

A P H O R I S M S,
COMPOSED
FOR A TEXT TO
PRATICAL LECTURES
ON THE
CONSTITUTION and DISEASES
O F
C H I L D R E N.

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L O N D O N :

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P R E F A C E.

THE course of Nature and that of Providence are sometimes seemingly at variance. This is in no case more remarkable than in the deaths of mankind. That *all must die*, is a proposition that no rational person ever yet doubted of. According to the course of nature, all ought to die of old age, or of worn-out constitutions. Yet in fact not one in ten thousand dies, strictly speaking, a natural death. The accidents are innumerable by which the lives of mankind are shortened; and, most of them, such as might be obviated if they were foreseen; and that might be foreseen if we had inclination, disposition, and resolution equal to our capacity for attention.

When we apply this observation to the proportion of mankind that die in infancy,
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every person of reflection must be convinced, that there must be some fatal and very general error in breeding them: for at least, according to the most moderate computation, above one-third of mankind die under ten, I believe I might venture to say, under six years of age.

This cannot be owing to any defect of nature in producing children. On the contrary, the nature of infants is generally free from these internal seeds of disease, that our habits contract from various accidents, as we grow up.

When mankind, at least here in Europe, were strangers to the enervating luxuries that trade and refinement of manners have introduced, infants were bred hardily, and few in proportion died. The great waste of mankind was then among the full-grown, the young and robust, trained to hostilities and the barbarous ravages of war and feuds.

I do not introduce the above observation to insinuate, that we ought to return

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to that hardy education of children, that succeeded so well formerly.

The change of our manners has certainly changed our constitutions also: so much has it done so, that our infancy would not bear that treatment, that only tempered and invigorated the habits of infants two or three hundred years ago—— Neither, if it was possible (which it cannot be, without a total change of the manners of young and old) am I sure, that it is to be wished, if we could recall the athletic corporeal vigor of former ages; as in my opinion it would imply a revival of the spirit and manners of these times; which, I own, I am not partial to, whatever others may be.

All I mean to inculcate is, that children born with sound constitutions, tho' they be not strong to bear the usage of robust ones, may be preserved in health by proper management.

I would also observe, that the constitutions of infants being in general sounder, and more free from any internal seeds of diseases, than grown-up persons,

it yields two very important inferences ; namely ; 1. That the most early disorders of infants (having no seeds of diseases in themselves) must be caused by mismanagement through ignorance or negligence. 2. Their disorders being, on the above account, simple, must be much more easily redressed, being complicated with few internal seeds of disease inherent in their constitutions.

Notwithstanding it has been a long rooted general opinion, that has too often been countenanced by even men of character in the profession of medicine ; that physicians can know little of the maladies of infants, and that nurses are their best doctors. It may be too generally true : but it ought not to be so ; and in whatever degree it is true, it is so far a shame to the profession :

These ideas of the Nature of Infancy have long directed my attention to the maladies of Infants, and my observations from my practice in that particular line, which has not been small nor unsuccessful, have greatly tended to confirm my ideas.

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I have always thought that, on account of the importance of the subject, both to families and to the public, the nature and diseases of infants merited to be treated of in a particular class, and course of lectures, as much as any one branch of medicine. Such an undertaking might have fallen into more able hands; but my apology is, That no person else has undertaken it.

In the last course of lectures I read on this subject, I found some inconvenience both to myself and my pupils from the want of a text; which I have now endeavoured to supply, by the following little Collection of Aphorisms on the Nature and the Diseases of Infants.

I do not produce it as a perfect piece, but rather as a first essay to reduce that important subject into a proper arrangement. I suppose my attempt may contain marks of imperfection in respect of accuracy, distinctness, comprehensiveness, and also in the art of compilation: but it is the nature of such works to grow, only gradually, more perfect, by
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the frequent revival of them in lecturing from them. We have many instances of this in the various editions of the Text Books of the most learned professors.

Perhaps some readers may deem several of the propositions not strictly connected with the subject; and others of them too much turned to physiological speculation. As to the first exception, I would reply, that it cannot be fairly determined from the Aphorisms themselves: they are only a Text or memorandum of the heads to be treated of; the enlargement and the use made of them, can only determine that point.

As to the vein of theory that may be discerned in some of the aphorisms, I confess, that has not happened through inadvertency. Theory and physiology are with me equivalent terms; and I apprehend a rational practice cannot be pointed out upon any medical subject, without establishing it upon physiological principles. It is of greater consequence therefore, than is perhaps generally supposed, to distinguish accurately
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between Theory and Hypothesis, as the latter must always have a bad influence upon practice.

By Hypothesis I mean all assumed unexplicable species of matter, or occult qualities of matter, principles or laws of action, either in philosophy at large, or in physiology in particular.

Philosophising in different ages has undergone a fate not dissimilar to that of Theology in the pagan world: who, unable or indisposed to refer the government of the universe to one infinitely intelligent and potent Ruler of all things, referred the immense charge to a multitude of subordinate divinities, independent of each other. I cannot help being of opinion, that until the principles of nature are reduced to the same simplicity, as better information has reduced those of theology, we shall be deficient in the application of physiology to practical use, and exposed to the influence of empiricism, or fashionable hypothesis, as variable as modes of dress.

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Though, as I have intimated above, my attention has been long particularly directed to the subject of the Aphorisms: the charge I am entrusted with of that Excellent Charity for the relief of Infant Poor, first instituted by Dr. Armstrong, ought to furnish me with the Means of rendering the subject daily more instructing to such Pupils as favour me with their attendance.

As some of the errors of the press are very gross, and as they are rather too frequent for so small a publication, I must request the readers to correct them, with their pens, before they begin to peruse the Aphorisms.

Beaufort Buildings,
1st January, 1783.

OF THE
NATURE AND DISEASES
OF
INFANTS.

§. I. PARTURITION.

1. **T**HE causes of parturition in the mother are excited by the uterine perfection of the infant.

2. The uterine perfection of the infant consists in the complete formation of its various organical parts, and their having attained a fitness for discharging their proper functions.

3. Whenever the animal organs attain that state, they begin to reject uterine supplies, or further nutriment in that state ; because the exercise of their functions

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tions then becomes necessary to their further growth.

4. The animal organs cannot exercise their functions on the maternal supplies in the uterine state. 1. Because the maternal blood wants qualities necessary for disposing the organs to secrete. 2. Because, on the part of the infant, it wants, *a*, a free communication with the air. *b*. A change in the mode of the circulation of its fluids. *c*. That admixture of nutriment, and that mode of conveying it, that belongs to the functions of the chylopoetic viscera: and, *d*. that exercise of its sentient powers or animal functions requisite to excite the actions of independent vitality.

5. There is some reason to suppose that the state of the skin has a regulating influence, not only in perfecting all the internal organs, but in directing them to reject further uterine nourishment, when perfected for discharging their respective private offices.

6. The cessation of uterine growth, and an incapacity for further disposing of or
digesting

digesting the uterine supply, necessarily produces such a regulation of them; as throws that redundancy of the uterine circulation, which the infant was wont to admit and appropriate, upon the *uterus* itself and these sympathetic parts, that excites these wringing pains, throws, and nifus's to expel the infant from its uterine connexion with and dependence on its mother. 2. This is promoted by the uneasy agitations the infant is thrown into, whenever its organs and whole system become unfit for being nourished and living any longer in an uterine state.

7. By a wise unerring distribution of sentient and muscular fibres, the same pains that bring on abdominal straining and pressure upon the uterus, not only tend to contract the uterus upon the infant, but also to retract its *os internum*, and so open a passage for the infant.

8. In kindness to the mother, nature has broken these painful efforts into recurrent throws and intervals of ease and cessation from pain, till by renewed efforts the end of nature is accomplished.

§. II. *Of the Nature of the uterine Connection between the Infant and the Mother.*

1. AS according to the nature of the animal constitution there could have been no security for the safety and preservation of either infant or mother, if their disjunction had been to be effected by a laceration, or solution of the continuity, of vessels of communication between them.

2. Nature has therefore kindly and providently substituted a more safe, and equally certain, mode of communication between them: namely, a non-vascular adhesion of parts, and a reciprocal absorption of the fluids interchangeably assumed by the vessels of each.

3. Absorption is the most universal and primary modus of communicating fluids to all bodies, whether inorganic or organic.

4. The faculty of absorption does not depend on any specific quality that any certain series of vessels or pores characterising

terising them absorbent are endowed with, but merely on mechanical circumstances determining some vessels or pores in bodies to absorb, and others to discharge their respective fluids; or, in some cases, the same vessels do to both.

5. Vessels full without waste cannot absorb; but any vessels that empty themselves regularly at one end will absorb by the opposite extremity—Where resistance is regularly withheld anteriorly, absorption will always take place posteriorly.

6. The strength of adhesion between the uterus and the placenta will be as their respective powers of absorption.

7. The absorbent are properly to be accounted the adherent vessels. The adhesion between the uterus and placenta must be mutual, each having absorbent veins as well as imparting arteries.

§. III. *The Change of State that passes upon an Infant at Birth.*

1. THE life and even the whole vitality of an infant in the womb is wholly derivative and dependent on its mother. Not only its fluids, but its very vitality, is circulated from her to it, or is a continuation of hers. The life of a foetus is properly an ingrafted life.

2. At birth the circumstances of an infant are totally changed in the above respect: its life becomes wholly proper and confined to itself; all its vitality is comprehended within itself:

3. Both the mode of the motion of its fluids, and the principle or cause of it, become totally changed.

4. This change from a comparatively passive state to one of self-activity, excites an action in each and in all of the vital, the natural, and animal organs of the functions of life, that they never experienced before.

5. From being immerged in warm animal fluids, the new-born infant passes
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into an exposure of its surface to the comparatively dry cold air. Nor is this change confined to its external surface, but more extensively reaches to the lungs, supplying the fluids there with fresh principles, and waſting off from them a conſtant redundancy of hot animal effluvia. In ſhort, the infant, from a ſtate of its habits being conſtantly equally full, paſſes into a ſtate of a conſtant waſte of its fluids by various conſtant drains and ſecretions made from them.

6. Theſe and the like conſiderations neceſſarily imply ſeveral points of attention and offices due to the new-born infant; as, 1. To aſſiſt, when requiſite, incipient reſpiration. 2. To ſeparate the now unneceſſary appendage that connected the infant with its mother. 3. To pay a proper attention to its ſkin. 4. To attend to its firſt paſſages, the ſtomach and inteſtines, which neglected, proves too frequently fatal to infants. 5. To adminiſter duly to them their firſt food, in which great errors are often committed.

§. IV. *Of the external Attention due to the three Cavities.*

1. THE head, the thorax or breast, and the abdomen or belly, are very properly denominated cavities, because they are cases which inclose and defend the great organs on which the animal, the vital, and the natural functions of life momentarily depend.

The Head.

2. From birth (more properly, from conception) till we arrive at our full growth and stature, there is a constant decrease in the size of the head in its proportion to the rest of the body.

3. The head, and consequently the brain of new-born infants, is comparatively large: in proportion to its largeness, the brain is moist and soft: hence infants sleep much: yet their sensations and feelings are very quick and vehement; their whole frame is very irritable; they cry vehemently.

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4. The bones of the head are incomplete: the brain under the bregma, or top of the head being defended only by the cutaneous integuments.

5. All tight bandages and applications round the heads of infants are therefore hurtful, dangerous, and injudicious.

6. Any remarkable weakness or decline of the health of infants is attended with an excessive largeness of the openness of their heads.

7. The skin of the hairy scalp of newborn infants is very apt to contract scurf.

§. V. *The middle Cavity or Breast.*

1. THIS cavity commonly, and not improperly, called the *Chest*, encloses two of the vital organs; namely, the lungs and the heart.

2. The alternate action of these two organs, each dilating and collapsing by turns, is momentarily necessary to life.

3. As they can endure no compression nor external pressure, it is necessary that
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they

they should be encased so as to defend them therefrom.

4. As they are in constant motion, it is necessary that the case should be moveable also.

5. It is necessary that these organs, with their appendages, should fill easily the case that contains them, in order to prevent their natural motion from being disturbed or destroyed by any violent accidental external agitation of the body.

6. The ribs are the only bones in the body whose motion begins with birth, and never ceases till death.

7. These considerations indicate the necessity of keeping the chest at liberty, and shew the impropriety of confining it with bandages and swaddling-cloths applied tight round it. They also suggest how to assist nature, when the chest is in hazard of becoming too flat and confined.

8. The signs of a strong or weak constitution, or of vigorous or languid vitality, are to be drawn from the form of the chest.

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9. An ample broad chest indicates an easy free respiration, a slow regular pulsation of the heart and arteries, a full unobstructed motion of the blood, and distribution of it through all the organs and members of the body.

10. A narrow confined chest is an indication to the contrary in every respect.

11. What are the uses and ends of respiration? What is the nature and cause of anxiety under the suppression of it? What is the cause and the uses of the action of the heart and arteries? What is their relation to the brain and lungs?

§. VI. *Of the lower Cavity or the Abdomen.*

1. THIS cavity is principally occupied by the organs destined for receiving, digesting, and transmitting into the blood the daily supplies of food, and for throwing off the recrements of it: it is also occupied by the organs formed for the secretion of urine; but these are artifi-

cially defended in a manner its other contents are not.

2. The contents of the belly or abdomen are provided with no defence of bones, but are freely exposed to every accidental pressure and agitation.

3. The primary organs of digestion are, besides the food conveyed into them, generally distended with an elastic vapour arising from the ingesta or food that we assume: both these bear compression and accidental agitation, not only without injury, but with benefit.

4. The warmer and more elastic that nutritive effluvia is, provided the absorbents of it are clear and unclogged, the more assimilated and nutritive it is—There is a diseased distension of the abdomen as well as heat, to which this proposition does not extend.

5. Moderate compression and agitation accelerate and assist digestion.

6. The elastic effluvia also assists the muscles of the back in sustaining our bodies in an erect posture.

7. Ban-

7. Bandaging and a moderate compression of this cavity are of various uses, both to young and old. It prevents too great distension of the abdomen; it supplies a deficiency of the due quantity of it; and strengthens, aids, and invigorates the action of the abdominal and dorsal muscles.

§. VII. *Of the Food; the Qualities of the Food of Infants; and the Manner of feeding them.*

1. THE Author of Nature has almost universally provided milk for the first original food of young animals.

2. Milk is a translation of the same supplies that nourished infants in the womb. Suction favours the secretion.

3. There is a similarity between milk and blood in the divisions their substances fall into—The first into cream, colostrum, and whey; and the other into red globules, crassamentum, and serum. There is however a dissimilarity of their characters.

4. Milk

4. Milk only, rarely disorders the digestion and the bowels of infants; and nature generally provides as much of that, as is sufficient of itself for their support, till they are strengthened for the concoction of other food.

5. When infants are accidentally disappointed of their natural food, the qualities and consistence of milk direct to the most proper substitutes for it. Whey of other milk; but particularly weak white wine whey, &c.

6. The animal heat of milk drawn from the breast cannot be wholly repaired.

7. The more frequently infants suck, the more nourishment is contained in the milk they suck.

8. The breaking and curdling of milk in the stomachs of infants is of two kinds: the one natural, inoffensive, and rather salutary; the other pernicious, and the result of a morbid state of the stomach, and of depraved powers of digestion.

§. VIII. *Of Acidity.*

1. ACIDITY enters as a principle into the composition of all bodies vegetable or animal, and seems to be the radical principle of their cohesion.

2. Its existence in bodies is distinguishable into, 1. Manifest, as in acid fruits, unripe fruits; tartar, &c. 2. Latent, as in other ripe fruits, farinaceous and other grains, &c.

3. Of bodies containing latent acidity some are spontaneously acescent; such as all saccharine substances, milk, &c. Others are alkalescent; such as certain tribes of vegetable substances, blood, oil, and almost all other animal substances besides milk.

4. Hence we may infer, that to the digestion and assimilation of nutritive substances a certain quantity of acidity either manifest or latent, is essential; which the process of nutrition has a power of both extricating where it is latent, and of re-composing

composing into an animal state suitable to the nature and age of the animal.

5. No nutritive acidity is purely acid; but, however manifest, is always incorporated with some certain portion of a neutralising substance.

6. A due quantity and digestion of this neutralising substance with acidity, is what constitutes the due and healthy crasis of animals, according to their natures: while an excess of acidity introduced into the constitutions of young or old, however latent it may be there; 1. weakens, 2. relaxes, 3. cools the animal heat, and, 4. consumes the animal oils.

7. All concoction terminates in the digestion of acidity with its neutralising principles, into oils fit for immutation and fixing into solids, which is the ultimate process of nature upon the materials of the composition, either of vegetables or of animals.

These propositions, so far as they are just and consonant to what is the known analysis of bodies, will tend to elucidate the

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the laws of nutrition in young and old
 —I say nothing of the aqueous principle
 concerned in all nutrition, as what of it
 is not by the powers of nature, changed
 into either acidity itself, or into what
 neutralises it; is subservient only as a
 vehicle to the other principles, as a me-
 dium of their immutations; or fixes with
 them without immutation, as a compo-
 nent part of the substance of bodies.

§. IX. *Application to our Subject.*

1. THO' manifest acidity in a certain
 degree in the stomach is inoffensive, and
 perhaps necessary to digestion: yet a re-
 dundancy of it weakens the composition
 of the materials of our frame.

2. A redundant acidity is generated
 in the first passages of animals, particu-
 larly in infantile and young ones, by
 three (two of them very opposite) causes.

1. By an excess of acidity or of acesi-
 cency in the food. 2. By an excess of
 heat in the constitution; for which cause
 the stomach and digestion are disordered

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in

in all (what are called) colds and feverish disorders. 3. In all unnatural coldness and relaxation of the habit or constitution; which generally first commences with heat and plethora.

§. X. *The Diseases of new-born Infants.*

1. INFANTS being generally brought into the world without any vice or imperfection in their constitution (except what is seminal and allies them to their genitors and progenitors, like the alliance of shape and features), they are born subject to no diseases, but what are owing to inattention, and which may be obviated.

2. The first diseases that affect them are, 1. An unnatural retention of the meconium. 2. The gum. 3. An appearance of the jaundice. 4. Aphthæ.

§. XI. *The Meconium.*

1. THE meconium is probably generated in the bowels during pregnancy,

to prevent their collapsing or cohesion, and to furnish them with an irritating subject to begin their expulsive powers to act upon: for, from the discharge of it by a relaxation of the retentive powers before birth, in children that are born dead, it is plain that the meconium is principally lodged in the lower intestines, where sensible irritation to expulsion is primarily felt.

2. The impression of the cold air upon the skin throwing a momentum of the circulation internally, rouses the internal organs into action, primarily and particularly the intestines, which first irritates them to expel the meconium.

3. This irritation proves sometimes slow and even insufficient; especially when the infant is long in shewing the first symptoms of life by respiration.

4. The neglect of this languid expulsion is sometimes not only the cause of immediate death, but it often proves the cause of much suffering, and of death in the end, to many infants who are not carried off instantly; by not only neglect-

ing to procure the expulsion of the meconium, but by ministring food inordinately, before it is expelled.

5. The cure of this disorder is almost certainly to be attained by emetics and purgatives suited to the state of the newborn infant, and by with-holding food for some time.

§. XII. GUM.

The gum is a kind of miliary eruption accompanied with redness of the skin; occasioned by the infant's change of climate, both as to moisture and cold. It is owing to the delicacy of the skin of some infants, and in others to improper exposure to the air or perhaps to the particular season or temper of the air. No more is required to favour its gradual disappearance than warmth and washing the infant, when dressed, with tepid milk and water, or any such emollient wash.

§. XIII.

§. XIII. JAUNDICE.

THE infantile jaundices is an appearance of the same nature with the former, or at least produced by the same cause, and requires only the same attention. It has been considered as a proper jaundice; but I can scarcely conceive it such. I rather apprehend it to proceed from the gradual evanescent change of the inflammatory appearance of the skin in some infants: as we see some inflammations and extravasations put on a yellowish appearance as they begin to resolve; or as most people change their complexion by residing in a hot climate, by the adust particles of the blood becoming fixed under the scarf skin.

§. XIV. APHTHÆ.

1. APHTHÆ are an affection infants are subject to, of a more serious nature; because attended with pain, inflammation, consequently with a fever, and a dread of taking food.

2. They

2. They principally affect the mouth, tongue, fauces, and even the lips. Sometimes also they appear about the verge of the anus; and then, even by some people of professed skill, they are supposed to have crept from the mouth along the whole alimentary canal down to the anus. This also has been pronounced of aphthæ in other diseases, particularly the dysentery. But such suppositions are very improbable, and grounded on superficial reasoning.

3. The subjective cause of aphthæ is the particular tenderness of the skin of the mouth, and these parts the air has access to, which have no covering of true skin—The exciting cause is partly the cold air, and partly the fermentative sharpness of the infant's food in its stomach; which when thrown or belched up, or which even by its steams irritate, inflame, ulcerate these tender parts, or produce inflammatory pimples all over them.

4. In this disease it is absolutely necessary to attend to the state of the bowels
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of infants, to empty them of acrimonious matter, to keep the infant warm, to administer the most inoffensive food, when other than the breast is necessary. As to topical applications, both emollient and detergent ones, have been experienced to be serviceable. If practitioners were attentive to the circumstances and stages of the disease, that clearly indicated the application of the one or the other class of these medicines, they would be better employed than in censure and comparative estimates of one another's different practices.

§. XV. *Of the other Diseases peculiar to Infancy and Childhood.*

1. FEW or none of the diseases proper to infants are owing to any hereditary taint or vice originally inherent in their constitutions, nature generally brings them into the world with sound stamina.

2. But as they are necessarily the charge of others so long, most of their diseases
are

are chargeable upon the (I do believe) involuntary mismanagement of them.

3. To be particular, the seeds of most infantile disorders may be deduced from a superabundant acidity; generated from errors either in the nature of their food, or from the quantity of it, and the mode of feeding, combined with other accidents of cold and nurses that they are exposed to.

4. But before we particularize their diseases, it becomes necessary to add some things, to what I have already delivered on food in general, of the nature of the milk: which is ordained for their first, and for some time their only necessary food.

§. XVI. MILK.

1. THO' milk is an animal secretion; it cannot be called wholly an animal substance. There they generally err in the composition of the food that is substituted for milk to infants, who have the misfortune to be denied the breast in their infancy. The characters of milk,
tho'

tho' a glandular secretion, renders it a question, whether any vegetable food is wholly animalized in the arteries; and whether the perfecting of that immutation is not one of the functions of the venous system of vessels.

§. XVII. *Of Nursing and Nurses.*

1. GENERALLY, the mother's milk and care is preferable to any other person's.

2. Nursing is generally a healthful employment, as beneficial to the mother as to the infant.

3. The following propositions comprehend what is principally to be attended to upon the article of nursing.

4. If nursing agrees with the mother, the mother's milk will generally agree with the infant.

5. Bad effects are often imputed to the milk that are owing to the mismanagement of the child.

6. The thickness or thinness of the milks are what are often examined as the

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rests of their qualities : but few milks are so thick as to disagree with infants, if their stomachs are not disordered by other food : and few milks are so thin as not to nourish sufficiently in sufficient quantity.

7. More women are hurt by nursing, than children injured by sucking the milk of women to whom nursing proves injurious.

8. The principal points to be regarded in the election of nurses are ; the sound healthy state of their constitutions ; the sufficient quantity of their milk ; freedom from scorbutic or any other infectious taint of their blood ; not subject to any hysteric, cholicky, or gravelish disorders ; not subject to violent fits of passion, nor incident to these alterations that the sex in general are not accustomed to, when nursing.

9. It is certain that the sucking infant partakes of the effects of every accident of weeds, fevers, frights, passions, medicine, menstruation, that befalls the nurse.

§. XVIII. *Of the Food, besides the Breast, proper for Infants.*

1. FOR the first months an infant that has a good nurse, has no occasion for any other food.

2. Accidents, however, render it necessary, that an infant should be accustomed to take a little food.

3. The food administered to infants should resemble the mother's milk as much as possible. 1. In consistence. 2. In qualities. 3. In warmth.

4. These qualities are best answered by plain whey, and white wine whey; or animal decoction, a very little thickened with crumbs of stale bread or powdered biscuit.

5. Sugar and wine should be sparing ingredients of the food of infants; the use of both requiring great discretion.

6. The effects of the food of infants in rendering them costive or laxative should be duly attended to.

§. XIX. *Diseases peculiar to Infants.*

1. ALMOST all the diseases peculiar to infants are remotely and ultimately referable to excess of acidity. I except infectious epidemics; which, though with some justice they may be referable to the same cause, it may seem too abstracted to account for in that manner; therefore they shall be arranged by themselves under such diseases as are called acute.

2. The diseases of infants are, like the diseases of all ages, to be distinguished into, 1. ambiguous; 2. chronic; and, 3. acute.

3. Acute diseases are either, 1. Accidental, fuscitated by accidents of cold, errors in diet or management, teething, &c. Or, 2. They are depuratory and non-recurrent, such as the measles, small-pox, some other eruptive diseases, the chincough, &c. Or, 3. They are epidemic in common with other ages, though most incident to non-age: such as the ulcerous sore throat, &c.

4. The

4. The effects of vicious acidity are manifest; 1. In the first passages: or, 2. In the blood: which 2d must again be distinguished; 1. Into such as are cutaneous; 2. Into subcutaneous or internal.

5. Excess of acidity in the first passages; 1. Coagulates the milk unduly; 2. destroys the quality and use of the bile; 3. generates viscosity.

6. The consequences of morbid acidity may be distinguished into three degrees.

7. The first, weakens and then inverts the peristaltic motion in the stomach, causing hiccough, belching, puking. In the intestines it produces wind, distension of the belly, twitches, gripes; spasms, sometimes, but more rarely, costiveness.

8. This stage of the disease, in which the infant's natural strength is little affected, is easily cured and easily obviated and prevented by proper remedies and correctors.

9. Of the abuse of anodynes and of the proper judicious use of them.

§. XX. *Second Degree of Disorders derived from predominant Acidity in the Bowels.*

1. CONTINUANCE of the cause of any disease renders the disease itself greater, and, 2. more habitual and obstinate.

2. In this stage there is either constant recurrent pain, or else indisposition after food or sucking. The infant is always uneasy when awake. Its rest is disturbed with frights, starts, and sudden fits of crying. The stools are either slimy and costive, or exceedingly chopped, that is, mixed with curd and bile appearing in them separately, sometimes mixed with thin watery humour that scarcely stains the cloths; but which is often so sharp as to inflame or excoriate the infant.

3. This degree of the disease, and likewise the third, is often produced by cold, or other accidents affecting the infant or the nurse.

4. It

4. It is remedied by stronger medicines of the same nature as are competent in the first stage : and, as in this stage, the tender bowels suffer considerably, moderate strengtheners are requisite.

§. XXI. *Third Degree of Disorders produced in the first Passages by excessive Acidity.*

1. THE bowels in their native peristaltic motion being weakened, the infant loses its strength and flesh; or, its vital powers become languid. It discovers more sickness and oppression and less pain. Its stools become ash-coloured, slimy, and tenacious in their consistence. The belly becomes not only swelled, but feels tense and hard. The infant becomes convulsed.

§. XXII. CONVULSIONS.

1. OF the ordinate and inordinate motions of the nervous system—the causes
and

and nature of its irritability, and of the sympathy of parts.

2. Convulsions are distinguished into idiopathic and sympathetic.

3. Sympathetic convulsions are distinguished into these which are produced by sensible pain; and these excited by insensible irritation of the nervous system.

4. Vomiting ceases or abates when convulsions commence in infantile disorders.

5. Of inward convulsions, what is meant by them, and their nature explained. The different causes of sympathetic convulsions, are indigestion, dentition, eruptive irritation, repelled eruption, worms.

6. The inutility of specifics so commonly prescribed and recommended in infantile epilepsies.

7. The medicines indicated in the paroxysms, and out of them.

8. The necessity of restoring the stools to their natural colour and consistence, and the means of doing it.

9. The

3. The subsequent necessity of strengthening the intestines, in order to prevent relapses.

§. XXIII. *Of Viscidity and other Disorders of the Bowels of Children.*

1. **THOUGH** in very young infants viscidty is generally an immediate cause of fits or a concomitant of them; yet in children more advanced it ought to be considered as a disease by itself, and an immediate cause of various other consequential disorders they frequently labour under, and which may be interpreted, signs of that viscidty.

2. Such viscidty is not generated out of their food, but is produced by a morbid inspissation of these fluids that are secreted for lubricating the excrementitious parts of the aliments in passing along the alimentary canal.

3. The formation and collection of this slimy mucus generally begins in the lower regions of this canal, but gradually

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increasing

increasing it often extends to and fills the smaller intestines.

4. Whenever these passages fall into a state of indigestion from an excess of acidity, and destruction of the qualities of the bile, that viscosity is apt to be generated in them. Sometimes it makes a remarkable appearance, both during and after acute disorders, and prevents a recovery from them.

5. Among the other diseases that this morbid viscosity of the bowels is apt to produce, are, 1. Worms, which it proves a proper nidus for. 2. Loss of appetite. 3. Languor, paleness, and atrophy. 4. Sometimes costiveness, but more commonly diarrhoea. 5. Hydrocephalus. 6. Dropsical or tympanical swelling of the belly.

6. The signs of this state of the bowels may always be collected from one or more of the above disorders, which it is the cause of.

7. In this state of the bowels sharp and repeated purging is indicated, and afterwards such medicines as are strengthening,

ening, and such as increase the momentum of the circulation, and likewise a dry, light diet; nutritive, and of easy digestion.

8. When this morbid state of the bowels has superinduced any of the other diseases above-mentioned, the patient must be treated in a manner proper to such a disease; but still with a proper regard to the primary cause of it.

§. XXIV. WORMS.

1. THO' all ages are subject to this vermin, yet children are most generally preyed upon by the common kinds of them: probably because their juices are a more agreeable food to them, and a more eligible nidus to their eggs.

2. The common species of worms are of four kinds—The teretes and the ascarides—To these two children are most commonly incident, though they are by no means peculiar to them, especially the latter—The tenea or tape-worm and the fluke-worm, to which grown-up people are

most incident; they rarely making their appearance in very young subjects.

3. The teretes generally occupy the higher regions of the intestines even as high as the stomach itself. The ascarides as generally occupy the lower regions of the intestines.

4. As worms, though contained in our bodies, must nevertheless be considered as extraneous living subjects; the indications of cure are to poison, and to expell them,

§. XXV. *Diarrhœa. Lientery.*

1. INFANTS are subject to diarrhœas not only from that most general cause of all infantile disorders, acidity; but from various other accidents of cold, weaning, dentition.

2. A diarrhœa is the safest turn that any complaint of the bowels in infants can take.

3. It ought however neither to be neglected too long, nor too suddenly suppressed.

4. The

4. The primary indications of cure are neither astringents, absorbents, nor anodynes; but emetics and purgatives.

5. In some cases, when the tone of the bowels has been much injured by habitual predominant acidity or neglect of a diarrhœa in its first stages; an intire change of diet, aromatic fomentations or fumigations to the belly, and keeping the skin clean and warm, in order to promote free perspiration, are all necessary to the cure of a diarrhœa.

6. A diarrhœa from dentition is merely symptomatic, and salutary; and therefore ought never to be rashly suppressed.

7. Scarifying the gums when the teeth can be reached, is a certain prevention of the dangerous consequences of either diarrhœa or fever from teething.

§. XXVI. *Ascitès and Tympany.*

1. A SWELLING in the belly is a very common concomitant symptom of the declining health of infants or children.

2. Some-

2. Sometimes it occurs as a disease by itself, or as the primary symptom of children's sliding into a bad habit.

3. Such swelling is most generally of the tympanitic kind; at least at first, though gradually and by too long neglect it comes to be hydropical also, thro' weakness of blood and decay of natural heat.

4. In such cases purging is indicated, not so much to carry off the disease, as to remove the original and permanent cause of it. Whenever that is effected, which is easily determined by the quality of the stools, the disease is carried off most readily by diuretics and increasers of the momentum of the circulation, and by a light, dry diet.

§. XXVII. HYDROCEPHALUS.

1. NEITHER this nor the former disease seem to derive their original from any topical obstruction, as is often the case in full-grown persons, from obstruction of the liver, ovaria, &c.

2. This

2. This disease especially seems to be generated by a general relaxation and coldness of the habits; produced by a bad state of the first passages, and a particular predominant weakness of the encephalus.

3. This disease is seldom discovered, or rather suspected, till it is in its fatal stages: but, if attended to in its early stage, it is, I am persuaded, as easily cured as the preceding disease.

4. The intentions of cure in both are also the same.

5. The universal office and function of the brain, and of its appendages, is what renders every morbid affection of it so dangerous, and the symptoms of its oppression so various. Add to this, the office of the brain is so universal and unremittent, that the balance of the circulation between veins and arteries in it, once lost, is not so easily recoverable as in other less vital and important organs belonging to our system.

§. XXVIII. *Of Cutaneous Diseases:*

I. I DISTINGUISHED diseases of infants into those of the first passages, and, 2dly, into diseases of the animal fluids (i. e. such as are in circulation)—This second I classed under, 1. cutaneous, and, 2. subcutaneous diseases.

2. Of cutaneous diseases in general. Though topically they are sores, diseases, or defecations, yet they are generally signs of internal health.

3. At the same time they may in a measure be obviated by attention to proper evacuations, cleanness, and the promoting of a free perspiration.

4. The diseases of the skin are either, 1. vitiated condensations of the perspiration, or of what furnishes and repairs the cuticles or scarf skin: or, 2. inflammatory obstructions of the cutis or true skin.

5. Eruptive disorders, especially in infants and children, have a remarkable tendency to break out about the face and head.

head. The face being that portion of the skin that, by being most accustomed to air and cold, gives most resistance to perspiration; while on the hairy scalp, on account of the hair, the drier, more fixed parts of the perspirable matter is apt to condense and collect into scales and crusts.

7. Hence many infants are subject to the *crusta lactea*, and children farther advanced, to crustaceous and scabby eruptions of the head.

8. The first is an humour that bursts out upon the yet tender skin of the faces of some sucking infants, which spreads and forms into a standing scab sometimes over all the face—This ought never to be repelled; but the scabby state of the eruption requires some topical management.

9. There is another species of cutaneous disorder, which (though not in the order of classing, yet in the order of its occurrence) I am obliged here to mention. Its technical name is *intertrigo*; though, from its being merely accidental

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and what may be prevented by proper attention, it ought not to be ranked among the natural series of children's diseases. Yet, though it may be prevented, it is by no means always safe to cure it rashly by local application. The disease is no more than that scalding that children, some more than others, are subject to where their skin falls into deep folds or furrows, or where the sharpness of the urine excoriates the neighbouring parts.

10. In the first instance this is easily cured by dusting, &c. But where, by neglect or otherwise, it has been of any continuance; or, where the infant is of a habit very full of humours, and there appears a remarkable flux of them upon any part, it ought by no means to be hastily healed by outward applications. In such cases the safest of any application is cold water and keeping the parts clean.

11. Eruptions on the head are either scabby or scurfy. The one indicates an over-abundance of humours. The other a vice of the materia perspirabilis, or of
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that matter that furnishes and repairs the cuticula, and is of kind to that which sometimes happens to full-grown people in other parts of their bodies, called the herpetic scurvy, and also to aged people, with an intolerable itching all over their body.

12. This disease requires both edulcorants and evacuations.

13. The phthiriasis is often a concomitant of this disease. As it consists of a generation of extraneous beings, they must be destroyed by their proper poisons, and by other mechanical means.

14. Only it is of some importance to observe, that certain states of the humours are most favourable for this species of animal propagation. Whence we may deduce the qualities of certain kinds of food; and also the reason of its becoming a disease in certain aged constitutions.

§. XXIX. *The Itch.*

1. **THOUGH** this is a disease to which every age is subject, it is requisite to say something of it here. Very young children, especially when at the breast, are not remarkably subject to it. It is the true acescent scurvy, distinguished from other species of that disease only by the truly great Boerhaave. It is not owing to animalculæ. It is infectious. It is of various kinds, very properly distinguished by Goulard. It is by no means safe to cure it (which can easily be done) by external applications only. It is endemic in cold, damp, mountainous countries, where the inhabitants feed much on oatmeal. Cleanness is the best and almost a certain preventative. When it is cured with safety to the patient by external application, the habit is in general relieved by an eruption of boils and inflammatory pustules, filled with true pus.

§. XXX.

§. XXX. *The internal chronical Diseases of Infants.*

1. THE second orders of diseases of the fluids of infants are internal. When the common secretions are not sufficient to purge the blood of impurity, and the *vires vitæ* are intire and sound, they throw the load off on the skin.

2. When the strength of the constitution is insufficient for that; or, when by any accident or piece of mismanagement nature is resisted in its efforts; or, when any such cutaneous disease is repelled, and the effects are not prevented by some means provided either by nature or art; the consequence will be, that either the habit at large will become diseased, or the disease will fall upon some particular part of the system.

3. All diseases, whether in young or old, that terminate in relaxation, weakness, coldness, and waste of the constitution, commence with morbid plethora, and
greater

greater than ordinary exertions of the constitution to unload and purge itself.

4. Weak fluids, out of which solids are assimilated, necessarily yield weak solids.

§. XXXI. *Tabes or Atrophy.*

1. THO' *tabes* very rarely happens without some particular internal part becoming obstructed and diseased; yet it is necessary to treat of it by itself, since it is not unfrequently met with, without the sensible signs of any other particular or local disease.

2. The general signs of this disease in children are, loss of colour and strength, waste of flesh, sometimes loss, but sometimes also increase of appetite, a diarrhoea or lentergy, tho' sometimes, but less commonly, a costiveness, swelling of the belly, dryness of the skin, hectic fever, &c.—The last stage of this disease is called a *marasmus*—The other sensible signs of the disease, mentioned by writers, are

are necessary consequences of the above signs.

3. The causes of this disease are inattention to the food, exercise, cleannels, natural warmth, or, to the state of the constitution of infants.—Internally the disease proceeds from predominant acidity in the first passages, and of consequence in the blood, the alimentary canal loaded with crud, slime, and other corrupted stuff, consequential obstructions of the mesenteric gland, checked perspiration, or repressed eruption.

4. When the causes of a disease can be distinctly collected and specified, the indications of cure become obvious of course, when the causes are neglected, administration of medicine must be injudicious, arbitrary, and criminal.

§. XXXII. RICKETS.

1. IT can scarcely be believed that a disease that may be referred to such rational causes should have ever been unknown, though perhaps some remarkable

able change in people's mode of diet and manner of living, may render a disease epidemic that was before more rare and accidental. The rickets are said to have made their first appearance not a century and a half ago.

2. The rickets are one of the most early chronical diseases to which children are incident. The period within which they are liable to it, is from nine months to two or three years of age.

3. The local seat of this disease, is the bones; tho' it is generally attended with the concomitant symptoms of the disease last treated of, namely, the tabes.

4. It is remarkable that the most firm, condensed, and solid parts of the body should be the seat of the earliest internal diseases that infants are subject to; first the osseous system, and if that escapes, next the glandular one. But a rational or mechanical cause of this is easily rendered, by a little reflection.

5. If about that time of life when children grow more active and disposed to perpetual exercise, by the quickness of
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of their sensations, the variety of impressions they receive from them, and the constant diversions of their attention to different objects; if then, their bones are not sufficiently strong, it is natural to suppose that they must suffer by their exertions.

6. It must be owing to a preceding weakness and coldness in the blood, and in the motion and qualities of the other fluids, produced by predominant acidity, if the bones are not sufficiently strengthened by the time nature calls them to sustain infant activity.

7. It is no wonder that under these circumstances, the epiphyses of the bones, which are so comparatively spongy and distended for forming the articulations of the joints, especially such of them as are most exposed to cold and exercise, should grow so diseasedly large in this disease. Neither is it any wonder that the bones should be so ready to bend, and to lose their natural shape, and that the ligaments of them, especially in the vertebræ of the back, should become diseased, swell, and

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throw these bones and the ribs into distortions.

8. The indications of cure in this disease are, to cleanse the first passages, to use a nourishing, dry, antacid diet, to increase the momentum of the circulation, and of the internal warmth, and to encourage perspiration, and such exercise as is competent for the age and strength of the patient.

9. This disease is very various in the degrees in which children are affected by it; and here I cannot omit noting, that all degrees of rottenness of the teeth and of tooth-ach ought to be referred, remotely or ultimately, to a manifest tincture of the rickets, or of these causes that produce it in the blood.

§. XXXIII. *The Struma or Scrofula.*

1. THE glands, next after the bones and their ligaments, are the most compact and solid parts of our substance: any vice therefore arising or existing in the blood, which the constitution cannot expel,

expel, and which the bones have acquired firmness enough to repel the impressions of, is apt to fall upon the glandular system; and in particular the most superficial subcutaneous class of them, that are most exposed to the air, and that are most contiguous to the head, the principal seat of the eruptive disorders to which children are incident.

2. While any vital energy remains, there is an incessant effort of the combined powers of our constitution, that will not suffer any thing offensive, and that cannot be assimilated, to rest till it is thrown upon some particular part or parts.

3. The salivary glands, the amygdalæ and the parotides, with these contiguous ones connected with them, that are most exposed to the impressions of the air; whose secretions are not incessant, and whose secretion is also diminished upon the weaning of infants, are the system of glands that are most generally and primarily obnoxious to strumous obstructions.

4. The remote causes of the disease may be referred to, 1. Hereditary taint. 2. To universal weakness, not only of the glands, but of the whole habit, fluids and solids. 3. To accidental causes of obstruction, as heats and colds in immediate succession, &c.

5. The disease, which has never been accurately distinguished, ought to be classed under at least four different kinds, partly referring to its seat, and partly in respect of its degree. Some of them are very improperly reputed either malignant or hereditary.

6. The first class or order of this disease is strictly scrofulous, affecting only the glands, and these principally about the neck, ears, and throat. While these glands are only swelled, without signs of suppuration, it is called a *strumous* swelling. There is a species of this disease, that never tends to suppuration, which is endemic in some places, and which, in regard to the tonsils, is more common than is generally apprehended.

7. When

7. When there is a tendency in strumous swellings to suppuration, the suppuration ought to be promoted as much as possible, for two reasons; the one consequential of the other: 1. In proportion to the slowness of the suppuration is the length of the discharge, when it comes to a state of ulceration. 2. In proportion to the length of the discharge is the danger of the infection contaminating the blood, and spreading to other glands.

8. The *second* order of this disease is that which is seated in the periosteum only. It ought to be distinguished by the name of the membranous or periodical scrofula. In this species the bone is not so soon affected as is often supposed.

9. Tho' this paronychious species of the scrofula is sometimes found by itself, as the former is by itself, yet in bad cases they are often found combined together.

10. The third species of this disease is of a very mild kind, that cannot be supposed to have any malignancy in it, tho'
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it has sometimes proved dangerous from the quantity of the collection. The seat of these collections is confined to the cells of the cellular membrane in which they are incised. They may be distinguished by the name of suppurating wens. They are also allied in kind to these tumours that are called mellicerous and steatomatous, from the consistence of the matter contained in them.

II. This species of the disease is almost peculiar to children of otherwise good constitutions: the others, tho' they often break out in florid, seemingly good habits, yet they often make their appearance in the cachectic constitutions of very young children.

I have known scrofulas, that is, inflammatory swellings and suppurations of glands produced by mere accident of cold, or violent exercise and subsequent cold, in young persons otherwise free from tendency to that disease, and where it never before or after made any appearance. This may be considered as a fourth species of the disease under the
name

name of, the accidental, non-malignant scrofula.

12. The first matter generally discharged in every species of the disease is good mild pus, but often much inspissated.

13. Pus is a concoction of coagulable lymph tending to fibrous granulation: but collecting too fast and subjected to a digestive heat; that is, a greater heat than is natural to sound parts. Whence we may infer, that since solids are formed or regenerated out of fluids, the principles of vitality are more immediately and primarily in the fluids than in the solids; tho' in the sound and full grown constitution, their co-operation in every action and function of life, i. e. their mutual and reciprocal influence, are indistinguishably combined.

14. As the discharge of scrophulous ulcers continues, and the passage grows sinous, the matter grows worse, more thin, and intermixed with small curds, and at last, sanious.

15. The

15. The indications of cure in this disease respect, 1. The external cure of the diseased parts; to accelerate the suppuration, and to give the matter discharged as free a vent as possible, for various important reasons; such as, shortening the time of the discharge, preventing marks by loss of unregenerable skin, and preserving the constitution from further infection by absorption. 2. The internal care of the habit by diet in due quantity, and of due quality, by medical evacuants, edulcorants, and strengtheners. These intentions may be prosecuted either separately or conjunctly.

§. XXXI. *Acute Diseases.*

1. THE second class of internal diseases of infants are acute ones, i. e. fevers and febrile disorders.

2. Though neither plain fevers nor such as are attended with anomalous eruptions can be ranked among the diseases peculiar to infants; yet as children are very incident to them, and as in them

them they require a very simple treatment, it is requisite to pay some attention to the nature of fevers in general with a particular view to infants.

3. A fever is an universal disease, i. e. a disease in which the whole habit suffers at once.

4. A fever is a disease in which (I will not say the circulation, but) the momentum of the circulation is always increased.

5. A fever is only accidentally a disease; for in fact it is no more than an extraordinary effort of nature to repel or expell some other morbid affection of the constitution.

6. A fever is a critical disease, i. e. every fever has a certain *acme*, precise point or height, from which it declines either to death or to recovery.

7. Every fever induces a morbid change upon the blood; and a necessity for the expulsion of some of the fluids so changed. The symptoms of this expulsion are what are commonly called critical evacuations: and death is some-

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times occasioned by an imprudent management of such symptoms.

Peculiarities in the Fevers of Infants.

1. THE plain fevers, to which infants are most incident, are generally sharp and short, of the nature of a synocha or ephemeris; or, when they are of any continuance, they are remarkably remittent.

2. They are rarely preceded by any sensible rigor, or previous signs of their invasion.

3. They are generally either accidental, proceeding from cold, repressed eruption, foulness of the first passages, infected milk, indiscreet cold bathing, or the like: or, they are symptomatic, excited by pain, as in teething.

4. In children the accidental, external, or procatartic causes of fevers meet with small predisposing causes in their constitutions; and, on the other hand, their symptomatic fevers are not often copulated with any procatartic cause. Hence the fevers of infants, if duly attended

tended to, are simple, tractable, and not commonly dangerous: they may therefore generally be safely conducted without bleeding, blistering, or much medicine; vomits, glysters, semicupium, poultices to the feet, light drinks and food are all that are necessary to the assistance of nature in facilitating their cure.

§. XXXV. *Of febrile inflammatory Eruptions.*

I. NATURE often relieves infants and children in fevers, by forcing some anomalous eruption out upon the skin, especially in seasons where either by long heat there has been excess of perspiration, or when by summer's cold, unnatural to the season, there has been a deficiency of perspiration, by the pores and texture of the skin not being duly opened nor relaxed. The difference of the causes calls for different management. Under the first-mentioned circumstance eruptions have a tendency to the erysipelatous nature.

2. Children are not unfrequently subject to local erysipelas, creeping from one part to another. I have seen the whole skin successively so inflamed—The general cause of such erysipelas is great relaxation of the skin, from waste or want of a natural, or due proportion of red blood circulated in it.

3. But the most common erysipelatous inflammation to which children are subject, is what is commonly called the ulcerous sore throat. The degrees of this disease, and consequently the danger that attends it, is very different, though little attended to; or else great advantage is often taken of the name to alarm people. Medicines that sustain and invigorate the circulation and that brace the solids are always indicated in this disease, according to the different degrees of it.

4. I am in some doubt whether or not to arrange the *croup* among erysipelatous inflammations. To me the disease seems immediately to be owing to a morbid secretion of inspissable fluids along the trachea, such as happens to the Sneiderian
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rian membrane in a cold; the fluid parts of which evaporating, leave the inspissated parts like a cuticle on the surface of the trachea. What is done by evacuation, emetic, or blisters externally near the parts, must be done early and quickly; for the function of the internal membrane of the trachea becomes irreparably suppressed if that mucous cuticle once covers it.

5. The whooping cough is another disease of infancy or childhood which I am inclined to rank among the acute diseases of nonage; for though, in favourable seasons, when the atmosphere is mild, that is, warm and dry, the disease often runs its course with very little fever, yet it generally either commences with some fever, or it excites some before the disease finishes its course. It is remarkable, that all the epidemics peculiar to childhood affect principally the parts to which the air has access by contact. The chin cough is called a spasmodic disease; but there is much reason to suspect that the recurrent irritations of
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that epidemic is owing to a bias or flux of humours on the trachea, which, at intervals, excite the cough. Vomiting and moderate discharges of blood during the paroxysms are accounted rather salutary. Volatiles and bracers (*præmissis præmittendis*) seem to be principally indicated. I have known anodynes also of service; and in one instance saw a singular effect produced by them. Change of air is of little effect in this disease till it has past its acme.

6. There is another disease to which children are incident, that I must arrange among acute diseases. It has hitherto escaped practitioners and medical observation. This disease has no name, but among the vulgar; by whom, at least in Scotland and in the North of England, it is called the *Bowel-bives* *. The symptoms of the disease are sickness and great pain, a quick, small pulse, aversion to food,

* The word *bive*, expressive of an eruption, is in Scotland synonymous to the word *blain*, or a broad pustula or eruption.

and

and rejection of it again. In its agonies the child throws itself backward. After death, and sometimes before it, large livid spots, especially about the false ribs and sides, appear, from which the disease has its vulgar appellation, I apprehend. I had access to cause to be inspected one infant, who died with many of the above symptoms, and a mortification was found in one part of its stomach. So that I apprehend the disease is an erysipelatous inflammation of some part of the intestines, tending to and terminating in mortification. The case I allude to was the result of a repressed eruption, by exposure to cold, in a cold summer, when eruptive disorders were from that cause epidemic among children.

§. XXXVI. *The SMALL POX.*

1. THE small pox are a febrile, epidemic, infectious, inflammatory, eruptive disease, that, most generally, children and young people are subject to, only once in their lives.

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2. The fever, or rather, the fevers that pertain to this disease are of three kinds, 1. The eruptive. 2. The symptomatic. 3. The blackening or recession fevers.

3. There is little reason to doubt of the small pox being an epidemic disease. It is found to be such at certain seasons and periods. They at such times partake of the nature of other epidemics then prevailing : when they are general, during their prevalence, they generally change their type from better to worse, or from worse to better.

4. That the small pox are also infectious needs no other proof, but the practice and success of inoculation ; of which I shall treat briefly, after explaining the genius of the natural disease.

5. All fevers may be considered as, in a certain degree, inflammatory : but by inflammatory is here meant, that the small pox are locally so, in distinct spots externally and internally.

6. Local inflammation (all inflammation, indeed, and every degree of it) consists

sists in the introduction of red blood into vessels into which it does not pass in that state, naturally.

7. This happens, at the crisis of the eruptive fever, by the balance being lost between the sentient solids and the circulating fluids.

8. By the particular genius of the disease, it happens instantaneously, and with pain, in particular separate points, external and internal; which constitute the *eruption*. The mode of the eruption may be defined explosive, and is not unfrequently productive of fits.

9. These inflammatory points are not extravasations; other specks, where the inflammatory tendency runs high, or where other malignant tendency prevails, denoting extravasation or tendency to gangrene.

10. The general phenomena of the eruption are, 1. It is successive, beginning about the face, and more slowly appearing upon the lower extremities: so that some days intervene between the first and the last pox that break out. 2. There

is generally the largest quantity of eruptions on these parts of the body, such as the face, hands, and feet, that are most exposed to cold and the open air.

11. The eruption, in respect of quantity, is distinguishable into, 1. The distinct. 2. The anomalous. 3. The confluent: to which may be added, 4. The impetiginous or erysipelatous.

12. The inflammation attending the eruption is distinguished by the appearance of the pox into, 1. The bland or concocted. 2. The serous. 3. The bloody. 4. The anthraceous.

13. The natural period of the eruption to the blackening of the pox is, like that of most other inflammatory suppurations, from seven to nine days.

14. A good species of pox, such as the distinct concocted are generally accounted, are not without accidental danger, 1. From the quantity of the pox that may be seated in the Sneiderian membrane, and in the trachea and lungs. 2. From the too sudden universal recession of the pox at the turn. 3. From a sudden

sudden unexpected subsiding of the inflammation during the filling or suppuration of the pox.

15. The badness and danger of the nature of the small pox is always to be prognosticated from the earliness of the eruption, which ought not to make its first appearance before the end of the third day of the eruptive fever. The earliness of the eruption is an indication of the height or malignancy of the eruptive fever. Another sign of danger is, the continuance of the eruptive fever after the eruption has commenced, or is well advanced.

16. In the anomalous and confluent small pox there arises a quantity of humour; a surplus, which the eruption cannot dispose of by suppuration, part of which is discharged sometimes by diarrhoea; another part of it by the salivary glands; and still another part of it by tumefaction of the face, hands, and feet, as the pustules ripen in these parts, and in the same succession as the eruption takes place in them.

17. The eruptive fever of the small pox is known by a pain and heaviness in the head, heaviness, and tendency to inflammation in the eyes, lassitude, and pain in the back and loins, correspondent with the seat of the spinal marrow: so that the primary and most immediate impression of this fever seems to be made upon the brain itself and its continuation.

18. The history of the disease with the concomitant symptoms of it in its different stages; the nature of the epidemics, and seasons when the small pox are prevalent, and the constitutional habit of the patients, contribute both to explain the various symptoms that occur in it, and to point out the general and particular indications of cure, in all its stages.

§. XXXVII. INOCULATION.

I. NO branch of the practice of medicine requires greater caution and judgment than this operation: it is assuming a precedence to nature, which we ought
always

always to be well justified in doing. ' One lost by inoculation is a more just reproach upon a practitioner than twenty by the natural small pox : for, with sufficient knowledge and caution, we perhaps might have foreseen what we may afterwards pretend no person could foresee. We may also, by mismanagement, sow the seeds of diseases in the constitution that were not in it before.

2. At the same time the general success of the operation justifies the practice, though it neither vindicates miscarriages, nor intitles us to urge people to submit themselves or their concerns to the operation, by a compulsive species of overpersuasion.

3. As inoculation gives the great advantages to practitioners, of knowing previously the constitution of the patient, the tendency of the epidemics of the season, and what the disease is when it commences, they are highly to blame if any of these circumstances escape their strictest attention.

4. Pre-

4. Preparation, so far as it is requisite, consists in correcting the habit of grossness, or crudeness and acrimony, cleansing the first passages, and disposing the skin to perspiration.

5. The great inconvenience, and indeed danger, to be avoided in this artificial disease is an imperfect species of small pox; which, by leaving the habit charged with what should have been more perfectly concocted and discharged, occasions not only the lesser evil of subsequent anomalous eruptions, but glandular or membranous obstructions of the worst kinds, from a deposition on these parts, or what should have been thrown off by a more perfect crisis of the eruption.—These evils are generally chargeable upon, either an injudicious previous treatment of the patient under the idea of preparation; or to an abuse and misapplication of the cooling regimen, and of exposure to the cold air during the course of the disease, productive of a low inflammation, and consequently an imperfect suppuration of the pustules.

6. The

6. The common interval between inoculation and the commencement of the eruptive fever (which is sometimes very slight, remittent, or imperceptible) is about nine days.

§. XXXVIII. *The MEASLES.*

1. The measles are a febrile, inflammatory, epidemic (perhaps infectious) disease.

2. The morbillous fever cannot be distinguished into three fevers resolvable into separate causes, as in the small pox: it is rather continuous, persisting during the eruption, and often augmenting upon the recession of the eruption.

3. The eruptive stage of the fever is accompanied with the same pain in the head and back, and the same watry shining, and tendency to inflammation in the eyes, as in the small pox: but instead of the same degree of sickness of the stomach, it is more characterised by an incessant dry cough.

4. The eruption is sometimes faint in
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its colour, almost like freckles, and distinct in separate specks: sometimes it appears in clusters, raised a little above the skin, of a more florid appearance: sometimes the eruption is so florid and universal, that it has the appearance of the skin in what is called the scarlet fever.

5. The eruption has never that degree of inflammation in it as to tend to suppuration. Its regular continuance is between three and four days——The longer it continues, it is so much the better sign. Upon the disappearing of the eruption it leaves a white, dusty scurf upon the skin.

6. It admits of evacuations in any stage of the disease, when the symptoms of the fever require them; but more especially in the evanescent state of the eruption.

7. When the recession of the eruption proves premature; or, when due cooling evacuations are neglected, as the eruption disappears, and the fever at the same time continues, the disease is apt
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to degenerate into a species of peripneumony; which, if it prove not fatal in the first instance, often degenerates into an emaciating hectic.

8. This eruptive disease, having no critical discharge by suppuration, like the small pox, requires so much the greater attention upon its decline; especially in cold seasons, or when any symptoms of the disease linger upon the patient.

9. There is a remarkable sympathy between the organs of respiration and all the eruptive diseases of children.

10. Though the ulcerous sore throat is to be accounted a distinct disease; yet the worst kind of it has almost all these symptoms that would otherwise characterise it a malignant or putrescent species of the measles.

§. XXXIX. Of CHILBLAINS.

1. **THOUGH** this may seem scarcely to merit the rank of a disease, being in it-
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self

self merely local, yet under certain circumstances it is not absolutely free from danger in its consequences: and though it is more properly a disease of youth than of children, yet as children who are of the age to go to school are very incident to it, it is requisite to understand its nature.

2. The chilblains is an itching painful swelling of the hands and feet, occasioned by these parts suffering much under a sense of cold, for want of sufficient exercise during the winter season.

3. The swelling is rather inflammatory than edematous, though properly it is neither of them: for when such swellings break, which they do sometimes, they exhibit more the appearance of scorbutic ulcers of the legs, than of true suppuration.

4. This local disease is certainly produced by a conflict between the keen sense of cold felt by young persons, and the greater natural heat of their blood, and laxity of their solids.

5. It

5. It is cured topically by the application of such stimulant and active medicines as promote absorption, and quicken the return of the fluids from the extremities; but at the same time proper evacuations are indicated,

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 25, line ult. *for* of the milks are *r.* of milk are.
 31, l. 9, *for* in their native peristaltic, *read*
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 34, l. 18, *for* tympanical *r.* tympanitical.
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