumatiſms, and of the Outſide and Surface of the Body, as in the Meaſles and Small Pox.

Of the Phrenſie.

771. If there ariſeth a perpetual Delirium, with a fierceneſs in Looks and Actions with a continual acute Fever, from the Brain's being originally affected, that Diſeaſe is call'd *a Phrenſie.*

If from any other diſorder transferr'd from other Parts to the Brain, in a Fever, Inflammation, *&c.* That is call'd a Symptomatick Phrenſie, παραφροσυνη, Senſeleſsneſs.

772. The true Phrenſie is preceeded by a Heat, and violent inward Pain of the Head of the Inflammatory kind; by too great a quantity of Blood; an Inflammatory diſpoſition; a redneſs of the Eyes, and Face; diſorder'd and turbulent Sleeps, a ſlight diſturbance of the Senſes; Youth; the Uſe of hot fermented Liquors; lying with the Head bare to the hot Rays of the Sun; Waking, Anger, Sorrow, ſtern or rough Temper; ſudden Forgetfulneſs; a drineſs of the whole, chiefly of the Brain, and by a gathering of the nap of the Bedcloaths. But the ſecond Sort of Phrenſie is preceeded by almoſt every acute Diſeaſe with a Fever; A pain of the Side which is not Pleuritic with a ſlight diſturbance of the Mind; An Inflammation of the Pleura, Lungs, Diaphragm, which laſt Sort is the worſt: This ſort of Phrenſie may be foreſeen from the blackneſs of the Tongue, Coſtiveneſs, Suppreſſion of Urine,

white

white Stools (which last doth always end in Death) pale, thin Urine without any colour; from the Patient's not being sensible of Thirst; (when from the Nature of the Fever and Inflammation he ought) his looking and acting wildly and roughly, as in a degree of Madness, and contrary to his Temper, his looking very Red; his Urine having a black Cloud; his being unable to Sleep; All which are Signs of an approaching Inflammation in the Head.

773. When both (772.) are present they are attended with the following Symptoms. 1. The Notions about external and sensible Objects are depraved; (they think to see, to hear, to feel, *&c.* things quite different and contrary to those they do) and also the internal Senses (as Memory, Imagination, *&c.*) and their Reason and Passions are quite unhinged. 2. They grow wilder, unruly and even beastly (so as to do any ugly or ill-natur'd Trick to the unwary and helping Bystander, till they are forced to tie 'em down, *&c.*) they are restless, or have often very turbulent Sleeps. 3. Their Pulse is hard, they breathe seldom, but make it up by the length of their Breathing. 4. Their Face is generally very red, staring, and frightful to behold; their Eyes look wild and are very protuberant; and their Nostrils drop frequently.

774. The Prognostic of this Disease is laid down in the following Rules.

A genuine Phrensie kills on the 3d, 4th, and 7th Day, and seldom outlasts that.

If the ſame be pretty fierce, it often changes into Madneſs.

If this laſt increaſes a little, it becomes quite ſavage and ungovernable.

It often terminates into a Lethargy, a Coma, or a Catoche.

The Vomiting of ruſty Matters upon account of an Inflammation of the Brain; a frequent and unbecoming ſpitting upon the By-ſtanders; Tremblings; Excrements and Urine being either intercepted, or white; the Urine Crude; Convulſions; a hunting for Flies or Napes, that ſeem to be flying before them; a gnaſhing and grinding of the Teeth; inſenſibility of Thirſt, which is commonly the forebode of Convulſions; a continual change of Symptoms, the ſubſiding of a ſwell'd Ulcer; All theſe are moſt times the Preſages of the higheſt danger, and of Death.

That which either ſucceeds a Peripneumony, or comes from the Inflammations leaving the Lungs to invade the Brain, is Mortal: That, which comes from and in the Small Pox, is very bad; That, which comes from the Iliac Paſſion, is Mortal alſo.

An Inflammation, fixed for ſome time in the Jaws and there producing a Roughneſs, mounting up in the Head creates a mortal Phrenſie; and thoſe have great Heart-beatings and Pulſations in the Neck outwardly appearing, and they all along work and toſs with great Labour and Anguiſh.

That Sort where the Patient is conſtantly talking, and taken up with his Affairs and the Neceſſaries of Life, is one of the worſt.

775. Such as have died of Phrensies, and were open'd after their decease, had their Meninges inflamed; a Gangrene, Imposthume, and a Sphacele of the Brain, or some very sharp corroding ichorous Matters.

776. From whence we may draw the nearest Cause of the true Phrensie to be a true Inflammation laying hold chiefly of the *Pia* and *Dura Mater*: and that of the Symptomatick to be a like Inflammation arising from a removal of the Inflammatory Matter from other parts into these Meninges.

777. Whatever can occasion these may be called the next Cause.

778. And even from hence must be fetch'd the true Diagnostics to discern these two Sorts of Phrensies.

779. To obtain a Cure we ought chiefly to attend what follows; If in Phrenetick People the Veins do swell in the Leggs, or the Piles do flow, it is advantageous to 'em.

A Loosenes in a moderate degree is of service.

A Pain of the Breast, Feet, or even a violent Fit of Coughing seising them doth put an end to this Disease.

As likewise a large Hemorragie.

780. A genuine Phrensie doth require the most powerful Remedies without any delay, which are able to remove the Inflammation seised on the Arteries of the Brain.

781. Which are chiefly to be taken from the general Cure of all Inflammations, observing these following *cautionary Rules*. Blood must be lett

to

to a large quantity out of the large Orifice of one or more Veins at once in the Foot, Throat, and Forehead. Great quantities of cooling Decoctions ought to be given with a large proportion of Nitre. Then give cooling Purges, and at the time of their working great Draughts of diluting, nitrous Drink. Glysters of the like kind, with some lenitive Electuary or Honey, or any such Opener. The Anus must be fomented with the Application of Spunges, the Piles be rubb'd with Figg Leaves, *&c.* or to be emptied with Leeches. His Mouth must be cooled and wash'd often with soft Gargles: the Nostrils, Eyes, and Ears to be fomented; the Head to be shaved. Having done all these, if the Illness doth not abate, give Opiates; bathe the Feet; apply Blysters, Cupping-Glasses to the inferiour parts. The Body ought to be moderately cooled and set upright. *NB.* "If Blysters are good at any time 'tis in the beginning, "and then apply 'em boldly to the Neck, and even upon the very Head, as it is the Practice of "the most able Physicians in *England.*

782. But if the Phrensie has been occasion'd by a preexistent Inflammatory Distemper in some other part, it ought chiefly to be minded, whether the nature of that Illness will bear the Applications of (781): Which if not, then ought it to be cured according to the Method peculiar to that, always adding the Remedies that divert from the Head, and are externally applied.

Of

Of the Quinsie.

783. When the faculty of Swallowing and Breathing, is very much hindred, or very painful, or both these together; which proceeds from some Morbific Cause acting upon the Parts performing both these Functions, seated above the Lungs and the Stomach, it's called a *Quinsie.*

784. Whereof two Sorts are observ'd; the first without any Sign of an external or internal Tumor; But t'other always with some Swelling in some part of the forementioned Organs.

785. The first happens at the latter end of long continued Diseases, chiefly after very large and often repeated Evacuations; its Companions are a paleness of the Jaws, their dryness, together with a thinness; so that in this case the Nerves and Muscles of those Parts are most times Paralytic; it's most always a Sign of Death just at hand; it's seldom cured, and then only with Remedies filling the empty Vessels with good vital Juices, as are at the same time warming and corroborating.

786. This very first Kind arises sometimes suddenly without any evident Signs of any other Disease before: 'tis hardly Curable, and after Death it generally shews that the Lungs were Imposthumated.

787. The Quinsie which arises from a Tumor has divers Names; either from the Nature of the Tumor it self, or from the place which the Tumor occupieth. Whence 'tis distinguish'd into an Œdematous, Catarrhous, Inflammatory, Purulent, Schirrous, *Cancrous,* and Convulsive Quinsie.

788. These

788. These Tumors do occupy the Tongue, its Muscles; the Palate, Tonsils, the Uvula, and its Muscles; the Cavities of the Os Frontis, of the upper Jaw, the Os Sphenoïdes, by the growing there and taking root of a Polypus still increasing, stopping the Nostrils, pressing upon the depending Palate, making the Jaws narrower, and and shutting up the Pharynx and Larynx; they occupy all the Muscles of the Os Hyoïdes, or some of them; the external, internal, common or peculiar Muscles of the Larynx; the internal muscular Membrane of the Windpipe; the superior Muscles of the Pharynx, and also the Œsophagæus; The very Muscle of the Gullet; the Glands of the Windpipe, and they so nearly seated to the Gullet, that its Fistules may be compressed from a Tumor of those, as are all the Salivar and all such as are scattered about those Parts; and lastly even those of the gristly Shield call'd *Thyroides*.

789. From which History (785. to 789.) well understood it is plain, Why so many, unforeseen and often fatal Endings of this Disease (783.)

790. But as this Disease is so manifold, and produces such various Effects, and consequently requireth so many Remedies and different Methods of applying them; It will be proper to enlarge upon it, as much as the shortness of our intended Work doth permit.

Of the Watry Quinsie.

791. The Watry, Œdematous, and thin Ca*tharrous* Quinsie is a disturb'd or painful exer-

cise

cise of the Swallowing and Breathing faculty with a Lymphatic Tumor of the Parts, which either perform them, or are adjacent to those Organs.

792. It has its Seat therefore, like all other watry Gatherings, in that part of the Glands where the Lympha is laid up and squees'd out of the Arteries.

793. Its Cause therefore is whatever hinders the free thoroughfare of the Lympha; and those Causes are very numerous and very different. Every Compression of the Veins whatsoever, into which perhaps the Emissaries of those Glands do empty themselves; an Obstruction grown in the very follicle of the Gland from a kind of Plaister, Phlegm, Stone, Fungus, and such like there produced; an Obstruction in the Emissaries themselves from the said Causes; a Compression of the same places from without; a very cold Body applied to the Extremities of those excretory Ducts; And lastly, a weaker Circulation of the Humors in general.

794. The Effects of this Evil are, a watry, white, cold Swelling; a Compression of the adjacent Vessels, a hindrance to the Functions which depended on their not being press'd upon.

795. So that the Diagnostics are plain enough (from 791. to 793.) and the Prognostics from (794.)

796. The Cure is performable with such things as, 1. Resolve and move the obstructing Causes; or remove the Parts entirely, either with Caustics or with the Knife; "(Which is the only sure *way to prevent* a Return when practicable,

" ticable, as it is easily upon the Tonsils, where " some People are distemper'd upon every little " Cold or change of Weather. *Hereto belong*, all Emollient, Opening and Loosening Medicines in the shape of Fotusses, Cataplasms, Gargarisms, Injections with Syringes, Washes or Steams; and outward Frictions to cause the Inflammation to turn to the outside of the Throat. 2. All such as lessen the quantity of the Lympha, Emptying the same by opposite Doors; which is perform'd with Masticatories, Blisters, " (applied " not only in the Neck behind, but even round " the Neck before, as I know it to be successfully " practised by several Physicians in *London*; " Only the Women are shy of this, because of the " Deformity it sometimes occasions to their Necks, " most times their greatest Pride.) Dry, Internal or External Sweats; Diuretics of the same Kind, or smart Purges, as will promote watry Stools. 3. Abstinence from Liquids as much as possible, a warming and drying Diet. 4. The Increase of the Circulating Powers, by the Means laid down (in 98, 99.)

A Schirrous Quinsie.

797. But if a Schirrous and much growing Tumor has occupied the Glands, it will be known by the Signs of a Schirrus (in 392.) And from its known Situation a Quinsie may be foreseen, and when there already, it is perceivable; If then the Schirrous Tumor can be extirpated, that alone will be a safe Remedy: Or the Surgeon must *with a* great deal of Prudence endeavour to lodge a

Caustic

Caustic in the midst of the Tumor to eat the same out; which is faiseable enough when the Seat is near the Jaws.

An Inflammatory Quinsie.

798. But when either the Glands (788.) or the Muscles are invaded by an Inflammation, then ariseth a Disease properly belonging to this place, because of its often fatal acuteness, and its sudden violence oftentimes not to be overcome.

799. Its Cause is, 1°. Whatever is capable of producing a general Inflammation (315, 376. to 378.) 2°. Every thing which doth direct the Causes of an Inflammation chiefly to the places described in (788.) principally to the Larynx, Pharynx, the Os Hyoïdes, and its Muscles, and to the Superior Parts of the Windpipe: These are, a disposition towards inflammatory Distempers peculiar to Young Men, abounding in Blood, of a ruddish Complexion; A frequent and strong exercise of those Parts by Oratory, Singing, Hollowing, hard Riding against a strong and cold Wind; Sounding of Trumpets, and playing on the Flute or Hautboys; hard Labour in a cold Air; a great Heat in the Spring suddenly overtaken by a great Coldness; The dryness of the Jaws from the reception and protrusion of warm Air in Sunshine Weather, or in an Inflammatory Fever.

800. When produced from these Causes it creates many, and some very frightful Symptoms, according to the variety and necessity of the part it occupieth.

801. If the Lungpipe only is affected (without offending the adjacent Parts) in its internal muſcular Membrane, then ariſes there a Tumor, Heat, Pain, hot acute Fever, without any other externally apparent Signs; the Voice grows ſhrill, hollow, hiſſing, and the breathing in of Air occaſions an acute Pain, the Breath is ſmall, frequent, upright with extream working and panting; hence the Circulation of the Blood difficult; the Pulſe wonderfully and ſoon wavering, prodigious Anguiſhes, ſtraitneſs, and ſudden Death. And this is one of the moſt fatal Quinſies, and which is hardly diſcoverable by any external Signs: And how much the nearer this is to the Glottis and Epiglottis, ſo much the more and ſooner doth it prove Mortal.

802. If the Larynx chiefly be acutely inflam'd, and the Seat of this Evil be in the white Muſcle of the Glottis, and together in the fleſhy Muſcles whoſe office it is to ſhut the ſame; there ariſeth a terrible Quinſie which ſoon Strangles. The Signs are the ſame as the firſt in (801.) A violent Pain in the raiſing of the Larynx upon Swallowing, increaſed upon ſpeaking or hollowing; A very ſhrill and ſcreaking Voice; A very haſty Death with the utmoſt Anguiſhes. And this is the worſt Kind of all, and not diſcernable by any outward Sign.

803. If only thoſe Muſcles are highly inflam'd which ſerve to lift up the Os hyoïdes and the Larynx, then are the following Signs apparent; Breathing is pretty free; Swallowing upon the *Exercise* of its firſt action acutely painful; and

besides the Signs of Inflammations in general, and the same on those Muscles which may be distinguish'd by such as look narrowly into 'em.

804. But when the Pharynx is solely affected with this Disease, the Specific Signs are upon inspection into the Mouth visible; a pretty easie Breathing; swallowing painful and even impossible; The throwing back through the Nose whatever is offer'd to be swallow'd down; the same things drove partly into the Windpipe, and there causing a violent Cough: hence a Want of Meat and Drink; A drying up and an Exasperation of all the Humors in the Body; The Fever not very high; Death not following until the Distemper has been of a pretty long Continuance.

805. But if the Tonsils, the Uvula, its Membranous depending Cover, or its four Muscles (call'd *Pterygostaphylini*) are much inflamed; then happen almost all things as in the first (of 804.) Breathing is troublesome, difficult, not to be drawn through the Nostrils, or at least but little, and but narrowly through the Fauces; Meat, Drink or Medicines to be swallow'd, because of the straitness and violent Pains, are turn'd back to the Mouth; a perpetual hawking; a continual dropping of Phlegm towards the Cavities of the Tonsils; an acute Pain on the inside of the Ear, and in the passage from the Jaws thither; a cracking in the Ears whilst the Patient endeavours to swallow; sometimes an entire Deafness. This sort of Evil proceeds of late much from the Great Pox, *and is much to be* dreaded.

806. If all these Sorts of Inflammations (801. to 805.) do invade together or successively, it's easie to conclude that the Disease is like to be so much the fiercer as more of 'em happen together; and that then also the Symptoms will be more in Number, and more dreadful in effect.

807. For then the return of the Blood into the external Jugular Veins, or through them, when compressed, being hindred, there ariseth a Tumor of the Jaws, Lips, Tongue, and Face; the Tongue hangs out, twists and inflames; the Eyes grow red and jut out in a frightful manner; the Brain from the same reasons is suffocated; hence are the Sight, Hearing, and Feeling dull, a Delirium follows; the Mouth is kept wide open; he Snoars; lying down is impossible without being suffocated; there is a redness, tumor, pain, pulsation, often in the Breast, Neck, Nape of the Neck, which are apparent; whence the Jugular, frontal Veins, and those under the Tongue, have apparent varicous Swellings.

808. And every Quinsie doth run over all the usual Stages of the general Inflammations, occasions the same, and undergoeth the Changes into a Resolution, Imposthumation, Gangrene, or a Schirrus.

809. If therefore the Signs do shew that the Quinsie is as in (801, 802.) it ought forthwith to be inquired into, whether as yet it be a pure Inflammation as in (382. to 384.) And then ought a Resolution to be instantly endeavour'd by the most powerful Remedies, as from (395. to 402.) *1. The* Patient therefore must immediately be let blood,

blood, to a great Quantity, at ſeveral times until Weakneſs, Paleneſs, Coldneſs, the falling of the Veſſels ſhew, that the Strength of what remains is not able to increaſe anew the Tumor and the Stiffneſs of the Veſſels. 2. The Belly muſt be looſen'd ſtoutly with either Purges or purging Glyſters, frequently injected. 3. A Diet muſt be order'd of the thinneſt and ſofteſt Kind. 4. Medicines of the Nitrous and Acid Kind. 5. Moiſt ſoft lukewarm Steams continually received upon the Part, external Fomentations, and Derivations by Blyſters.

810. But the Sort of (803.) is ſeldom ſo dangerous as thoſe (of 801, 802.) and requires the ſame Sort and Method of Cure as (809.) but leſs in number and force: And chiefly apply outwardly anodyne, looſening, and emollient Medicines in the form of Cataplaſms, *&c.*

811. While, Laſtly, the Quinſie deſcribed in (804, 805; 806.) is yet inflammatory; then ought the Medicines (of 809, 810.) to be jointly applied, adding moreover continual moiſtnings of the Mouth and Jaws with the ſofteſt, nitrated attenuating, warm, watry, diluting, fat looſening Medicines; Such as may be bore without uneaſineſs in the Mouth, and be applied to the Part with gargling gently, or with a Syringe be injected: This ought to be done continually to give no time to the Parts to grow dry again.

812. If all theſe Things having been omitted, too late, or in vain attempted, the illneſs be very recent, and choaking from a Cauſe ſituated higher than *what will admit* of cutting, with the worſt

Symptoms of (807.) but not yet turned into a Gangrene of the Parts; Then ought the Physician without delay after having prudently shewn the extremity of the Danger, (whether it be done or omitted) propose the Operation of laying open the Windpipe externally; which Operation is called Βρογχοτομη.

813. Which must be done, after a due preparation of the Patient's Body, in the Windpipe about a Thumbs breadth below the lowermost part of the Larynx; having first laid open the Skin, and Integuments; removed the Muscles, cut the Intervals between the ring-like Cartilages of the Windpipe; put in a Silver Tube; Then having removed the Cause which made this Operation necessary, curing and healing the Wound up again: In the interim, nourishing Glysters ought to be injected as frequently as possible until the Patient be again capable of swallowing.

Of the Imposthumating Quinsie.

814. But if the Evil has already got to such a heighth, that it be plain the affected Part begins to suppurate, by the Signs in (387.) then ought the same to be treated according to the Method and Rules concerning Imposthumes in general (from 402. to 412.) But chiefly there ought to be used constantly a gentle soft Gargle, a large relaxing Cataplasm to be applied outwardly; the place to be launced when it lies bare to the Touch and Sight; and if by the largeness of the Swelling the Patient can all the while neither swallow nor breath but with the greatest Difficulty, the

Opera-

Operation of (813.) must be call'd to his assistance.

815. But that Sort of Quinsie, which was first described in (801, 802.) can but seldom last long enough to attain to an Imposthumation, but it will either end well by a speedy and timely Resolution as in (809.) or otherways kill the Patient.

Of a Gangrenous Quinsie.

816. If also the Causes of the Quinsie describ'd in (799.) do increase, and dwell more in a noble Part, as in (801, and 802.) or even in the External, as in (804, 805.) it often turns into a mortal Gangrene: This we may know to be, 1°. From the general Signs of a Gangrene in (426. to 429.) being applied to the Parts here affected, whose Function is depraved; 2°. From its peculiar Signs; If there has been first an apparent Redness and Tumor which have suddenly disappear'd without any good Cause or Effect; And if the Pain is also gone off in the like manner; If the Jaws are suddenly grown smooth and even, dry, slick, and livid: When it is come to this pass, it is in vain to attempt any Remedy, for there is no possibility of a Cure.

817. A Quinsie from the Tonsils, the Uvula, the Palate being affected will turn and end in a Schirrus of those Parts from the Causes laid down in (392.) Whence it is easily known, and the Cure is but difficult, chiefly if this latter is already grown Cancerous. (See 79. N°. 7.)

Of the Convulsive Quinsie.

818. If the Nerves, which do move the Organs and Instruments of Swallowing or Breathing, are hinder'd to perform their Function upon those Organs there ariseth a Paralytic Quinsie; Such a one is said to happen from the Luxation of the prominence of the Second Vertebre (which naturally ought to stick into the First) or of another Vertebre of the Neck below the former. "Which "is said to happen much to Hunters in very "Mountainous Countries, when in falling from "their Horses they put out these Vertebres, of "which they wou'd die very soon, unless some "of their Company (acquainted with the Cause "of their lying motionless) did forthwith fall a "pulling their Head one way and their Legs "another with all their might, *&c.*) If any Cause of Convulsions doth invade the Muscles of the Pharynx or Larynx, there ariseth a sudden and suffocating Quinsie; such do happen in Epileptic People, in Hysteric and Hypochondriac often, and such as are often troubled with the Cramp; in them it often goes and comes again: It is chiefly cured with the Medicines, which are proper to remove the last mentioned Diseases. "This Sort "of Quinsie I have seen kill a Boy of about "seven Years old, after I had removed the Fits "several times with proper Medicines; and he "died in an instant as he was endeavouring to "make Water, without so much as a Struggle "or a Cry, though he had yet his full Strength, "*and* was but little before playing about the

"Room.

" Room. This happ'ned at *Eltham* in *Kent*; at " one Mr. *Newland*'s the Child's Grandfather: " *And I then call'd it a Cramp of the very* " *Bronchia.*

819. From this History of Quinsies (from 783. to 819.) we may come to the understanding of the Observations of *Hippocrates.*

A Quinsie without any apparent Sign, shewing it self only by an Orthopnæic Strangling, with an acute Fever, violent Pain in the Head or Legs, without any good Signs, is soon Mortal, and kills on the first, second or third Day.

A Quinsie coming as a Symptom to other Inflammatory Distempers, or if it be the Sorts of (801, and 802.) occasion'd by, or born from those of (803, 804, 805.) they all of 'em are mortal.

A Quinsie that forces Froth out of the Mouth, squeezing out a thin Rheum, with involuntary and insensible Stools, in a very acute Fever without any apparent Sign in the Parts; with a going off of the tumor, redness, and pulsation in the Throat or Tongue, yet Strangling; is always mortal, and that very soon.

Of the Genuine Peripneumony.

820. If there happens a real Inflammation in those Vessels of the Lungs that are capable of being affected therewith; that Illness is called, *A genuine Peripneumony.*

821. Such Vessels are the Bronchial Arteries, those of the softer Substance of the Lungs, and the Lymphatics, which attend the same throughout.

822. Whence it ſeems we may conceive two Sorts of Peripneumonies; the Seat of the one is in the Extremities of the *Arteria Pulmonalis*, and of t'other in the Productions of the Windpipe, call'd *Bronchia*.

823. And it may appear at firſt ſight, that the firſt Sort is the moſt dangerous, and the laſt eaſier cured, but that the ſame may occaſion the former, and that both have often the ſame Beginnings from the ſame Cauſes.

824. Which ſeveral numerous Cauſes may be brought over, 1°. To the General ones of all Inflammations all over the Body (from 375. to 380.). 2°. To ſuch as chiefly affect the Lungs, as are, The *Air* being to a fault, moiſt, dry, hot, cold, heavy, light, poyſon'd with cauſtic, adſtringent and even with coagulating Exhalations; *The Chyle* made up of too groſs, dry, and viſcous Parts, having either too great or too little a proportion of Acrimony: The *Violent Exerciſes* of the Lungs, be it in Running, Wreſtling, Striving, Singing, Hallowing, or hard Riding againſt the Wind: *Poiſons* that are coagulating, corroding, tying up, receiv'd into the Veins, which carry the Blood more immediately to the Heart; Violent *Commotions* and Diſturbances of what is call'd *the Mind*; a Quinſie with a great oppreſſion of the Cheſt and an erect Breathing; a violent *Pleuriſie* and Inflammation of the Diaphragm.

825. If theſe Cauſes have occaſion'd the Diſeaſe; this will alſo according to the difference of its Seat (822.) produce divers and ſundry Effects: *For* that of the Bronchial Arteries producing all

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the effects of an Inflammation (382. to 393.) it will at length by its preſſing upon the contiguous Extremities of the Pulmonic Arteries (as by a Contagion) inflame them.

826. But when the very extream Veſſels of the Pulmonic Artery are inflamed, the Blood ſtops, the Veſſel is extended, the moſt liquid Part is ſqueez'd out of it in the manner of Sweating, the thickeſt is heap'd and throng'd together; almoſt all the Blood as yet capable to circulate is gathered together between the right Ventricle of the Heart and the extreams of the Pulmonic Arteries; hence the Lungs grow weighty, unable to unfold themſelves and livid; the left Ventricle of the Heart is depriv'd of Blood, hence an extream Weakneſs, a ſmall Pulſe, ſoft, unequal, and uneven in all reſpects; ſmall Breathing, quick, difficult, upright, often diſturbed with coughing, and hot; Then the Blood that comes through the Veins towards the Heart ſtops at the ear of the right Ventricle of the Heart; an unuſual redneſs comes in the Face, Eyes, Mouth, Throat, Tongue and Lips: At laſt comes on Death it ſelf with its immediate forerunners, a Choaking with an unſpeakable anguiſh, and loſs of Senſes.

827. If the Caſe as juſt now deſcrib'd ſeiſeth upon both ſides of the Lungs at once, and violently, Death muſt very ſoon and unavoidably enſue; Nature not being in a capacity to wait for the Reliefs that are proper to remove Inflammations, and deſcribed (in 386. 395. to 402.)

828. But if it has laid hold of but one ſide of the Lungs, *and but* a ſmall part of that, and the

Cauſes

Causes are not of the most violent; there is some hopes, but no certainty, that the Patient may be well cured.

829. So that we may know the Nature of this Disease and foretell its Event, by looking diligently into what has been said from (824. to 829.) Chiefly if we observe that it takes the same course with all Inflammations: So that it has different Aspects at the different Times of its duration, and consequently may terminate into Health, another Disease, or Death.

830. *It terminates into health*, 1°. By a beneficial *Resolution*, or by dissipating, if the Constitution of the Patient is not very dry, and hardned by Labour or violent Exercise, but rather somewhat soft like that of Women: If the Humors that occasion the Inflammation be not very harsh, but gentle and not too slimy; If the part affected be bronchial or of the soft substance of the Lungs, and be not too large. 2°. By causing the Patient assoon as possible *to spit*, freely, abundantly, yellowish with a little mixture of Blood, of a reasonable thickness, by which he perceive his pain to diminish, his breathing become easier; by which the Physician perceives the Pulse to beat larger and fuller than before; And lastly if it be not long before he spits smooth and white; which we may expect, and must fall out so, when rightly managed, if the Seat of the Illness is chiefly a bronchial or pulmonic *small* Artery: 3°. By Stools with much Choler, giving ease, and which bring away Matter resembling the wholsome Spittle *just* now described. 4°. By great quantities of

Urine,

Urine, thick, setling, giving ease, with first a red Sediment, and then whitening by degrees, and made such before the seventh day: which rightly succeeding the Patient breatheth easily, the Fever is gentle and of a good Sort; the Patient thirsts no more, but he is warm, moist, soft and lax all over his Body equally. *NB. Hyppocrates* saith "that loose Stools are mortal, but this ought only to be understood of watry Stools, and such as the Patients breathing is not mended by, but rather made worse, which ought to be stopp'd immediately. *Mercurialis* finds out another way to excuse *Hyppocrates*, and to reconcile him with *Galen and Aretæus*: He thinks *Hyppocrates* meant nothing else, but that a Looseness in the very beginning was mortal, but beneficial if happening together with the other Signs of a good Concoction, or at the time thereof: and for this he quotes the XL §. of the 7th *Epidemicorum.*

831. It terminates into another Disease capable of being produced by any Inflammation, or that particular one of the Lungs, as they are damaged and thereby hindred from performing their Offices duly.

832. Therefore it first terminates in an Imposthumation, when the Inflammatory Matter (376, 377. 824.) not being able to resolve and dissipate itself through the strength of Nature (380.) nor corrected by the help of art, yet becomes gentler (387.) stagnating, hot and throbbing, breaks the smaller Vessels, resolves the same into purulent matter, and by extending the Sides of the pressing

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Subſtance, or eating through the ſame, forms within a fourtnight an Abſceſs or a *Vomica*.

833. That this will happen may be foretold to a certainty in making the following Obſervations. 1°. If there have been ſure Signs of a Peripneumony from very corroſive Matter (825.828.) but yet not in the higheſt degree, as in (826.). 2°. If no reſolution, nor the Signs thereof (830.) have appear'd timely, that is, before the fourth day. 3°. If the Symptoms (825, 826.) mentioned have not been removed by well digeſted Spittle, and evacuated in due order according to the critical Days, *viz.* the third, fifth, ſeventh, ninth, eleventh, and fourteenth; and that changing ſucceſſively, and mending till it is come to that colour and conſiſtency as promiſeth a Cure: Or if the ſame Symptoms have not been conquered by Bleeding, Medicines or Diet. 4°. But if on the contrary the Symptoms (not altogether the worſt) continue obſtinate, with a continual Delirium, a ſoft and floating Pulſe, like to the gentle motion of the Waves in a Calm after a high Wind.

834. That it is actually gathering, a judicious Phyſician may know by the following Signs, 1°. If thoſe of (833.) be preſent. 2°. When the Patient is often taken with ſlight ſhiverings ſometimes in one place ſometimes in another, without any viſible apparent Cauſe from without, ſuch as might be uncovering of himſelf, or drinking ſuddenly of any cold Liquor; when the pain hath relented and the difficulty of breathing remains, a Fluſhing appears upon the Cheeks and Lips, the *Thirſt* continues, and a little troubleſom Fever

hangs

hangs upon him, and chiefly towards night, and the Pulse is weak and soft.

835. That this Imposthume is already formed one may conclude, if the foregoing Signs of (833, 834.) have already lasted their usual time. 2°. A constant dry Cough, increasing after every Meal or motion; A difficult short breathing with puffing and rattling increased also after Meals or Motion; When the Patient can lye only upon that Side where the Imposthume is; When there is a continual little Fever though sometimes periodical as to its Accesses, heightned generally by eating, drinking and motion, with a redness upon the Cheeks and Lips; the Patient loseth his Stomach, is very dry, sweats in his Sleep chiefly about his Throat and Forehead, maketh frothy Urine, looks pale, grows very lean and extreamly weak.

136. This Imposthume when once made has different Events. 1°. It suffocates the Patient, because the Tumor either occupieth all that Side of the Lungs, or by its compression doth interrupt the motion of those parts as were yet free of the same. 2°. It suffocates him when it breaks suddenly and sends forth all the Matter contain'd therein at once into the Windpipe. 3°. It breaks loose and emptieth itself in a purulent Spittle, which maketh the Patient easier, but consumeth him. 4°. It breaks loose emptying itself into the cavity of the Chest, or into the space of the dilated Midriff, which divides the Chest into two parts. 5°. From whence several sorts of Consumptions or an Empyema, which mostly kill.

837. There is another Diſtemper into which the Peripneumonia vents itſelf, when the inflammatory Matter already become purulent (832, 833,834.) is again taken into the Pulmonic Veins, and is remixed with the Blood and thrown upon ſome parts, ſo that the Lungs are freed, but another part burthen'd with the ſame; which part if leſs neceſſary to life, the μεταϛάσις or tranſportation is reckon'd happy: But if it happens to be the Liver, the Spleen, the Brain or ſuch like, it is generally ſo much the worſe. Hence happen Impoſthumes in, near, or behind the Ears, in the Legs or the Sides of the Belly.

838. A judicious Obſerver may know that ſuch Abſceſſes are like to be, 1°. If with the Signs of a Peripneumony not of the worſt kind (833, 834, 835.) he ſeeth a Fever, which is not violent, nor malignant, but continual, with a pain, ſtraitneſs, heavineſs of the Cheſt, and a difficulty of breathing, but none of theſe to a violent degree, and without the Signs of a Diſſipation (830.) 2°. If the Pulſe together with theſe Signs be conſtantly and in all reſpects very fluttering. 3°. And chiefly if he be ſenſible in thoſe places (837.) of pains, redneſs, heat, and ſtretchings in the Muſcles.

839. We know that thoſe Abſceſſes are to be in the Legs, 1°. If the Signs of (838.) be preſent. 2°. If at the ſame time there be Signs of a very ſlight Inflammation at the ſides of the Belly.

840. But we know that the ſame will be about the Ears. 1°. If the firſt Signs of (838.) be preſent there. 2°. If at the ſame time the ſides of *the Belly* be without an Inflammation, and very *ſoft.*

841. We

841. We know them to tend towards the Liver, if the first Signs (838.) be present. 2°. If there be a remaining pain in the Liver, with a yellowish Urine, almost like that in a Jaundice, and a yellow Skin. From hence, if the Imposthumation fixes in the Liver, ariseth a dreadful Scene of Evils, of which hereafter at large.

842. These Imposthumes (839, 840.) if they ease the affected Lungs, if they carry off the Fever, if they remain full of Matter and make a good discharge as it were through a Fistula, and if they happen time enough before the ninth day; In such cases they are always advantageous: But if they do not appear before the Spittle is purulent without being yellower, or relieving the Patient in the particulars before named; in these cases they are to be deemed ominous: But if after having appear'd they disappear again, and that in the beginning of the Illness, and the Peripneumony returns again, then they are altogether mortal Signs.

843. It happens also that this Disease terminates in a callous Tumor or a Schirrus in the Lungs, if the matter and circumstances of (392.) meet together. From this the Patient is all his lifetime troubled with a Cough, and breaths with difficulty unless he sits upright, which disorders are still more troublesome after Meals or Motion: This Case you must suppose present, when the Signs of a bag of matter in the Lungs (835.) are absent; And here you'll generally find the Lungs to stick to the Pleura.

844. Lastly,

844. Lastly, when the Bronchial Artery is invaded with the most violent sort of Inflammation (388.) and that from an inward Cause or an external one (824.) there ensueth suddenly a Gangrene, and from this quickly after an entire Mortification, because of the Quantity and often repeated Motion of the Blood at each breathing and contraction of the Heart, by which so tender a Body and of so soft a Substance as the Lungs are soon destroy'd. That this will be, may be learn'd, 1°. From the Signs of the most violent kind of Peripneumony (826.) which has not mended by any accident, nor by any application of due Remedies. 2°. An extream Weakness coming on suddenly and shewing it self chiefly by the Pulse. 3°. From the Coldness of the Limbs, and other extream Parts. And we know this same Gangrene to be present already, if, the foregoing Signs having appear'd, the Patient spits ichorous, thin, ash-colour'd, livid, black and stinking Matter: And then Death is at the Door, and seizes him suddenly.

845. To the Knowledge of all these different Kinds of Peripneumonies, and of their changes into other Distempers mention'd in (830. 832. 836. 837. 843. 844.) Industrious and diligent Physicians have attain'd by a curious attention to the usual course of this Distemper in general, and also by an exact Anatomy of such as have died of them.

846. Whence it is past all doubt, that this Disease so amply describ'd by the Ancients by the Name of *Peripneumony*, is in its Origine and Nature

ture nothing else but a true Inflammation of the Substance of the Lungs.

847. The Prognostic cannot therefore be very difficult, it appearing, *That this Disease is always very dangerous*; because of the indispensable necessity of the Lungs remaining capable of the vital Function (Breathing); and of the Necessity of removing incessantly the inflammatory Matter; because of the great quantity of Blood which is continually thrust into the Lungs with all the strength of the right ventricle of the Heart, at each one of his Contractions; because of the perpetual motion of the Lungs themselves at each Breathing; because of their Situation being incapable of admitting any topical Medicines; because of the extream tenderness of their Vessels easie to be destroy'd; and chiefly because it is impossible to make a Revulsion here, which is so necessary a Remedy to remove Inflammations.

848. From this it appears, when, wherefore, and with what Symptoms it must needs terminate into a sudden Death; *viz.* If the Lungs are inflamed all over together with the Heart; when this last seems to fall on one Side, that is, when the Heart is bore down towards one of the Sides, the Patient is taken with a general Palsie, lyeth cold and senseless, and dies either on the second or third Day. If the Urine is well digested in the beginning of the Illness, but grows thin after the fourth Day; If in the height of the Illness the Patient is obliged to be set upright; If he voids purulent Matter in his Stools without being eased; If the Peripneumony is a *dry one*, with a hot rat-

ling in the Throat, as if the Lungs were full of Matter; If the Diſeaſe be very violent in a very dry Conſtitution, and in Bodies that are hardned by their way of Living and Exerciſe, as are moſt Husbandmen, Hunters, Soldiers, and the like; If it be a bad Sort, with a dropping of Blood from the Noſe; If it be a dry one with red Spots over the Breaſt, which argue the Inflammation to have ſpread it ſelf throughout; If a ſtrong Defluxion of ſharp matter from the Brain with violent Sneezings hath preceded or doth follow; If it took its riſe from a hot burning Fever; If there appears immediately after the ſixth day a bilious Spittle with Pus; If the Spittle has been from the beginning very bloody, of an entire yellow, or white and round, very frothy, not allaying Pain, if dark brown, filthy like unto Lees of Oyl, black, growing livid, uneven and ruſty; If then neither the Fever has abated, nor the Breathing mended, he dies on the ſeventh or the ninth Day: And you may ſee Death coming on apace, when the Pulſe fails them, they grow cold all over, only their Breaſt, Neck, and Head are in an apparent heat with Sweats, and the Cheeks firſt glow, and then turn to a livid paleneſs.

849. *The Method of Cure* is to be varied according to the different ſtate of the Illneſs, and the variety of Symptoms; ſo that what may do Service at one time, will do Damage if applied at any other improper time.

850. If therefore in a Peripneumony all the Signs be preſent, deſcribed in (830. N°. 1.) Then *the Phyſician* ought to preſcribe Quiet and the avoid-

avoiding of any Passions; The Air, if not naturally moist and temperately warm, must be made so by Art: The steam of warm Water ought to be directed to his Lungs, Nostrils, Mouth, Feet and Legs; his Diet ought to be small, his Medicines of the cooling kind, such as are Emulsions, Ptysanes, and Pectorals sweetned with Honey, and all these made more effectual by the addition of several preparations of Nitre or Saltpetre.

851. But if the Case stands as in (830. N°. 2.) you must make use of all the just mention'd, and also of Emollient, cleansing Medicines, such as promote Spitting; gentle Cordials, and Steams directed to the Parts as before mention'd: No bleeding must be allow'd of, no purging, no sweating, nor any one thing that can disturb or put a Stop to the Spitting.

852. If the Case is as in (830. N°. 3.) you must order gentle and loosening Glysters; the Belly must be fomented with warm Fotusses, not spirituous; The Patient must drink now and then of a gentle opening Apozem, and besides observe all things of the two preceeding Aphorisms.

853. If it is as in (830. N°. 4.) do all things as in (150. to 852.) And besides, bathe your Patient's Feet with warm Water; Let the Kidneys be fomented from within with emollient Glysters and from without with wet Clothes, and let him drink plentifully of some cleansing and gently diuretic Apozems. *NB.* "There is in *Oysters* what "will answer several Indications in this Distem-"per, as cooling, promoting Spittle and Urine: "This *the Ancients* knew, and therefore always

" recommended the Liquor of 'em boyl'd up to
" Consumptive People, and such as were in the
" Case here before us. *Tulpius*, both a famous
" Physician and a Burgomaster of *Amsterdam*, in
" his noble and elegant *Book of Observations*,
" *lib.* 2. *cap.* 8. tells us the History of a Woman,
" who was entirely emaciated and despaired of,
" and was recovered by the sole eating of Oy-
" sters, which she happen'd to have a sudden
" Longing for. *And I my own self* upon reading
" of this Cure tryed it in a Young Man in *Dept-*
" *ford* about five Years ago in the same case, and
" succeeded. And Nature seems to shew us the
" Way, for she hath provided a plenty of Oysters
" in *Essex*, which by a Common Observation,
" is the most invaded with Distempers of the
" Lungs of all others in *England*, and perhaps in
" the whole World.

854. But if the Inflammation be recent, great,

ctions, such as resolve, soften, and loosen the rigidity of the Fibres, adapted to Inflammations in general, never omitting a due proportion of Nitre, and Anodynes, in small Doses, but often repeated and taken as hot as they can be taken down; for Cold drink is Death, or at least very prejudicial in this Distemper. 4°. An opening cooling Glyster ought to be given daily. 5°. And the Patient kept to a very low Diet, cooling at the same time, and as much as possible from the vegetable Juices of cooling Herbs and Fruits.

855. If the Inflammation be great, with a high Fever, and other violent Symptoms, and has lasted now longer than three Days, and there be Signs of its tending already to an Imposthumation (833, 834, 835.) the Danger is always very great, though now the Illness is like to last some time, and so to give an opportunity for the Cure. In this Case, 1°. You must either not Bleed, or at least very sparingly, if there is some urgent Symptom that commands it. 2°. The Diet must be low but somewhat thickning, and of such Things as are thought to promote the ripening and digesting of the Spittle. Such are the Jellies of Fishes or Bones, Bowels or any other fleshy Parts. 3°. You must use such Fomentations and Steams that may prove softning to the Lungs and ripening at the same time. 4°. The fifth and sixth Days use the same things, adding Suppings of such Liquors as may promote a gentle beneficial Cough, and fill the Vessels, so that on the seventh Day the Part affected may be reliev'd by the emptying and discharg ng *of well-digested* Spittle, the Vessels be-

ing now reduced to a ſmaller Bulk than they were at the beginning of the Inflammation; And by ſuch a Method the Patient will be able to bear that great and neceſſary Diſcharge if at the ſame time he is ſupplied with proper Cordials and Aliments. " The beſt thing that can be given at " this Juncture is warm Barley-broath ſweetned " with Honey with a little Cinnamon.

856. If by the Signs of (835.) it appears that there is already an Impoſthume form'd in the Lungs, the Phyſician muſt uſe all Means to break it forthwith, and to make a Diſcharge thereof through the Windpipe, and then order ſuch things as will cleanſe and heal the place in a ſmall time, before it can acquire any degree of foulneſs or ulcerate. *NB.* " The reaſon is, that otherways " the Impoſthume may break of it ſelf unex- " pectedly in the Night, and choak the Patient " at once.

857. This Impoſthume may be broke having firſt duly prepared the Patient with a ſufficient quantity of ſoft Food, fat Broaths with oleous Wine, Directing towards the Lungs the hot Steams of Wine, Vinegar or Euphorbium; cauſing the Patient to hallow, cough, take ſlippery and oleous Medicines, ſetting him on Board of a Veſſel in hard Weather, or jolting him in a Coach. *NB.* " *Hip-* " *pocrates* and moſt of the Ancients follow'd this " Method conſtantly; See here an entire *Recipe* " of that curious obſerver of Nature and bold " Practitioner, *Lib.* 2do. *de Morb.* §. 44. The " Man, who is ſo affected (ſpeaking exactly of " *the Case* before us.) and has now reach'd the

" tenth

" tenth Day from the beginning of his illness's
" tending to an Imposthume; Wash him with
" a great Quantity of warm Water, and *Mix*
" *together a small Quantity of Aron root bruised,*
" *some Grains of Salt, a little Honey and Water*
" *with a little Oyl.* Then pull out his Tongue
" and lay some of this upon it, *viz.* to make
" him Cough: And if that doth not do; let
" two or three strong Fellows take him by Neck
" and Shoulders and shake him with all their
" Strength. Which sort of Practice we very
" rarely dare follow now adays in these Coun-
" tries, where it doth carry a Face of roughness
" and Cruelty.

858. As soon as by certain Signs it is known, that the Imposthume is broke, you must confine your Patient to a Milk-Diet, allowing him only the softest kind of Vegetables, and such as do not easily rotten, such are Turnips, Parsnips and the like. (Avoiding all sorts of Cabbage except the Red.) In the day time give him detergent Decoctions gently loosening, made of Scordium, Marrubium, the Opening Roots, *&c.* But at Night very gentle Opiates, never exceeding half an Ounce of Diacodium: And he must continue the use of softning Steams, take the Air on Horseback, in a Chaise, or in a Boat.

859. But if by the Signs of (338.) it appears, that the Case is already as in (837.) but no certainty whether the Matter is going to remove it self; then you must bid your Patient to keep very quiet, and his Strength and Spirits up with a light Diet, chiefly *Spoon*-meat gently spiced, allowing

a ſmall quantity of proper Wine. Let the Medicines be at that time Emollient, but of the Claſs of thoſe that are leaſt aperient; Solace the Lungs with ſoft Pectorals; and thus in a little time the Matter will have determined it ſelf to one place or another; or being made more fluid, it will empty it ſelf its proper way by Spitting.

860. But if with the Signs of (838.) thoſe of (839, 840.) be alſo preſent, whence you are ſure that the Matter has already removed it ſelf, then do what has been juſt now mention'd, and work upon the place, where you foreſee (839, 840.) that the Matter is going to work it ſelf through, by ſucking with dry Cupping-glaſſes, made of Horn, or Iron, or Glaſs; by looſening the Part with Cataplaſms; by ſtimulating by drawing or bliſtering Plaiſters; "Which applied to the Legs "do at all times eaſe the Lungs greatly, and "do promote Spitting and relieve difficult Breath-"ing; By ſuch Openers as of themſelves, or with the help of the reſt, may facilitate the Diſcharge in that place.

861. If the Caſe is as in (841.) do the ſame things as in (859, 860.) then you muſt exhibit ſuch Medicines as are more opening and of a ſoapy nature, or even Caſtle-ſoap it ſelf in a draught of Milk; Such as are ſaid to purge the Liver, "*Viz.* All Compoſitions that have Rhubarb in "them, and are at the ſame time Diuretic and "ſomewhat Chalybeat: Glyſters and Fomenta-"tions repeat daily.

862. But the Caſe as in (843.) doth rarely *admit of* a Cure, unleſs it be by continuing long

together

together the Use of Emollient Medicines, outwardly and inwardly; by riding on Horseback, or any other constant travelling Carriage; And even by this you can only flatter your self to make it somewhat easier, and to put off the evil Day for a while.

863. If it be already changed into a Gangrene (844.) it is altogether incurable.

864. But if the Peripneumony had already begun to go off with a Spitting, and that the same doth stop; then all hands must be set to work to bring it back again: This will sometimes be occasion'd by a sudden cold Air let in upon the Patient; a great Drying come on from various Causes, a hot Fever coming on afresh; heating Medicines or Cordials, a Loosenes which is not Critical, great Sweating and a violent Passion.

865. Then will the neighbouring Parts immediately be invaded by a fresh Inflammation from the stagnation and heaping up of the peccant Matter, and from thence all the Symptoms of the original beginning Peripneumony (825,826.) And whereas this comes now on a Body weaken'd already with the former, it generally Kills in a little Time.

866. The Remedies for this fatal Relapse and its Consequences, (865.) are to mollify the Lungs in all haste, as well as Mouth and Nose, and moisten them with continual Steams, and even making the Air of the Room to be constantly like unto them; Give the Patient large Draughts of the same thin and warm Liquors as said before, chiefly *with Honey* and Vinegar: Give gentle

Diapho-

Diaphoretics that may gradually resolve and dissipate this new Inflammation; Such as is Antimonium Diaphoreticum with some Grains of Nitre; gentle Opiats, and with all possible Care avoid Sweating; and let him not by any accident be frighten'd or put in a hurry. "All these things "here mention'd must be tried instantly one up-"on the other, for unless some one doth take "effect very speedily, your Patient dies in a few "Hours.

Of the Spurious Peripneumony.

867. That Sort of Peripneumony, which happens often in the Winter from Cold, or in the Spring from too sudden a Heat coming upon cold Weather, doth usually proceed from a slow Phlegm spread in the Blood throughout the Body, and occasion'd by the Spontaneous glew described in (69. 72.) which gradually lays hold of the Lungs, till it unawares passes into this dreadful and often mortal Disease.

868. When this Evil is somewhat increased, it has already produced in the whole Body several Effects, (72. to 74.) and besides them, such also as are usual to a slow Peripneumony (825, 826.) Whence it appears to be very difficult to cure.

869. For if you let Blood in that Quantity as the Nature of this Disease requires (854.) You do a great deal of Damage, because of the weakness of the Bowels, and of the Liquids being too sluggish and not fitting the Vessels; Whence it is that the same seems to be beneficial at first, but *soon* proves hurtful and increasing the Disease in *most* Circumstances.

870. As

870. As to the attenuating Medicines, which in this Case are so much extoll'd by some, they rather increase the Degree of Thickness, and drive in farther the stagnating and obstructing Bodies, as they increase the force and motion of the Humors in and upon the Lungs; and they consequently by so doing, soon render the Disease mortal.

871. This Disease is common to aged, phlegmatick, cold People, such as have Defluxions and Rheum falling from the Head; it usually invades upon any occasion, which by moving the stagnating Fluids too suddenly make them fall upon the Lungs; such as Running, Declaiming, Singing, Drunkenness chiefly occasion'd by very hot or spirituous Liquors, junquetting, The heat of the Fire, Bath, or Sun, chiefly if a great Cold follows this Heat suddenly.

872. By its deluding gentleness it destroys such as scarce thought themselves ill: For beginning with a small Weariness, Weakness, a general Prostration of the motions of the Mind, a difficulty of Breathing and an oppression of the Chest, it causes such small Motions, that there is scarce enough Fever or heat to warn you of the Danger: Afterwards come on by Fits uncertain Shiverings and slight Fevers; upon which the difficulty of drawing Breath and Weakness follow, and sudden but unexpected Death, of which there was hardly any Sign either in the Urine or in the Pulse.

873. It's cured by this most prudential Method; 1°. Let the Patient first be blooded out of a large Vessel. 2°. Let a Glyster be injected daily till *it appears by* proper Signs, that the Lungs

are

are eased. 3°. Let his Diet be of thin flesh Broaths, with some Juice of Limons or Oranges, his Drink also small of Water and Honey. 4°. Use the Steams and Smoaks describ'd in (866.) diluting, cleansing, and gently opening Apozems in large Quantities; bathe the Legs and Feet, and lay on many and large Blysters.

874. From all these (820. to 874.) Reasons may be given, why this Disease happens seldomer to Children and Women? and likewise why it ever seizes those People whose Solids are of a looser Contexture? Why it is easily cured in them and almost without any Help? And why so difficultly in strong and exercised Bodies? From the same it is plain also, why this Disease comes as a Symptom in most other Diseases just before Death? So that a Peripneumony is the proximate Cause of Death, and the last Effect of almost all Mortal Diseases.

Of a Pleuresie.

875. A Pleuresie is said to be present, when the Patient is afflicted with an acute continual Fever (564. 567.) with a hard Pulse, with an acute Inflammatory Pain and Stitch (383. N°. 3.) which are much increased upon breathing in the Air, and milder in the breathing out, or while the Patient gently keeps in his Breath, gentler also when he performs breathing without moving the Chest, but chiefly by the repeated raising and lowering of the Belly; he coughs almost incessantly, which because of the violent Pain it causes, he strives to *Suppress.*

876. When-

876. Whenever at the ſame time he ſpits ſuch ſymptomatical Spittle as is common in Diſeaſes of the Lungs, it is call'd a *Moiſt Pleureſie*; when that is wanting, 'tis a *Dry Pleureſie.*

877. There is no part of the internal integuments of the Cheſt which is not capable of being ſeized therewith; The whole Pleura therefore, the whole Midriff; hence its Seat may be in the fore or back-part, right or left ſide, higher or lower, more outward or deeper place equally: But moſt commonly in the Sides.

878. But when the very Membrane, which doth beſet all the Ribs inwardly is the Seat of Pain, then is it *a Genuine Pleureſie*; But if it be higher, and the intercoſtal Muſcles, and thoſe which are higher than them be affected, its called *a Spurious Pleureſie.*

879 It chiefly invades grown, ſanguine People, ſuch as have eat or drank much, or taken violent exerciſe, as ſeldom belch ſowr, prone to Inflammatory Diſeaſes; in the Spring, chiefly when the ſame grows ſuddenly very hot after a ſharp froſty Weather, or in the Winter when the Wind blows ſharp out of the North-Eaſt, and then it is called an *Idiopathic* Diſeaſe; that is an Original one, not owing its Cauſe to any other more principal Diſeaſe.

880. But if the ſame ariſes from the Cauſe of another Inflammatory Diſeaſe moving and tranſlated to the places deſcrib'd in (877, 878.) then is is it a *Symptomatic* Pleureſie.

881. It owns for its antecedent Cauſe, 1°. All that is apt to *produce* an Inflammation of any kind,

kind, (375. to 380.) 2°. Whatever doth direct the Cause of it chiefly to the Pleura; to which belongs most the Constitution of the Patient, the narrowness of the smallest Arteries of the intercostal Muscles and their rigidity; a foregoing Distemper which has left a Disposition towards those Effects, such as is a Schirrus of the Pleura, or a Callosity of the same, an adhesion of the Lungs to the Pleura, (which is observed to be frequent in most Northern Climates) the Nature of a predominant Epidemical Disease; a cold Air driven violently through some narrow Passage upon the naked Body before over-heated by Labour or Fire; very cold Drink taken suddenly when the Body is disposed in the same manner as aforesaid; a cold, frosty, Northern Air in the Winter. 3. A deposition of an Inflammatory, ichorous, and suppurating Matter, first predominating in the whole or in some part, and then from any Cause whatever deposited or translated into this Part, as it will happen in the Measles, Small Pox, ulcerous Tumors, great and wide Ulcers suddenly disappearing, the Matter thereof being suck'd up by the Veins.

882. This History (from 875. to 882.) Its Course to be expounded presently (from 803. to 907.) and the dissected Bodies of such as have died of Pleuresies do clearly intimate, That it is an Inflammation of the Blood (371.) in the small Arteries of the places mentioned (877, 878.) occasioned mostly by a preceeding acute Fever.

883. Hence the History of this Disease may be *clearly* deduced: It begins with a desire of feed-

ing

ing, which is often very great, with a Coldness, Shivering, Weakness, Weariness, and a Fever: It goeth on with a Heat gradually increasing to a Burning, a Drought, an entire Loss of Appetite, a Pain from being light increasing till it becometh very violent, breathing much vitiated: when in its force there is a violent Fever, but less apparent because the Patient holds his breath as as much as possible, and is almost suffocated upon account of his endeavouring to suppress the most violent pain, which he could not but feel, if he should breath out; which often deceives the Physician much to his dishonour: Then doth it terminate variously, according to the several Causes, but chiefly the different changes of the Inflammation (See 386. to 393. 492. to 500.) the different nature of the place which the Disease has laid hold of (877,878.) and the Consideration of those Circumstances; according as more places (877, 878.) are affected at once; as the motion of the circulating Liquor is more violent, (see 92. to 102.) or the Malignancy of the very principal Disease is greater (564. 567.) So are the several Symptoms worse, and chiefly do the defects of Breathing and Pulse more widely differ from the natural state of both, as likewise do Spittle and other Excrements.

884. It terminates in Health, other Diseases, or in Death.

885. Into Health by the help of kind Nature or by Physick in the beginning, while the Disease is yet in its simple state.

886. It *is cured with* the help of Nature, or a kind

kind Resolution, or a Concoction and Excretion of the Morbific Matter.

887. By a Resolution, if the Causes of (386. 401.) do concur at the same time; and then doth the lenity of Symptoms inform that nothing is necessary to be done but to keep the Patient to a thin spare Diet, give him the gentlest Openers, which together with soft Fomentations will ease the Pain and help to remove the Cause.

888. By a Concoction and Excretion of the Cause it is cured, chiefly observing these Things, 1°. As often as the Piles do let out a sufficient quantity of a well qualified liquid and at a seasonable time. 2°. As often as the Patient has voided a great quantity of thick, hypostatic Water, *with a Strangury*; ("*NB.* I have been an Eye-" witness how Dr. *Boerhave* twelve years ago " did in an Hospital at *Leyden* prognosticate the " Recovery of a Pleuritic Patient, who did com-" plain of a Strangury, not from any Blisters, or " or any other Medicines, and that it actually fell " out as he did foretell us.) When the same has been pretty high-colour'd with a white Sediment before the fourth Day, and that the Symptoms did at the same time abate: which sort of Urine has also cured a dry Pleuresie. 3°. If the Patient voids by Stool a great quantity of yellow bilious Matter before the fourth Day, and is eased thereby. 4°. If ichorous, purulent, and fistulous Imposthumes, running long and begun before the sixth Day, have shewn themselves behind the Ears, or in the Legs according to (837. to 843.) 5°. If the Pain in the Side is removed to the

Shoulder,

lder, Hand, Back, with a Numneſs, Pain and
ineſs of thoſe Parts. 6°. If the Patient ſpits
ifully from that Part, and is eaſed thereby,
out a Rheum at the Noſe, in a great quan-
it firſt like Matter, but ſoon changing into
, or before the fourth Day; continuing all
or not being long ſuppreſſed without return-
s before; for then you may expect a Cure
e ninth or on the eleventh Day.

9. When the Signs duly obſerv'd do con-
that the ſtate of the Pleuriſie is ſuch as juſt
deſcribed, then ought the Phyſician to en-
our at no change, but only to continue and to
rage all Evacuations or ſpontaneous Tranſla-
of the morbific Matter. Bleeding therefore
t proper here, neither ought any other kind
vacuation or Alteration to be made. But,
Uſe a ſoft thin Diet, let Body and Mind re-
quiet; the Air be made temperately warm
noiſt; the Sleep be natural or procured by
e Paregorics; and all Medicines be ſoft, ſmall,
gently opening. 2°. All proper Evacuation
h appears in each particular caſe to be bene-
is to be encouraged and help'd; ſo that in
aſe of (888.) N°. 1.) the Anus ought to be
nted with a ſoft, looſening and aperient Fo-
or if that doth not anſwer, Leeches muſt be
ed to the Hemorroidal Veins, till they have
d a good quantity of that groſs Blood. If
as in (888. N°. 2.) The like Fomentations
t immediately to be applied to the Loins, the
eum and the Lower Belly; Gentle opening
etics *to be given*; the Air made ſomewhat

cooler; Sweats and other Evacuations to ve avoided; ſoft Diuretic Glyſters, with ſome Turpentine, to be injected. But in the Caſe of (888. N°. 3.) The like Emollient Fomentations muſt be uſed all around the Abdomen; Looſening Glyſters injected; a looſening Diet order'd. When the fourth State of (888.) is preſent, foreſeen from (838.) and that the Place as in (839, 840, 841.) is alſo known, Then ought to be put in practice the means mentioned in (859, 860, 861.) making an opening and keeping the ſame open for ſome time by ſuppurating Medicines. In the Caſe of (888. N°. 5.) beſides the Means common to the preceeding, the Parts into which the Pain is removed, muſt be fomented with ſoft and warm Decoctions; to be gently rubbed; and to be ſtimulated with gently drawing Plaiſters. Laſtly, in the Sixth of (888.) all things ought to be done which were adviſed in a kind Peripneumony, and conſequently all things be brought hither from (850, 851.) and executed.

890. But a Pleureſie is alſo cured by Art without any remaining illneſs after it, chiefly by this Method; If the ſame Pleureſie be recent before the end of the third Day, yet violent from the many and ſtrong Symptoms (875. 883.) and Dry (876.) in a ſtrong, exerciſed dry Body, without the Hopes or the Preſence of (887, 888.) Then let the Patient immediately be blooded largely, with a quick running Stream out of a great Veſſel, and a large Orifice, keeping his Body quiet and leaning backwards, enforcing his Breathing all *the* while with Coughing or Panting, fomenting

the

the Side at the same time, and gently rubbing it; Which bleeding ought to be continued till the Pain seem to abate pretty considerably, unless a fainting Fit forces you to leave off sooner, at whose approach the Vein must immediately be stopped; Bleeding ought to be repeated according as these Symptoms do return, upon whose account it was done the first time; and when that Skin (384.) doth not any longer appear upon the Surface of the Blood, it is time to forbear any more Bleeding. 2°. From the Beginning ought to be used Fomentations, Bathings, warm Steams, Liniments, Plaisters and the like, which may be of use as they loosen, resolve, mitigate, and avert. (See 395. N°. 6. 398. N°. 3. 3°.) Then ought those Medicines to be administred, which dilute, resolve, loosen, mitigate, cool, ease pain, or lay it asleep: Which being taken warm, moist, and in great Quantities do help, and are to be varied according to the different changes and faces of the Disease, always providing to chuse such as are the most contrary to Putrifactions. 4°. There is occasion for a small, soft, cooling Diet contrary to Inflammations. 5°. Every thing is to be avoided, which is drying, heating, increasing the Motion of the Blood; such are the heat of the Air, Sun, Fire, Bed, Diet and Medicines.

891. The Continuance or Repetition of all which is to be learn'd from the obstinacy of the Disease, or its remission and transition into perfect Health.

892. A Pleuresie terminates into other Diseases, 1°. When *the Inflamed* place doth Suppurate,

which we know when it will be α. From the general Signs (387. 402.) β. From the obſtinacy of the Pain, Cough and Fever, laſting beyond the fourth Day. γ. From the abſence of the Signs of a Reſolution (887.) and of an entire Cure (888.) δ. From having neglected the Means laid down in (890.)

893. That this Impoſthume is already gathering, is known from the general Signs in (405.) but chiefly in this Caſe from a Shivering often returning without a Cauſe, and from the Signs ſet down in (834, 835.) concerning the Peripneumony, comparing theſe with the time that the Diſeaſe has laſted: Hence we may alſo know when it is perfected, and it is ſometimes evacuated through the Lungs by Spitting.

894. But this Impoſthume will be broke by its own Matter, whence the Pus falls into the Cavity of the Cheſt, the Ulcer by the Production of more new Matter ſtill heap'd on the firſt, fills up the whole Cavity, conſumes all the Fleſh and Subſtance of the whole Body: That this has happen'd is known from the juſt mention'd Signs in (892, 893.) the Continuation of the Diſeaſe until the fourteenth Day; from a ſudden relenting and quick return of the Symptoms: Whence a Conſumption.

895. If therefore we know by the Signs of (892, 893.) that the inflamed Part is impoſthumating, the place where the Pain was, being carefully noted, muſt be pierced with Cauſtics, and an Inciſion made about as deep as the Pleura, and *kept* open with ſuppurating Medicines, that the

Matter

Matter being thrown and turn'd toward the outside by the power of the Lungs may leave the Pleura whole, and so an Empyema be prevented: Then ought the place to be assuaged till it be entirely cleansed.

896. But if from the Signs of (302. 894.) it is plain that the Imposthume is broke inwardly, and the Pus has already form'd an Empyema, Then ought the Chest forthwith to be opened (303.) N°. 5.) the Matter to be let out (303.) and the Wound to be heal'd up again by means of a good Diet and useful Medicines.

897. It also changeth into another Disease, when the affected Part is grown schirrous or callous, or if the Lungs adhere to the Pleura; which when it happens, there ariseth an Asthma, difficulty of Breathing, a dry Cough, chiefly after Meals and Motion; From which Symptoms it is known to be the Case, if they are present without the Signs of an Imposthume (893.) or an Empyema (896.) and chiefly if they last long without any considerable alteration for the worse.

898. When this is known to be (897.) it is either altogether incurable, or can only be removed by a laborious and hard Life in a free, open Country Air, and hard Riding continued long, and frequently used.

899. This sort of Inflammation also changes into a Gangrene first of the Side, but soon after of the Lungs themselves, because of their neighbourhood (844.)

900. Which evil proceeds either from the Violence of the *Pleuresie*, or the sharp or putrified *concomitant Matter.*

901. That this will be, or is even begun, may be foreſeen from many Signs; if the purulent Spittle be ſomewhat tainted with Choler, round, purulent with ſome ſtreaks of Blood, black and ſooty, like Lees of Oyl, ſtinking; If there be a great rattling in the Cheſt with a ſad Countenance, the Eyes red and yellowiſh, with ſeeming duſt in 'em, and dim; If the Spittle be in the beginning of divers colours; then do they often die on the third or the fifth Day. If the Patient Snoars much in his Sleep, Spits nothing or with difficulty, the Pulſe be languid, the Urine extreamly high-colour'd: If there be a Looſeneſs with watry, ſtinking, rotten Stools, and it be Symptomatic, not critical nor eaſing: If a violent Inflammation of the Lungs comes at the back of it: If a Relapſe of the Pleureſie: If the Blood coming out of the Vein appears very florid without the inflammatory Cruſt notwithſtanding its diſcharge through a large Orifice, flowing briskly and received in a clean Porringer: If Spitting be ſuppreſſed leaving the difficulty of breathing behind, and that even increaſed with a pain and heavineſs in the Cheſt, a hard, ſmall, quick Pulſe and a great heat; all which being grown much worſe on the fifth Day do kill on the ſeventh: If the Urine is very red, dark, with a ſettling of mixed and various Colours, and not entirely ſeparating at the Bottom or the Sides, that kills within fourteen Days: If the Sediment be black or broke into ſmall particles like Bran, the Patient dies ſooner: If the Pleureſie is gentle in the beginning, but grows worſe on the fifth or

ſixth

sixth Day, the Danger is great on the seventh and twelfth Day, and they seldom do well unless they can overcome the struggles of the fourteenth Day. If the Back, Sides, Shoulders are heated with a Redness and a great Anguish, green loose Stools and very stinking; If the Pleuresie be *a dry one*, because of the want of Strength, because of the greatness of the Pain, of the unfitness of the matter for an Expulsion, because of the too great contraction and shrivelling of the Vessels, because of the too great use of hot Means, and the Pain at the same time doth rise up higher: If the Tongue is from the beginning dry, foul, livid, black, with a black Blyster or Pustule upon it; If any one of these Signs be present singly or more of them together, the Disease is most times Mortal of it self, not easie to be cured, but most times kills by a Gangrene of the Side, or of the Lungs situate just near it.

902. But when from those Signs it is plain that this Evil is already impending, the Physician ought boldly to try immediately all the most powerful Means, not relying upon the strength of Nature, nor common gentle Means, it is no matter how low he brings him, if he but saves him.

903. In this Case therefore the Physician ought immediately to burn the affected Part to the quick with a red-hot Iron, and the Crusts ought afterwards to be cover'd over with strong Cleansers, and often be heated and constantly kept warm, with the most penetrant Fomentations; And the Patient ought besides to take inwardly Strong diluters, *Openers, such* things as are contrary to putrifactions

trifactions and ſweating Medicines in great Quantities. For theſe things, if any, will allay the fierceneſs of the Diſeaſe.

904. But if the Cauſe of the Inflammation be the moſt violent, and has created the higheſt Symptoms incident to Pleureſies, which give way neither to the Helps of Nature (887, 888.) nor to any Remedies uſeful in Pleureſies (890. 903.) and that the ſame be afterwards ſuddenly removed without any Cauſe, (as they did depend from the Nature of Inflammation) the Pulſe continuing ſmall, quick, and intermitting; The Breathing alſo quick and ſmall, with cold Sweats; It is then apparent and certain, that a Gangrene has already laid hold of the inflamed Parts. Hence you muſt ſoon expect the Patient to grow delirious, and then ſhortly to die, chiefly if at the ſame time the outſide of the Cheſt be of a livid Colour from the ſtagnating of the Blood in the Capillary Veſſels: Which is alſo the Event, when he that ſpits a bilious or yellowiſh Spittle, is eaſed of his pain without any reaſon; for then alſo ſoon appears a mortal Delirium, the Meſſenger of Death, occaſion'd by a Gangrene.

905. A Pleureſie terminates alſo into Death, when its Cauſes are ſo powerful that the Pain, ſuppreſſing entirely the Motion of the Cheſt, ſoon creates a mortal Peripneumony, deſtroying very ſuddenly by hindring all paſſage of the Blood through the Lungs.

906. Hence it is eaſie underſtood, Why a Peripneumony never fails of ſucceeding a moſt violent and fierce Pleureſie? Why that is generally

mortal

mortal to old People, Women with Child, or in Childbed? Why the girding of the Thorax with a Bandage doth relieve Pain so much in this case, as even to make the Disease supportable? *NB.* "I have had just at this time the good for-
" tune to save the Wife of an Apothecary in
" *Deanstreet Sobo*, who had a Pleuresie just be-
" fore she was brought to Bed, which conti-
" nued for several Days after her Delivery; the
" Matter whereof was twice translated, first to-
" wards the Liver, and afterwards with greater
" violence than ever to the opposite side of the
" Chest and the Shoulder (See 888. N°. 5.)
" when she was brought so low by one necessary
" Bleeding, that every body expected her Death
" suddenly, but yet by successful Means has re-
" cover'd to my own surprize and every bodies
" else, and even without any apparent danger of
" a Consumption, or any other Disease.

Of the Paraphrenitis.

907. If a Disease like to a Pleuresie doth invade that part of the Membrane of the Chest (the Pleura,) which doth surround the Diaphragm or the Midriff it self, there ariseth a most stupendous Disease call'd *Paraphrenitis*.

908. Which is more common than is generally believ'd, though it be seldom discover'd when present, is neglected, or is treated by some other Name.

909. It is known from a most acute continual Fever; an intolerable inflammatory pain of the Part, because of its very nervous Membranes;

which

which pain is horribly increaſed upon Breathing, Coughing, Sneezing, Fulneſs of the Stomach, Nauſeating, Vomiting, the preſſing of the Belly upon going to Stool or making Water; whence the Patient draws his Breath on high, ſmall, quick, almoſt with a Suffocation, the Belly not moving but only the Cheſt; he is perpetually Light-headed, his Hypochondria are lifted up and drawn inwardly, he has a convulſive Laughter, Convulſions in other Parts, he grows furious, and the Part Gangrenes. *NB.* " Under this head of " Convulſions, we muſt rank a moſt obſtinate " and painful Hiccough which is peculiar to " this Caſe.

910. The Event is the ſame as in a Pleureſie (884. 892. 896. 897. 899.) but, becauſe of the great and conſtant motion of the part, of its neceſſity to Life, of the nervouſneſs of its extended Membranes, all things are quicker and more fatal; And from hence a large Collection of purulent Matter in the Abdomen, not unlike an Aſcites.

911. The Cure therefore doth require the ſame Diſtinctions and Cautions, and do almoſt all the ſame Remedies, excepting ſuch as the Situation of the Part doth not admit of. Emollient Glyſters are often very beneficial becauſe of the neighbourhood of the Parts, performing as it were the office and ſupplying the room of Fomentations and Bathing.

912. But when the Diaphragm is impoſthumated after its preceeding Inflammation, if the *Impoſthume* breaks on the ſide of the Belly and empties

empties its Matter therein, there happens a Gathering thereof in the Abdomen, a heaping up of the ſame, a Putrifaction, Tumor, a corroſion of the Bowels, a very bad ſort of Conſumption and Death.

913. And this Evil is incurable in all its Circumſtances, though the Nature and Cauſe of it be very well underſtood.

Of the Inflammation of the Liver, and the ſeveral Sorts of Jaundices.

914. As other Bowels and the Parts we have been treating of, ſo is the *Liver* likewiſe capable of Inflammations; though it is ſeldom thought of, and perhaps is not ſo frequent becauſe of the ſmalneſs of the hepatic Artery, and the weak motion of the Blood in the *Vena Portæ.*

915. Its Seat therefore is in the Extremities of both the juſt mentioned Veſſels (914.) which carry the Blood into the Body of the Liver after the manner of all other Arteries, and with the ſame effect; ſo that this Inflammation of the Liver, as well as that of the Lungs, is twofold as to its Seat and Origin; but yet ſo that the one ſoon produces the other.

916. Both ſort is preceeded by the like Cauſes; to wit, the general Cauſes of all Inflammations directed chiefly to theſe Parts; then ſome as theſe Parts are moſt diſpoſed to receive, which are many, and ſuch as follow; The great fatneſs of the Caul, the atrabilious temper of the Blood and Choler; The Acrimony of a ſomewhere ſtagnating *purulent, ichorous* or ſcorbutic Matter:

If

If to these are added a Heat, Fever, Motion, Diet, Remedy, or Venom, which do melt, move, and direct them towards the Liver; a fat sharp, adust bilis put in a violent motion by its proper Causes; Stones, chalky Matter, a Schirrus, a Callus, Steatom, Imposthume, Cancer, or Worms besetting, pressing or squeezing some part of the Liver, of the Gall-bladder, or the passage of the bilis, if any one of the forementioned Causes doth awake and stir them; A sudden perception of a great Coldness upon the Liver (after its being very much heated) proceeding either from the Air, Drink or Swimming in cold Water; A long continued Thirst during a great Motion, heat and sweating; A burning Fever with a denial or want of Aliments and Drink: Great and violent perturbations and hurries of the Mind; Great Commotions occasioned by Vomits; And Diseases of the Hypochondria of a long standing.

flux of the Blood from the Cœliac and both the Mesenteric Arteries, and stops it just at the going in to the Liver; and consequently hinders all the venous, arterious, and lymphatic Liquids wholly from flowing into the first Bowels of the Abdomen; It destroys and inverts the Generation, Secretion, Excretion, Circulation and office of the Bilis; Produces a Jaundice and its Effects; a Putrifaction of all the Liquids and Bowels of the Abdomen: Whence innumerable Evils.

919. This also terminates either into Health, other Diseases, or Death.

920. It terminates into Health, either by the help of kind Nature, or skilful Physicians.

921. By the help of Nature either by Means of a kind and gentle Resolution, or the Coction, and then the Excretion of the Morbific Matter.

922. By a Resolution, if the Matter be recent, soft, and the other conditions of (386.) be present; then doth Art assist this Work of Nature with diluting, solving, gently moving by Epithema's, Drinks and Glysters.

923. By a Concoction and Excretion, whilst in this Disease, known by its proper (916, 917, 918.) Signs, 1°. The Patient is somewhat Loose and his Stools are yellow (from the voided Choler) and a little tainted with Blood before the fourth day. 2°. When he makes a great deal of Urine, which is sharp, thick, red with a whitish Sediment, long thus continued before the fourth day. 3°. When a lesser Pain invades the Spleen before the Signs of the Liver's imposthumating. 4°. When he falls a Bleeding a great Quantity out of the right

Nostril.

Noſtril. 5°. When he falls into Sweats, which the Phyſician has reaſon to think beneficial from the Nature of their Matter, Place, Time, Continuation and their Effects.

924. When the firſt (923.) appears, thoſe things ought to be adminiſtred, which are able to dilute, reſolve, move, cleanſe, gently to expell and chiefly are able to reſiſt a bilious Putrifaction and to conquer, whether in the form of Epithema's, Glyſters, Fomentation, Drinks, Aliments or Medicines.

925. If it be as in (923. N°. 2.) You muſt uſe thoſe Means of (889.) which were ſaid to cure the Caſe as in (888. N°. 2.) adding to them ſome Ingredients of a ſoapy and deterſive Faculty.

926. In the third Caſe, do the ſame things as in (924, 925.) but at the ſame time apply Fomentations of the ſame Nature all the way from the Liver to the Spleen, and upon the Spleen it ſelf.

927. In the fourth Caſe, foment the Noſtrils outwardly and inwardly with ſome emollient lukewarm Liquid, to encourage Bleeding till the Symptoms are eaſed; but then, if it continues to flow in too great a quantity, it ought to be ſtopp'd gradually with Stiptics and a cool Diet; but take care not to be too haſty.

928. In the fifth and laſt Caſe, ſupply the Patient with large Quantities of diluting Apozems, which at the ſame time be gently cleanſing and abſtergent.

929. And all along while you are doing ſome *or all* that is ſet down from (924. to 929.) take a conti-

continual Care, that nothing of the morbific Matter remain in the Part affected, for that creates afterwards almost insuperable Difficulties. And thus have we seen, how the first kind of Jaundice, which is also the mildest may be cured.

930. If the Inflammation of the Liver be recent, violent, and without the Signs and hope of (922, 923.) it ought to be treated with the same Cautions by the same Remedies and Method as a Pleuresie, Paraphrenitis and such like Diseases; But that the cooling Emollient and gently loosening Apozemes drank or injected are in this Case of an admirable use.

931. The Signs of Health being entirely restored are, when all yellowness is entirely gone out of the Eyes, Face, Urine, and Stools, and the Symptoms of (918.) have ceased.

932. Whence are known the Origine, Nature, Effects and the Cure of the second sort of Jaundice worse than the former.

933. But if in the Inflammation of the Liver (914, 915.) the Remedies of (922. to 931.) are not, or too late, or in vain applied; the Cause be greater and more vehement; Then will follow an Imposthumation of the Liver (387. 402.) like unto others, but that here seldom a good Pus can be expected but in the small and outside Parts, the inside being very full of Blood and bilous stagnating Matter; So that most times follows a most fatal Putrifaction of that noble Entrail.

934. This is foreseen, 1°. From the Signs of a precedent Inflammation of this Part, an inflammatory *Pain, a Yellow* Jaundice shewing it self in

in the Eyes, Skin, Urine and Stools, an acute Fever. 2°. From the absence of a Resolution, (922.) of an Excretion of the concocted Matter, (923.) or of a Cure (924. to 933.) 3°. From the Change of Symptoms, the Abating of the acute Pain, a Throbbing succeeding thereon, the Jaundice remaining, wandring and uncertain Shiverings. 4°. From the Inflammation, which was not of the very worst sort, lasting more than three days.

935. We know the same to be made already, 1°. From the Signs of (934.) having preceeded. 2°. The apparent Tumor of the place. 3°. The Change of Symptoms, so that instead of pain, the Part now feels heavy, and the Jaundice remaining. 4°. The great weakness, a little Hectic Fever, and a great Drought.

936. This Imposthume either, 1°. doth eat through the whole Liver; 2°. Or breaks into the Cavity of the Abdomen, and lets out its foul

Palliation: And this is another sort of Jaundice.

939. If there be *Ulcers made* in the Liver and that breaking they have already shed their Matter into the Cavity of the Abdomen, they continually increase there the quantity of Pus, they convert all the Liquids and the Nourishments of the Body into new Pus, putrifie all the Entrails, and thence create an Ascites in the deceitful shape of a Tympany, whence follows Death after a slow and most cruel Wasting and its Symptoms: This Case is almost like the foregoing in (938.) and this Jaundice is curable by no manner of Means.

940. But as often as the suppurated Matter and Ichor, after having eat through the Ends of the bilious Ducts, doth flow into their greater Receptacles, and thence into the Intestines, according to the different way they take, they produce either fætid Vomitings of putrified, purulent, ichorous, white, ash-colour'd, tawny, yellow, and black Matter, or Stools of the like Nature, with the greatest loss of strength, which go by the Name of Colliquative loose Stools, and do kill in a small time. This is yet another sort of Jaundice, much to be apprehended.

941. But if these Matters and Liquids do throw themselves through the consumed extremities of the Vena Cava into the same, and from thence into the whole mass of Blood and mix therewith, there arise the most dreadful and soon destructive Symptoms; frequent and most frightful Swoonings, extream Weaknesses; the Pulse disorder'd all manner of Ways; a Disturbance and Confu-

ſion of all the Functions at once, a ſudden and unexpected Death. This is ſtill another and different ſort of Jaundice.

942. In which Caſe no ſort of Method or Medicines will avail any thing; but a large ſupply of ſuch as do ſupport Strength, reſiſt Putrifaction, and reſtore the loſt Liquids, all theſe help a little.

943. But if it be the laſt ſort of Impoſthumations (936. N°. 5.) then ought the Tumour well marked out to be open'd with the burning of Flax upon it (as the Antients commonly did) " or with a burning Iron (or Sticks burnt at the " Ends as they yet practiſe in *Africa* by the re- " port of Travellers) or with Cauſtics; The Wound then ought to be conſumed with gentle Corroſives and ſuppurant Applications until it has penetrated into the very Bag or Vomica which is in the Body of the Liver.

944. If then the Pus, which comes out, be white, even, ſmooth, void of any Smell, not colouring the Probe, there is hopes of a Cure: It ought then to be treated as an Ulcer (402. to 413.) giving at the ſame time cleanſing internal Medicines.

945. But if the ſame be yellow, tawny, livid, black, fætid, colouring the Probe with a ſort of Rain-bow Colours, ſanious, and like unto a filthy leeiſh Ichor; the Liver will be eaten through by Degrees, the Patient be conſumed, and almoſt the ſame Symptoms will ſucceed as in (491.)

946. And again if after an Inflammation of the *Liver* the Circumſtances be as in (392.) A Schir-

rus will grow there; which by its Tumour, hardness and continual increase, doth incommode and hurt not only its own Seat but also the adjacent Parts; hence are again produced almost all the same Evils as in (881, 882, 883.) but slower; It doth not give way to softning Medicines, and sharp ones do soon convert it into a most horrid Cancer, whereof the terrible Effects are easily understood from (499.) compared with this affected place: The chief Effect of such a Schirrus is a perpetual Jaundice.

947. So that it is plain, that this Evil, when known by its proper Signs, ought to be treated with the most gentle and slow Means, and that the same is scarce ever cured.

948. But if only a slight Inflammation has been in a small part of the Liver, it will produce there a Stone, a small Schirrus, a large Pustule, a small Imposthume; which of themselves will cause a small, but upon the approach of a Fever, many and great Evils (881.)

949. Lastly, an Inflammation of the Liver doth likewise terminate in Death, if the Causes of Inflammation are so violent, that nothing can pass through the Liver, and a very high Fever doth rage at the same time: for then is the whole stiff all about the circumference and extremities of the Lobes and Vessels, and much dilated about the larger Vessels, so that it cannot perform any of its Functions; there breaks out a great and sudden Jaundice, the Vessels break, the Blood and Choler are shed, and the Patient thereupon instantly dies. *This event is foretold,* 1°. From the known

violence of the Diſeaſe in the Liver. 2°. From a ſudden and utter loſs of Strength. But its preſence is known from the vomiting, or voiding by ſtool Blood, Choler, Excrements like lees of Oyl, green, black, very ſtinking, and even like unto the ſmell of dead Bodies: A violent, continual Hiccough; a Fever of the higheſt, an unquenchable Thirſt, and a very ſudden Paleneſs.

950. From all theſe explain'd, ſince (914. to 950.) may be underſtood numberleſs Symptoms, occurring in acute Diſeaſes; whoſe Reaſons being unknown, have given birth to all the idle Tales about *the Malignancy in Diſeaſes*: for from the Liver do depend all the Bowels of the Abdomen, and conſequently all their Actions, of Digeſtion, Aſſimilation, Nutrition, ſupplying the Blood with new Fewel, and the Alvine Excretion. In the Liver are three ſorts of Liquors all eaſily rottening upon the acceſſion of heat, much Blood

pears, rests, and returns with such great Anguishes, Vomiting, Pain and Convulsions? and what it then doth mean and indicate? Why it is so calamitous in acute Fevers before the seventh Day? Why so very insuperable in the same Fevers after the seventh Day? Why upon the coming of a large Bloody-flux by Stool, which however doth not continue long, the same is so thoroughly cured? Why letting of Blood doth so little profit in those Diseases? Why in all acute Distempers a Physitian ought always to have a great Regard to, and a constant Eye upon the Pains of the Hypochondria, their Tumors and their Liftings upwards and inwards at the same time? Why the presence and absence of the Jaundice be so suddenly known from the Eyes, and Urine? Why the inflammatory, suppuratory, gangrenous, schirrous, cancrous Diseases of the Spleen, Stomach, Caul, Mesentery, and Intestines do always at the same time violently affect the Liver. Why also the Inflammatory and Schirrous Diseases of the Liver do in their turn infest them? Why the Liver can swell to so prodigious a bulk, and afterwards be even dried up? Why a Dropsie proceeds from defects of the Liver, and the Tympany a worse afflicting Disease than the former? Why Dropsical people waste away, their Liver is dried up, and on the contrary the Spleen swell'd much? Which is the Bloody-flux proceeding from the very Liver, *&c?* for there are innumerable things belonging to this place, and to be resolved by what has been said.

Of the Inflammation of the Stomach.

951. As other Parts, ſo can likewiſe the Stomach be ſeized with a true Inflammation: whereof the Signs and Effects are pretty near, as follows; a burning, fixed and pungent Pain ſettles in the very Stomach; it grows fiercer at the very moment that any thing is ſwallowed down into it, and the Patient vomits up every thing with the utmoſt violent Strainings, and a very painful Hiccough; he is in a terrible and uninterrupted anguiſh about the Vitals, and has an acute continual Fever. Its Cauſes are thoſe of all Inflammations in general or the neighbourhood to ſome other thus affected Part, or ſome ſharp corroſive Matters that have been ſwallowed.

952. It moſt times becomes Mortal in a ſhort time, unleſs it be ſuddenly cured, becauſe of the Neceſſity of the Part, and its having ſeveral tiſſues of Nerves.

953. It uſes to terminate like all other Inflammatory Diſeaſes into Health, ſuppurating, ſchirrous, cancerous, gangrenous Diſtempers, or into ſudden Death it ſelf, which is haſten'd by Convulſions.

954. As ſoon as it is known preſent by its Signs, it ought to be relieved and the Cure attempted by Bleeding immediately, largely, and if need be, repeatedly: by the ſofteſt, emollient Diet and Medicines contrary to Inflammations, and to the immediate Cauſe thereof in this Caſe; by Glyſters, Fomentations, and other outward Applications of the like Kind. Above all things abſtain from giving a Vomit, or allowing any Juices that have any degree of ſharpneſs in them.

955. If

955. If it terminates into an Imposthume, there follow many Evils, chiefly a Nauseating, Vomiting and Pain; which to the ignorant of the Cause pass for very strange and wonderful Phænomena: Which Causes, when known, require the same Cure as other Imposthumes. (See 402. to 413.)

956. When it creates a Schirrus, or a Cancer, then are occasion'd the most enormous Vomitings, intolerable Pains, increased upon the swallowing of every little matter, fixed, long continued and always worse upon the assuming of any sharp Medicines. " Forbear therefore the too common " Mixture of *Sal. Absinth. Succ. Limon. Aq.* " *Menth. &c.* which every pretender to Physick " doth administer without any distinction; but " let the *Succus Thebaicus* be your all, mode- " rating your Doses according to the degree and " circumstances of the several Symptoms.

957. It is assuaged only with soft Medicines proper to these Diseases. (See 490, 491. 506. to 511.) it is rarely cured: " In this case chiefly are " profitable the famous Waters, of *Bath*, *Aix la* " *Chapelle*, *Bourbon*, *Aix* in *Provence*, &c.

958. The Origine, Nature, and Effects of the Inflammation, Imposthumation, Gangrene, Schirrus and Cancer, of the Spleen, Pancreas and Caul, are known, foreseen, cured or palliated from and with the same as have been said from (914. to 958.)

Of the Inflammation of the Guts.

959. The Intestines, chiefly the thin Guts, are very often *seized* with the like acute Inflammation

in their Membranes as the Stomach, from Causes common to all Inflammations carried thither; or from the matter of sharp Drink, Aliments, high Sauces, Medicines or Poisons reaching those Parts, detain'd in the Foldings of the Valvules and sticking to them; And also from a sharp, putrid, and fætid purulent, ichorous, gangrenous, bilious, and atrabiliar Matter convey'd hither from the Gullet, Stomach, Liver, Spleen, Pancreas, and Caul, which sticks also to them and gnaws them; Or lastly, from some strong preceding Convulsion, occasioning Flatusses, stopping the Motion, and thereby creating an Inflammation.

960. When created in those Parts, it contracts the Guts, shuts up the Cavity, hinders the Passage of what presents it self, and occasions a very sharp, burning, fixed pain; Violent Convulsions when irritated by the Matter that is near and upon the affected Part; It stops the passage by Stool; excites a Vomiting of what is then taken, or approaches the Part, and that sooner or later after taking, according as its Seat is higher or lower; It creates painful Winds, most sharp griping Pains, with great murmurings in the Guts, the Iliac Passion, twisting of the Guts, an Imposthume, Gangrene, Schirrus, Cancer; a very acute Fever, a very great Weakness from the fierceness of the Pain, and a very sudden Death.

961. As long as it continues within the terms of an Inflammation, it imposes on the unwary, under the Name of the Iliac Passion, who adscribe the Cause of it to a cold Flatus, or Wind, to the great detriment of the Patient, for they attempt

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the cure with hot Things, and such as from their pretended *power of Charming*, have retain'd the Name of *Carminatives*, the event whereof is generally Fatal.

962. But it may easily be known to be a true Inflammation by its Companion, a very acute continual Fever, a great Drought, great Heat, a hard Pulse, a burning fiery Pain, a very high-colour'd Urine, and a sudden Weakness.

963. If the same doth occupy the tract of the *Gut Colon*, it occasions that pain, which is called *the Cholick*; if it seizes the lower end of the *Intestinum Rectum*, then it commonly passes for a Fit of the Blind or inward Piles: It goes off with a kind Dysentery, the Excrements being somewhat bloody and bilious.

964. As soon as it is known present by its Signs (959, 960.) then ought the Cure to be attempted forthwith with all the most powerful Means whilst it is yet in this first state; Which is obtained, 1°. By a large and repeated Bleeding as in the Pleuresie (890.) 2°. By the continual injecting of loosening, diluting, antiphlogistic Glysters repeated often to three or four or more times in a Day. 3°. By the drinking incessantly things of the same kind, mixing Opiats with a due Caution; and also such things as are known to be contrary to the particular or singular Cause of the Disease (959.) 4°. By Fomentations of the like kind applied all over the Belly, and chiefly the Application of young, live, hot and sound Animals; such as Puppies or Kittens. 5°. And *in the* mean time prudently forbearing

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the use of any sharp things, or such as increase the Motion of the Blood, as are heating, whether Aliments, Drink, Medicines, Motion or Passions. 6°. Continuing in the Use of those, till the whole Evil be appeased, and doth not return in three Days after it.

965. If this Evil having preceeded (959, 960.) and not having been removed by proper Means, and continuing still with the same obstinacy longer than three Days, in the room of pain, burning, and tearing, there has succeeded an uncertain and wavering shivering all over the Body without a manifest Cause, an obtuse pain in the Part, together with a Heaviness of the same, it will be a Sign that an Imposthume is forming there; out of which there will flow Pus within a Fourthnight upon its breaking; if it falls into the Cavity of the Abdomen, it creates many ills like unto those of (939.) But if it flows in the Inside and through the Tracts of the Guts, it causes a purulent Dysentery, which is great or small, of a long or short continuance, according to the nature of the Ulcer there; hence are often the whole glandular Membranes voided, and Consumptions might hence arise.

966. As soon as that is known to be the Case, you must immediately forbear giving any such Diet whence many hard, thick or sharp Excrements may be separated; the Patient is to be fed only with Broths, with gentle cleansing Roots boyl'd therein; Balsamic and detergent Decoctions are to be drank in great Quantities, or given in Glysters; or medicated Waters must be drank in great Quantities;

rities; and these things must be continued till the Cure is perfected.

967. But if the Disease has had very violent Causes (959.) and has produced the most cruel Symptoms of (960.) it may easily produce a Gangrene in that Part (388.) which doth afterwards kill with very great Sufferings.

968. Which to be approaching we may easily foresee by observing the same things already laid down, if at the same time there be no Signs of a kind Resolution (963.) or of a Cure (964.)

969. That the same is already present we know if we have already observed what was said just now, and if there be a sudden, and causeless remission of the most bitter Pain, while the Pulse remains weak, intermitting; Cold Sweats appear; and there is a Dysentery which voids fœtid, ash-colour'd, ichorous, livid, and black Excrements and Skins, without any sense of the Patient; Whence we see very soon an easie kind of Death.

970. This Evil when thus far advanced, doth seldom admit of a Cure; it ought to be cured sooner; but if any thing is capable of doing good it is only the Method of (966.)

971. But if the Causes of (392.) have produced a Schirrus here, there grows an Illness of quite a different Nature, which we must endeavour to put in a true Light, and to understand throughly.

972. If therefore an Inflammation lays hold of the Intestines (959. 963.) with the circumstances of (392.) and lasts long without raising to *the highest pitch of fierceness* (960.) and is not

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conquered either by a Resolution, or Medicines, nor an Imposthumation; and then hath left in the part a numbness, heaviness, a pulling, all which do continue, the Physician ought to think that a Schirrus is growing there.

973. Which following its own Nature (392.) and producing its proper (486.) Effects in this place, must needs create many great and obstinate Evils, as are chiefly, the numbness, weight, and bulk continually increasing; Hence the Cavity of the Gut made narrower; a Stagnation there of the Chyle and the Fæces; an Action and working of those against the resisting place, their growing putrid from their being detain'd; hence at last an entire shutting up of the Gut and its winding; a Staying of all the gross Parts of the Aliments, &c. The Iliac Passion, Miserere, or from the sharp irritating fæces a dry sort of Dysentery; Convulsions, Hiccoughs, Vomitings, continual Pains, a Fever, a Leanness, Wasting, and Death.

974. Remedies of any kind are but of little profit here. The Diet ought to be as in (966.) And thus it may be bore long without any great Sufferings.

975. But if this Schirrus grown here and produced by the Causes of (492. 495.) is known by the Signs of (497, 498.) then is it a most calamitous Case and altogether incurable; which may be known from (498.) compar'd with the Nature, Function, and the nervous Texture of the Gut: But chiefly a continual Dysentery, a very sharp one, not giving way to any Medicines, burning, corroding, consuming, with most sharp Convul-

sions,

sions, Pains greater than what the most patient can endure, and them fixed and long continued; till at last Death is wish'd for, and call'd upon as the only relief for those Miseries.

976. If as soon as this Schirrus is known to be present (972.) it be treated after the Method of (974.) The Calamities of (975.) are in a great measure prevented. But if to overcome and cure the same there be imprudently made use of sharp Remedies (490. N°. 3. 495. 502.) and chiefly of strong Purges, a Cancer will certainly grow and rage there. For then his Drink ought only to be of Milk-whey, his Diet of meally Broths, or made of Flesh only with Yolks of Eggs: Let Glysters be injected made of the Decoctions of only Lynseed, or the Leaves of the woody Night-shade, or the Seeds and Heads of Poppies; The Medicines be of the most softning Anodyne, gentle Opiats, and such as do not easily turn either sower or sharp.

977. Hence doth it at last appear, Why Physicians meet so frequently in their Practice such cruel, fixed, obstinate, intolerable and incurable pains of the Gullet, the upper orifice of the Stomach, Liver, Spleen, Pancreas, of the thin Guts, and of the Colon? And also how many sorts of Bloody-Fluxes which are wonderful in all respects? How ill-grounded People often are, when in these Diseases they accuse a peculiar sort of a Hectic Acrimony, and according to this erroneous Notion, often give quite contrary and pernicious Medicines? How prudent a Physician ought always to be, when in these Diseases he goes about

to

to prescribe Purges? And why often upon the same wrongly and untimely given, there follows a terrible and most-times insuperable Over-purging, or Hypercatharsis? How many different Methods and Remedies are required to cure the several sorts of Dysenteries? How foolish, deceitful, and pernicious therefore the Boastings be of some People, to cry up one particular Medicine, though never so excellent, as an infallible Specific against that Disease? or even one general Method? And abundance more Consequences besides. *NB.* "Dr. "*Boerhave* has most certainly in his View here "Dr. *Helvetius* of *Paris*, who has imposed much "on the World with the *Indian* Vomit, crying "it up as an ever infallible Remedy in Bloody-"Fluxes, by which he in a little time did "get very considerable Sums of the Credulous. "* And as he has very good Intelligence from "*London*, I am affraid that he has in his Eye at "the same time an otherways worthy *North-"Brittish* Physician, at whom I have often won-"dred how he cou'd make himself so little as "to carry about his infallible Electuary, when "he has Merit enough otherways to make him-"self commendable.

Of the Thrush.

978. But as in many acute Diseases where the Bowels are inflamed, the Thrush doth not a little rage and perplex, it will not be improper to treat of it in a few Lines.

979. Which in reality is nothing else than an *accumulation* of small, round, superficial Ulcers *which* beset the inside of the Mouth. 980.

980. Which being examined with Judgment, seem to be Exulcerations of the extream Emissaries by which the Spittle, and the oily mucous Liquor is separated and pour'd out into the Mouth, occasion'd there by the shutting up of that Canal with a slimy and tough Humor that has been convey'd thither.

981. So that they occupy all those Places, where the like Emissaries unload themselves; that is, the Lips, Gums, the inside of the Cheeks, Tongue, Palate, Jaws, Tonsils, Uvula, Gullet, Stomach, and thinner Guts; and they are much of the same Nature, and produce the same Effects in all those Parts.

982. They mostly and often invade the Northern Nations, that inhabit Fenns and Lowlands, in warm, rainy Weather; they are very fatal to Children and Old Age.

983. Before the Thrush shews it self in the Mouth, there has usually preceeded a continual putrid Fever; or an Intermitting one turn'd into a Continual; beginning with a Diarrhæa or Dysentery; a great and continual Nauseating, Vomiting, loss of Appetite, great Anguishes coming on frequently with a great Pressure, and like a cross barr about the Vitals; a great Weakness; a great evacuation of all sorts of Humors; a Numbness and Dulness; a slight, unsettled, continual Slumbering, a continual complaint of a heaviness and pain about the Stomach.

984. There useth sometimes to appear here and there a single Pustule, sometimes first upon the Tongue, *or in the* corners of the Mouth, in the

Jaws

Jaws or elſewhere, without any conſtant choice of the Place at the beginning; And this ſort of Thruſh is always a kind one: Sometimes it appears very deep down the Jaws with a white Cruſt, ſeeming to climb upward from the Gullet; which Cruſt is thick, ſhining like freſh Lard, ſticking very faſt and mounting ſlowly: This is the worſt Sort which moſt times doth kill: Sometimes it occupies the whole Cavity and inſide of the Mouth, even to the further out-parts of the Lips, with hard, thick, cloſe, and very ſticking Cruſts; covering all theſe Parts over in one continued Body: And of this Sort very few do eſcape.

985. Theſe Ulcers (979.) are of different Colours: Of a pellucid White like Pearls; An entire White from their great thickneſs; tawny, yellow, livid, black; the Malignancy whereof increaſes in this ſame Order as the Colours have

to 987.) do give us sufficient Light into the different Nature of this Illness: And from thence we may also rightly foresee what their several Effects and Consequences must be.

988. For when such an Aphthous Crust doth cover over the whole surface of the Parts described in (981.) it takes away all feeling and sensation which ought to strike the Nerves, whence the Patient cannot possibly taste any Thing; It hinders the egress of the Liquids through their Emissaries, whence a dryness, a dilating of the Vessels underneath that Crust, a putrifaction of the Liquors that stops there, and an Inflammation of the Parts themselves: It shuts up the Cavities of the absorbing Vessels (that is the Lacteals.) Whence it hinders the ingress of new Chyle, Drink, and Medicines into the Blood, produces the Defects arising from the want of Nourishment; whence at last Death it self: When the Crusts fall off, there follows a greater flux and discharge of Humours through the now dilated Vessels; whence a *perfect Salivation* ("Which in this very Case I "saw continued last Summer in a young Lady, "my Patient, to the Quantity of above two "Quarts a Day, for three Weeks together, "which cou'd not be entirely suppress'd but af-"ter many repeated Purges and gentle Adstrin-"gents to restore the Tonus both of the Vessels "and of the Blood.) A Looseness, which is advantageous if the Aphthous Crust do not grow afresh; but very pernicious if they do return: When the Crusts fall off, the Pain of the inflamed and now *bare Parts* often dropping clear Blood,

occasion bloody Spittle or a bloody Flux; all which Effects if we apply and compare with the Nature of the Stomach, of the emissary Duct of the Liver, Pancreas and Intestines, will inform us of the infinite Evils that may ensue from this one Disease the Thrush; so that there is no occasion for any other Prognostic.

989. But if those ulcerous Crusts be very slow, thick, wide and close, then is the subjacent suffocated, inflamed, suppurated and gangrenous Flesh, changed into very illnatured Ulcers, which eat and consume the Palate sometimes to the very sheath of the Bone; and it is self-evident, what Evils it produces when this happens in the Stomach or Guts.

990. To obtain the best Cure for this Disease, 1. The Physician ought to cause the internal Impulse of the vital Juices against and towards the affected Parts to be raised, and thus moderated, that by means of this supply of Liquid the ulcerous Crust may be resolved below, loosen'd and made to fall off; this is effected with drinking great Quantities of warm, diluting, resolving and cleansing Decoctions. And because in the bad Sorts of this Disease the Lacteals are so obsessed as not to give an easie Passage to these Liquors into the Blood, recourse must be had to Fomentations, Steams, and Bathings; the best Aliments here are Panadoes with the addition of some Wine and Honey. 2. This Crust ought to be prepared and made apt to fall off easily and quickly; which is done with Fomentations, Gargles, Glysters; which ought to be made of warm, loose-

loosening, emollient Detersive Liquors; and by its sufficient stay moistning, and resisting Putrefaction. 3. Assoon as the Crust is fall'n, Anodines, softning Medicines, and such as at the same time are somewhat corroborating are forthwith to be given. 4. And assoon again as the Fever is abated, the Urine begins to separate, the Pulse is freer, then is cordial and strengthening Drink useful and profitable. 5. At the end of the Disease a warm Cordial sort of a Purge ought to be given; such as may be the *Tinctura Sacra.*

991. From this History and the Cure of the Thrush may a great many Doubts occurring in the practice of Physick be resolved. As why at the latter end of a Fever, that was attended with a Diarrhæa or Dysentery, a Thrush ensueth? Why this doth mostly happen in Children and aged People? Why mostly when in this sort of Fever from the first were ordered heating or adstringent Medicines, Dyet and Regimen? Why the Thrush may be prevented in those Fevers if a Purge be order'd before any thing else? Why in the worst sort of Thrush the Patient is afflicted with a fatal Hiccough? Why *Hippocrates* joins together the Thrush in the Mouth, a loose Belly, and loss of Appetite? Why the Thrush obsessing the whole Membrane of the Stomach doth needs occasion a Lientery (that is a Looseness by which the Chyle passes through all the Guts unalter'd?) Why the black Thrush is reputed Pestilential? Why a violent Thrush in the Mouth of Women with Child doth forebode a Miscarriage? Why in Diseases of putrid Lungs or Liver the Thrush is almost an inseparable Symp-

tom, though ſlighter? Why upon the overcooling of the Thruſh there follows a Tumour, a Heat, Suffocation, or a Quinſie? Why a Delirium, Toſſings, conſtant Wakefulneſs and cold Sweats be ſuch dangerous and even mortal Symptoms in the Thruſh.

992. So that in a few this is the Rule to judge by: A tranſparent, white, thin, ſcatter'd, ſoft, falling off eaſily, little returning and ſuperficial Thruſh is a kind and good Sort: But on the contrary; that which is very white and ſolid, yellow, tawny, black, cloſe, thick, running into one, hard, tough, continually returning and eating into the Parts, is the bad and fatal ſort of Thruſh.

Of the Nephritis.

993. That the Kidneys themſelves are ſeiſed with a true Inflammation, we know from a burn-

Imposthume, a Tumor, lying long upon the Back, a violent Strain of the Back, or a Stone. 2. All that hinders the Passage of Urine into the Pelvis, Ureter, or Bladder, as are most Causes just now mentioned, when applied to these Parts. 3. Such as with violence force the coarse Parts of the Blood into the Urinary Passages, as Running, long and hard Riding, great Heat, a Straining, a Plethora, sharp corrosive Duiretics and Poysons. 4. A convulsive Contraction of all the said small Vessels if long continued.

995. If the Inflammation of those Parts be in the highest Degree, they are often so very much tied up, that no Water at all can pass 'em; sometimes only a very little and that transparent, thin, watry Urine can pass, which is worst of all. The cohærent and neighbouring Nerves being often irritated, it occasions Pains and Convulsions in the Stomach, Mesentery, Guts, and Ureters; whence Belchings, a Nauseousness, Vomitings, Griping painful Stools, the iliac Passion, stoppage of Urine, a Numbness of the Thighs and Legs, and their unmoveableness, and a Burning in the Loyns.

996. It goes off by the help of kind Nature, or the Illness it self carrying off and overcoming its Causes. 1°. By means of a Resolution. 2°. By the voiding of a great Quantity of a sad, red, thick Urine, without any interruption, and before the seventh Day of the Illness, at fartherest before the Fourteenth. 3°. By the copious flowing of the Piles in the beginning of the Illness.

997. It is cured, when known by its Signs that it is an Inflammation (993. 995.) 1°. By the general Remedies apt to remove Inflammations in general, as is bleeding, withdrawing, and diluting. 2. Gentle emollient Decoctions, such as are contrary to Inflammations given in large Quantities. 3°. Glysters, Fomentations, and Baths of the same Kind. 4°. A moist, soft Diet; Rest, keeping out of a warm Featherbed, and chiefly not lying upon the Back: "Which abundance in "this Case are apt to do, because it numbs the "the Parts and gives them Ease for that Time, "but they pay for it afterwards with a Witness.

998. If the Pains or Convulsions be very urgent, without waiting for the Effects of other Remedies, give Opiates with due Caution.

999. A great Vomiting, here only a Symptom, will often abate and be eased upon the drinking of warm Water with some Honey.

1000. And only this Method will safely cure, even that Nephritis which is occasion'd by a Stone lodged in the Kidneys or Ureters.

1001. If the Causes of the Nephritis be violent, and the same will not be resolved (996.) nor cured (997.) but the Violence of it lasts beyond the seventh Day; then ought an Imposthume to be feared: Which we may know to be gathering, from the abatement of the Pain, its change into a Beating, from often returning Shiverings, from a heaviness and numbness of the Part: That the same is already made is known, from the just mentioned having preceeded, from a beating, heating, and *stretching* in the Part; from the Urine being

charged

charged with Matter, being ſtinking and like to ſalt Urine that is putrified by ſtanding: Aſſoon as this Impoſthume is known to be made, you muſt uſe at firſt ſuch Things as do ripen very much and are emollient at the ſame time; and when afterwards the Urine appears purulent, then order your Patient the cleareſt diuretic Medicines, ſuch as the Mineral-waters of *Iſlington, &c.* Milk-whey, and the like, not forgetting at the ſame time Balſamics: " Of which in my Opinion none are to be " compared to Copaivy given in ſuch a Method " as to preſerve the Stomach and to hinder it from " purging by Stool.

1002. But if this Impoſthume continues long, then doth the wholly conſumed Kidney form an altogether uſeleſs Bagg; and then doth a Conſumption of the Back very often enſue.

1003. If it creates a Schirrus, there follows a Palſie or a Lameneſs of the Limb of that Side, which is no ways curable: Whence often enſues a ſlow Conſumption, a Dropſie, *&c.*

1004. But if a ſmall Portion of the inflamed Matter be coagulated and ſtops in ſome of the ſmalleſt ſecretory Ducts of the Kidney, it forms there a Baſis, to which any ſandy Matter, contained in the Urine, hapning to ſtick in the Form of a Cruſt, forms a Stone of the Kidneys and enlarges the ſame. Of which hereafter.

1005. This Inflammation doth even ſometimes terminate into a Gangrene, which is known from the violence of the Cauſe (994), of the Symptoms (995), and the not appearing Eaſe from the Remedies (997, and the ſudden abatement of the

Pain without any Cause, with a cold Sweat, a weak and intermitting Pulse, the Hiccough, no Urine, or its being livid, black, with streakes in it like Hairs, stinking, with tawny or black Skins, a sudden and entire loss of Strength: In which Case either nothing or only the Medicine of (902.) is of use.

1006. Hence it is plain, that there are numberless Sorts and Causes of a Nephritis, and among them one which is occasioned by the Stone; and that yet all of 'em may and ought to be cured by almost the same Method? Why Nephritic Pains are so frequent in Fevers (993.) and its Crisis (996.)

Of the Apoplexy.

1007. The quick Event of Apoplexies, their depending often from and joyning with Inflammations, their producing many Evils, requires that we should treat of them now.

1008. Which Apoplexy is said to be present, when of a sudden, the Action of the five external and all the internal Senses is abolished together with all the voluntary Actions, and there remains only the Pulse, most times very strong, and Breathing, but difficult, great and with a Snoaring, together with an appearance of a deep and everlasting Sleep.

1009. The most accurate and often repeated Observation has taught us, that this Disease has happen'd as often as those Causes had preceeded, which have been able to cut off entirely or in a great measure the Efflux of the Animal Spirits out of their Magazine the Brain, and hindring them

from

from flowing into the Organs of the Senses and of voluntary Motions; and also their return from the said Organs into the *Sensorium commune*; whilst there remains a free egress and probably regress of the cerebellous Juice into the Heart, and the natural Organs of Respiration to that degree, as is in a manner sufficient to perform the said Functions.

1010. All which Causes enumerated by the observing Physitians, and delivered to us may be reduced into some certain Classes for the ease of Practice.

1. The natural Make of the Body, as a large Head, a short Neck, and often raised but upon six Vertebres instead of seven; a very large, big and fat Body; a Plethoric Constitution, and an abounding pituitous Cacochymie.

2. Whatever doth alter the Blood, Lympha and Matter of the Spirits so, that they cannot freely pass through the Arteries of the Brain, but stick and fasten there: Such are often. *α.* Polypous Concretious in the carotic or vertebral Arteries, whether first grown about the Heart or bred within the Cranium itself; which shew themselves by a palpitation of the Heart, an unequal Pulse, frequent Vertiges and dimness increased upon the increase of Motion, or Heat. *β.* An inflammatory thickness of the Blood, which is known by the presence of an acute continual Fever, a Phrensie, a violent inflammatory Pain in the Head, and by their having long continued; then all the Signs, which arise from the Blood, which being hindred *from going* through the Vessels of the Brain,

Brain, fall with so much the greater Force, and in greater Quantity upon the other ramifications of the carotic Arteries, whence a Redness, a Tumor, Inflammation of the Eyes (and forced Tears in 'em) Face and Neck. γ. A thick, gluish, and pituitous sluggish Nature of the whole Mass of Blood; whence this Distemper so commonly invades old, catharrous, cold, pale, leucophlegmatic People of a moist Constitution; and it may even be foretold before its coming, if active People grow lazy or idle of a sudden, and dull, sleepy, indifferent to any Motion or Exercise, speak slower than usual; from their Tremors, Snoarings, Night-mares; a paleness, turgidness, moisture and dimness in their Eyes; their frequent vomiting of Phlegm; being giddy, breathing with difficulty upon the least Motion, with a drawing and beating of the Nostrils: All the Causes which will either produce or accumulate a sluggish Glew. (69. to 75.)

3. Whatever doth squeese the very Arteries or nervous Vessels of the Brain, so that neither the Blood nor Spirits can flow through them. α. A Plethora, a filling Cacochymie, a very hot Constitution, hence very much prone to this Illness, chiefly if Motion or an additional great Heat have increased the Motion of the Liquids; hence it uses to befal them from over-eating, hard drinking, sharp and much moving Medicines, as are Cordials, Volatil Salts, Spirits, &c. Vomits, &c. Overheating, overwaking or working, too much thinking or too frequent and too long bending of the Mind. β. Any sort of Tumours grown in the Cranium, whether

ther inflammatory, suppuratory, serous, pituitous, steatomatous, schirrous, osseous, or compressing the Arteries, or the meeting of the Veins near the Torcular of Herophilus, or doing the same to the Medullar beginnings of the Nerves, or the very Medulla of the Brain. γ. A too quick motion of the Blood towards the Head, while the Blood doth not circulate so freely in the Arteries below, which may proceed from numberless Causes. " A daily occurring one is the pressure of the full " Stomach, which seldom fails to make People " heavy to sleep from this very Cause. δ. All that doth squeeze and press the Veins which return the Blood from the Brain; as it happens to People that are hang'd, who may all be said to die of an Apoplexy. ε. The Effusion of Blood, Pus, Ichor, or Lympha upon the *Dura* or *Pia Mater*, and pressing them outwardly upon the Brain.

4. Whatever doth divide the Arteries, Veins, and Lymphatic Vessels of the interiour Brain near its Cavities, so that the flowing Juices being accumulated do offend by their pressure the arched Origins of the Nerves. Such are the sharp Serum in Dropsical and Leucophlegmatic; Blood in Plethoric; the bilious Acrimony in melancholic, scorbutic and gouty People; Which very common Cause occurs mostly between the Age of Forty and Sixty; all which being awaken'd and stirred up out of obscurity by their peculiar moving Causes, do often create this Disease suddenly. It may therefore be foretold from the Nature of the præ-existent *Matter and the* knowledge of the Causes

which

which are like to put in Motion. And here are chiefly prejudicial violent Paſſions of the Mind, and the too great application to any ſort of Buſineſs that requires much Thought.

5. Hereto belong alſo ſome Poiſons, which however do operate according to the power of the three laſt Cauſes (No. 2, 3, 4.) and which rather ſuffocate the Lungs than hurt the Brain. " *NB.* Our Author here particularly deſigns the " *Grotta Canina* near *Puteoli* in the Kingdom of " *Naples*, the Sulphureous acid Steams whereof " mounting a ſmall ſpace above the Ground in " that particular *Dog's hole*, do ſuffocate ſuch " Dogs as are forcibly let down into it, but of " which they recover as ſoon as taken out, and " thrown into the Pond juſt oppoſite and near " to it, *&c.* Of this ſee the Particulars in moſt Voyages to *Italy*.

1011. Thoſe Cauſes we have learn'd from the

1013. But the affected place in a true Apoplexy is the whole *Sensorium Commune*; But in a slight or symptomatick one, it is only some part thereof chiefly, while the other parts are in some measure, but yet less pressed; The Cerebellum being most times unhurt in the beginning.

1014. Whence it appears, why the Pulse beats and Breathing is preserved, while the Senses and voluntary Motions are destroy'd? and even why the Pulse and Breathing are stronger in proportion as the Senses and Motion do decrease, and also when Death is near at hand?

1015. The greatness of an Apoplexy therefore is measur'd by the age, constitution, and make of the Patient; then by the violence of the Symtoms, and chiefly the entire destruction of Senses and Motions; the Strength of Breathing with loud Snoaring; by a Quantity of tough froath about the Mouth; a thin Sweat gathering in drops and coldish; If this Fit be produced by a preceeding slight Fit of a Symptomatic Apoplexy; or by a violent Epileptic Fit, or any other known violent Cause whatever.

1016. The lightness and curableness of the Illness on the contrary is measured from the slightness of the Symptoms, and the absence of what went just before.

1017. A gentle Apoplexy goes off with the coming on of Sweats, which relieve by their great quantity, continuance in an equal degree, spreading equally like a Dew and Heat; with a large quantity of thick Urine; with large Bleeding from the *Piles for a long* while; with the Fluor

of

of the Menſtrua being reſtor'd; a Looſeneſs and a high Fever.

1018. One ſomewhat ſtronger, when the Cauſe is overcome, doth uſually change into a Palſie of ſome muſcular Part, of one entire Side of the Body, whence it is called an *Hemiplegia*, or of all the Parts below the Neck, which is call'd a *Paraplegia*, and is ſeldom cured, leaving always behind a craſed Memory, Judgment and Motion; whence they uſe to continue all their Life-time after ſleepy, dull, trembling, giddy, and puſillanimous.

1019. But a fierce true Apoplexy (1015.) ſoon terminates in Death from the violent attrition of the Cerebellum, the corruption of all the Liquids, and the reaching of the Cauſe into the Cerebellum itſelf; Theſe do ſeldom out-live the Seventh Day.

1020. That an Apoplexy is like to invade may be foreſeen; 1. From knowing the natural Conſtitution (1010. N°. 1.) 2. From knowing the preſence of ſuch præ-exiſtent Matter as will occaſion it. (1010. N°. 2.) 3. From the ſeveral Occaſions as will ſet that Matter going. 4. From the firſt Effects of the beginning Illneſs, as are a Tremor, Staggering, Vertigo, Dimneſs, Numbneſs, Sleepineſs, faulty Memory, tingling noiſe in the Ears, a heaving and panting, a deeper Breathing than uſual, with a drawing of the Noſtrils inwardly; and a complaining of a heavy Weight when laid down, which is called, being *rid by the Night mare.*

1021. It is soon discover'd when present, only care ought to be taken not to confound the several Sorts.

1022. No general Rule can be laid down for the Cure of it; for that ought to vary according to the various Causes, their different way of invading, and the difference of the Place chiefly affected, and ought to be applied in the very beginning before the evil is confirm'd and encreased by time.

1023. If therefore it is foreseen that the same is to happen from a slow, sluggish, and cold Cause (1010. N°. lett. 2. γ.) by its Signs there mention'd, Endeavours ought to be used forthwith. 1. That the pressure of the glewish Matter be drawn off from the Head. 2. That its sluggishness in the Brain, and all over the Body, be amended by attenuating Medicines.

1024. The Pressure upon the Vessels of the Brain is lessen'd. 1. By diverting the Matter into other and opposite Places. 2. By general Evacuations.

1025. The first will be obtain'd by Steams, Fotusses, Baths, Suckings, Blysters, drawing and heating Plaisters, Caustics, Issues, Setons, Frictions, Ligatures upon the larger Veins, and all these applied to the Feet, Legs and Thighs (1024. N°. 1.) And likewise Mouth-washes, Gargles, Masticatories, such things as increase Spitting by their biting Qualities applied and held in the Mouth, Jaws, or Nostrils, will be of Service here.

1026. Strong Vomits and Purges, the Operation of *which be surely* known; Scarification and Cupping,

Cupping, and Bleeding do anſwer the ſecond end in (1024. N°. 2.) though the ſucceſs of 'em be always pretty uncertain.

1027. But the Sluggiſhneſs, having firſt applied ſuch as are determin'd to diſtant Parts (1024, 1025, 1026.) is diſſolved by the general Remedies againſt Glewiſhneſs deſcribed in (75.) which ought to be uſed with Prudence, and to be applied to the Head in any form; but of the greateſt ſervice are Bliſters and the like drawing Plaiſters, whether with or without Spaniſh Flies.

1028. If an Apoplexy from the ſaid Cauſes (1023. is already preſent, it is ſeldom cured: If ſtrength will bear, the ſame are to be tryed as from (1023. to 1028.) all thoſe things are to be applied to the Noſe, Mouth and Head, as are able to awaken the Senſes; all ſort of ſharp ſtimulating Means uſed, and the Belly to be looſen'd with ſharp Glyſters.

immediate recourse to be had to such as can empty, resolve, and divert very suddenly. 1. Let Blood therefore immediately out of a large Vein and Orifice, chusing rather the Jugulars; which repeat as you see occasion: for after this you'll find an Amendment if the Case be curable. 2. Then give a stout and large cooling Purge, which repeat so often that you may raise an almost continual Loosenesss; And if they will not work soon enough, promote and forward their working by injecting some sharp Glyster, with Colocynthis. 3. Then during the whole Course of the illness exhibit cooling, diluting, attenuating, diuretic Medicines. 4. And at the same time apply strong Withdrawers, till the Illness be conquered. 5. His Diet be very thin and light. 6. Beware of all Medicines which strongly stimulate, stir up, and heat; from external Fire or Heat of any kind; suffer him not to lie down upon a Bed, or otherways in a Supine or much leaning Posture.

1031. But if that sort of Apoplexy has already invaded, there is hardly any hopes of a Recovery, unless it be by doing what has been just now mentioned.

1032. But that which proceeds from extravasated Liquids between the Cranium and Membranes, between the two Membranes, from a Wound, Bruise, Fracture, or Imposthume, of that we have already treated in the Chapter about the Wounds of the Head, (267, 268. 273. to 297.) to which we refer the Reader.

1033. Such as is already occaſioned and produced by the effuſion of the Liquids into the ſeveral Cavities and Ventricles of the Brain it ſelf (1010. N°. 4.) and is known by its proper Signs there laid down, doth hardly require any Means to be uſed, becauſe the Patient ſeldom fails of dying very ſuddenly: But if any thing be tryed, all your Hopes muſt be grounded, 1. On the ſudden driving of thoſe Liquids into the Veins (279, 280.) 2. On the correcting of the predominant acrimony and toughneſs together, which is not to be effected more happily than by ſoapy Chymical Medicines.

1034. That which was produced by a predominant extravaſated Lympha, is eaſier cured; by forbearing to bleed, which rather is prejudicial than of any Service here: by giving immediately thoſe Purges as are reputed to be the moſt effectual in purging of Waters; by large bliſtering Plaiſters, chiefly if kept running a long while; a

which it was in when the Diſeaſe ſeized him firſt. " *NB.* This doth happen ſo ſeldom, that there is " hardly one Phyſician in ten, who in fifty Years " Practice ſhall happen to ſee it.

1037. Its neareſt Cauſe therefore is the unmoveableneſs of the *Senſorium Commune*, which continues to ſend forth its ſupply of Spirits only to thoſe Nerves that were in action at the time of the Diſeaſe's firſt invading.

1038. Conſequently an entire reſt (as in the beginning before Conception and original motion of the Heart) of the Blood in the Brain, the Glands of the Brain and their Emiſſaries.

1039. All the Functions of the Brain are diſturbed in this Diſeaſe, and alſo ſuch as depend from 'em; only the Muſcles remain in that tenſion as they were in the beginning; Breathing and Pulſation of Arteries remain, but commonly very weak, and not much perceivable.

1040. Intermitting Fevers of long continuance, chiefly a Quartan; a melancholic, dry, and lank Conſtitution; the ſuppreſſion of the Menſes or Piles; great and ſudden Frights; a deep and long continued intenſe Meditation upon the ſame Object; Strong Fevers ſet a flaming in a Man of a very Sanguine Conſtitution, all theſe do moſtly precede this Diſeaſe.

1041. Diſſected Bodies have made it plain and certain, that the Arteries and Veins of the Brain are very turgid with thick Blood forcibly drove into them.

1042. It is often cured by raiſing and promoting a large *Bleeding* at the Noſe.

1043. It ſeldom changes into other Diſeaſes, yet it has ſometimes been ſucceeded by the Falling-Sickneſs, Convulſions, Fooliſhneſs, and waſting from a want of Nouriſhment; but moſt times ends in Death.

1044. The Method is to be alter'd, and different Means to be tryed according to the variety of the Cauſe: By waking and ſtirring the Patient up by Means of Objects acting with a great force upon the Organs of Senſes, as are light, ſound, ſtimulating and pricking Medicines, as very ſharp Sal Volatile; ſuch as cauſe Pain, frictions and toſſing him up and down for ſome time; by making him bleed at the Noſe, by promoting the flowing of the Piles or Menſes; by Sneezings, Vomits, Bliſters, Iſſues, Setons, and a moiſt Diet.

Of a Carus.

1045. The Carus is a ſlight Apoplexy, but a ve-

1047. One may ſee and know how to cure this Diſeaſe from the Method of curing Apoplexies deliver'd from (1020. to 1036.)

1048. The wakeful and the ſleepy Coma, and the Cataphora ſeem to be only ſlighter Sorts of Cari; look back from (703. to 710.)

1049. A Lethargy alſo is a ſlighter ſort of Apoplexy from a cold, ſlow and watry Cauſe, ſo that the Knowledge of its Nature and Cure is to be fetch'd from (1008. to 1036.)

OF
CHRONICAL DISEASES.

1050. HItherto we have treated of the moſt remarkable internal and external acute Diſeaſes: It's time we come to the Chronical. Theſe, if bred in the Body, took their Origin either from the Defects of the Liquids bred therein gradually, or from the Defects left behind by acute Diſeaſes, that have not been entirely cured.

1051. The Defects bred gradually in the Liquids proceed, 1. From the aſſumed Air, Meat, Drink, Sauces, Medicines, or Poiſons, ſo foreign, as not to be like unto the Liquids of our Body,

Taste; These do produce a heat, attrition, an injury of the smallest Vessels, hot Pains, attenuation of the Liquors, a Putrifaction of the same, Extravasations, and a great many more such Evils; They are cured with watry, meally, gelatinous and acid Means. δ. *a Sluggish fatness*, from the too great use of fat things, either of Land Animals, Fishes or oily Vegetables; hence the Obstruction of (117.) a bilious Rustiness, an Inflammation, Corrosion, and worst sort of Putrifaction (82. 526.): This is cured with Diluters, soapy and acid Medicines and Diet. ε. *A briny Saltness*, from the use of Salt or salt Things; This destroys the Vessels, breaks the Liquids, makes them Sharp; hence a Wasting, a Solution of the Vessels, Extravasations of the Liquids not putrefying soon but producing Spots. 'Tis cured with Water, Acids, and the Use of Lime-water. ζ. *An Alcali.* (76. to 91.) η. *A Glew.* (69. to 76.) 2. From *a too great Power of our Faculties over the things assumed.* (50. to 58. 92. to 106.) 3. From the spontaneous vicious changes of our Humors. (58. to 91.)

1052. Defects arise in the Humors of our Bodies in any place from acute Diseases ill cured: α. *Purulent Diseases*, (158. N°. 5, 6, 7. 402.) Which produce many Evils, (936. N°. 4. 941.) They are cured according to (492.). β. *Ichorous Diseases* (158. N°. 4. 206.) whose effects are gnawing, and consuming. They are cured with gentle, softning and thickning Means. γ. *Putrified Defects*, which have been enumerated (1051. N°. 1. l. γ. 3. N°. 3.)

1053. Acute Diſeaſes ill cured in the ſolid or compound Parts, are apt to leave behind *Impoſthumes.* (387. 402.) *Fiſtules.* (413.) *Empyemas.* (894.) *Schirrous Tumors.* (392. 484, 485, 486.) *Cancers.* (492. 494.) *Caries.* (526.)

1054. From theſe in ſimple Diſeaſes (1051, 1052, 1053.) or any way compound with themſelves, it is uſual for almoſt an Infinity of others to follow as their Effects; which therefore may be thoroughly known and cured from the Hiſtory of thoſe well underſtood.

1055. And as all Chronical Diſeaſes do, as it will be made evident, depend from thence, we muſt therefore fetch their general Doctrine and diviſion alſo from thence.

1056. So that it is alſo plain at firſt Sight, that thoſe Diſeaſes are indeed numberleſs, on account of their Symptoms, and yet not of ſo compound a Nature as to their Origin, nor do require ſuch variety of Medicines or Intentions in the Cure;

1058. Its proximate Cause is always a hindrance of the flux of the nervous or arterial Juice into the paralytic Muscle from the Brain.

1059. It may therefore be produced, 1. By every Cause creating an Apoplexy. (1010.) 2. From all such as renders the Nerves incapable to let the Animal Spirits pass through them. 3. That, which hinders the ingress of the arterial Blood into the Muscle. Hence may be understood the Nature of a Paraplegia, Hemiplegia, and Palsie of a singular Part or Limb.

1060. So that an Apoplexy; a slighter Parapoplexy (1009, 1010. 1015.) The Falling-Sickness, Convulsions; A great and long continued Pain; The suppression of all usual Evacuations with a subsequent Giddiness, as that of the Menses, Piles, Imposthumes, Fistules, Stool, Bladder, Spittle; Translations of any morbific Matter in acute or chronical Diseases; all that offends the Nerves by obstructing, separating, pressing, tying, twisting, turning aside or binding them strait; all thick Humors therefore, Wounds, Corrosions, Imposthumes, Gangrenes, inflammatory Tumors in the Integuments of the nervous Marrow, in tendinous Tumors, or the Nerves themselves; serous, purulent, ichorous, schirrous and the like Tumors in those Parts; strong and strait Ligatures, Fractures, Luxations, very adstringent Aliments, Medicines or Poisons; Whence a very great coldness, great heat, a cold moistness, too great and frequent use of warm Water, the steam of Arsenic, Antimony, fresh quick Lime, Mercury, and other Poisons, are able to cause a Palsie.

1061. The

1061. The proximate Cauſe (1058.) and the remote ones, (1059, 1060.) and conſequently the Palſie it ſelf produced by them doth occaſion various and ſundry Effects, according to the different Seat, where that Cauſe doth reſt, according to the different degree in which it reſts there; according to the difference of the Part affected, as that is more or leſs neceſſary to Life, and that more or leſs immediately in it ſelf; for from thence it is known to be more or leſs Mortal, Curable or Incurable.

1062. A Palſie of the Heart, Lungs, Muſcles the Inſtruments of breathing and that of the Gullet, doth kill very ſoon: That of the Stomach, Guts, and Bladder from inward Cauſes is very dangerous: That of the Muſcles of the Face is of an ill Conſequence, and eaſily terminates and changes into an Apoplexy. A Paraplegia is very dangerous, a forerunner of an Apoplexy, and is Mortal when that follows. A Hemiplegia is very bad, of a Kin with the Paraplegia, and therefore kills with an enſuing Apoplexy: That which is accompanied with a Coldneſs, Inſenſibility, waſting of the Part, is bad and ſeldom curable: That which comes on with a ſtrong Convulſion of the oppoſite Part and a great Heat therein, is bad: And from the Oppoſition and Comparing of theſe it is known which is Curable and leaſt to be feared, and which is ſo often the Cauſe of a ſudden and inevitably unforeſeen Death, without ſcarce any concomitant Symptom, which ſhou'd and cou'd have made you ſenſible of the Danger.

1063. All

1063. All which (1057. to 1063.) if any body applies to all the Muscles appertaining to any Function whatever, he will understand the Causes of an infinite number of very wonderful Diseases, and will be also acquainted with their Diagnostics and Prognostics.

1064. Nature has cured this Disease by attenuating and dissipating the morbifick Matter, by depositing a defective and even vicious Crisis to the outsides of the Brain, its Ventricules, about the Medulla Oblongata, the Spinalis Medulla, the Egress of the Nerves from the Medulla, and the Nerves themselves; by loosening the impacted Matter with the help of a great Fever; stirring it by a convulsive Motion of the Part; or carrying it off with a great long continued Looseness.

1065. The Cure requires the removal of the Cause (1059. 1060.) which hindreth the function of the Nerves and Arteries, and then the restoring of the free Influx and Reflux.

1066. The hindring Cause is removed many ways, easily found out, when the Nature of the Cause it self is sufficiently known.

1067. If that Cause dwelling within be thick and stagnating, those Means ought to be used, which may produce those Operations, by whose assistance we have seen that Nature her self can cure.

1068. The Cure therefore is attempted, 1. With attenuating and dissipating Means. α. Aromatic, Cephalic, Nervine, and Uterine Plants, given in their Juices, Infusion, Decoction, Extracts, Spirits, or preserved. β. Fixed Salts made from them

with

with burning them whole, or volatile ones extracted from 'em by Diſtillation or Putrefaction. γ. Oils alſo produced from 'em by Expreſſion, Coction, Infuſion or Diſtillation. δ. Soapy Salts and Oils artfully made out of their conjunction. ε. Ill ſavour'd parts of Animals, Juices of Inſects, Spirits, Oils, Salts, and Tinctures. ζ. Foſſil Salts, Cryſtals from Metals, and ſuch as are moſtly made up of them. η. Mixing all theſe things with that prudence that they may help each other: And by the uſe of them we may promiſe our ſelves to attenuate, to diſſipate the foreſaid Matter, and alſo to raiſe a beneficial Fever. 2. With powerful Stimulants, and ſuch as will drive out all the ſtrongly impacted Matters by cauſing a trembling Motion in the Nerves or even Convulſions: to this Claſs belong chiefly ſuch as will promote ſtrong Sneezing and Vomiting; chiefly if they are repeated ſome times. 3. With hot, reſolving aromatic Purges from Vegetables or ſharp Foſſiles, or Mercurials, or Pra-

applications to the Skin of Spirits endow'd with penetrant or stimulating qualities, whether from Animals or from Vegetables; or anointing with Oils, Liniments, Balsams, Ointments, or other nervous Medicines: Baths of all Sorts and Stews; Sharp, aromatic, drawing Plaisters; Cupping-glasses, Scarifications; Blisters, Whippings; such as will create a Pain and a slight Inflammation in the Parts, as Nettles, and the like.

1070. But Care must be taken above all, that all these Remedies be directly applied as much as possible to the Seat of the Cause: The offended part it self, many being affected in the same manner at the same time; The knowledge of the Muscles, Nerves, their union, origin, spreading, and the understanding the several Functions of each; if all these are compared together, they will most clearly demonstrate the Seat of the Evil.

Of the Falling-Sickness.

1071. A Distemper of a quite opposite Genius to the latter, is what is call'd *an Epilepsie*; which we know to be present, when any Body is thrown down suddenly with the loss of Internal and External Senses, with violent Concussions, and reciprocal unvoluntary Motions of all or some of the Muscles; with Alternate Rest and new Insults of 'em.

1072. This Disease wonderfully different in its many Aspects doth often appear so surprizing, that it has in all Ages been attributed to the Gods, Devils, Divine Wrath, Witchcraft, and the

the like Cauſes above, and greater than Natural ones.

1073. For there is no one Geſture, Inflexion, or Poſture of the Body known, which it has not ſhewn at ſome time; and it emulates all the Motions of running, walking, turning, bending forwards, laying down, ſtanding upright, or keeping the Body in a very Stiff and almoſt inſuperable Action.

1074. Yet all theſe Varieties do only conſiſt in the Changes of Motions of ſome moveable Parts, which conſequently are muſcular; ſo that they only ſuppoſe various Contractions of the Muſcles, and therefore only various influxes of the nervous Juice; hence a various expreſſion of the ſame from the Senſorium Commune into the Nerves; And laſtly, the various Cauſes which produce theſe Expreſſions in the Medulla Cerebri: Which will be beſt underſtood by giving an Hiſtorical Account of thoſe Cauſes.

1075. They are, 1. *Hereditary* from a Family-defect on the Father or Mothers ſide, coming immediately from the Parents, or Anceſtors; for it is common for this Diſeaſe to jump over a whole Generation, and to fix again on the Grandchildren. 2. *Born with* the Patient, from the ſtrong Impreſſion the Mother has received by looking on an Epileptick in his Fit. 3. Proceeding from *the Brain*, being ill-affected in its Integuments, Superficies, Subſtance or Ventricules, either by Wounds, Bruiſes, Impoſthumes, Pus, Sanies, Ichor, Blood, ſharp and fœtid Lympha, bony Excreſcencies of the inſide of the Cranium, its preſſings down upon

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the Brain; the cartilagineous Nature of the Sinusses of the Veins; Fragments or splinters of Bones, or Instruments hurting the Meninges, or Brain, or Quick-silver carried to the Brain any how. The same Brain being ill disposed by an Inflammation, Corruption, or Corrosion of the Meninges from the Caries of a Bone, black Choler, or Venereal Ulcers. All these Causes do the more mischief as they are increased, by all such things as do increase the influx of the Liquids into the Cranium, such as a Plethora, Motion, Heat, Drunkenness, Gluttony, immoderate Venery; an acute and deep Judgment, profound Meditation, great Passions of the Mind, a strong Fancy and Imagination; but above all Frights and Terrors. 4. All violent Affections of the Nerves, as all great and periodical Pains, hysteric Passions, Gnawings and Irritations from Worms, Teeth, sharp Humors, turn'd Milk and curdled like Cheese, grown sour, any other acid in Infants, Diacodium or Diascordium given them unseasonably, the Contagion of the Small Pox in their first state, violent Pains at the mouth of the Stomach (commonly called by the unskilful, a Pain at the Heart) an ulcerous Matter lurking somewhere, Fasting, Surfeit, or Sickness after hard Drinking, sharp Meat or Drink, Medicines or Poisons. 5. From the Stoppage of some Matter used to have their free Course, whether sanious Blood, Pus; the Menses and Cleansings in Women; the Piles or Urine in both Sexes, but chiefly the former in Men. 6. Some Fumes which bring the Fits on again; Some Matter deposited in some part as in a Nest; whence

it

it mounts up the Brain with the perception of a raiſed Vapour.

1076. All which Hiſtorical Obſervations, and the Anatomy of Bodies has made plain, beyond diſpute.

1077. The Effects of this illneſs may be reduced to 1. The Diſeaſes of the Brain vitiated by the many repeated and ſtrong Convulſions; whence a wavering of Memory, Stupidneſs, Fooliſhneſs, Palſies, Apoplexies, Death. 2. To the Diſeaſes of the Nerves and Muſcles; whence the Diſtortions, Contractions, and Deformities of them and the Limbs. 3. To violent Cramps, whence Inflammations, Gangrenes, a blackneſs of the Parts the moſt abounding in Blood, chiefly ſuch as are ſituated above the Muſcles. 4. To ſome Secretions made violently at the very aſſault of the Paroxiſm, as are Meat, Drink, Lympha, Bilis, Froath, Snivel, Spittle thrown upwards; and downwards

lids (1075. N°. 1, 2.) doth hardly admit of any total eradication of the Evil, but may safely carry off the Causes of the Paroxisms, which are renewed as they are continually growing afresh; So that those, which are infinite in number and not to be known but from Observation, are to be diligently search'd into, and then to be cured according to their Nature.

1081. The Third (1075. N°. 3.) is known from other Symptoms, which likewise indicate the Brain to be offended, as is Pain, a heaviness, fulness, a received Injury on the Head, a Vertigo, a general trembling, sparkling of the Eyes, an unmoveableness or fixing of the same, a winding round of the whole Head or of the whole Body. The solid Cause of this can hardly be removed, because it is very seldom that a Singular one be known; here Revulsions and dissipating Means are useful, such as clear the Passage and depurate: Hence Bleeding, Purging, Vomiting, Burning, Issues, Fistules, a Blister, a Wound of the Head, the Trepanning of the Scull, Antihysterics and Opiates are useful: Which now must be learn'd from the discovery of the proximate Cause of the Disease. (1079.)

1082. That which proceeds from the Fourth Cause (1075. N°. 4.) ought to be treated differently, according to the different Nature of its proximate Cause: Hence do all Anodynes, Paregorics, Narcotics, Antihysterics, Antihelmintics (that is, Medicines against the Worms); such as soften and correct Acrimonies, a seasonable cutting of the Gums; The ablation, and correction

of a preſent ulcerous Matter; all theſe, I ſay, become by their operation Antepileptics.

1083. An Epilepſy created by the Fifth Cauſe (1075. N°. 5.) may be remedied by diſſolving the Matter unfit for ſtirring, looſening the ways, and driving the ſame out of the Body. Hence do ſo often ſucceed in this Diſeaſe Bliſters, Cauſtics, producing Iſſues or Fiſtules; Forcing Medicines, ſuch as provoke the terms, and open the Piles; and Diuretics.

1084. But thoſe that proceed from the Sixth Cauſe (1075. N°. 6.) may be removed by Curing the Weakneſs of the Syſtem of the Nerves too eaſily ſtirred up; which is beſt done by the exerciſe of Motion, playing, riding on Horſeback or in a Chaiſe; the uſe of Aromatics, of Steel and ſtrengthning Medicines and Diet: Than by procuring an Ulcer, upon the place where the Matter lyeth lurking, to be made deep, laſting, by Cutting, Cauſtics or Bliſtering: then keeping

1087. And that the Causes, which create the reciprocal Paroxisms, are many in number and variety.

1088. And lastly, the Origin, Nature, Effects and Cure of the particular Cramps or Convulsions, of the Opisthotonos, Emprosthotonos, and the Universal Tetanos are also evident; as they are nothing else than a kind of a singular Fit of an Epilepsy.

Of Melancholy.

1089. Physicians call that Disease a Melancholy, in which the Patient is delirious long, and obstinately, without a Fever, and always intent upon one and the same Thought.

1090. This Disease arises from that malignancy of the Blood and Humors, which the Ancients have called *Black choler:* And again, though this Disease doth begin in what is called the Mind, it yet doth render the Choler black in the Body very soon.

1091. It will be therefore needful to draw a small Sketch of this wonderful Disease, whereof the Doctrine is supposed commonly to be so dark, that Antiquity is unjustly blamed for it.

1092. If the most moveable parts of all the Blood be dissipated and have left the less moveable united, then will the Blood become thick, black, fat and earthy. And this defect will be call'd by the Name of an *Atrabiliar Humor*, or *Melancholy Juyce.*

1093. Whereof the Cause is whatever doth expel the most moveable and fixes the rest: A vio-

lent Exercise of the Mind; the dwelling Night and Day mostly upon one and the same Object; a constant wakefulness; great motions of the Mind, whether of Joy or Sorrow; great and laborious motions of the Body much repeated, chiefly in a very hot and dry Air; hereto refer also Immoderate Venery; rough, hard, dry, earthy Aliments long used without any Motion or Exercise of the Body to digest them; The like drink; Parts of Animals dry'd in Smoak, Air or Salt, chiefly of old and tough ones; unripe Fruits; meally unfermented Matters; adstringent, coagulating, sticking and cooling Medicines, and slow Poysons of the like Nature: hot Fevers hanging about long, often returning without a good Crisis and going off without the Help of diluting Means.

1094. When this Evil already bred in the Blood and produced by these Causes doth yet infect equally all the circulating mass of Humors, it will

and earneſt Application to any ſort of Study or Labour.

1095. Its matter therefore is the earth and thick oil of the Blood united and cloſed up together, which is worſe in its Effects, and more difficult to cure, according to its degrees of fluidity, ſoftneſs, drineſs, thickneſs, intimate mixture and time of being ſo.

1096. Hence are the Diagnoſtics and Prognoſtics plain enough (though yet clearer from what follows) and the rationality of the Cure doth alſo occur eaſie enough from theſe Principles.

1097. For as ſoon as it ſhews it ſelf by what is ſaid in the Beginning of both, (1093, and 1094.) either as a Cauſe or an Effect, the Phyſician ought to procure a continual change of Objects and that without the Patient's knowledge; and ſuch ought to be choſen, which are able to raiſe a Paſſion oppoſite to the moſt predominant in him: Sleep ought to be procured him by diluting, ſoftning, paregoric, narcotic Medicines, and by Reſt; Let him breath a moiſt and moderately warm Air; his Aliments be light, liquid, like unto our wholſome Liquors, recent, ſoft, looſening with a gentle ſoapy Faculty, and he muſt continue long in the uſe of 'em: Give diluting Medicines, as ſoften the Acrimony, reſolve the oily Earthineſs, looſen the Veſſels, expel with a gentle Stimulus; Such are the Juices of thorough-ripe Fruits, all things made up with Honey, Garden Herbs, and Broathis made of them; Mineral Waters: The beſt Drink is a Ptiſane ſweetned with a little Honey. And above all things,

great Care muſt be taken to debar him from all the Cauſes of the Illneſs (1093.)

1098. But if that very Matter (1092.) be from the ſame Cauſes (1093.) grown thicker, tougher, and leſs moveable; it muſt neceſſarily be drove into the Hypochondriac Veſſels; this the Nature of that Humor, the ſeat and condition of thoſe Veſſels and the Laws of motion of the Liquids do demonſtrate. Here it will gradually ſtop, be accumulated and ſtagnate: Then it is called an *Hypochondriac Diſeaſe*, or in uſual terms in *England*, *The Spleen*; as it doth obſeſs the Spleen, Stomach, Pancreas, Caul or Meſentery.

1099. Hence it produces there gradually a ſenſe of a conſtant weight, anguiſh, fullneſs, chiefly after eating and drinking; a difficult breathing from the Bowels of the abdomen being burthened; Impediments of both the Cholers, of the pancreatic, ſtomachic, meſenteric Juice, and of the Inteſtines as to the confection, ſecretion, mixture,

the Evil soon grows terrible in its Nature; and those Difficulties ought to be prevented if possible: If it continues in this state any time it becomes incurable, and sometimes mortal, as will appear hereafter: If you attack it with purging Medicines, you only drive out the wholesome and moveable Humors, but the tough and bad ones do stay behind, whence the Disease grows worse still: If you attempt the Cure with stimulating and powerfully resolving Medicines, then doth often the loosen'd Matter grow very sharp, and throwing it self with a great violence upon the tender Vessels of the Liver, it destroys them, whence many and incurable Ills.

1101. So that, 1. The Matter is to be render'd moveable slowly, inquiring into the Nature of the predominant Acrimony; then giving soapy Medicines in which there is an Acrimony predominant over that which is in the peccant Matter; These must be continued till the unequal and weak Pulse, a nauseating, or a continual pressing to go to Stool, an Anxiety, and a small Fever do signify that the Matter is put into motion; And then, 2. Drive the same out immediately with a gentle opening Purge, a Glyster of the same kind, Milk-whey, Mineral-waters, and the like.

1102. But if that very Matter of (1098.) already fixed, and drove in close, has been detain'd there long; the same begins already to grow sharp and gnawing by its Stagnation, the motion of the Bowels and the heat of surrounding Parts; new Matter is continually laid on, because the Obstruction is made already, and the same Causes

do ſubſiſt; hence it extends, gnaws and corrupts the Veſſels by its encreaſed bulk, its preſent Acrimony and continual Motion; hence the like deſtruction of the Spleen, Stomach, Pancreas, Caul, Meſentery, Inteſtines, and Liver, and conſequently all the Evils of (1099.) do increaſe the former much, but diſturbs chiefly all the Functions, and above all thoſe of the Brain, by the conſtant Steam of the putrified Matter received into the Veins. And then may it be called by the true Name of *Atra bilis*.

1103. Which being diſcover'd by theſe its Signs, laid down in (1093. 1094. 1099. 1102.) cannot but with the greateſt Prudence and Skill be thinn'd, moved or drove out, becauſe of the Difficulties mention'd in 1100.) Which here are yet greater, and becauſe that the Matter now arrived to its greateſt degree of Acrimony is eaſily ſtirr'd up, but very difficultly quieted again. Let therefore all his Diet be of a very oppoſite nature to the known predominant Acrimony of the Matter, deſcribed in (1051.) Let the ſame always be gently reſolving, ſtimulating, looſening by Stool, carrying off almoſt all the Excrements after each Digeſtion; his drink be of a Ptyſane with ſome Honey, or made of ripe Fruits, or Milk-whey; Let his Motions be gentle, but continued; his Heat very temperate; his Sleep long; Let him frequently uſe Bathing, Fomentations, Glyſters, and drink of thoſe things which being free from Acrimony do thin the Matter by diluting, reſolving, cleanſing and ſoaking, and then do expel the ſame very ſlowly and cautiouſly, and that only

through

through the Passage as Nature directs, having always an eye to the singular Acrimony in this Case, which never fails of being present in view.

1104. But when that Evil of (1102.) is already advanced to a great Acrimony, with the Bowels already much corrupted, if during the said (1102.) causes it be put in motion and stirred up with a muscular Motion, the heat of Sun or Fire, a plentiful and sharp Diet, sharp and much stirring Medicines which will ferment with the sharpness of the Evil, poisons that hurt by the same operation, or lastly with some Diseases; Then doth the same, grown sharper and moveable and already changed into an Agent, break, corrupt and dissolve its Vessels into a Rottenness, and change them with the very *Atra bilis* into putrified Bags; and now it is the *Atra bilis become turgid*; And when this is now brought so far, if liquefied in its Vessels, and transported towards and into the Liver, creeping into the consumed ramifications of the Vena Cava, it be let into the Heart, then doth it create those pernicious Evils: for if it participates of a coagulating Acid, it creates Polypusses of the Heart, Lungs, Aorta, Carotids, their ill Consequences and Death: If it reaches the Brain it produces Apoplexies, Palsies, a Catalepse, an Epilepsy, Deliriums, furious Madness, all these of the worst Sort and Incurable. In the System of Arteries it changes the whole face of Things, there it brings forth very terrible Fevers, which do putrify all things very suddenly: If it participates of the putrifying Alcali, it creates suddenly killing Gangrenes wherever it

reacheth

reacheth. Whence innumerable and incurable Diſeaſes over the whole Body and each ſingular Part, unleſs this ſink and Neſt be cleanſed and ſtopped up. But if the Matter, having eat through the Veſſels of the Bowels, doth fall into the Cavities of the Peritoneum, there ariſeth immediately a very great and inſuperable Weakneſs; a Putrefaction and an accumulation of the ſharp delapſed Matter; Then a Gangrenous eating of all the abdominal Entrails, whence moſt admirable and terrible Phænomena; a Tympanitis; Death with a prodigious Stench: But if the ſame, when put into a Motion, doth throw it ſelf upon the Liver, and from thence through the dilated and eaten bilious Veſſels into the Gall-bladder, the Ductus hepaticus, the common Ductus, into the Inteſtines, then doth it create Loathings, Vomitings, atrabiliar Bloody-Fluxes, with an Anguiſh, an Impetus, Pain, Gnawing, all intolerable;

demonstrated before from (58. to 107. and 1051, 1052.)

1106. And it is easie to all, who consider what was said in (1000. 1003. 1004.) and the Seat, Structure and Circulation of the Bowels, in which this malignant Humor doth reside, That this Disease is greater than to admit of a Cure. But the chief Helps are such as dilute with a sharpness of an opposite Nature to the predominant Acrimony, or Opium.

1107. From which (1090. to 1107.) the Nature of Melancholy and Hypochondriac Diseases as described in (1089.) is known: for it is evident, that from a long continued preceeding sorrowfulness, the Vessels of the abdominal Bowels create a Stagnation, Alteration, and Accumulation of black choler (1092. 3. 5. 1098. 1102. 1104.) Which insensibly increaseth, though the Body was very healthful but a little before: And also that the same black choler, when bred from bodily Causes, doth produce that Delirium of (1084.).

1108. The apparent Causes of Melancholy therefore have been observed to be, 1. All things, which fix, exhaust, or confound the nervous Juices from the Brain; as great and much unforeseen frightful Accidents; a great application upon any Object whatever, strong Love, Waking, Solitude, Fear, and hysterical Affections. 2. Those which hinder and confound the Confection, Refection, Circulation, the various Secretions and Excretions of the Blood, chiefly if done in the Spleen, Stomach, Caul, Pancreas, Mesentery, Intestines, Liver, Womb, or hemorroidal Vessels: and conse-

quently

quently any hypocondriac Diſeaſe, acute ones, imperfectly cured, and chiefly a Phrenitis, or a burning Fever; all exceeding Secretions and Excretions, eating, and drinking cold, earthy, tough, rough, or adſtringent Aliments; too great a heat long continued, which doth as it were, roaſt the Blood; a ſtagnating, fenny, or too ſhady Air. 3. A natural diſpoſition of the Body, ſuch as a black, hoary, dry, lean or manly one; A middle Age; a ſharp, deep and penetrating Judgment.

1109. If this (1089.) Diſeaſe doth continue long it occaſions Fooliſhneſs, Epilepſies, Apoplexies, furious Madneſs, Convulſions, Blindneſs, wonderful Fancies, Laughters, Cryings, Singings, Sighings, Belchings, Anguiſhes; great Evacuations of Urine, ſometimes clear like fair Water, at other times very thick; a retention, accumulation, often a ſudden Excretion of bloody Fæces in the Veſſels of the abdominal Viſcera; an obſtinate Coſtive

as put the Liquids into a violent Motion, whether they be Cordials, or cryed up under any other Title.

1112. So that the best Method to cure this Disease, is to apply different Remedies and opposite to the different Sorts known from the exact observation of the proximate Cause and different Constitution of the Patient.

1113. 1. The Indications will be therefore to excite, increase, and bring into a good order the Liquids of the Brain and Nerves; which is done; α. By withdrawing the Mind from the usual object to others contrary to the same. β. By causing and raising very artfully another Passion of the Mind contrary to the constant Melancholic one. γ. Sometimes by Siding with them in their false and depraved Fancies. δ. Or often by opposing the same with a great Force.

1114. 2. By opening, softning, cutting, stimulating the Obstructions, or the Cause, or the Effects of a false Imagination, with mineral Waters, Milk-whey, Water and Honey, Splanchnick, Hepatic or Antihypochondriac Decoctions, Waters made effectual with the addition of Lixivious or Compound Salts; loosening Mercurials, Vomits, Motions, Exercises, Riding, or going in a Boat; Medicines which evacuate from the Womb (as are the Aristolochica) or the Piles; Bathings, Ointments, or Plaisters.

1115. 3. Easing the Symptoms with Bleeding, ducking into cold Water, by Carminatives and Opiates.

1116.

1116. 4. After the juſt mentioned Evacuations, By giving ſuch as Experience doth ſhew us to be Exhilarating and to ſtrengthen all the Parts of the Body.

1117. From which (1110. to 1117.) it appears, that the Cure of this Diſeaſe (1089.) is perfected in curing the black Choler (1097. 1100, 1101. 1103. 1106.) And that we muſt hence learn the Cure not only of this Diſeaſe: But of an infinite Number of others, which are wrongfully reputed incurable.

Of Madneſs.

1118. If Melancholy (1089.) increaſes ſo far, that from the great motion of the Liquid of the Brain the Patient be thrown into a wild Fury, it is call'd *Madneſs*.

1119. Which differs only in degree from the ſorrowful kind of Melancholy, is its Offspring, produced from the ſame Cauſes, and cured almoſt

1123. The greatest Remedy for it is to throw the Patient unwarily into the Sea, and to keep him under Water as long as he can possibly bear without being quite stifled.

1124. When all Remedies have been tryed in vain, it has sometimes happen'd that varicous Tumors, Piles, Dysenteries, Dropsies, great Hæmorragies come of themselves, and Tertian or Quartan Agues have cured this Disease.

1125. This sort of Madness is occasion'd sometimes after the Body has been exhausted by an autumnal, strong, obstinate intermitting Fever, and not only thus weaken'd by the Disease but by repeated Bleedings, and Purges; which same will also occasion the return of this Disease.

1126. This sort is cured only with restorative, replenishing, Cordials, strengthning Aliments and Medicines long continued: But if you attempt the Cure of it by Evacuations, you'll cause a Wasting, Weakness, and an insuperable Foolishness. " *NB.* See *Sydenham*'s Treatise of the Intermit-
" ting kind of Fevers from the Year 1661. to
" 1664.

1127. But a Madness bred in strong, hail, youthful, plethoric People of a hot Constitution, is cured by the same Means as that sort of Epilepsy in (1081.) By repeated letting of Blood and strong Purges between each Bleeding, and afterwards when you have lay'd his fury, and have brought him to his Senses, then give him Cordials and Opiats.

Of

Of the Dog-Madness.

1128. There is still another Disease, which is conveniently mentioned now because of its Companion, the furious Madness, and ought to be treated of by it self, because of its desperate and ill Nature.

1129. It's called Fury or Madness, and because mostly proceeding from the bite of Dogs, a Dog-Madness, and from that terrible Symptom of *fearing Water*, an *Hydrophoby*, &c.

1130. It almost ever arises from other Animals, which were first Mad, and that by Contagion: Though also sometimes of its own accord in some acute Fevers, as has been observed and we find recorded.

1131. Almost all sorts of Animals may be affected with this Evil, and by their Contagion infect others, and even Men.

1132. Dogs, Cats, Wolves, Foxes, Horses,

Noſtrils; All theſe are preceeding Cauſes of Madneſs in Beaſts juſt now mentioned.

1135. The Signs of a beginning Madneſs are chiefly theſe, at whoſe appearance alſo due Care muſt be taken to avoid other Animals or Men being infected, by removing them, *&c.* They firſt grow ſad, chuſe to be alone, hide themſelves, dumb as to their barking or other uſual noiſe, but yet are grumbling, they are averſe to all Meat and Drink, they are provoked at the Sight of all Strangers and fall upon 'em, however yet remembring and fearing their Maſter; They hang down their Ears and Tails, They ſeem to ſleep as they go along: And this is the firſt ſtate of the Illneſs; and if they happen to bite then, it is dangerous, but yet nothing near ſo bad as afterwards. Now they begin to pant, loll out their Tongue, to froath much about the Mouth, they gape; you'll ſee 'em ſometimes walk as if they were half aſleep and preſently again run on very quickly, and that not ſtrait forwards always; Now they ſcarce any longer know their own Maſter, their Eyelids hang down, they ſeem to weep, to have duſt in their Eyes; Their Tongue is of a Lead-colour, they ſuddenly grow very thin, mad and furious: This is the Second degree of the Illneſs, which they can hardly endure longer than thirty Hours, after which they die. A Bite from them in this State is almoſt incurable: And the violenter the Madneſs is, the longer they have been affected, and the nearer to their End, ſo much the more mortal is the Bite, ſharper, and the more violent the Symptoms which

come on very ſuddenly; and ſo on the contrary, *&c.*

1136. There is ſcarce any Poiſon which infects ſo many ways, for the ſlighteſt Bite imaginable through ones Clothes, only ſcraping and not deep enough to fetch blood; The contact of freſh froth, or even of ſuch as has been dried up ſome time applied to the Lips or Tongue; A Kiſs only given to a mad Dog; The handling much of an Inſtrument or the Wound of which and by which the Animal has been kill'd ſome time ſince; The eating of the Meat or Milk of a mad Creature; The feeling and often handling of Things that have been infected by any of the juſt mentioned; All theſe will infect Man or Beaſt.

1137. Again, There is ſcarce any Poiſon known, whereof the Malignancy is ſo terrible and occaſions ſuch prodigious changes in Men; and which, when it has once begun to ſhew it ſelf, doth ſo ſuddenly and ſo furiouſly Rage, and which notwithſtanding can at other times lie conceal'd ſo long, before it be diſcover'd. For ſome People are immediately affected with the Symptoms of this Diſeaſe, ſome not till twenty Years after they were bit, and ſome are more or leſs diſorder'd all the while between its firſt Occaſion and its laſt Scene: This difference depends from the heat of the Weather, from the ſeveral degrees of Infection in the Animal that did Bite, (1135.) the Conſtitution of the Perſon who received the Hurt (for cholerick Men are ſooner and quicker affected, butphlegmatic or dropſical People ſlower.) And

laſtly,

lastly, from the different Diet and application of Medicines.

1138. When a Man in perfect health is infected with this Poison after different distances of Time (1137.) he begins to be disorder'd much after the following manner: The Place pains him, where he first of all receiv'd the Injury; Then follow wandring uncertain Pains in other, but chiefly the nearest Parts; a weariness, heaviness, slowness succeeds in the whole System of the Muscles; his Sleeps are disturb'd, uneasie, full of frights, convulsions, and catchings in the Tendons; he is continually restless, sighs, looks dejected and affects to be alone; and it is much after this manner, that this Disease begins and finishes its first Stage: If you bleed him then, the Blood doth not carry the Face of any Defect. Then are all the foregoing Symptoms increased, and there follows besides a prodigious narrowness and pressure about the Heart and Chest, Breathing is difficult, and accompanied with Sighs; he frequently shakes all over; his hairs stand an end, and trembles all over at the sight of Water, of any sort of Liquors, or even upon the sight of transparent Things, or reflecting like Looking-glasses; he loses his Appetite entirely, yet he can swallow any thing that is very dry and solid: The touch of any moisture chiefly with his Lips or Tongue creates an incredible Anguish, Tremors, violent Convulsions and a Raving; he vomits tawny, glewish Choler or green like Leeks; he grows very hot, feverish, sleepless; is troubled with a Priapisme; and he thinks very disorderly of things quite foreign and

unusual. Thus doth it go on, and here absolves its second Stage. Afterwards doth every thing constantly grow worse, and you'll soon see him loll out his rough and dry Tongue, gape wide, speak hoarse, have a great Drought, grow raving at every attempt to drink at the sight or touch of any Liquor; gather Froath in and about his Mouth; to endeavour the spitting of the same upon the By-standers even against his Will; to bite and snap at every thing within his reach and that unvoluntarily, nor yet to be withheld from those Attempts; he gnashes his Teeth with froth, snarling like a Dog; his Pulse now and breathing begin to fail, Cold sweats break out on all sides, Raves in the highest degree, notwithstanding which he is all the while sensible and is afraid for the By-standers that he shall unwillingly hurt 'em. Hence you may always reckon upon his dying (within the fourth Day from the first State of his Illness) convulsed with a most terrible Anguish upon drawing his Breath.

1139. From this whole History (from 1129. to 1139.) the Nature of this Illness may be understood: The Prognostic may be drawn from the Consideration (of 1135. 1137, 1138.) at the same time always preparing for the most dismal Events; For since Physick has been an Art, the most famous Physicians have been known to lament, *That there have been so few Examples of People preserv'd from Madness after they were bitten by mad Animals: But that there have been certainly none saved after their arrival to the Symptom of dreading Water.* But it is mostly

deplorable

deplorable, that after so many Ages, which have complain'd and bemoan'd the useless Application of all the hitherto commended Remedies, no Method shou'd have been attempted different from the former.

1140. The Anatomy of Bodies has shewn, that the Organs for Swallowing are most times inflamed; that there is a bilious Glew of several colours in the Stomach; that the Gall-bladder is full of black Choler; That the Pericardium is quite dried up; that the Lungs are surprizingly full of Blood heap'd up therein; that the Heart is full of Blood almost all dried up; the Arteries full, the Veins empty; the Blood very liquid, which hardly wou'd run together when exposed in the Air, yet when let out of the Vein it wou'd coagulate before three Days time; That all the Muscles, Bowels, Brain, Cerebellum and Medulla Spinalis are dryer than usual.

1141. The Cure has hitherto, if you except a few Cases, been very doubtful and unsettled, and not only the Therapeutic but also the Prophylactic; The First and chief reason of this is the vain boasting of having many specific Remedies; and then the Neglect of a Method, which might be deduced from the known Nature of the Disease.

1142. As much therefore as we may conclude from this whole History of the Disease, and comparing it with others, and with the happy Event of a few Cases, it seems first to be, a nervous Case which most properly ought to be ranked with Convulsions, which invade the Bowels and

their Veſſels; That from hence a Defect is communicated to the Blood and Humors, which is very much reſembling a gangrenous Inflammation; and that the Seat of this Evil is firſt about the Stomach and neighbouring Parts.

1143. The Method to preſerve one that is bit from farther Harm, requires, 1. That immediately after the Poiſon is communicated, the whole affected Place, together with the Surrounding, be immediately ſcarified very deep, and Blood be drawn to a great quantity, by Means of large Glaſſes laid over the ſcarified Parts; or the ſame be burn'd deep with a red-hot Iron; then the Part be made to ſuppurate for a long while by Means of ſuch things as ulcerate by their conſtant corroſiveneſs; In the mean time, from the beginning of the Cure to the end, foment the Parts with Pickle made of Bay-ſalt and Vinegar; And theſe things ought to be continued till over the ſixth Month from the firſt Accident. 2. The Clothes,

happen'd to those poor Wretches, who in helping to hold a Patient in this Case under Water were bit by him; For they have not escaped the highest degree of Hydropobia, notwithstanding they wou'd fall to Swimming and to Ducking in salt Water for many Hours from the moment they felt themselves bit, thinking thereby to prevent all harm. 4. Let him be made to sweat every Morning fasting, by giving him some spiced Vinegar, with Bay-Salt and plenty of hot Water. 5. Let him wash and bathe daily his Hands and Feet, his Head and Mouth, and swim often. 6. Let his Diet be moist, light, loosening; forbearing the use of too many Aromatics, Wine, heating Means, and also too great Motions of the Body or Passions of the Mind.

1144. But the Cure of the Disease already present ought to be attempted, and chiefly in the First Stage, and the beginning of the Second (1138.) the more because the least Neglect is attended with a very fatal Event. It looks the most promising, and it is confirmed with a few Examples, that the following Method is like to Succeed best and ought to be taken. 1. Immediately after the first Signs of this Evil's invading (1138.) it ought to be treated like a Disease of the fiercest inflammatory Kind (890.) Letting blood out of a large Orifice of a large Vessel to a large Quantity, and even to Swooning; then giving Glysters made of nitrated Water, moderately salted, with a little Vinegar: These must be repeated boldly, and even more than Prudence wou'd allow of in most other Diseases: In the Intervals of these he

muſt be blinded and thrown into a cold Pond, or be made wet with the continual throwing of Water upon him, till he doth not ſeem any more to be afraid of Water, or but little; Then immediately upon this force him to drink a large quantity of Water, and procure him Sleep at Night, no otherways than by fatiguing him into it by thoſe Means: Let his Diet be very thin and always moiſtning.

1145. And as this Method is built upon the nature of the Illneſs in all its Circumſtances, and upon all the reaſonable Rules of the Art; ſo it ſeems nothing is more deſtructive than to Murder as it were, and teaſe theſe poor Sufferers with ſharp heating, drying Medicines, and by their roughneſs very much affecting the Nerves, which are all Poiſons in this Caſe where the Patients are already dried up by their very Diſeaſe: And again, nothing is more Cruel, than neglecting all Means whatever to abandon theſe poor Wretches from the beginning, or to ſtifle them between two Beds.

1146. Nor ought we yet to deſpair of finding out one time or other a peculiar Antidote for this Poiſon, ſeeing we have ſucceeded in Poiſons thought formerly as deſtructive.

1147. But hitherto we have not met with any one, which deſerves credit enough to be entruſted with the Life of People thus miſerably afflicted, for no one is known whereof the Experiments be certain, but they owe their Birth either to Speculation, or they have been copied from others, and taken upon truſt; *Not Excepting here* the Secret

of

of burn'd Crabs of *Æschrio*, mention'd by *Galen* and *Oribasius*; nor the famous Electuary of *Scribonius Largus*, so cried up for being infallible in the Madness of the *Sicilians*; Nor the Advice of *Peregrinus*, of putting on the skin of the Monster called *Hyæna*, nor of the Ashes of River Crabs with the *Theriaca* of *Andromachus* cried up by *Aëtius*, *Rufus*, and *Posidonius*; Nor the Secret bragg'd of by *Palmarius*; Nor the too much exalted Pewter with Mithridate by *Mayerne*, *Grew*, and most Hunters; Nor the Root of Cynorrhodon reveal'd in holy Dreams; Nor the famous earthy ash-colour'd Moss call'd *Lichen*; Nor Pimpernel, the burn'd Liver of the Mad Dog, and the like: For whoever doth rely on these magnificent Trifles will find himself deceived. *NB.* "Upon "this Disease see among the Ancients *Cælius* "*Aurelianus*, and among the Moderns, *Mar-* "*tin Lister.*

Of the Scurvy.

1148. The Scurvy is a Disease very common to all Nations that inhabit the Lands near the North Seas, is the cause of a great many others, is neither new, nor has not been over-look'd by the Ancients; Though they have not left us a very exact Description of the same; which ought to be imputed to their being incapable of long Voyages by Sea, because they wanted the Compass, and that they were unacquainted with most Nations that do inhabit the coldest Climates of this our Earth.

1149. This

1149. This Diſeaſe, as it often deceives by its many and various Symptoms, cannot be made known any better way, than by narrating its whole Courſe, and then concluding upon its Nature and Genius.

1150. It rages in *Britanny*, *Sweedland*, *Denmark*, *Norway*, *Lower-Saxony*, and the *Netherlands*; ſo that it chiefly infects the Northern Nations, and ſuch as live in the colder Climates; and among them chiefly ſuch as live near the Sea, Fenny and Overflown Lands by Salt-water, Marſhes, Lakes, Pools and Clay-lands, in Low-lands behind Dikes and High Cauſſeys that keep the Waters out: It chiefly afflicts the idle, unactive People, ſuch as undergo cold in Rooms paved with Tiles or Marble Stones in Winter weather (which is very common in *Holland*) Seafaring People, who live upon ſalt and dried Meat, Biſcuit, Putrid Waters with Worms at Sea or on Shore; and alſo ſuch as delight too much in feeding upon Water-fowls, Salt-fiſh hardned and dried either in the Wind or in Salt, Beef or Hogs-meat pickled or dried, or upon unfermented meally Food as Peas, Beans, Salt, ſharp and old Cheeſe; ſuch as are much ſubject to Melancholy, Madneſs, the Spleen, Hyſterics, or any other long Diſeaſes: And chiefly ſuch as have taken too much of the Jeſuits Bark. *NB.* "It wou'd be too much to "ſay that the Jeſuits Bark doth never do any "harm, even when it is given properly; becauſe "ſome Conſtitutions are very tender, and cannot "bear its roughneſs in Subſtance; but yet it is "as wrong to accuſe it of ſo many Miſchiefs as

"Or.

" Dr. *Sydenham* and our Author doth here; I
" came to *England* very much prejudiced against
" the constant use of it, but I protest that I am
" entirely recover'd of that prejudice, and think
" now sincerely, that there is hardly any one Me-
" dicine in Nature which is capable of so many
" good, and guilty of so few ill Qualities; and
" particularly in this case I absolve it, as being ra-
" ther able to induce into the Blood an evenness
" of Mixture and a solid Contexture, than to
" break the same, which we shall see anon is one
" of the most obvious Causes of the Scurvy.

1151. And when it doth Invade those, it commonly begins, increases, and arrives at its height with the following Steps and Phænomena;

1. An unusual Lazineſs, Stiffneſs, an Inclination to sit and lie Down, a Spontaneous Wearineſs all over, a General Heavineſs, a pain of the Muſcles as after too great a Fatigue, chiefly in the Legs and Loins, a great difficulty in walking chiefly up or down Stairs, and in the Morning upon first waking in all the Limbs and Muſcles a ſenſe of Wearineſs and a Smarting.
2. A difficult, panting, and almoſt deficient breathing upon every little Motion; A Swelling of the Legs coming and going, and an unmoveableneſs of them from their weight; Red, tawny, yellow, purple Spots there; a pale tawny colour in the Face; a beginning Stench of the Mouth; the Gums ſwelling, painful, hot, itching and bleeding upon the leaſt Preſſure: The Teeth bare from the Retractions and Looſneſs

of

of the Gums; Various and wandring Pains all over the External as well as Internal Parts of the Body, caufing wonderful Torments refembling Pleurefies, Stomachic, Iliac, Colic, Nephritic, Cyftic, Hepatic, Splenetick, Pains, *&c.* feveral forts of Hæmorragies but flight ones.

3. A rottennefs of the Gums ftinking like dead Bodies, an Inflammation of the fame dropping Blood and a Gangrene; the Teeth grow loofe, yellow, black and rotten; The Veins under the Tongue have varicous, ring-like Swellings; Hæmorragies frequently mortal, through the very external Skin of the Body, without any apparent Wound, through and from the Lips, Gums, Mouth, Noftrils, Lungs, Stomach, Liver, Spleen, Pancreas, Guts, Womb, Kidneys, *&c.* Ulcers of the worft kind and obftinate, giving way to no Medicine whatever, eafily gangrening, dfpers'd in all Parts, chiefly

ings, Looseneſſes, Bloody-Fluxes, ſharp Stranguries, Faintings, and often ſuddenly mortal Anguiſhes: A Dropſie, Conſumption, Convulſions, a Trembling, Palſie, Contractions of Sinews, black Spots, vomiting of Blood and voiding the ſame in great Quantities by Stool; a Putrifaction and waſting of the Liver, Spleen, Pancreas and Meſentery; and a quick Contagion to all other Parts.

1152. From whence it appears, that the Nature and Effects of this Diſeaſe are eaſily gather'd from the Conſideration of what went juſt before.

1153. And that its proximate Cauſe is that Conſtitution of the Blood which is faulty and peccant, of too great a Thickneſs in one part, and at the ſame time of a ſharp, ſalt thinneſs of the acid or the Alkali kind in t'other part: Which two Phænomena are above all things to be duly weigh'd and diſtinguiſh'd.

1154. And that from the Knowledge of theſe, (1151.) all the different Phænomena of this Diſeaſe, though never ſo wonderful, may be deduced eaſily.

1155. Which will ſtill more clearly be made out from the Rules which the proſperous or unhappy Event has eſtabliſhed, whereof the following are the moſt material.

1156. In this Diſeaſe, the thick Humor muſt be made thin, what is ſtagnating render'd Moveable; and what is ſticking together made Fluid.

1157. And alſo, what is too thin muſt be made more compact, what is too ſharp be ſoftned; both in general and particular.

1158. And

1158. And in the Correcting of the one, regard must be had always to the Nature of t'other (1156, 1157.) So that there is occasion for the greatest Skill in Physic to treat this Disease with Success.

1159. Sharp evacuating Medicines do always exasperate this Disease, and often render it incurable.

1160. So that one ought to begin α. In the sort described in (1151. N°. 1.) First with a gentle, attenuating, opening Purge, given often but in a small Dose. β. The attenuating and digesting Medicines must be continued. γ. And then ought to be used the gentlest specific Antiscorbutics for a long while in all Forms and Shapes. δ. and such a Diet is all the while to be exactly kept, contrary to the Causes described in (1150.)

1161. When the Disease is in its Second Degree, (1151. N°. 2.) Then will be of Service all things mention'd in the First (1160. α. β. γ. δ.) And besides, the Scorbutic Medicines endow'd with somewhat a greater degree of Sharpness, in the form of Juices, Conserves, Spirits, Sal. Volatil, medicated Wines or Beer: Outward Bathings also, and washing of the Feet in Antiscorbutic Decoctions; hot and dry Frictions, or with the Liquors of the Specific Plants; Letting of Blood may often be profitable to carry out at once part of the acrimonious Juice, to lessen the Gnawing of it upon the too much distended Vessels, to procure a Revulsion, and to make room for such other Medicines as may be given Inwardly.

1162. And

1162. And in proportion as the thinness is sharp, the heat and fear of Hemorragies are greater; or as the thickness, sluggishness, coldness, and paleness of the Vessels greater; the Physician ought to prescribe Specifics, that are moderately adstringent and cold; or hot and somewhat sharp.

1163. And to correct the Defects in the Mouth usual to this Sort, such ought to be made use of, as are Antiphlogistic, Antiscorbutic, and at the same time peculiarly proper to each particular sort of Scurvy.

1164. In the Third sort (1151. N°. 3.) all the aforesaid are useful, but that the Patient ought at the same time to take large Quantities of soft, easily circulating Liquids, contrary to Putrifactions, Antiscorbutic, together with a gentle promoting of Sweats, Urine, and Stools for a long while together.

1165. As to the Fourth sort it seldom admits of a Cure; the Method of Cure is to be varied according to the variety of Symptoms; Mercurials are sometimes useful, and also those advised in (1164.)

From all which (1148. to 1166.) duly consider'd and compar'd with the Phænomena of the Disease and of dissected Bodies, it is evident, that to obtain a happy Cure of this Disease, it is above all necessary to find out the Nature of the vicious Humor, and each peculiar Acrimony which is peccant by its predominancy; And as this Acrimony is either of a briny Salt, of a rough Acidity, or a fætid Alcali, or rancid oleous Quality; and that we have already more than once treated

of

of all these in general and particular, it is easie to have recourse to it, and to form Rules to this peculiar Case: And it is evident also, why Milk-whey, Butter-milk, Physical mineral Waters have so often cured this Disease after it had been given over for incurable, and also what Sorts of Scurvy met with this happy Fate at last? Why and when the acid Juices of ripe Fruits, of Oranges, Citrons, Lemons, Pomegranates, Sorrel, great and small, Vinegar, Rhenish and Moselle Wines, have so often proved Specifics in the Cure of this Disease? Why austere Adstringents, such as Rhubarb, Dock, Tamarisc, Capers, rough black Wines or red Wines, and some Preparations of Steel have often also proved successful, and when? And why again the roughest and sharpest Aromatics, Scurvy-grass, Pepper-wort, Mustard-seeds, Aaron-root, Radishes of all sorts, Pepper, Ginger, the Less sharp Houseleek, The alcaline volatil Salts, the fixed, oleous, aromatic, and saponaceous of a mixed Nature, Why only these are often profitable? Why what is useful to one Scorbutic Body must prove destructive to another? So that a true Physician ought not so much to mind the general Denomination of this Disease, but to apply himself to cure the several Kinds, as if they were Distempers of quite a different and contrary Nature. " *NB. Cambden* in his *Britannia* in the " Description of *Kent*, mentions a Memorable " place out of *Pliny*, where he speaks of the " *Britannick Herb*, which I take to be *Scurvy-* " *grass*; He says, that *Cæsar*'s Soldiers were " seized with a Disease called *Stomachace*. Soon

" after

" after they had drank of the Water of a Foun-
" tain which they dug up at the Mouth of the
" *Rhine*; which he describes to have been an
" Affection of the Gums, which made all or most
" of their Teeth fall, and afterwards caused a
" weakness of the Joints and the Knees.

Of a Cachexy, or Ill Habit

1166. By a Cachexy is generally understood that disposition of the Body, which depraves its Nourishment through the whole Body at the same time.

1167. And consequently acknowledges for its Cause, either any depravation of the Nature of the nourishing Liquid, or a defect of the Vessels receiving them, or a defect of that Faculty which is to apply them to the Extremities of the said Vessels.

1168. The Depravation of the Liquids ariseth, 1. From all Things taken inwardly, which are not capable of being made like unto the last Particles which they are design'd to restore by the Power which doth execute that Alteration in us; such are Aliments of meally matters, Peas, such as are coarse, fibrous, fat, sharp, watry, and tough. (69.) Bodies that cannot be digested at all, as Turf, Cynders, Chalk, Sand, Tobacco-Pipes, Lime, *&c.* 2. From a defect of animal motion in lazy, idle People, and such as sleep too much. 3. From the very vitiation of the Organs by too great a Weakness, (41. to 44.) or too much Strength (50. 92, *&c.*) or a defect of the Liquids themselves not easily to be amended (60. 69. 76. 106, 107. 406.): This may be occasion'd

by many; as all too great Secretions of whatſoever Nature; Vomitings, any ſort of Looſeneſs, Bloody-Flux, all Hæmorragies, a ſchirrous defect of a particular Bowel, *&c.* Or the Retention of any Humor which ought to have been ſecreted.

1169. And it is manifeſt, that theſe Cauſes, once præ-exiſting, do act either by leſſening the Solids or embarraſſing them with liquids incapable of paſſing freely: Whence a twofold Effect of this very remarkable Diſtemper, *viz.* a Conſumption, or a Leucophlegmatia, and a general Dropſie of the Muſcles in the ſurface of the Body call'd Anaſarca.

1170. And ſeveral ſorts of Diſeaſes will be produced as effects of a Cachexy according to the different color, bulk, tenacity, ſharpneſs and fluidity of the engaged Liquids, *viz.* a whiteneſs, paleneſs, yellowneſs, lividneſs, redneſs, greenneſs, blackneſs or tawny colour of the Skin; a heavineſs; a ſwelling under the Eyes and of the thinneſt Parts; a bloating and watry ſwellings of the

ment, if the circulating force be too languid or too violent. (92. to 107.)

1173. So that the Diagnostic of the Disease is pretty easie, and the Prognostic is made out from the consideration of the Cause, Duration, Effects, and Degrees of the Disease.

1174. And it doth even appear, that the Cure doth always require, 1. Sometimes a Softning of the too great sharpness and moderate thickning of the too great Fluidity. 2. A Dissolution and Fluxility of what is too tough or sticking. But as these two may proceed from so many Causes (1168, 1169, 1170.) it will be above all things necessary to alter and diversify the Medicines and Method of applying them according to the variety of those Causes.

1175. Care ought chiefly to be taken, that the Patient's Diet be of such as are most like unto the healthy Juices, easily passing, contrary to the peculiar Cause of the Disease, and as are most agreeable and grateful to him.

1176. Then that the same may be very well digested, must be procured with Sauces, Wine, Exercise, and convenient Air.

1177. And care ought to be taken that the Organs of the first Concoctions may also be well disposed, with gentle Digestives, or a Vomit, or a Purge or such Medicines as do strengthen their tone; as is "*Decoctum amarum, cum vel sinè purgantibus*; *Elixir proprietatis Parac. Tinctura Sassafras, Martis Mynsichti*, and the like.

1178. And after the Passages are somwhat loosen'd by the Use of those, and the morbific Matter

ſhall be ſomething attenuated, then you ought to inſiſt on attenuating Diuretic or Sudorific Medicines.

1179. Laſtly, uſe Chalybeats, Alcalies, Saponaceous Medicines, together with the Exerciſe of Running, Riding, Frictions and Bathing.

1180 And all theſe may be choſen from many and prepared many ways, and applied according to the known proximate Cauſe.

1181. But when a Conſumption or a waſting from this ill habit of Body is already occaſioned by too great an Acrimony; The Phyſician ought to inquire into the peculiar Kind of Acrimony, if poſſible, 1. By finding out the Cauſe of the Cachexy (1168.) 2. The Nature of the Diſeaſe, the particular Conſtitution of the Patient. 3. The Symptoms. 4. And of the Excrements.

1182. When thoſe are known, they are to be corrected by their oppoſites. See (1166.)

Of the Empyema.

a Bruise of the same, or a conceal'd Rupture, turning into an Imposthumation (324.) 3. Of the Diaphragm inflamed, suppurated, and broke on its superior Part towards the Chest (907.910.) 4. Of the Mediastinum affected after the same manner (877.) As also lastly, 5. Of the Pericardium it self. (877.)

1186. It is known to be coming, 1. From the Inflammation of those five Parts (1185.) not being quite removed by any Coction, Revulsion, Crisis, or Medicines, but ending with uncertain Shiverings, a little Fever troublesome at Night, an uncertain Heat, a heaviness instead of Pain, difficulty of Breathing, loss of Appetite and a Drought. (See 833. 892. 910.)

1187. It's known to be already present, 1. From the twentieth Day since the Inflammation began, without a Purgation of the same. 2. From the Signs of a Vomica in any of the said (1185.) Parts disappearing. 3. From a new Pain, Cough, difficulty of Breathing and Spitting, breaking out and soon again vanishing. 4. From a dry Cough, a heaviness upon the Diaphragm, the lying upon one Side only, a noise and rattling of the Pus upon Motion, a slow Fever, red Cheeks, hollow Eyes, a heat at the Fingers ends, the Nails growing crooked, and the Swelling of the Belly.

1188. The Effects of this Evil are, 1. A continual accumulation of Pus out of the broken Ulcer, which was neither heal'd nor cleans'd. 2. An Exacerbation, Putrifaction, Stench and Thinning of the same from its being detain'd in a close, hot, moist place, and continually moved. 3. An

Impediment in the lifting up of the Diaphragm, and in the extending of the Lungs: Whence a blowing, difficult, and ſtreight Breathing, a fear of being choak'd upon lying down, an impoſſibility of lying upon the ſound Side, a continual dry Cough, and an Anxiety or Anguiſh. 4. A Maceration, Corroſion, and into a deſtructive liquid Conſumption of the Lungs, Pleura, Diaphragm, Pericardium, and of the Heart it ſelf; whence a ſmall Hectic Fever with a quick, ſmall Pulſe, a redneſs in the Cheeks, a continual Drought, want of Appetite, a great Weakneſs, and Swoonings. 5. Hence a diſability and unfitneſs of all the Liquids for Nutrition, Circulation, Secretion, and Excretion; whence a Conſumption, Atrophy, a reſolution of the Fibres, a putrifaction of the Liquids, and their Rejection even through the corroded Lungs, or a mortal ſanious Belly-flux, with

1191. 2. When it is certain, that the ſame is already broke, (302. 836. N°. 4, 5. 894. 910.) then ought the Pus to be diſcharged from the place it fell upon. α. By the Mouth, if Nature doth ſhew that way. β. By Urine, if in the ſame there appear Signs of a diſcharge of Pus in ſome promiſing Quantity. γ. By an Opening of the Cheſt, made with a proper Inſtrument on the affected Side, between the 5. and 6. or the 4. and 5th Ribs, reckoning from below, and tapping the Pus ſlowly and by intervals, and cleanſing the Cavity of the Thorax ſometimes with honey'd Water, and then cloſing the Wound with the Prudence recommended in (303.) δ. Giving at the ſame time inwardly vulnerary, cleanſing Decoctions, and ſuch as reſiſt Putrifaction in pretty large Quantities.

1192. If the Pus be white, ſmooth, equal, void of ſtench, not colouring the Probe at its taking out; if the Patient be free from Fever, Drought, Looſeneſs, has an Appetite and digeſts kindly, is healthful in all other reſpects, and the Air be hindred as much as poſſible to enter into the Thorax; There is hopes, that the Patient may recover entirely. (304, 305.)

1193. But if the Pus be tawny, ichorous, ſtringy, fætid, colouring the Probe with a fiery colour, bloody, coming out all at once with violence; The Patient is in a very great Danger, for he'll either die inſtantly, or be ſoon conſumed.

1194. If the Mediaſtinum has been eat through, and that the Thorax be open'd, the Patient is generally inſtantly ſuffocated; " by the Air preſ-

" ſing upon all the Lungs at once with a greater
" force, than that, which comes in at the Wind-
" pipe, can overpoiſe.

1195. If the Empyema is of an old ſtanding, the Strength decay'd, the Hair falls off, and a colliquative or melting Looſeneſs preſſes hard, the Body wears away; If then the Operation of the Empyema be made, it only ſerves to haſten Death.

Of Conſumptions from Ulcerated Lungs.

1196. If an Ulcer has ſo far eat through, or into the Subſtance of the Lungs, that the whole habit of the Body be thereby conſumed; The Patient is ſaid to be in a Conſumption of the Lungs.

1197. The Origin of which Ulcer is deduced from any Cauſe, which is able to ſtop the Blood in the Lungs, ſo as to be changed unavoidably into a purulent Matter.

per and too forward acuteneſs of Wit and Underſtanding. *β.* In that weakneſs of the Bowels, which occaſions thoſe Aliments, which of their Nature are too tough, to create Obſtructions, Putrifactions, and to grow acrimonious, and by theſe ill qualities to ulcerate the deſtroy'd Veſſels after a preceeding ſpitting of Blood: It is known by a ſmall Fever, a dry Cough, an increaſed Heat, a redneſs of the Lips, Mouth and Cheeks increaſed and apparent about the time that the new Chyle doth enter into the Blood, by a propenſity to Sweats upon Sleeping, a Weakneſs, and great panting upon the leaſt Motion. *γ.* At that age when the Veſſels having reach'd to their full growth, do reſiſt a farther endeavour of the Liquids to lengthen the ſame, while the Blood is increaſed in quantity, ſharpneſs, ſtrength of motion, and conſequently between the Years of *16.* and *36*, and earlier in Girls than in Boys, becauſe their arriving ſooner to their full growth. *δ.* In hereditary Diſpoſitions: Hereto refer what has been ſaid in 24. 26. 29. 38. to 41. 44, 45. 48. 60, 61. 64. 69. 72. 82. 84. 86. 100. 106.) for thoſe compared with the Circumſtances juſt mention'd do explain, define, foretel, the Nature, Cauſes and Effects of Blood-ſpitting; and thoſe Circumſtances of that Effect, (*viz.* ſpitting of Blood) are haſten'd. 1. By the Interception of all the uſual Excretions, chiefly of Blood; ſuch as the Piles, Monthly Courſes, Cleanſings, bleeding at the Noſe, Omiſſion of Bleeding at uſual times, chiefly in plethoric People, and ſuch as have loſt ſome Limb. 2. By any great force upon the Lungs,

either

either in Coughing, Hollowing, Singing, Running, great and forcible ſtraining of the Body, violent paſſion of Anger, or any Wound occaſion'd by any ſort of Inſtrument or Weapon. 3. By a Diet of ſalt, ſharp or aromatic Meats; Drink of the like Nature, way of Living or any other Diſeaſe, whence the quantity, ſharpneſs, quickneſs, rarefaction or heat of the Blood is augmented; and this is the reaſon, why this Symptom is ſo frequent in acute Fevers, the Plague, Small Pox, and Scurvy.

1199. It ariſes from all thoſe (1198.) Cauſes with a ſlight Pain, a moderate Heat, and a narrow preſſure of the Cheſt; The Blood iſſuing out is generally florid, of a fine Scarlet frothy, with a Cough, a noiſe and rattling in the Lungs, mix'd with ſome ſmall Fibres, Membranes, arterial, venous or bronchial Veſſels; with a ſoft, ſmall, waving Pulſe; a Panting; and a ſalt Taſte perceived before the ſpitting of it up.

1200. It is cured, 1. With a large Bleeding every third Day, repeated to four times, or till the Inflammatory Cruſt has entirely diſappear'd. 2. With cooling, thickning, ſtiptic, ſoftning Medicines, long continued and mixed now and then with gentle Balſamics. 3. Directing the ſix Non-naturals, ſo as to make 'em contrary to the Cauſes (of 1198.): Chiefly with a very temperate and ſoft way of Living and Dieting always obſerv'd: to which a Milk Diet doth peculiarly belong. 4. Correcting the Specific Nature of the Cauſe or the peculiar Diſeaſe, which has occaſion'd it.

1201. When it has once happen'd and has been suppress'd by those means, the Patient ought to be let Blood every six Months for some Years together; yet lessening the Quantity at each time, that it may be left off at last almost insensibly.

1202. But if, because of the Greatness of the Evil (of 1198.) or of Styptics untimely applied, or the neglect of that true Method proposed (in 1200.) there doth arise a shortness of Breath still encreasing after the spitting of Blood, uncertain Shiverings; a heat and redness of the Cheeks, a small dry Cough, a Hectic Fever, a greater Drought, a Weakness, a sense of heaviness in the Chest; It denotes that the Wound, out of which Blood was spitted, has already begun to change the Matter about its Lips, and the Blood dried under a Crust into Pus, and that this Collection is passing into a conceal'd Bag, which broke, doth terminate into a manifest Ulcer of the Lungs.

1203. 2°. This Collection of Matter doth also besides the Causes mention'd (in 1198.) arise from any Inflammation of the Lungs terminated into an Imposthume (832. to 843. 867.) and is known from the Signs there laid down.

1204. 3°. And it is even possible that an Empyema (1185.) shou'd gnaw, melt and consume the Lungs, so that the same Disease follows, as if it had been occasion'd by an Ulcer first bred in their Substance (1188. N°. 4.) And that may be known from the Signs there mention'd.

1205. Whence it is evident, which are the Signs to know an Ulcer of the Lungs by, even of a Conceal'd one, and how many Causes there be of the same,

ſame, and how many ſorts, and conſequently how many different kinds of Conſumptions.

1206. Now the Effects of an Ulcer of the Lungs already made, but yet conceal'd by the Name of Vomica, are pretty much ſuch as follow: The Sharpneſs, Quantity, Putrifaction of the Pus increaſe daily; The Membranes, which do contain the ſame, are daily dilated, eaten and made thinner; The Blood and bronchial Veſſels are converted into Pus; The whole Lungs or one of its Lobes is conſumed into Pus alſo; A continual dry Cough, or one that continually rubs off Spittle with its ſhaking and forces it up, attends the Patient; all the Blood running upon the Ulcer is turn'd into Pus, the Vomica gains ground every Day into the ſubſtance of the Lungs, and that breaks at laſt into the Pipes of the Larynx; Sometimes the Patient is choak'd at once with the breaking and iſſuing forth of the Pus, or voids the ſame daily in great quantities with a Cough, and

a ſmall and languid Pulſe, a troubleſome ſharp heat in the upper Parts, glowing Cheeks, an Hippocratic Face, an unexpreſſible Anguiſh chiefly towards Evening, a great Drought, large overflowing Sweats in the Night, red Puſtules in the Face, and about the Neck and Breaſt, a ſwelling of the Hand of the affected Side, a great Weakneſs, a Hoarſeneſs, a falling of the Hair, an Itching all over, with watry Puſtules; a Looſeneſs with yellow, fætid, purulent, cadaverous Matter, preſſing hard with almoſt a continual Motion to go to Stool, and ſpending the Spirits greatly; a ſuppreſſion of Spittle and Death; whence theſe Rules are eaſily drawn.

1207. 1. An Hereditary Conſumption is the worſt Sort of all, nor to be cured but by preventing the ſpitting of Blood by the ſame Method as it is cured in others.

2. A Conſumption occaſion'd by ſpitting of Blood from an external Cauſe without any previous inward Defect, is the lighteſt, if all Circumſtances be alike.

3. A Conſumption (of N°. 2.) in which the Vomica is ſuddenly broke, when the expectorated Pus is white, well digeſted, even, eaſily brought up, anſwering in quantity the largeneſs of the Ulcer, without Drought, with an Appetite, good Digeſtion, Secretion and Excretion, is difficultly but yet curable.

4. A Conſumption of the Lungs from an Empyema is incurable.

5. Heavy, ſolid, ſtinking, ſweet Spittle, with the laſt Signs of (1206.) ought to extinguiſh all *hopes of a Cure.*

1208.

1208. When there is already a Vomica form'd in the Lungs, the Intention of the Physician ought to be, the Ripening of it as soon as possible, and then to break it: Which is executed by a Milk-diet, riding on Horseback, lukewarm Steams, and expectorating Medicines: When it is broke, then it is requisite,

1. To fence the Blood against the purulent Contagion.
2. To empty the Ulcer of its Pus forthwith and to cleanse and heal up the Lips of the same.
3. To allow such Nourishment as requireth the least Concoction, that they may not only flow through, but also be changed by the remaining power of the Lungs; But yet solid enough to be capable of nourishing the Body and unqualified to make more and new Pus.

1209. The First Intention is satisfied with the help of Medicines of a gentle and plaisant acidity, saltness, of vulnerary Herbs, gentle Balsamics, given in all Shapes in great Quantities and continued long.

1210. The Second by Liquid, and Diuretic Medicines, that promote coughing, whether Internal or External; By Riding and Country Air; Then by the Help of balsamic Cleansers both Internal and External; and healing up at last by virtue of consolidating Paregorics.

1211. To the Third belong Ptisanes, Broaths, and all things made of Milk

1212. As to the palliative Cure of this Disease it regards chiefly the Cough, Oppressions, and Loosenes.

1213. Which

1213. Which may be eased with a proper Diet (1211.) Opiates administred prudently, and warm Liquids.

Of other Sorts of Consumptions.

1214. As Consumptions are mostly occasion'd by Ulcers in the Lungs, There are some also that owe their birth to Ulcers of the Liver, Spleen, Pancreas, Mesentery, Kidneys, Womb, Bladder, *&c.* The Knowledge, Prognostic, Effects, Cure and Palliation are easily drawn from the distinguishing Marks of each particular Bowel of which no good Physician ought to be ignorant.

Of a Dropsy.

1215. When watry Serum is shed out of its Vessels and received into the Cavities, or when stagnating somewhere it distends its Vessels too much, it is called *a Dropsie.*

1216. Which may consequently take place wherever there are such serous Vessels, that is, in the whole habit of the Body, and in each particular part thereof.

1217. Hence the Hydrocephalus, from a gathering of Waters between the very external Integuments, between them and the Cranium, between the Cranium and the Meninges; between the two Meninges and the Duplicatures of them; between them and the Brain; between the Foldings of the Brain, in the Cavities or Ventricles of the same; and yet the Patient may not die suddenly.

1218. It is easily known; the last Kind is incurable, the others may be cured, by burning slightly, trepanning, puncturing prudently and slowly, using at the same time inwardly such Medicines as purge the Waters, and afterwards do strengthen both the Blood and Vessels; or some may be dissipated by such as do discuss externally.

1219. In the Dropsie of the Chest, which is apt to collect Lympha from several parts, we may observe almost the same Signs as those of an Empyema; but the observation of the antecedent Cause doth shew the difference of the Disease and how to distinguish between them. This Dropsie is cured by the Opening of the Chest, using at the same time those Things which are contrary to its Cause, and are able to remove it.

1220. The Lungs also have been experienced to have fallen into this Disease by admitting either watry Bladders, or even a dropsical Bag by the accumulating, and shedding or receiving Water in their larger Sinusses; which Disease is certainly difficult to know and to cure, unless some other present Signs do by chance put the Physician upon the administring of Medicines proper for the Cure of this Dropsie; "Which is cer-
"tainly but a Chance, because its Symptoms are
"so like those of other Asthmas from other
"Causes.

1221. And even the forepart of the Aspera Arteria which is in sight, collecting the Lympha by the help of any power apt to stagnate the same, doth often shew us a sort of Bronchocele, (a wa-

try

try ſwelling in the Throat like a Rupture;) which as eaſily known is generally cured by a Puncture made therein, with diſcuſſing and diverting Medicines; If obſerved as Authors do mention. *NB.* " Our Author ſeems to doubt of the Exi-
" ſtence of ſuch Swellings, becauſe he never was
" farther than his native Country *Holland* : But
" he would have ſeen them very common in
" *Switzerland* and in many other Countries,
" where People drink Waters that have a great
" mixture of melted Snow amongſt them; which
" are generally cured by Diſſipating, drying Me-
" dicines and drinking of Wine.

1222. The Follicle of every Glandule may be invaded with the like Diſtemper, which is there curable after the ſame Method.

1223. A very remarkable ſort of Dropſie doth alſo occupy frequently the Ovaria in Women, chiefly the barren and advanced in years, it is but difficultly diſtinguiſh'd from an Aſcites, and hardly ever without an Anatomical Inſpection; It is never cured, but often changes into an Aſcites.

1224. And even in the very Cavity of the Womb, by its Internal Orifice ſhutting very cloſe, is often ſo much Water collected that the whole Belly is as much ſwell'd as in a true Aſcites; which Diſeaſe is alſo difficultly known becauſe of ſeveral doubtful Signs, which ſeem to indicate the Patient to be with Child : It is to be cured by relaxing the Mouth of the Womb with Fomentations, Steams and ſuch Medicines as operate moſtly upon the Womb.

1225. Whenever this ſame Lympha doth ſtagnate in the whole habit of the Subcutaneous Fat, or is there depoſited, there ariſeth that ſort of Dropſy call'd *Anaſarca*, *Upoſarca*, and *Leucophlegmatia*, which extends it ſelf alſo about the Abdomen and Scrotum.

1226. While that ſame Water is collected within the duplicature of the Peritoneum, in the Cavity of the Abdomen between the Peritoneum and the Bowels of the Abdomen, or in the dilated Cavities of the Glands or Veſſels contain'd in the Abdomen, it is call'd an *Aſcites*, and alſo a *Tympany*, if it be puff'd up from rarified Steams, Water, Pus, Ichor, and Air, which are here lock'd up, kept hot, and thence putrify.

1227. The Dropſy of the Teſticles or Hydrocele is, 1. That of the Scrotum; belongs to (1225.) is known by feeling, by an apparent tranſparency, and the pitting of the ſame after preſſure. 2. That of a Bag, from the production of the Peritoneum, bred in a true Rupture: happens in a violent Aſcites; it is known from an Aſcites or Tympany having preceded; from the Vaniſhing of the Swelling upon preſſure, lying upon the Back with the Buttocks rais'd higher than the Head, and upon the voiding of the Waters out of the Abdomen; from a ſudden increaſe often and decreaſe of the ſame without any apparent Cauſe; from the Figure of the Tumor not unlike a Gut-pudding from the Scrotum up through the Groin. 3. Of the peculiar Sheath and outward Membrane of the Teſticle: it happens, if the Humor there ſeparated is not reſumed again by

by its proper Vessels, but stagnates, is accumulated, and often extends it Bladder to an immense bulk; Or if the same be there collected from the said Vessels being either broke or obstructed; The Inflammation, Suppuration or Ichorous Collection does often appear like this sort of Dropsy in the Testicles. It is known from the Tumor not being Elastic, not giving way, hard, and produced slowly; from the absence of the Signs of the First and Second kind of Hydrocele; from the round Figure of the Tumor, or at least Oval; from a manifest Transparency, if, upon bending the Scrotum all round, the bag of collected Lympha held to a Candle is seen to be clear and transparent like an Egg: But whether besides these there be also such a Tumor between the Tunica Nervea and the very Substance of the Testicle, or even in its very Substance, is not so certainly determin'd, is hardly discernable from the preceeding Kind, and is perhaps not to be cured but by Castration. All these come under the common denomination of Hydrocele.

1228. It has been observed, that all these Diseases are produced by all Causes, which are able, 1. To restrain the serous Liquid, so as not to be able to return into and through the Veins, but is forced to stagnate in the extended Vessels. 2. To break the Vessels thus as to be shed and spill'd between the Membranes. 3. Or to obstruct the Vessels which return the same from the Cavities so greatly, and so little move the Liquids already deposited in the Cavities, that the same are neither exhaled nor resorbed by the Veins.

1229. Which Cauſes have been obſerved chiefly to be an hereditary Diſpoſition common to a whole Family more or leſs: too much and ſudden drinking of cold Water not brought away or diſſipated either by Vomiting, Stools, Sweats, or Urine, promoted by Heat, or proper and ſufficient Motion: Acute Diſeaſes, chiefly the moſt ardent Fevers either with or without an unquenchable Thirſt, though never ſo much eaſed with plenty of Liquor: A Bloody Flux proceeding from the Spleen long continued: All obſtinate Obſtructions of the Bowels, as a Schirrus of the Liver, Spleen, Pancreas, Meſentery, Kidneys, Womb and Inteſtines: A Jaundice: A violent and long continued Quartan Ague: A Lientery: a Diarrhæa or long Bloody Flux: Cæliack Paſſion: "(in "which the Aliments run through very little al- "tered, and without ſupplying the Blood with "any part of their nouriſhing Parts.) An Empyema: A Conſumption and the Gout: All too large Evacuations, and chiefly thoſe of arterial Blood: the Drinking of ſharp and ſtrong fermented Liquors: The dieting and living upon tough and hard to be digeſted Food. Large and many watry Bladders hanging in the Cavity of the Abdomen, and many more like Cauſes, as Melancholy, Scurvey, *&c.*

1230. The Effects of this Diſeaſe and its Progreſs are pretty near as follows: The Feet ſwell, chiefly towards Night, this Tumor increaſeth gradually both in bulk and limits: then doth the Abdomen ſwell and grow bigger daily; In a Tympany the ſame will ſound when beat upon, There

is

is a Noise of floating Water in the Ascites, from the Water being let loose in the Cavity of the Abdomen; but it deceives in that sort of Ascites when the Water is yet contain'd in some Bladders and Bags: Then comes on Difficulty of Breathing, Drought, a Heaviness, Sluggishness, Costiveness, spare Urine, a slow Fever, privation of all Sweats, a Leanness which is greater in proportion as the Swelling is grown: Then you shall see Waters gathering in the Thighs, Scrotum, and between the Skin of the Abdomen; watry Bladders, an Acrimony of the Water stagnating and putrified by its tarrying in a hot and close Place; Ulcers, Gangrenes, Bleedings at the Nose, a kind of Rupture or a Protuberance of the Navel, a Sphacele of the Bowels, and then Death.

1231. The Cure of a Dropsy therefore requireth, 1. To procure a free Flux to the Lympha, whether it be Water, bilious, ichorous or bloody Serum. 2. To draw out the Waters that are already extravasated and fallen loose into the Cavities. 3. To remove the Defects of the debilitated Bowels, whether those have been the Cause or the Effects of the Dropsy.

1232. A free Flux is procured to the Lympha by removing the Causes which hindred the same. Which are, 1. The vital Strength not sufficient to make that circulate duly. 2. The compression, disruption and obstruction of the Vessels. 3. The too great tenacity of the Liquids.

1233. To the First (1232.) do contribute all things call'd Cordials, that are strengthning and stimulating; which are taken, unless there be a

great Drought attending, from the warm Aromatics, Salts and Oils, in the ſhape of Electuaries, Mixtures, medicated Wines, medicated Beers, Pills, Decoctions, Syrups and Lozenges, according to the Palat and Deſire of the Patient, as much as the Nature and Compoſition of Medicines can bear, without loſing any part of its virtue.

1234. But if a troubleſome Drought attends, and the Cauſe of the Diſeaſe be hot, and the ſame be alſo attended with a hot Fever, which often happens, then in the room of thoſe juſt now commended, ſubſtitute thoſe Cordials that are refreſhing by their grateful Acid, and are of the gentleſt Aromatics.

1235. In both (1233, 1234.) Caſes are uſeful Frictions, Motion and Heat.

1236. To the Second Intention (of 1232.) diligent Search muſt be made after the Cauſe that makes the Veſſels narrower, that obſtructs or breaks them, which muſt be removed, if poſſible, (1229.) or muſt be often amended with Mineral Waters.

1237. The too great toughneſs of the Liquid will be reſolved in the hot and cold ſort of Dropſy, (1233, 1234.) 1. By thoſe Remedies there mention'd. 2. By Alcaline Salts chiefly, not only Volatil, but more effectually by fixed ones. 3. By Preparations of Mercury and Antimony, and others uſed in Venereal Caſes, chiefly of the Chymical Kind, if well prepared and applied with all the Sagacity that able Phyſicians ſhou'd be Maſters of.

1238. The Waters when fallen into the Cavities

ties are fetch'd out thence, 1. By a Paracenthesis. 2. Making new Out-lets. 3. By Urine. 4. By Vomiting. 5. Purging by Stool. 6. Dissipating.

1239. If the Cause of the Dropsy of the Belly be recent, and come on suddenly from an external Cause, Strength entire, the Patient young, the Bowels sound, nor ill affected with any other Disease, the Waters not yet putrified, nor stagnated long in the place, Tapping must be resolved on immediately.

1240. Which make three Inches below the Navel, and the same distance from the *Linea alba*, which measure is understood to be taken as in a healthy Body free from a dropsical Swelling, for which the Operator must allow in proportion as it is farther from the natural Shape; it must be made on the Side opposite to the original Seat of the Distemper, that is, if the Dropsy took its rise from a Defect of the Liver, the Operation must be perform'd on the side of the Spleen, and so on the Contrary, *&c.* The Puncture must be made with a proper Instrument, and a Tube be introduced and be taken out again; The Water must be tapp'd in a small quantity at a time, twice a-day, spending at least fifteen Days in emptying the whole; and all the while those Remedies must be administred recommended (from 1233. to 1238.)

1241. If the Conditions of (1239.) are either not present but on the contrary some opposite to those; Then ought this Operation by no means to be allowed of, for it will only hasten Death,

and bring blame and reproach on the Operator, or the Phyſician who adviſed it.

1242. Emiſſaries or Iſſues and Setons made with a red-hot Iron, Cauſtics, Spaniſh Flies, Launcet or a Needle and coarſe Thread, in a fleſhy depending part, have often been of great advantage, chiefly if the Nature and Degree of the Illneſs permits to keep them open.

1243. And as many Examples are mention'd of Dropſies cured by Diuretics, we ought alſo to try that Method, if Nature doth ſhew us the way, Exhibiting urinary, fixed Compound, ſome Specific Salts, prepared from Animals, Vitriol and others from ſome diſſolved Metals, all which are ſaid to be Specific for the Kidneys.

1244. By Vomiting are reſolved all the tough Liquids, the obſtructed Parts are ſhook, the ſtagnating Matters are drove out, whence they are of admirable uſe in this Diſeaſe. *NB.* " This muſt " be underſtood to be uſeful in the beginning be- " fore the Waters are yet let looſe into the Ca- " vities, for then it more weakens the Patient " than it voids any of the extravaſated Waters.

1245. But they ought to be given Strong, repeated often and without any long Intervals be- " tween each : " Otherways you only open the " Paſſages and fetch out nothing ; Give therefore " boldly ten Grains of Tartar Emetic at leaſt " every other Day : *Sydenham* uſed to give an " an Ounce and a half of *Infuſio Croci Metallo-* " *rum* every Day for three Days together.

1246. And theſe very Vomits will at the ſame time Purge by Stool, when they work uſefully

two

two Ways, and even a Third, for they generally free the Neck of the Bladder of its obstructing Load, and make a Passage for Plenty of Urine.

1247. The Waters are purged off by Stool, if Strong, quick Purges be given, and often repeated; " Let the same be Liquid as much as " possible, because they'll find their Way easier to " exert their stimulating power on the Intestines, " whereas dry Purges may be buried as it were " in the tough slimy Matter, with which they " then abound. With our Author, agree *Sydenham* and *Lister*; But among the Ancients *Celsus* was of Opinion, that the Physician ought " first to begin with gentle Purges, to measure " the Belly daily and to enlarge the Dose gradu- " ally, if he finds it answer.

1248. The Waters may be *dissipated* by the heat of a Fire or Stove, Oven, Sand, Sun, Salt or Dung, which is encreased as long as the Patient can bear, and till it throws him into a large Sweat, or a Diaphoresis. *NB.* " The famous *Dampier* in his Voyage round the World tells of " himself, that when a long continued unwhole- " some Air and Diet had brought a Dropsy upon " him (I take it to be an Anasarca) and had been " set on Shore in the Isle of *Califurnia*, that he " had buried himself (all but his Head) into " Sand heated by the Sun-beams for about half " an Hour, that he was carried thence to his Bed, " cover'd with many Clothes, whence he fell in- " to so profuse a Sweating, that from that time " he began daily to mend, and was at last per- " fectly cured. This *Dampier* had read proba-

" bly

" bly in ſome ancient Author; and how com-
" monly it was uſed by 'em, may be ſeen in *Mer-*
" *curialis*, and others.

1249. It may be done beſides with abſtaining for a long while together from all manner of Drink, living upon Biſcuit, with a little Salt, and now and then a Spoonful of Mountain or Canary. The celebrated *Capivaccius* of *Padua*, has left us the Hiſtory of a Patient of his, who was cured by him, " Whom he affirms to have abſtain'd
" from all Drink for two whole Years together,
" and had taken no other Aliments than Biſcuit.
" 'Tis probable that he had ſomething allow'd
" him, or found out ſomething that did delude his
" Drought: As *Liſter* reports of a Woman, who
" was alſo cured of a Dropſy by the ſame Me-
" thod, but had of her own accord ingeniouſly
" found out means to *fallere Sitim* with a mor-
" ſel of Bread, which twice a Day ſhe uſed to
" dip in Brandy, keeping it in her Mouth, and
" thereby keeping the Glands of the Mouth from
" cloſing.

1250. The Third Intention (of 1231.) is anſwer'd chiefly by Chalybeat Wines, Steel in Subſtance, Strengthners gently adſtringent given in a due Doſe and Seaſon; a dry Diet; generous Wine without Water, which are old, adſtringent; and all theſe help'd with Exerciſe.

1251. A Tympany is cured by the ſame Method and Means, if it took its riſe from rarified Steams of extravaſated and putrified Humors, for then it is removed by the removal of the Cauſe: But if it owed its birth to Air fall'n into Cavities

through

through the Membranes of the putrified Inteſtines, not able to return back, but rarified more and more through the heat of the Body, then do all things by the help of this very Air corrupt very ſoon, and the evil from this Cauſe is almoſt always incurable: So that a dry Dropſy is always reputed much more incurable than a moiſt one: The Paracentheſis has eaſed ſometimes, but ſeldom cured; A bandage next to that may be uſed to bind the Belly and to eaſe it thereby.

1252. The firſt Sort of Hydrocele (1227.) is cured, if, 1°. The Anaſarca its parent be cured firſt. (1231. to 1238.) 2°. By the Remedies (of 1248.) 3°. By the moſt powerfully diſcuſſing, and at the ſame time ſtrengthening Medicines, apply'd to the very Scrotum, and put into a greater Motion by a conſtant external Heat. The following Cataplaſm is incomparable. ℞. *fol Aſar. Ellebor. nigr. Taba.* āā ℥iij. *Bryon. raſ.* ℥j. *Coque ex aqua vel fæcibus vini vel Cereviſiæ fort. Admiſcendo ſub finem Galban. ſolut.* ℥iſs. *ol. junip.* ℥j. *M. pro Cataplaſmate.* But the Second ſort (1227.) will be beſt cured. 1. If the original Rupture is firſt well cured by a skilful Surgeon. 2. If the Matter of the Aſcites be carried off and its Fountain drain'd. (1238. to 1252.) 3. Then preſſing upon the Groin with convenient Machines, as in Ruptures with Bandages: but it is ſeldom that a Dropſy which has gone ſo far is entirely cured. The laſt ſort (1227.) will be cured, 1. By giving ſtrong Purges often repeated, and keeping to a drying Diet. 2. By the ſtrongeſt Diſcutients and Corroborating Applications. 3. By piercing

into

into the Scrotum. 4. Applying Cauſtics, and cauſing the Part to digeſt well.

1253. Whence it is evident again, That in the Cure of Dropſies the greateſt Difficulties ariſe more from the nature of the Waters putrified in the places where they ſtagnate, than from its firſt Cauſes? and Reaſons may be given, why, when thoſe putrified Waters are tapp'd off, or otherways evacuated, thoſe Parts that were floating in 'em do ſooner gangrene than they would have done otherways? Why upon letting out the Waters too ſuddenly out of the Cheſt or Abdomen, the Patient inſtantly dies or at leaſt faints away to a ſurpriſe? Why dropſical People are commonly ſo droughty? and what this Thirſt means? Why Acids are ſo often beneficial in that Diſeaſe? ("I "remember a young Lady at the *Hague* who was "cured of a Dropſie by eating a great quantity of "Cherries by the advice of our Author. Why after ſtrong and great Evacuations of the Waters the ſwelling of the Belly does not only remain, but even increaſe? And why this Swelling falls ſoon upon giving a ſufficient Doſe of Laudanum?

"I cannot forbear mentioning here *a Dropſie* "*of one Legg*, which a worthy Clergyman much "afflicted with the Stone, at this time under my "Care for both, doth labour under, partly owing "its riſe to the Scurvy, which he has contracted "in Sea Voyages, and partly in *Ireland*; but, I "believe, chiefly to the obſtruction of the Kidney "of the ſame Side with the dropſical Leg; He "never felt any Nephritick pain on t'other Side

"till

" till three days ago, when he was seized with " a most desperate Fit of the Stone lodged in that " Ureter; and time will shew whether I shall be " able to prevent the Dropsie falling also in that " Leg : I have conceived some hopes of success " from having very near conquer'd that of the " first; and the more because that what will cure " the one Disease is also very proper for t'other.

Of the Gout.

1254. The Gout is a painful Illness chiefly seated in and about the Ligaments of the Bones of the Foot and its Joynts, invading mostly in the Spring and Autumn.

1255. Which, when it doth run undisturb'd its own natural Stage, is the Companion usually of People past the middle Age, the Male Sex, Men of acute and deep sense, such as do exercise the same much, and protract their Studies late in the Night, such as live voluptuously, drink much of generous strong Wines, chiefly at Night; such as have been much addicted to Venery in their younger and unripe Years, large, broad and full habited Men; such as are too much addicted to Acids; as cool their sweaty Feet too suddenly; as sweat in wet Stockings or Shoos; hence such as do hunt or ride much in cold Weather; such as have it from their Parents, or lie much with gouty People.

1256. The Season, Age, and other Circumstances which perform the part of Causes (1256.) and then the Phænomena, Beginning, Progress, Effect and Termination of this Disease being altogether

together well weighed and comprehended, do demonſtrate what Cauſes the Phyſician ought to form to himſelf to determine his Judgment in the Cure of this Diſeaſe.

1257. For before this long hidden and lurking Diſeaſe ſhews itſelf in its repeated Paroxiſms you may obſerve ſuch People, that it will invade, to be afflicted with Crudities and Indigeſtions, Belchings, Heavineſs, flatulent Sluggiſhneſs, Coſtiveneſs, the Interception of the uſual ſweating of the Feet, and the ſwelling of the Veins in the ſame.

1258. All Errors committed in the Nonnaturals, whence Crudities are form'd, are apt to haſten and bring on the Fit when little expected; ſo that immoderate Venery; Sitting up; Debauchery; the Eating of Hogs-lard and the like; Overfatigue; Great Paſſions; the taking of a Purge only, moiſt, cold, tempeſtuous Air and Weather, all theſe are very contrary and Enemies to gouty People.

1259. The place which it commonly firſt and regularly invades, is always the Foot, and chiefly thoſe Parts of the ſame through which the Liquids flow the moſt difficultly; as the Perioſteum, Tendons, Nerves, Membranes, Ligaments; ſuch as are the remoteſt from the Heart, and ſuch as are the moſt preſſed or pinch'd.

1260. When theſe Parts (1259) are at length ſhut up by Obſtructions, Tumors, or any Matter cramm'd up there, or that the Matter of the Gout by any Power whatever is thrown and diſperſed into other places, it does lay hold alſo of ſome other parts, yet ſo, as to obſeſs the ſame

places

places and the same parts; that is, Periosteum, Tendons, *&c.* (1259.)

1261. The Patient is immediately sensible of a stretching, tearing, straitning Pain, gradually increasing and decreasing again, with a moistness, redness, tumor; ended with a Diaphoresis, keeping warm in Bed, an itching, a skinning; or changing into a chalky Substance which breaks the Vessels.

1262. From all which it appears, That the proximate Cause of this Disease is a vitiated temper of the least, and consequently nervous Vessels in the Body; and also of the Liquid, which waters those nervous Parts.

1263. And moreover, that this Liquid here is defective by its Acrimony, and by its over-toughness; and the solid Vessels by too great a Narrowness and Stiffness.

1264. Whence it shews it self in places the most distant from the Brain, as resisting Motion the most, because of their solidity, hardness, exercise and the weight incumbent upon 'em.

1265. Now the nearest origin of this Defect (1162, 1163.) is from an indigestion of the Bowels, which do not sufficiently attenuate or assimilate the Aliments into a Substance, fit to supply the Nerves with Juices proper for 'em, which do require a most elaborate Concoction.

1266. The reason whereof may again be fetch'd from remote Causes (1255. 1258.)

1267. It supposes therefore that almost all the Functions of the several Concoctions are vitiated to produce this Disease, and that with a Defect

scarce

ſcarce perceivable in the larger Veſſels, or in their Liquids.

" *NB.* I cannot poſſibly go on farther without
" returning Thanks to our Author for having here
" furniſh'd a very late and new Writer at *York*
" with a Text to write an Elaborate Treatiſe up-
" on, and at the ſame time much applaud the
" ſaid Writer with his good Taſte in chuſing ſo
" good a Plan, and commend his Abilities in pa-
" raphraſing and inlarging as well upon it, as if
" he had taken it from our Author's own Mouth
" in his Lectures at *Leyden*; I cou'd only wiſh,
" that as he has not been covetous in his Quo-
" tations of other great Men, and even of ſuch as
" make yet a living Figure in *London*, he had not
" forgotten to do homage to my Maſter, and had
" named him Cap in hand, at leaſt once; That
" wou'd have excuſed his being ſo far a Plagiary
" as even to tranſcribe entire Sentences, and thoſe
" the moſt remarkable in his whole Book; which
" you meet with throughout his Treatiſe; but
" I refer the Reader chiefly to the laſt and fifth
" Chapter; which ſhou'd have been the Firſt,
" but that in all probability he wou'd hide his
" Theft, or ſhew us another Miracle of the Horſe,
" whoſe Head ſtood where his Tail ſhou'd: I
" ſhall not put down his Name here out of mere
" Charity, hoping he may mend.

1268. The Cure therefore is impoſſible, unleſs wrought by ſuch Medicines as are able to amend theſe Defects entirely. So that the Gout has hitherto been reputed incurable by Ancients as well as Moderns, if you except a few Quacks and boaſting Empirics in all Ages. 1269.

1269. That which is Hereditary and breeds Chalk-ſtones is the moſt difficult of all to cure, or even to eaſe.

1270. From the ſame may be gather'd, that Bleeding doth not reach either the Matter, Seat or Cauſe of the Diſeaſe: Yet that the ſame may be beneficial ſometimes by chance cauſing a ſmall Revulſion and leſſening the urgent Powers mentioned in (1257.)

1271. And that Vomiting or Purging doth not effect ſo much here, as is generally hoped for from 'em; That they often raiſe a tumultuous motion of the Nervous Juice, withdraw and drain the moſt liquid Parts, and weaken the expelling Faculty.

1272. That the Sudorifics artfully adminiſtred are of greater uſe.

1273. And that nothing can be more prejudicial in this Diſeaſe, than to hinder the matter of the Gout, now ſufficiently ſtay'd, nor ſafely to be educted any other way, nor to be corrected, from flowing freely to its proper Places, and chiefly to ſuch as are in Pain already, and as are the leaſt dangerous. For if the ſame be retain'd and hindred, it creates Apoplexies, Palſies, Deliria, Weakneſſes, Sleepineſs, Tremors, Convulſions all over, if it has turn'd upon the Brain; Aſthmas, Coughs, Suffocations, if upon the Lungs; a fierce and Convulſive Pleureſie, if upon the Intercoſtal Muſcles or Pleura; Nauſeating, Anguiſhes, Vomiting, Belching, Gripes, Contractions of the Bowels, if upon the Entrails of the Abdomen, and I do not know how many more wonderful and often ſud-

denly Mortal Diſeaſes: Which a Phyſician unacquainted with the firſt occaſion of them, ſhall in vain endeavour to cure with Means never ſo proper and effectual on all other occaſions: for they'll not give way, unleſs you bring on a New and a ſmart Fit of the Gout, and fix the ſame in its proper and ſafe part. This Damage and Miſchief will be occaſion'd by the imprudent application of Narcotics, Coolers, Conſtringents, and Thickners; or by the giving of any weakning, evacuating, revelling, or ſuffocating Remedy: Hence is this often occaſion'd by Bleeding, Purging, Vomiting, Plaiſters, the juſt named Cataplaſms, and all Opiates; or alſo the ſpontaneous Weakneſs of decrepid old Age; Or from all the external Parts being thus obſtructed, dried, corrupted, deſtroy'd, that the morbific Matter can no longer paſs through them: Hence it is plain which ſort of Gout, what ſort of Symptoms in it, and why it doth at ſome times Kill?

δ. Great, continued Exercise of Riding in a pure Country air, and Frictions and Motions of the Parts often repeated. ε. Going to Bed early and lying long in the Morning.

1276. To the Second (1274.) will be useful, 1. Any volatil Salt taken long but in small Quantities, in the Morning some time before he rises, with a large Draught of some softning Apozem, and thereby promoting a gentle Breathing or Sweat for about an Hour together. 2. Warm Frictions with dry Cloths. 3. Repeated Doses from time to time of such as purge Waters acuated with Calomel or Mercurius Dulcis, and adding towards Night an opiate quieting Draught.

1277. With which Medicines and Method much good is done even in the chalky and nodous Gout.

1278. To temperate the raging pain of the Parts, it may be often allowed upon urgent Occasions to use internal Opiates, a great quantity of Milk-whey, or such like thin cooling Drink, but drank warm; And externally some emollient Cataplasms or Fomentations, or Anodynes applied hot, or even whipping the Part with Nettles, or anointing with Therebinthinated Balsam of Sulphur, or burning with Moxa, " or a Match or " any actual Fire, held at a distance till you " raise a large Blister, which must be cut to let " out the Matter.

1279. Which otherways the Physician ought not to be too busy with, for thence he may reasonably fear to harden the Part sooner than it wou'd otherways, and to deprive it of Motion,

chiefly in People that have had the Gout ſome years, and are pretty well advanced in years.

1280. But that is to every one, and in every ſort and degree of the Gout the greateſt Remedy, which is the moſt oppoſite to the Cauſe it took its riſe from firſt, (1255. 1258.)

1281. But if the Signs be preſent of the Gout being turn'd inwards (1273.) you muſt without delay attempt to drive it back again into the Joints: Therefore immediately apply large Bliſters to the Thighs; to the Parts that uſed to ake, apply lukewarm ſalt aromatic Fomentations; Let him be bid to walk hard, or to be galopp'd ſtoutly in a Chaiſe; let him take a large Quantity of ſome ſudorific aromatic Drink, or, if that will not do, of old Rheniſh Wine; and when you have done this, and the Pains begin to invade the genuine places, let him be put in a warm Bed and ſweat. " I have lately in this Caſe " made a Patient of mine drink a Pint of burn'd " Brandy with ſucceſs.

1282. All which if any doth rightly conſider, he'll ſee the great and almoſt inſuperable difficulty in curing this Diſeaſe: and alſo the Reaſon why famous Phyſicians and Chymiſts have endeavour'd at finding its Cure in ſuch things as renew the Blood and Juices entirely? Why Milk and which way it conduces to its Cure? Whether a Specific Acrimony made and formed in the Blood be the Mother of the Gout? What reaſons may be given for the Nodes, Tophes, and Chalk of the Gout? Why it is eaſier upon the appearing of the Tumor? Why the Pain of the Gout doth at laſt en-

tirely

tirely ceaſe? Why, as long as the Pains are the moſt violent in the Fits, the ſame are ſhorter, and their intervals longer? Why when the Fits give over being fierce, the gouty People are hardly ever free from ſome Pain? Whether there be any alcaline Abſorber, which may extirpate the Gout wholly? Why the Machine of *Sanctorius* be the beſt Director and Præſager of what will happen, and what muſt be done to gouty People?

" *NB.* I cannot help mentioning with due " praiſe the two elaborate Treatiſes of Dr. *Muſ-* " *grave* of *Exeter* upon the Symptomatic and " Spurious Gout; there we find Obſervations " carrying the face of Truth, and adorn'd with " ſuch excellent Preſcriptions, as I have heard " our Author applaud, when I was his Diſ- " ciple.

Of Rheumatiſms.

1283. There is a Diſeaſe ally'd to the Gout and Scurvey which is very common in *England*, and is call'd *a Rheumatiſm.*

1284. Which is preceeded by a ſanguine Conſtitution infected with ſome ſharp Defect, manly Age, plentiful Living, a ſudden cooling of a heated Body, Spring and Fall, Tranſpiration interrupted, an inflammatory Diſpoſition, but ſhewing it ſelf ſlower than in a Pleureſie. It begins with a continual Fever, creates a moſt terrible, tearing pain increaſing cruelly upon the leaſt motion, long continued and fixed in one place, obſeſſing the Joints of any Limbs, but moſt particularly troubleſome to the Knees, Loins and Rump-bone,

excruciating and invading ſometimes the Brain, Lungs and Bowels, with a Tumor and redneſs of the place, and going off and returning again by Fits.

1285. If it laſts long and encreaſeth, it often deprives the Joint after more horrid Pains of its Motion, and makes it ſtiff by an Anchyloſs ſcarce removeable by any means whatever.

1286. Its proximate Cauſe ſeems to be an Inflammation in the Lymphatic Arteries of the Membranes which are about the Ligaments of the Joints, but not fierce enough to change into an Impoſthumation. It is cured by bleeding, cooling repeated Purges always allay'd at Night with a Narcotic, gentle Bathing in warm Water, and antiphlogiſtic Fomentations to the Parts; Bliſters applied to the Part, and even actual Cauteries; By ſuch Medicines as do dilute much, and ſoften at the ſame time; a thin ſpare Diet; Reſt; the

the giving of Opiates too soon doth prolong the Disease. " *NB.* Our Author had forgot to treat " of this Disease in his former Editions, and truly " I never heard him make any mention of it in " his Lectures during two Years, wherein I con- " stantly heard him; Nor doth it seem to be a " Disease much known, or at least distinguished " by any particular Name in *Holland*, or most " places beyond Sea, and consequently seems to " be more peculiar to this Isle. Consult there- " fore about its Differences and proper Cure the " never to be forgotten Dr. *Sydenham*, and *Mus-* " *grave*.

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1292. From this Blood thus penn'd up, we shall often see most surprizing Veins open'd for a Passage, mark'd down by the Observators for wonderful Evacuations of the Menstrua; for the same has been seen by Physicians to force its way through at the Eyes, Ears, Nostrils, Gums, Salivary Glands, those of the Gullet, Intestines, Bladder, Breasts, the Skin, through particular Wounds and Ulcers.

1293. Or even all the Bowels will be much weaken'd thereby, and almost innumerable and quite different Diseases will arise partly from the putrified Liquids, and partly from the injur'd Vessels. (106.)

1294. This Disease is known, 1. From the Age. 2. From the Body being full grown. 3. A Plethora. 4. And the other Signs afterwards of the thence following Disease.

1295. It requires a different Method and Means according to the different Cause in each particular Subject.

1296. Among which there is sometimes a natural and sometimes an occasion'd defect of the Privy Parts, *viz.* their wanting an Orifice, which requires the hand of a skilful Surgeon making there a free passage with a proper Instrument.

1297. But when occasion'd from the stagnation of the Liquid, then it ought to be made to flow, 1. By fomenting and rubbing the Feet, Legs, and Thighs. 2. By opening a Vein in the Foot, and letting out a moderate quantity of Blood. 3. By giving Purges as will also work upon the Womb. 4. By administring Emmenagoga. 5. By Plaisters

to

to the Belly, Fomentations, Liniments, Steams to the Privy Parts, and received into the Vagina through a Funnel, and by heat. 6. By strengthening the very Vessels weaken'd by the Plethora with Chalibeats and Adstringents. *NB.* "It is impossible "to say any thing more to the purpose, and at "the same time so consonant with our Authors "Opinion than what we find in the excellent "Treatise of Dr. *Friend* publish'd some Years "since upon this very Subject, which is suffi-"ciently meritorious to raise its Author to the "Pitch of those that have chose Subjects seeming-"ly more sublime, but considerably less useful.

1298. Having removed by those means the Fountain of the Evil, all the Symptoms mentioned (in 1291, 1292, 1295.) usually disappear in course; or they are cured according to the nature of the particular Disease as they seem the most ally'd to; which is easily perform'd from and by the Rules heretofore laid down.

The Diseases of Women with Child.

1299. When a Woman is with Child she is afflicted with several Diseases, owing their birth to no other Cause than their Pregnancy.

1300. Whereof some do proceed from the menstruous Blood, being hindred from separating because of the closeness of the Womb, and the Fœtus being not yet able to consume the Quantity conveigh'd thither for his Nourishment.

1301. Some from the very bulk and motion of the Fœtus, Afterbirth and Waters, which do exercise their Powers upon that very sensible Part.

1302. From

1302. From the First (1300.) seem to depend the Nauseatings, Vomitings, the loss of Appetite, or the depraved and untoward Inclinations, fainting Fits, Vertigoes, violent pains of the Stomach, of the Share-bone, the Groins, Kidneys, Breasts, and a Lazinesſ, Heavinesſ, difficulty of Breathing, and Miscarriages.

1303. All which therefore, as they proceed from one and the same Cause, may be cured by one Remedy, I mean letting of Blood in proportion to the time of being with Child, and of the Plethora.

1304. Taking a great Care not to do it in a wrong place, time, or quantity.

1305. Then are also useful a thin Diet, a gentle Motion, and small Drink.

1306. Sometimes do also avail much aromatic Cordials, together with the gentlest Antihysterics or some of the kindest Acids.

1307. From the increase and bulk of the Fœtus seem to proceed almost all the same things as in (1302.) And besides the difficulty in making Water and going to Stool, the Piles, Swellings of the Veins and Feet, and of the Pudenda; and the Women are then also from that very reason prone to fall upon their Knees.

1308. Which may be help'd sometimes with Bleeding (1303.) or by changing the posture of the Body for some time, (chiefly lying down) then also by supporting the Belly with Swaddles, and the like, or anointing those Parts with softning Liniments.

1309. But of all the Diseases incumbent to Women with Child, none is reputed so dangerous as the *flooding* or *Fluor Uterinus*. 1310.

1310. Which moſtly is occaſion'd by the Separation of the Placenta from the Body of the Womb, while the Arteries are full of Blood that dilates them, and when the Womb it ſelf is much extended, whence the Blood neceſſarily runs forth, and guſhes out with a full Stream.

1311. This is known to be the Caſe when the Orifice of the Womb is looſen'd, the Blood runs ſwiftly with a great Stream very much weakning, freſh or in Clots occaſioning Pain.

1312. The Occaſions thereof are violent Affections or Paſſions of the Mind, too violent Motions of the Body; The wrong application of Hyſterics or unſeaſonable giving of ſuch Medicines as provoke the Terms; or Blows received on the lower part of the Abdomen.

1313. Its Remedies are, a quieting of the Body and Mind; the carrying of the Patient into a cool Air; Bleeding in the Arm, Adſtringents, or Opiates.

1314. If by theſe you gain no ground, the Child ought forthwith to be fetch'd away by a very skilful Hand, who knows how to place the Child in the eaſieſt poſition for a quick Delivery, and who at the ſame time pulling out the Afterbirth frees the Womb as ſoon as poſſible of all preſent clotts of Blood.

1315. Nor is it any matter at what time of Childbearing this happens, it being more reaſonable to let that Child periſh, who even otherways has ſcarce any chance for his Life, and to ſave the Mother, than to delay this Operation till they muſt both unavoidably be loſt.

Of a Difficult Labour.

1316. A difficult Labour happens either by the fault of the Mother or of the Child.

1317. The Mother is in fault, when ſhe either wants Strength to thruſt out the Child, or that her natural Parts are not duly form'd or prepared.

1318. When her Strength fails her, that ought to be repaired and increaſed with the help of Uterines, of Cordials, and ſuch as promote Sneezing.

1319. If the internal Neck of the Womb is either too narrow or hard, you muſt help that with Liniments and Fomentations, that it may grow ſofter and glibber.

1320. If there be a Tumor in the Neck of the Womb or in the Vagina which ſhuts up the Paſſage, that muſt be diſcuſſed, brought to Suppuration, or otherways removed by the help of a skilful Surgeon.

1321. If the excoriated Lips of theſe Parts have grown together, they ought ſoon and before the time of Labour to be cut aſunder and heal'd up again.

1322. If the Bones are too cloſe and compact, and thereby render the Paſſage narrower, they muſt be ſoftned with Liniments and emollient Fomentations, and the Hand of the Midwife or Surgeon muſt part 'em and puſh 'em back a little at the time of the Labour.

1323. 'Tis the fault of the Child, when that lies either dead and immoveable, or ſo ſituated, that it ſhuts the Paſſage by that very Situation.

1324. 'Tis known to be dead, if it is unmoveable, if the Umbilical Arteries are felt to reſt upon the Navel-ſtring, and chiefly near the Body of the Child; If there comes from the Womb fætid Matters; If the Mother feels a greater dead weight than a little while before; If ſhe has ſudden and continual Motions to go to Stool; If ſhe Faints away often; her Hairs ſtand on end; her Breath ſtinks much, and of a dead Corps; Looks of a livid Colour; If ſhe is not deliver'd long after the Waters are all come away; If the Skin of the Child feels looſe, and comes off eaſily; and his Bones are moveable and ſoft.

1325. As ſoon as the Fœtus is known to be dead, it ought to be drawn out for fear of communicating a Gangrene to the Mother, throwing her into fainting Fits, Convulſions and Death; and that ought to be done by the Feet if poſſible, becauſe there is the beſt hold, which is material, when the Child doth not help it ſelf

Of the Diseases incident to Women in Childbed.

1328. The Woman after Delivery is taken with Pains proceeding from the past Labour, the contusion of the Parts, from Blood, another Fœtus, or part of the Burthen left behind.

1329. When there is another Fœtus, or part of the Afterbirth, or clotts of Blood, all they ought forthwith to be taken out with the Hand.

1330. Afterpains are eased with Opiates so prepared as to be contrary to Acids, cordial and diluting; and also with external anodyne Fomentations to the Parts.

1331. Women in Childbed are sometimes brought very low by too large Cleansings, proceeding from the thinness of their Blood and Agitation, or most times from the Matter retain'd (1328.) in the Womb, which hinders its closure.

1332. If it be from Matter retain'd, they must be brought or fetch'd away (1329.)

1333. If from Passions, too great thinness or motion of the Blood, you must have recourse to Barley Gruels, Jellies, Emulsions, Opiates, and Adstringents.

1334. The Choice of which is directed by the Signs of the Disease, the Constitution of the Patient, and the Degrees of Danger.

1335. Whilst the serous milky Nourishment is making its way from the now contracted Vessels of the Womb towards the Breasts, there arises a small Fever, at whose coming, the Cleansings are sometimes entirely stopp'd, whence numberless Symptoms, and of the worst Nature, according

as

as the Matter thereof is carried and thrown upon different Bowels; Hence Phrenſies, Pleureſies, Peripneumonies, Quinſies, Inflammations of the Diaphragm, Breaſts, a worſe of the Liver, Stomach, Caul, Meſentery, Spleen, Kidneys, and Inteſtines; Then Bloody Fluxes, Cholics, Iliac Paſſions, Apoplexies, Palſies, and a great many more Evils.

1336. All theſe vaniſh in courſe if you remove the Cauſe (1335.)

1337. Hence are requiſite here gentle Antacids to allay the acid defect of the Serum; Soft Diluents from Barley-broths, Grewels, Almond-milk, and Fleſh-broths; The gentleſt ſpecific Openers from the moderate Cordial hyſteric Claſs; Then topical Aperitives, Glyſters, Fomentations, Cataplaſms, Plaiſters, Liniments, Cupping-glaſſes, Peſſaries, and Suppoſitories.

1338. Letting of Blood, ought not eaſily nor without the higheſt Neceſſity to be allow'd of.

1339. Nor are the Symptoms to be removed by the ſame Means as if they belong'd to other acute Diſeaſes of their own Kind.

1340. When the Milk is already carried into the Breaſts, it often ſtagnates and curdles therein, whence an Inflammatory Pain, an Impoſtume, a Schirrus, and laſtly a Cancer.

1341. It's known by a Shivering, cold and heat returning by Fits, and ſucceeding each other, a Fever, and the Signs of a beginning Inflammation.

1342. It is cured 1. by gentle Alcalis and Teſtaceous Powders. 2. the ſofteſt Diluters. 3. And by

by an external and timely Application of discussing Means.

1343. If it is tending already to an Imposthume, it ought to be ripen'd forthwith, to be open'd, cleans'd, and consolidated, of which see the Chirurgical Aphorisms in the beginning of our Treatise.

1344. The pain of the Nipples of the suckling Mother or Nurse, their Fissure or Inflammation is removed by the kindest Balsamics, or with the application of spirituous nervous Medicines; such as is Hungary Water with some Oyl to incorporate it.

1345. When the Milk abounds too much and is too thin, it may be temper'd with a soft dry Diet and reasonable Motion: When that is deficient it is supplied by a moist, soft nourishing Diet; fomentations and frictions of the Breasts, and by removing whatever doth appear to be the Cause of that deficiency.

Of the Diseases of Children.

1346. To new-born Children happen Diseases peculiar to them, 1. From the glutinous, caseous, and tough filth, wherewith their Mouth, Gullet, Stomach, and Intestines are fill'd and obsessed.

1347. From which Cause only arise Nauseatings, Vomitings, Gripes, Hiccoughs, and often Convulsions; and which afterwards are the frequent occasion of their not digesting their Aliments.

1348. It is easily cured by making them fast ten or twelve hours, by giving them a small quan-

tity of good ſtomach Wine with ſome Honey, given ſeveral times during this abſtinence from other Aliments, or by giving at the ſame time the moſt gentle Purge imaginable.

1349. And in this Caſe do often wonderfully ſucceed external Applications of moderate Aromatic Oyls and Spirits to the Stomach, which by corroborating its Fibres do expel all that load of Slime and Phlegm.

1350. 2. They generally ſuffer much from a retention of the alvine Fæces, which from their blackneſs and reſemblance of the condenſed Juice of Popies are call'd *Meconium*, which ſhoud have been entirely expell'd ſoon after the Birth, but which the Child cannot effect becauſe of his weakneſs, the hardneſs of the matter, its too great quantity and drineſs of the Inteſtines not yet lubricuted with a glandular Juice deſigned by Nature for that purpoſe.

1351. So that from its Stay, and the admiſſion of Air, there follows an Acrimony, Sharpneſs, Putriſaction and Reſolution into Vapours, and conſequently griping Pains, Convulſions, Nauſeatings, Vomitings, Hiccoughs, Coughs, Sneezings, Cryings, Weepings, Wakefulneſs, Frights, Fevers, Waſtings and Death.

1352. The defect of the Expelling Quality is remedied with a gentle ſtimulating Purge, a Suppoſitory made of Honey, and a very agreable and ſoftning Cordial.

1353. The hardneſs of the matter is corrected by giving a Draught of freſh Milk-whey with a little Honey diſſolved in it, a Glyſter of Milk-whey and Caſtle-ſoap or Honey.

1354.

1354. The Inteſtines are lubricated by giving the Child Oyl of Linſeed; Olives, Sweet-Almonds, *&c.* and by giving them Glyſters of the ſame, or anointing the Belly and Anus.

1355. By which Method and Medicines you may ſurely promiſe your ſelves to overcome all thoſe various and dangerous Symptoms, which drew their Origin from that one Root in (1350.)

1356. But if any where it is here that Alcalies and Teſtaceous abſorbing Medicines are very ſerviceable. *NB.* "Concerning the Uſe and Efficacy "of them ſee Dr. *Harris* his Treatiſe *de Morbis Infantum.*

1357. Opiates ought ſeldom and not but with the greateſt prudence to be made uſe of.

1358. And we ought alſo to avoid all ſuch things as do attenuate and ſtimulate too much, or are too volatil.

1359. As to each particular Diſeaſe and Symptom (of 1350.) a Remedy is eaſily found, the Hiſtory of the Cauſes and Methods of the Cure of all the Diſeaſes heretofore deſcribed being once well underſtood and rememberd.

1360. 3. They alſo ſuffer many Ills from the Milk itſelf, when that is too ſoon and too much coagulated and curdled in the Stomach, and is there kneaded together into one heavy and ſharp Maſs.

1361. For that ſame, being by degrees grown ſharper and ſourer, cauſes green Stools that ſmell ſour, a continual vomiting of ſour ſtuff; hence Gripes, Flatuſſes, Pains, and a great many more ill Symptoms, but the frequenteſt and the moſt

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1369. There are some round, some flat and broad, and some very small call'd *Ascarides*; "Which I conceive lodge themselves in the Glands "wherewith the thick Intestines do abound.

1370. By their pricking they occasion Nauseatings, Vomitings, Loosenesses, fainting Fits; a small, deficient, and intermitting Pulse; an itching at the Nose, and Epileptic Fits.

1371. By the great Consumption they make of Chyle, they cause Hunger, a Paleness, Weakness, Costiveness, hence a Swelling of the Belly, Belchings and Fartings.

1372. They'll often eat even through the Coats of the Intestines.

1373. Which is the Cause of their proving frequently Mortal.

1374. They are known from the Age, Diet, Constitution of the Patient and their several Effects (1369, 1370, 1371.)

1375. The Cure is effected, 1. By destroying the Nest (1366.) with fix'd Alcalies, Slyme-purging Gums and Rosins, Mercurials, Antimony, and bitter Aromatics.

1376. Then by anointing the Belly externally with the strongest Aromatick Balsams, with an addition of Purging and oleous Ingredients.

1377. 2. By killing the Worms; which is done by the help of Honey, Salts, and such as the Worms cannot digest; bitter Aromatics, Mercurials, Acids, and Vitriol incorporated in Steel or Copper.

1378. 3. By driving them out alive or dead with bitter Purges, Phlegmagogues and Mercurials.

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of Hartshorn

ſay little more about it; and it appears from his very Hiſtory that this Diſeaſe may alſo be reduced to the ſame Simplicity as all the former we have treated of: And alſo, that there is ſtill a Deficiency in the Method of curing the ſame.

1386. It moſt times rages Epidemically, beginning firſt in the Spring, increaſing with the Summer and hot Weather, more languid and leſs fierce in Autumn, and ceaſing moſt entirely at the approach of Winter or cold Weather, waiting again for the Spring to be as general and proceeding in the ſame order as before. The ſooner it begins in the Winter ſo much the fiercer, and the later ſo much the gentler will the Kind be for that Year. Hence it appears in what Seaſon of the Year the Small Pox is moſt dangerous.

1387. It invades all Ages and Sexes, but chiefly Children, and thoſe that hitherto have not had it: The more Age has diſſipated the Humors, and has render'd the Solids compact: that is, The more People are grown, ſo much the more violent and dangerous is this Diſeaſe; hence do more eaſily eſcape Children, Women, and thoſe of a tender and lax Temper, and on the contrary a greater hazard attends Men, ſuch as have been laborious and ancient Men or Women.

1388. This Diſeaſe, though Epidemical, yet is catch'd from another who had it firſt by a Contagion: Which at firſt ſeems to be in the Air, and to be transferr'd into the Lungs, Mouth, Noſtrils, Gullet, Stomach and Inteſtines; and conſequently has yet but a ſmall ſhare of a poyſonous quality.

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that Year, of the Patient's constitution who seems that way disposed, of the probability of his having contracted it by Contagion from his Relations, Servants, or Neigbours about him, and the Symptoms which have thereupon ensued such as in (1388.) All these together do shew that this Distemper is actually present, and that the Pustules of the Pox will infallibly break out and appear in the second State, whereof anon.

1394. When that first State of the Small Pox is certainly known to be present by what has been said (from 1385. to 1392.) This seems to be the most natural Indication.; That, having removed the Inflammatory Stimulus, this present State be so far cured as to hinder its passing into its second State or Stage, that is, the Suppuration, Gangrene, *&c.* or any other Consequences of the Small Pox in that second State.

1395. That Stimulus one may hope to remove by correcting it either with Specifics, or by the general Method to remove Inflammations and their Effects.

1396. The Specific Corrector ought to be some particular Medicine directly opposite to the Nature of that contagious Poison, which though received into the Body in never so small a Quantity, is yet able to produce all those wonderful Effects of (1388, 1389.)

1397. That such a Specific may one time or another be found we have some hopes, when we inspect the History of other Antidotes and see, how long some have remain'd unknown, and how their Production has been more owing to Chance

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with Glysters, and Fomentations, Gargles and Drinks used in great and repeated Doses. 3. Make your Patient drink quantities of very thin Water-gruel, with some juice of Oranges, and salted with Nitre; Give him repeated Doses of *Nitre stibiated*, *Sal Polychrestum*, or *Mirabile Glauberi*, and Milk and Water to drink. 4. Let his Diet be of the thinnest; the Air, he breathes, coolish; his Body well cover'd so as to promote transpiration, but avoid throwing him into great Sweats.

1401. For though Physicians and Nurses do seldom think of this Indication in the Small Pox, and less still of this Method (1398, 1399.) Yet as mere Chance has frequently approved the same, when the Physician not aware of the Small-Pox, made use of it (which he wou'd have been afraid to do, if he had suspected it.) We see no reason why we shou'd not oftner attempt the same, notwithstanding the Vulgar Opinion of prejudiced Physicians and Nurses.

1402. When this Disease has run off its first Stage, which I call that of Contagion, it enters into its Second, which it doth after the following manner: The Skin first of the Head and Face, then of the Hands and Arms, and then of the Body and Lower Parts and Limbs is marked with small red points like Flea-bites; Thereupon all the Symptoms (of 1388.) do abate; The red Pustules encrease every Hour in Largeness and Number, they continually rise higher and higher, inflame more, the Skin is stretch'd; they begin to pain, to burn; the Circulation is interrupted, the Transpiration hindred; hence a greater return

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mors upon the Internal Parts, hence a large Salivation, and a great Swelling of the Feet and Hands.

1404. From these may be learn'd the Diagnostics and Prognostics of the second State of the Small-Pox, and the rationale of it and all its Symptoms, which will be plainer still by the following Rules.

The gentler the State of Contagion, the easier also is the Inflammatory State.

The slower the Pustules break out, and the longer therefore the State of Contagion, the easier and kinder is the whole course of the Disease through all its Stages.

The fewer, more distant, bigger, more remote from the Face, whiter and afterwards the yellower the Pustules are, and the later they appear; so much the better Event do they promise.

The more in quantity, more mixed and intangled, the less in bulk those that stand single, the more they are upon the Face, tawny, or black, and the quicker they grow; so much the worse.

The more the Matter of the Pustules is like to kind and perfect Pus, the better.

The more the space between the Pustules looks red, is hot, stretch'd and swell'd about the time of their imposthumating, so much the greater hopes, because it is a Sign of the Circulation being preserv'd there.

The more that same space looks paler, or grows tawny, so much the worse; there follows a mortal Quinsie or Peripneumony; unless a thin Salivation, or a great Swelling of the Hands or Feet

doth

doth enſue; the reaſon is that the Circulation of the Liquors is cut off in theſe Parts, and drove back and increaſed in the internal nobler Parts.

If in the places between the Puſtules there appear purple Spots, it is an Argument that a mortal Gangrene is at hand or preſent.

1405. The Indication in this ſecond State (1401.) is different according to the different time that the Diſeaſe has laſted, and is like to laſt: For in the firſt beginning of the external Inflammation ſhewing it ſelf, it ſeems reaſonable to endeavour to prevent its proceeding to an Impoſthumation, of which we have already ſpoke (in 1398, 1399.) Or, if that be neglected, Care ought to be taken that the Suppuration be as little as poſſible, and be promoted ſlowly, and far from the Head: Which is effected, 1. By keeping the Patient to that thinneſt Diet, which at the ſame times is contrary to Putrifaction. 2. By giving him diluting, ſoft and tart Drink. 3. Medicines contrary to the making of much Pus, ſuch as are opening and diluting in great Quantities, and continually given. 4. Bathing of the Feet repeated twice a Day, fomenting them continually with ſomething lukewarm; Bliſters applied to the hollows of the Feet and Knees. 5. A cool regimen, and chiefly by the admiſſion of a clean and cold Air, but covering at the ſame time the Limbs and lower parts of the Body very warm. And theſe things ought to be done immediately upon the firſt invaſion of this Diſeaſe. 6. If the Diſtemper proceeds too violently on the fifth Night you may give ſafely and to an Advantage ſome Opiates not neglecting

at

at the same time doing all that has been recommended before.

1406. After the running off of this second Stage (1401.) follows the third State, that of Imposthumation, during which that increases and arrives to its height : In this the Pustules already purulent do every day grow larger, then ripen, turn white, yellow, and break on the third or fourth Day of this State. Then doth the whole Skin and its subjacent Fat abound with a moveable Pus, it is dried externally, and inflamed in every place free from Pus; hence, from the impediment of Perspiration and Circulation, from the irritation of the membranous and nervous System, from the soaking of Pus into the Veins, there grows a Fever of the worst Kind, with the worst Symptoms; If this purulent Matter mix'd with the Blood is moved long, it putrifies (82. 100. 406) hence according to its falling upon different Parts of the Body it produces cruel and scarce superable Effects, as are Deliria, Phrensies, Quinsies, Peripneumonies, Pleuresies, Vomitings, Bloody-Fluxes, Inflammations of the Liver and Imposthumations of the same; Boils, Tumors, Abscesses, and stiffness of the Joints; a Wasting, Consumption, and innumerable more Evils.

1407. And if then the Matter be thinner, sharper, and the Disease very violent. The Skin, Fat, and Flesh are all eat away; there grow wide, ill-natur'd Ulcers, often penetrating to the very Bones, and very homely disfiguring Scars.

1408. In that third State (1405.) the Physician ought to promote the exit of the Pus to the

external

External parts, driving it from the Internals; which is done by Relaxing the Skin with lukewarm loosening Fomentations, constantly, though with much trouble and nauseousness renewed; A constant washing and gargling of the Mouth and Throat; drinking much of warm, cordial, detergent, aperient Decoctions and contrary to Putrifaction; Injecting daily a gentle, diluting, emollient and loosening Glyster, to be kept long in order to bathe the Intestines; Dieting upon Flesh-Broaths duly salted and sour'd; allowing now and then a moderate Draught of good generous Wine; Giving also against some violent and troublesome Symptoms a sufficient Dose of Laudanum or Opium.

1409. If the Small-pox proves to be of the worst Kind: that there is rather a gangrenous Ichor than Pus; that almost the whole Skin is obsessed with it; it easily appears why this Disease is so unavoidably fatal notwithstanding all the possible care taken: And it will be much plainer yet to any one acquainted with Dissections, that as the external Skin is full, so the Eyes, all the Membranes of the Nostrils, all the Covers of the Mouth, the Windpipe, the Bronchia, the Stomach, the Gullet, Intestines, Liver, Spleen, and Lungs are full of the like Pustules; and hence he will understand what has been said, and sees what is requisite for the Cure; and whether the greatness of the Disease, the loss of so many that die with it, after all the fam'd Remedies have so often been tried in vain, ought not to stir up the Industry of good Physicians, *To try all the great Medicines from*

from the beginning of its Invasion: For by the common Methods few do escape, but such as wou'd have been saved, though nothing at all had been done to them. *NB.* " I cannot help joyning hear-" tily in this Opinion of our Author, and must " add, that in this Disease a good Physician ought " from the beginning to do every thing, as if " he knew that all the worst Symptoms wou'd ensue, if not prevented: But this I again wou'd only have applied to grown People.

Of Epidemical Diseases.

1410. It ought to be observ'd above all things, that the Diseases of the Fluids hitherto described, though they Seem the same to the unwary by their Name, most of their Signs and by some appearance of the same event, yet by a hidden quality, by Phœnomena hardly taken notice of but by the most skilful Judges, at the different times of the Increase, Height, Coction or Crisis, they differ vastly as to their Effect, Event, and Method of cure.

1411. And that therefore they require a quite different administration of the six Nonnaturals, another Method and different Remedies.

1412. The Cause of which variety however is so dark, that the same hitherto has not been able to be assign'd to any one peculiar Error committed in the Nonnaturals.

1413. And yet as the same doth afflict many at a time, that the same may be avoided or kept off by either Wind or Fire, it is generally believ'd to *be in the Air.*

the Stone always remaining, all the other Rows are red, white, aſh-colour'd, or blue, and from theſe ſeveral appearing Colours one may know the ſeveral degrees of its ſolidity and incapacity of being diſſolved; Which is atteſted even by Chymical Experiments.

1427. When it ſtops in the Bladder, it occaſions an Inflammation and its Symptoms, fretting Ulcers, piſſing of Pus, Stranguries, an obſtruction of the Urethra; The Patient cannot make Water but in certain Poſtures, and chiefly lying upon his Back; it creates an Hectic Fever and a Conſumption: Sometimes it is puſh'd into the Urethra, and there it ſtays incapable of going either forwards or back again into the Bladder.

1428. The Stone in the Kidneys is known from an obtuſe Pain there, from a piſſing of Blood after riding in a Coach, or other great motion upon the Stones and rough Roads, upon any other violent

1431. This is effected, 1. By keeping the Patient to a liquid, soft, thin, and pretty salt Diet; the drinking of Water or something like it; yet keeping up the strength of the Circulation.

1432. 2. The Second is obtain'd by loosening the Vessels with Baths, Glysters, and relaxing oily Liniments; By making the passages slippery with moistening Emollients, soft and gentle oily Medicines; Opening them with Opiates and Anodynes; Driving them on with gentle Diuretics prudently managed, and with a gentle Motion, such as that of a Boat, or a very easy going Horse.

1433. 3. The Third by preventing the Symptoms; that of Inflammation by letting of Blood, and other proper Remedies; that of Pain by Anodyne Emulsions; that of the asperity of the rugged Stone by oleous, soapy and glutinous Medicines.

1434. For as to any true Dissolver or Specific for the Stone, none as yet deserves any Credit. " *NB.* The Ingenious Dr. *Cyprianus*, who has de-
" serv'd a great Character for his Dexterity and
" Success in cutting for the Stone, has told me
" some Years ago, that he had been at work some
" time in his Laboratory to find out a Specific Li-
" thontriptic, but I told him then, that he wou'd
" never succeed as long as he continued of *Van*
" *Helmont*'s Opinion and others, who think that
" the Stone owes its first Birth and Increase to
" the volatil and spirituous parts of the Blood:
" And hitherto I have prophesied right.

1435. When the Stone is fall'n into the narrow passages of the Pelvis, it requires the same Means (from 1430. to 1432.) And chiefly Glysters, Fomentations and Bleeding.

1436. That the Stone is fall'n through the Ureters into the Bladder is known from a foregoing Nephritic Pain, from that Pain being afterwards felt in the tract of the Ureter, from the ceasing of both with the Signs of (1428.)

1437. Then is it requisite to expel it forthwith, lest the same shou'd stay behind to grow larger and do greater Mischiefs.

1438. This is done by the same Means as from (1430. to 1433.) but applied to the very Part; by an oleous Bath, and the like Glyster, injecting of Oil into the Passage towards the Bladder, and by rubbing of the same gently to increase the elasticity of the Fibres.

1439. Then ought the several Symptoms to be eased as they imitate and are of a Kin to this or another Disease.

1440. If the Stone is unmoveably stop'd in the Urethra, use Injections, Fomentations, sucking after

1445. If lodging in the Neck of the Bladder it stops up the Urine entirely and for a great while, so as to endanger Life, push the Stone back with a Catheter.

" The best Treatise about the Stone and the " Operations for the same, is without doubt that " of Mr. *Tolet*.

Of the VENEREAL DISEASE.

1446. The Venereal Disease began in the Kingdom of *Naples* since the Year 1463. spread it self through the *French* Army there, from thence thro' *Europe*, and is still a very common Disease.

" *NB.* It may be true what *Sydenham* saith, " that the Name of this Disease was not known " in *Europe* before Travellers had brought it (as " he saith) from *Guinea*; But it is amazing to me " that either he, our Author, or any unprejudiced " Lover of Truth, and Men of exact reasoning " in all other Matters, shou'd so far be blinded, as " to believe this Disease new, and not to know " its true Features in a great many passages of the " Ancients both Sacred and Profane; Dr. *Sprengel* in his first Aphorism of the XVIIth Section " concerning the *French-Pox*, doth enumerate " most of those Passages, to which I refer the " Reader; But neither he nor any Body else, that " I know of, doth mention *that plain Passage out* " *of* Otho's *Life in* Plutarch, which in my opinion is past all cavilling, which had our Author, or *Sydenham* seen, it is impossible but that " Men of their Candour and Equity would have " alter'd theirs. It is as follows; *Besides, nothing*

gratify'd or gain'd the People more than his Justice in relation to Tigillinus, *who was a Person not only actually punish'd by the very apprehension of Punishment, which the whole City requir'd as a just Debt, but with several Diseases too, that he had contracted by conversing with Lewd Women: And though the ill Consequences to which this course of Life expos'd him, were generally look'd upon as Punishment enough, yet the People thought Life it self too great a Benefit for him to enjoy, who had been the Occasion of so many Mens death.*

1447. Which is infective several Ways, for sometimes it is Hereditary; sometimes Children get it by sucking unclean Nurses, some People get it by handling and conversing much with People whose perspirable Matter is very putrid, ulcerous and corrosive; Dry Nurses will communicate it to Children, when having pocky Ulcers in the Mouth or Throat, they taste the Childrens Pap or

1450. The Part is first known to be infected by an itching Heat, small Inflammation, a whitish Speckle, which scales, gnaws, then grows mucous, and which cannot be cured by common Medicines in other Cases seemingly alike.

1451. Hence growing on, it first infects the adjacent and generally the external Parts with the like ulcerous Pustules, afterwards it reaches the Internal Parts, as the Lips, Gums, Palate, Tongue, Throat, Nose, Brain, Lungs, Liver, Spleen, Womb, *&c.*

1452. Which do drop a mucous Filth, which is slow, greenish, eating into the Flesh, increasing more in Breadth than in Depth.

1453. Hence Chankers on the outside of the Penis, and a Gonorrhea on the Inside; and in the Vagina a flowing of white Matter, which abundance will put off under the Denomination of *the Whites.*

1454. The Glands of the Groins in both Sexes tumify, and Bubo's arise from a Communication of the Contagion by the Lymphatic Veins to those Parts.

1455. And in Men you may see sometimes so great an Inflammation of the Penis, that it is often difficult to prevent its hastening into a Gangrene.

1456. The Testicles also will swell, grow painful, and often ulcerate from an Inflammatory Tumor having laid hold of the Vesiculæ Seminales.

1457. Caruncles also will grow in the Urethra, whence Strangueries, and an eating of the Urethra, of the Prostates, the Neck of the Bladder and the Seminal Vessels: The same things do happen in the Organs of Women.

1458.

1458. Hence it is carried into the Limbs, with Night-pains occupying the middle of the Limbs; and with a Stiffness of the Joints.

1459. Whence it shews it self in the Cartilages, chiefly those of the Nose, and Palate, which it eats through.

1460. Then occupying the Middle Substance of the Bones it produces a Caries there, chiefly in the Scull.

1461. Then do the Parts surrounding them rise into very ill-natured Imposthumes.

1462. It even raises them to hard Knobs, which first are painful but a little, but more acutely by degrees, till they corrupt all the surrounding parts above them.

1463. So that the Signs, to know this Disease by, are pretty plain.

1464. A Gonorrhea or Clap, is cured by Bathing, Fomentations, Injections, Mercurial Purges often repeated, Emulsions, Balsamics, abstaining from all high Meat and Drink inciting to Venery, but on the contrary, living upon a small and thin Diet.

1465. You must go on in this Method till nothing unusual doth any longer drop from the Penis, or shews it self in the Urine.

1466. The swelling of the Penis is cured with Anodyne, discussing, and emollient Cataplasms, like Fomentations, and large Bleeding, and with all the Means of the foregoing Aphorism.

1467. A Venereal Bubo is cured by dissipating the same with specific Plaisters; or if that doth not easily succeed by Suppurating and after aper-

tion

tion cleansing the same. " *NB.* This I know " from undoubted and repeated Experiments to " be good Practice, whatever the generality of " Surgeons or Clap-Doctors may clamour against " it, and I have bled largely to help the dissipa- " ting of a Bubo; but then it was in the very " beginning, when I cou'd command a Gonor- " rhæa to carry off the Matter, *&c.*

1468. Swell'd Testicles must be fomented as in (1465.) If it presses hard, you must bleed the Patient in the Arm; and you may ease it also with a Plaister about the Scrotum, and lift it up with a Bag, till it has return'd to its natural bigness. " *NB.* Nothing gives more ease in this pe- " culiar Case than Vomits, which chuse rather " of *Turpethum* than any other, because it an- " swers in more than one respect.

1469. Pustules and Chankers must be consumed to the quick with Mercurials, and then cured with gentler Means, still with a small mixture of them to the last.

1470. And you must all along use the internal Means recommended in (1463.)

1471. The Venereal Whites in Women, are cured by the same Method as a Clap in Men.

1472. Not neglecting the most useful detergent soapy and Mercurial Washes and Fomentations.

1473. But when Pustules are dispersed all over the Body, Pains invade the Limbs and nightly Uneasiness, large Buboes, gnawings of the Bones, an often renew'd Clap; all these shew, that the Patient is *Pox'd*, and nothing then will do, but a Salivation by Mercury.

1474.

1474. Which to raiſe with the better Succeſs, make your Patient firſt drink plenty of Ptyſanes for ſome Days.

1475. Then give him every two Hours a ſmall Doſe of Mercurius Dulcis. " *NB.* This Method " of ſalivating with internal Medicines is far the " ſafeſt even in the opinion of ſeveral of the a- " bleſt Surgeons in *London*, and it is nothing but " Lazineſs or Covetouſneſs that has prevail'd up- " on the Majority of Surgeons; who make a " Bargain with their Patients, or who have No- " thing for their pains in the Hoſpitals, to extol " the anointing before this Method.

1476. As ſoon as the Breath begins to ſtink, the Gums to ake, the Teeth to grow looſe and ſtick out, then ought the Phyſician to attend carefully and conſider whether he ought to go on, to ſtop, or even to make ſome diverſion.

1477. If the Patient ſpits three Pints or two Quarts in Four and twenty Hours it is ſufficient

1483. Then you ought for 36 more Days to give him ſtill now and then a ſmall Doſe of Mercury, to retain yet a ſmall Spitting.

1484. Nor is there any other ſort of Remedy requiſite here to reſtore perfect Health. " *NB.* I " muſt beg the Author's pardon for that; and I " believe I ſhall have moſt Practitioners of my " ſide, to declare for ſeveral repeated Purges and " even Diet-drinks for ſome time after the Saliva- " tion, partly to remove all the Mercury and its " ill Effects upon the Brain and Nerves, and " partly to reſtore the tone of the Stomach and " the Blood.

1485. The Nodes are leſſen'd with ſpecific Plaiſters as in (1466.) or by ſcraping the Bone after having laid it bare.

Of the Ricketts.

1486. About the Middle of the Sixteenth Century, there aroſe a new Diſtemper in the Inland parts of *England*, ſpreading it ſelf from thence through that whole Kingdom, and all the Northern Regions of *Europe*, called *the Ricketts*; now a-days a very common Diſeaſe.

1487. It is never born with the Children, comes on ſeldom before they are nine Months old, ſcarce ever after they are two Years old, but moſt commonly between thoſe two Ages.

1488. But it is generally more fatal to Children, whoſe Parents are of a weak and looſe contexture of Body, are idle, delicate, live in a plentiful manner, delight in fat aud ſweet Meats, eat little Bread, drink ſweet Wines, and much warm Water;

Water; that have been exhausted, before they got them, by chronical Diseases, Venery, or Old Age; Chiefly if they were infected by the *French Pox*, or had been weaken'd by many Claps; For those have generally afforded no other than decay'd Seed in the getting of their Children.

1489. But if the Child gets a Nurse that is likewise infected with those Diseases and Infirmities, then doth the Child grow so much the more Ricketty as he grows too hastily in bulk.

1490. Chiefly if he be kept too cool and wet; If he is fed with watry, mucilaginous, raw Summer Fruits, Fish, unfermented meally and sugar'd Aliments: If he lies a long while ill with an Autumnal Intermitting Fever, a chronical or acute Disease; If he be ill cured of any sort of Scurf, Wolve, Ulcers, or that the same be improperly suppress'd; If he be enervated with bathing, fomenting, Liniments, Ointments, or moist Steams; Or if after the manner of most Children in *Holland* he be left in a continual, quiet, sitting posture over a Close-Stool, with his Coats turn'd up.

1491. This Disease is known to begin in Children as do not walk yet, 1. From their very Age. 2. Precedent Causes. 3. From the Brothers or Sisters being affected with the same. 4. From a flaccid Tumor of the Head and Face. 5. The loosenes of the Skin. 6. Bignes of the Belly. 7. A leanness of all other Parts, chiefly the Muscles. 8. A Protuberance of the Epiphyses at the Joints of the small Bone of the Elbow, or the Ulna, the Shoulder, Knee, Tibia and Fibula. 9. The largeness of the Jugulars, while the others grow less conspicuous and flat. 1492.

1492. But in them that had already begun to walk alone this Diſeaſe is known to be approaching, 1. From all the juſt mention'd having preceeded. 2. From their ſlow, weak walking, inclination to fall, their being unable to ſtand firm, or long but always inclin'd to ſit down; which ſoon changes into an habit of lying down perpetually, and at laſt into an impoſſibility of moving any Limbs, with a looſe hanging Neck, and nodding of the Head. 3. From a forward ſharpneſs and acuteneſs of Underſtanding, a clean Apprehenſion and quick Senſe; when their Appetite and Digeſtion are all the while unimpair'd.

1493. When the Illneſs is at this height thoſe affected therewith have a large Head, with very large apparent Sutures; Their Cheſt is flat and ſqueez'd, as it were, on the ſides, but raiſed high and pointed on the Breaſt, with Nodes at the Extremities of the Ribs; Their Belly ſticks out; Their Teeth are rotten and black; all which encreaſing daily, do often leave Diſtempers of the ſame kind, troubleſome all the reſt of their days, and chiefly the Spina Ventoſa, and rottenneſs of the Bones.

1494. And during the whole courſe of this Diſeaſe, a ſmall ſlow Fever doth conſume the Body until Death; and then doth all the Fibres, Membranes, Veſſels, Entrails ſhew themſelves ſoft, wither'd, the Humors all broken and ſlimy. So that we may conclude the proximate Cauſe to be a ſluggiſh, ſlimy, cold, and vappid Cacochymie, perhaps with a Mixture of a conceal'd Venereal Poiſon, and together a very looſe Fabrick of the Solid Parts.

1495.

1495. 'Tis beſt cured, with a light, dry, leſs fat Diet of a good Digeſtion, ſeaſon'd with the ſoft-eſt Aromatics, given often, but always in a ſmall Quantity: With a generous drink of either Wine or good Beer, not ſtale, but well brewed, and of the Nature of *Brunſwick* Mum. A dry and warm Air. Very dry Clothes, ſufficiently warm, and rather of Woollen than any other Stuff. Bedding, with ſome drying, ſtrengthening aromatic Herbs in it, in the higher and drier parts of a Houſe upon wooden Bedſteads. By carrying them about, dancing them, or riding 'em up and down over the Stones to ſhake their Bones and Bowels, and thereby to ſtrengthen them: By repeated, hot, dry frictions with flannels, or aromatic warm Herbs, chiefly their Bellies and Back-bones. By bliſtering them ſometimes, giving them gentle but repeated Vomits, though with due Prudence. By purging them for ſome days ſucceſſively with Rhubarb or ſome other ſtrengthening Purge. Laſtly, by giv-

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