



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### **Usage guidelines**

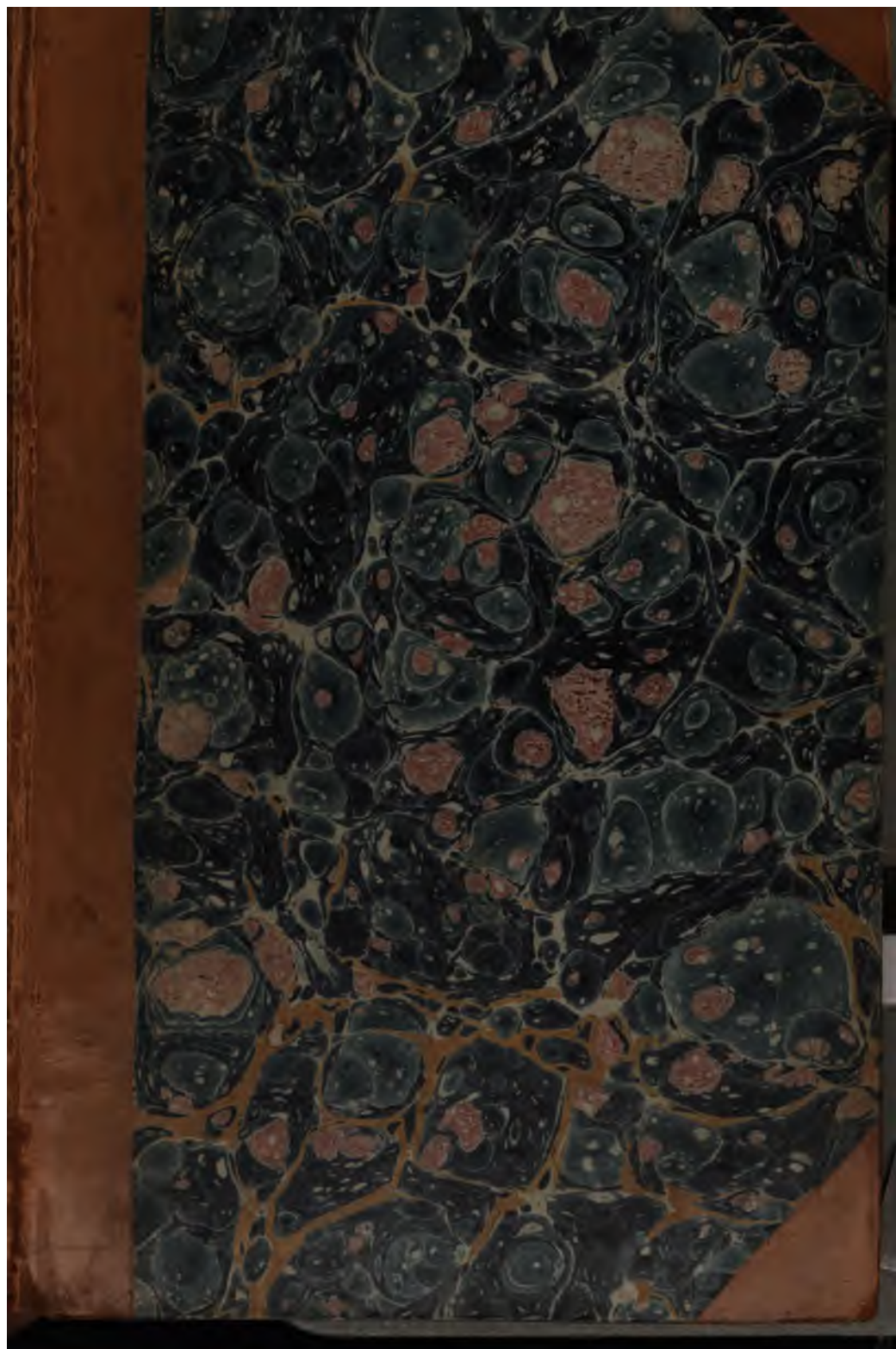
Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### **About Google Book Search**

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>





600043176R

S. 146. S.  $\frac{11}{1-5}$



E. BIBL. RADCL.

~~23~~  $\frac{257}{2}$   
~~14~~  $\frac{1}{A}$

86.E 19

C

1695

e

$\frac{64}{1-5}$

Succinea — Wasm. Belling — Family 5/4 17  
C. + C. 1817

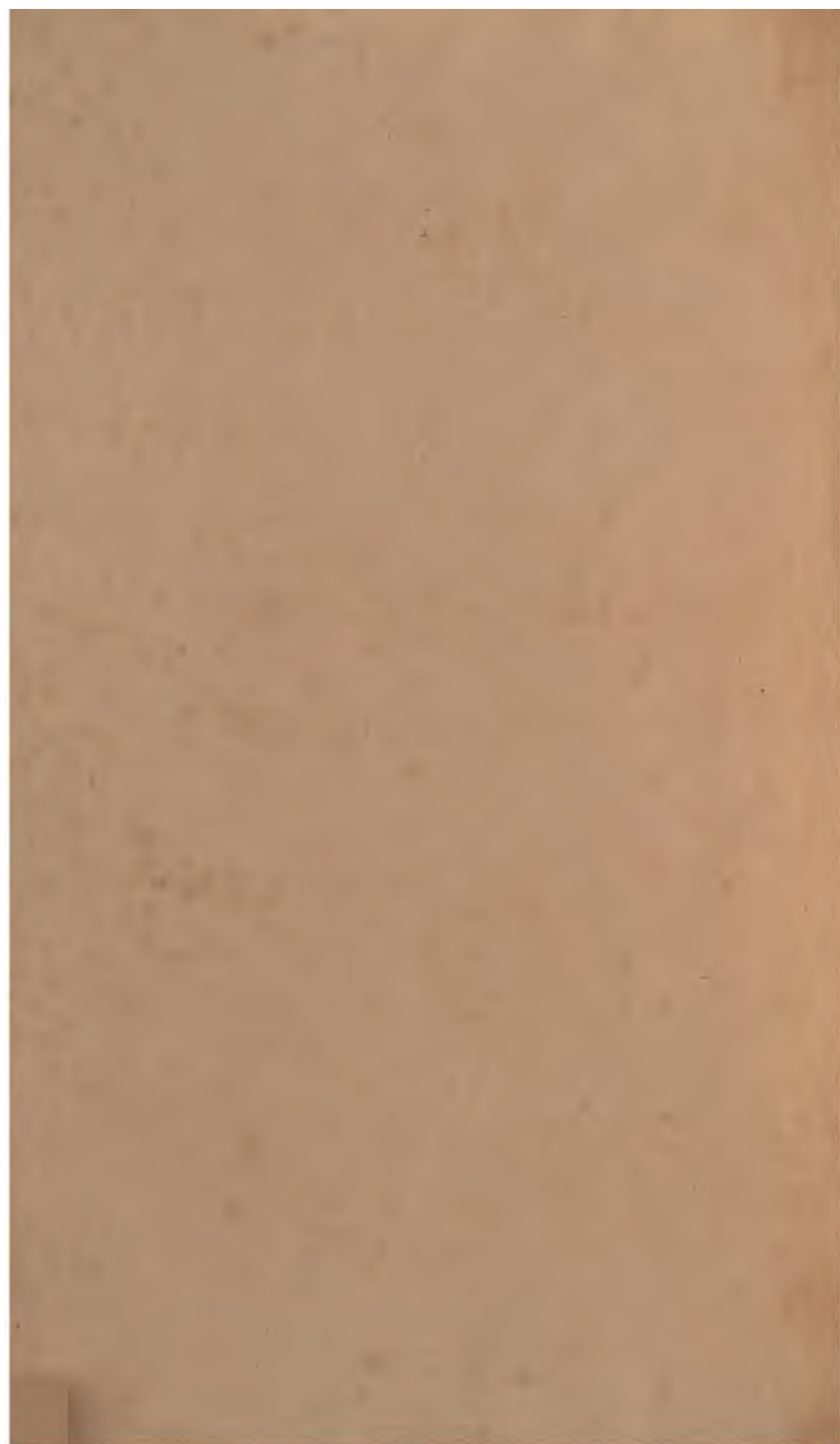
Charleton — Wasm. Belling — Family 1770

Falcorer — Bath. Water: — Family 1805  
— — — — — Bath. Water: — Family 1791









*r. Frevin*

A SHORT  
ACCOUNT  
Of the SUCCESS of  
WARM BATHING  
IN  
Paralytic Disorders.

By JOHN SUMMERS, M.D.  
At BATH.



L O N D O N :  
Printed for C. HITCH and L. HAWES,  
in Pater-noster-Row, MDCCLII.





---

A SHORT  
ACCOUNT  
Of the SUCCESS of  
Warm Bathing, &c.

THE Custom of bathing in Paralytic Disorders, which Success has introduc'd, having been establish'd for so many Years, I was somewhat surpriz'd and concern'd to find it discountenanc'd under the Sanction of so great a Name as Dr. *Mead's*. The distinguish'd Character that Gentleman has always justly maintain'd in the learned  
B World,

World, and the many great and eminent Services he has done in his own Profession, cannot but prejudice every Reader in favour of his Authority : But his known Humanity, and constant Application to improve the Science he presides in, are so universally admir'd, that it is certain he would with Pleasure retract any Opinion he had deliver'd, that might tend to hurt the Public, or not procure that Good he is so desirous of doing, and his extraordinary Talents have made him so able to promote.

In the \* Preface to his last Work, he speaks, as he has always acted,

\* Quocirea nec me puduit, quæ quandoque ipse, sive ignorantia, sive negligentia, perperam fecerim, monere, & agnoscere ; convenit enim ut ait Celsus simplex verioris confessio, præcipueque in eo ministerio, quod utilitatis causa, posteris traditur. Vid. Pref.

with

with so much Candour, and Zeal for Truth, that I am sure of his Pardon, when I venture to state a Matter of Fact, which will show he was mistaken in asserting, that \* warm-bathing is hurtful to all paralytic People.

This Sentence alone is sufficient to alarm many, and gain such Influence, as to deter them from pursuing a Method known to be useful. Many Cases might be produced, and many Instances are Here daily seen, that would prove the Utility of it; but as I would not oppose any single Authority from private Practice against so celebrated a Physician, I have chose to rest the whole Force this Expedient should have, upon Arguments that neither

\* Calidæ vero immersiones omnibus paralyticis nocent.

Prejudice nor Interest can be suppos'd to produce, or be suspected to convey more Weight than the bare Relation supports; I mean the Register of the General-Infirmary. There, when Patients are discharged, it is not what Condition the Physician concern'd reports they are in, but what the whole Committee sees and examines, which is recorded. This therefore is a Testimony to be relied on, and such a Proof as none can dispute. We have a great Variety of paralytic Patients, and upon exactly examining our Books, from the first opening the Hospital to this present Time, I find the Account to be as follows:

Admitted in Nine Years.	Cur'd	Much better	No better	Incurable	Dead
320	57	151	45	42	12

From hence it appears, that more than two Thirds were either cured,  
or

or received remarkable Benefit, and that only twelve died in the Space of nine Years. All these Patients were bath'd twice a Week, and many of them three Times. But what is very remarkable, is, that of those who were cur'd, or much better, above thirty were more than 40 years old, fifteen of whom were turn'd of 50, and five were 60 and upwards. Now let Conjecture hesitate, but Reason judge: And if to this Observation we add, the many Disadvantages these poor People lie under, such as the want of a good Air, and Exercise, which are found to be efficacious in these Cases, and that they are not allowed a proper Use of the Bath, which, as it is now regulated, subjects them to many Inconveniencies, which greatly obstruct the Good they might otherwise receive, and that for want  
of



of a *sufficient Fund*, how long many are obliged to wait before they can be admitted; by which Means, and the Negligence of Parishes to which they belong, the Distemper often becomes so fix'd and obstinate, that it is really surprizing, that any Method should be of Service, especially when to all this, I must observe, that the Generality of our Patients come as Incurables from other Hospitals, where there are Men of the first Character, and consequently where the best Methods are used; and yet with all these Obstacles, how strong in favour of Bathing is the above Account? I do not take upon me to distinguish the several Species of Palsies, but as the Hemiplegia is the most obstinate, and the most skilful Practitioners so seldom succeed in it, I have selected what with Certainty I can vouch to be

be

( 7 )

be of that Kind: Among the 310,  
43 were Hemiplegia's, the State of  
whom is as follows:

Cured	Much better	Better	No better	Incurable	Improper	Dead
4	13	24	2	4	3	2

In Confirmation of this Success, I  
must not omit to mention, that a-  
mong *Guidot's* two hundred Cases,  
there are 23 Paralytiks, 17 were  
our'd, 4 of which were Hemiplegia's,  
and the other 6 were much better by  
Bathing.\* These are such incon-  
testible Evidences, that whatever Ap-  
pearances the Disorder might assume,

\* *Guidot* says, in his Preface, that Mr. *John Revit*, an aged Man, hath very lately publicly testified his Cure of an Hemiplegia, in a Month's Bathing, by an Inscription round a very fair brass Ring, on the right Hand of the Entrance into the Queen's Bath out of the King's, after this Manner: "Thanks to God, I *John Revit*, his Majesty's Brazier, at 56 Years of Age, in this present Month of *July 1674*, in this Place recover'd a Cure of Health and Limbs, of the Dead Palsy on one Side from Head to Foot. Vid. *Guidot's* Preface."

OF

or Prejudices the Faculty may conceive, yet they are strong enough, I should hope, to remove them all; for tho' Hypotheses, and reasoning on the Animal Structure, may be useful, yet such undoubted Experience must show us the Truth: And after this, whatever the Learned have thought or advanc'd on this Subject, must be little to the Purpose: We are every Day convinc'd, that Theory but seldom coincides with Practice, and rather misguides and lead us to Error, than assists us in investigating the true Cause, or fixing on the proper Method of curing Diseases. But yet to show that warm Bathing is not so absurd and inconsistent as some have imagin'd, notwithstanding the Relaxation which attends this Complaint, I shall present the Publick with the Opinions of the most celebrated Moderns, *Pitcairn*, *Boerhaave*,  
and

and *Hoffman*, who declare, that the original Cause of Palfies arises from Obstructions in the nervous System. The first, after distinctly treating of the several Kinds, says, That an Obstruction of the Arteries of the Muscles, or the proper Influx of the nervous Fluids, will produce the several Symptoms; and mentions the common Experiment of tying the Nerve and Artery, either of which will bring on a Paralysis of those Muscles to which they were detach'd. *Boerhaave* says, That the common Coat of the Nerves, which arises from the Meninges, and is replete with various Kinds of Vessels, will often be inflam'd and obstructed; and so pressing the Nerves, prevent the Motion of their Fluids; and thereby be the Cause of the Resolution of the Muscles. And lastly, *Hoffman*, in several Places, says, That Palfies

proceed from the nervous Fluid being intercepted; and frequently mentions and recommends warm Bathing:\* But adhering to no Doctrine or Authority, let Bathing have *Experience* only to lead us to its Use, or show us the Danger of it: And if we take that for our Rule, what has been already observed, will, I should think, be sufficient to determine our Doubts and remove our Suspicions.

The Doctor observes, that he has known some, who after Bathing have died apoplectic; and I do not at all doubt it, but very much question, whether Bathing produced that Effect; for many Paralytiks die in

\* *N. Pifo* on this Subject, after enumerating the several Methods of Cure, says, Si adsint Balneæ calidæ naturales, præsertim nitrosæ, bituminosæ iis utendum, in eis que resoluta Membra, agitanda sunt: non ita probantur aluminosæ, quia nimium astringunt. De morbis cognosc. &c. Pag. 116.

that



that Manner, especially if the Disorder originally began in the Head: And indeed these Distempers are so nearly allied, as arising from affected Nerves, that they are frequently productive of each other, the Apoplexy bringing on a Palsy, and the Palsy ending in an Apoplexy. If we did not know this to be true in People who never saw *Bath*, the Effects of Bathing might perhaps be more strongly suspected and impeach'd; and yet what makes more to our Purpose, is, that not one of the 12 who died became apoplectic: And this I assert, after the most exact Scrutiny I could make; and upon my own Knowledge I can say, that ever since I have attended the House, which is near three Years, no one was ever seized with a Fit in the Bath, or immediately afterwards, tho' thro' the Inconveniencies I have

hinted, the Patients often stay an Hour, and sometimes longer; if Bathing therefore but remotely tended to such ill Consequences, we must have had frequent Examples in the Infirmary, more particulary as we have great Opportunities of seeing the Consequence of this Method; for the Patients often remain with us 3, 6, 9, and sometimes 12 Months; and if I add what I think is very material, that we have only the Use of the Hot Bath\*, when it is probable, that a more moderate one might sometimes be the best Beginning, and perhaps better succeed thro' the whole Course; at least Circumstances often arise, that must

\* The moderate Warmth of the Cross Bath, as it does not so immediately affect, perhaps stimulate the Skin and Fibres, us'd to be in the highest Esteem, but thro' I know not what Caprice, it is not now so frequently us'd, as I think it deserves.

make us wish to have such a Change in our Power; I cannot but conclude that warm Bathing seems to be the proper Means of restoring Health and Vigour, in this enervated Situation, I am afraid to call it relax'd, for fear the Effect should inadvertently be taken for the Cause. It has been insinuated, that we might have done more Good, had we not so indiscriminately bath'd our Patients, which seems rather an Experiment than a prudent Use of Bathing; but when Men fall into a Prejudice, rather than sink under it, they lay hold on Straws to support them; for if it was an Experiment, all must acknowledge it ought to be continued, seeing how well and how often it has succeeded; and as Success has given us this Encouragement, we cannot but still persevere in the Use of it: I have therefore  
only

only to say on this Head, that I shall be very glad, if any one can produce from the same Number of Patients, the same good Effects *without Bathing*.

A further Objection has been started, That all those who bathe, do at the same Time drink the Waters, to which all the Good obtain'd may be owing; at least the Virtues of Bathing cannot be so precisely ascertain'd. The real Force of this can only be determin'd by Observation; and it has been remark'd, that they who have bath'd have in general become better, and many of those who did not, either died Here, or soon after they left us, of which, there are some recent Examples; but what should have great Force as to this Point, is, that I have known several, who following the Orders  
they

they had in Town, only to drink the Waters, finding themselves no better, or rather worse, have ventur'd upon the Use of the Bath, and soon got great Benefit; and if we compare the Numbers reliev'd in the Hospital, with those in private Practice, I am well assur'd the great Odds would settle this Question much to the Advantage of Bathing: For tho' People in general come Here with such a Dread of it, rais'd by Injunctions laid on them in *London*, that one would think the Steams of the Baths were as poisonous as those of la Grotta de Cani, yet the many Instances of People who for some Time drink the Waters without Benefit, and afterwards have Recourse to Bathing with surprizing Success, will shew they have Qualities rather to be admir'd than dreaded.

In



In what Manner warm Bathing produces these good Effects in Palfies, may be difficult to explain, tho' it is sufficient to show, that Experience confirms the Propriety of it; but yet, as I have quoted some Writers who authorize and approve of the Method, I shall, in support of this Practice, suggest how I conceive the Fluids and Fibres may be so acted upon, by the Means of warm Water, as to bring about a Change in the Animal Oeconomy, quite opposite to its present Circumstances. Palfies appear to be, and really are, a State of Relaxation; but *that*, if the Doctrine of the Nerves is true, is but a Consequence of a previous Obstruction; or what will equally answer my Purpose in this Enquiry, an Inability in those Organs, which are allow'd to be  
the

the \* Instruments of Sensation and Motion ; when therefore they are render'd incapable of performing their Office, Part of which is to continue and regulate the Circulation thro' the Muscles, the Arteries, upon whose Coats the nervous Filaments are distributed and inserted, lose their Force, the muscular Vesicles can no longer be inflated, and the Muscles themselves, for want of Support, and their only Directors, remain inactive, soon become cold, flaccid, numb, and often wasted ; in short, the Body in those Parts is in a paralytic State.

Now whatever can so penetrate as to open Obstructions in these

\* The Modus agendi, or how the Nerves perform the important Parts of Sensation and Motion, I have no Business with ; all who have wrote on this Subject, have rather confus'd and perplex'd themselves, than improv'd others.

D

prin-

principal Organs, or any way restore them to Action, the consequent Feebleness, Langour and Inactivity of the Muscles will be remov'd, and these Cases either cur'd or greatly reliev'd.

The Effect of warm Water simply consider'd, we know is to relax, the Steams of it soften, and entering thro' the Skin, become a Fomentation to every Vessel and Fibre they reach, whereby their Diameters will be enlarg'd, and the contain'd Fluid have a greater Space to move in, and besides, may thereby be attenuated; even under this Circumstance, warm bathing may be justly looked upon as a Deobstruent. But we are led into an Opinion, I may call it a Mistake, that the *Bath Waters* have no other Effect than this; whereas if we consider these  
 Waters

Waters as impregnated with more active and mineral Principles, at the same Time that they act upon the Body as warm Water, their more powerful and volatile Contents will, by that Means, be better enabled to be convey'd to the remote Vessels, where penetrating the Coats, they stimulate them to Action, and mixing with the Fluids themselves, attenuate, dislodge, and move on the obstructing Cause, and thereby fit it to be discharged by its proper Secretion: Thus the several Organs will be restor'd to their respective Offices, and the Oeconomy of the whole Structure to be preserv'd\*.

\* Fernelius says of Palsies, Curationem ita instituemus, ut ratione causæ, humorem nervos occupantem, ab illis alio revellamus derivemus, vel & corpore expergemus, aut alioquin discutiamus, vel abluamus; and among other Ways, mentions warm bathing.

When we consider the Skin as the general Emunctory of the whole Body, and that a due Secretion from thence must contribute to the proper Action of the several Parts, and the general Vigour of the whole Constitution, it is likely that warm bathing only in this Light would be of Service in Palsies; but when we reflect, that it is more than probable, that the greatest part of the nervous System is spread upon its Surface, we may reasonably conclude, that the Water, and its Contents, will more immediately act upon, affect, and free the Nerves from Causes that hinder'd their Action: It would not perhaps be too refin'd an Opinion to imagine, that from hence, tho' the Cause arose from the Head, Success might be expected; for these extreme Branches may imbibe and convey to the very Seat of the Disorder

order a Power sufficient to remove it.

However, the Connection that subsists between the Skin and the several Organs of the Body, is so great, and Health is so often impair'd or restor'd, in proportion as that Secretion is obstructed or promoted, that there needs no Examples to confirm it; but the habitual Looseness is so remarkable a one, that I cannot omit it. Here, when an increas'd Perspiration either naturally comes on, or can by Art be procur'd \*, the Intestines always become stronger, the Acrimony of the Fluids is meliorated, in some Measure discharg'd, and the Diarrhæa lessen'd, according to the

\* Diurnæ Diarrhææ, irritis aliis, per dia-phoretica promptissime sanari solent. Baglivi, pag. 101.

known

known Maxim of Hippocrates, "Alvi laxitas, cutis densitas, cutis raritas, alvi densitas;" and we find this Observation to be true, and that warm bathing proves very useful in these Circumstances. What therefore tends to free one oppress'd Organ, may relieve another, especially as this Emunctory purifies the whole Machine; and when that is properly conducted, the several Parts are less interrupted, and better enabled to perform their respective Functions.

I am little solicitous whether warm Baths produce the Effects mentioned, in the Manner I have suggested or not, my Purpose being fully answer'd, in shewing that they really do Good; and yet I think there is something beyond a bare Conjecture, that they do more than relax, when

when we observe how frequently their Efficacy appears in the distorted Spine, where one or more of the Vertebræ are push'd outwards, and the lower Limbs become paralytic ; here warm bathing always succeeds, the Arch generally becomes less, and the Limbs are restor'd to their Use.

In short, if bathing serv'd to introduce Commotions in the Animal Oeconomy, or enfeeble the nervous System, we should, methinks, now and then see such Effects in the *Guides*, who are every Day in the Bath, and for several Hours together ; and yet it is notoriously known to be true, that they enjoy a better State of Health than the Generality of People, and are remarkable long Livers. Bathing in Health and Sicknes, is no doubt a very different Situation ; but as  
what



what has been observ'd, in the most apparent Languor, must justify its Use in that State, so the constant, continued, and long Use of it, in the *other*, not only without Inconvenience, but with an Addition of Health, will serve to strengthen the Proof, that it does not cause the Relaxation suppos'd; especially when we observe, that Persons, after much Fatigue, violent Exercise, and great Weariness, are refresh'd and invigorated, by warm Bathing more than by any other Means.

Upon the whole, tho' I must believe, that Dr. *Mead* founded his Opinion upon some Instances he had seen, yet I should imagine *They* were not sufficient for so general an Assertion, more particularly as the Account I have given, is so directly opposite: "Post Hoc, ergo propter hoc

hoc, is a Maxim never to be relied on, and a Consequence that may prove fatal, to be observ'd: And from hence it is, that Effects have been attributed to the *Bath* Waters, they never produc'd; without some stronger and more evident Proofs therefore, I should think that warm Bathing, after such repeated Experience, ought not now to be discourag'd, especially as scarce a Day passes without seeing its salutary Effects, and all who have practis'd Here join to commend it.

Dr. *Baynard*, who liv'd above 30 Years at *Bath*, observes, that " He  
 " has seen wonderful Cures done by  
 " Bathing, in the West India Gripes  
 " and Colics, where a Paralysis has  
 " been general, with a total Loss  
 " of the Limbs." And indeed, as he  
 says, there have been wonderful  
 E Cures

Cures. At this Time we have a remarkable Instance in the Infirmary, in a Youth about 19 Years old, who two Years ago was seiz'd with the West-India Colic, after a Voyage to those Parts: He was admitted a Patient *Here* in *September* last, and was the most miserable Object I ever beheld; his Arms hung entirely useless by his Sides, the Hands drop'd quite inwards, greatly emaciated, and the Fingers so strongly contracted, that it was not in the Power of Force to move 'em: The Legs were so wasted, as to appear only cover'd with Skin, and contracted up to his Buttocks; so that he always stood on his Knees: This Lad, by the Use of Bathing, soon began to recover, and has been for some Time able to walk *without Crutches*: He has now, the free Use of his Hands, the Legs and Arms are

are become plump, and the flexor Muscles of the Thumbs have nearly regain'd their Size, tho' they were more wasted than I ever saw. I mention this Case, because it is not among the Number of discharg'd Patients, and as any Body may be satisfied of the Truth of it: He still remaining with us.

Here I must not neglect to observe, That the shaking Palsy is the only Species we have but little Success in; they are generally made worse by drinking the Waters, and Bathing but very seldom is of Service; for I find only one Patient, tho' we have had several, who was discharg'd better.

What Dr. *Mead* observes about drinking the Waters any considerable Time (even in Stomach Cases) that they bring on too great a Laxity

a proper Time, the Feet should afterwards be frequently immerg'd : And here I shall add, that Bathing the Feet, when the Gout is in the Head, Lungs, Stomach or Bowels, is sometimes not attended with Success; for unless we are cautious, instead of relaxing as Here we design, we unwarily prevent the Effect, and fix or aggravate the Symptoms ; which serves to corroborate all the Proofs I have brought, that the Waters do not bring on so hurtful a Relaxation ; the volatile Parts of which powerfully stimulating the Vessels, they exert a greater Force, and drive the Fluids from the Parts we intended to invite them to. This Effect, I believe too, partly arises from the great Heat of the Water ; for the Feet being put into a Water so much hotter than the Fluids of the Body, the Vessels are immediately affected  
by



the Action of Heat, which crisps up the Fibres, and propels the Fluids from the Extremities; I should think therefore that the Waters of the King's and hot Bath should stand by a while before they are us'd, or the Cross Bath Water be employ'd in their Stead.

I have known some, who have bath'd their Feet without this Caution, complain, that just in that Part to which the Water reach'd, they felt a Sensation, like being tied round with a Cord; which seems to favour the Conjecture: But I shall leave this Matter, and what else I have advanc'd, to the farther Examination of more curious Enquirers.

*F I N I S.*

lignity, are Proofs of its being nervous, especially as no other Inflammations, so instantaneously bring Relief, or disappearing, produce such fatal Changes: In Support therefore of warm Bathing in nervous Disorders, the great Number of People who come Here on this Occasion, and the Benefit, under a proper Regulation they receive, should convince us, that the Nerves are rather strengthen'd and fortified than relax'd by it; for if it brought on such a State, Nature would in this Case soon sink under its acqui'd Imbecility.

The wandering Erratic Pains are by this Methode either fix'd in the Extremities, or by gentle Perspiration, the Cause is in some Measure carried off: The Vomiting's, Diarrhæa's and Headach's are remov'd by it, and the  
stiff

Stiff Limbs \* become useful; not so much by relaxing, as the volatile Parts rarefying and attenuating the thicken'd Defluxion, it is prepar'd to be carried off by its proper Secretion; but if neglected, by frequent Returns of the Fits, it will be greatly accumulâted, and harden'd into a cretaceous Substance, not to be remov'd: But at the same Time that the *Bath Waters* thus act upon the Fluids, they brace up and restore to their Tone the weaken'd, relax'd Fibres.

Bathing the Feet is, I think, a good and necessary Preparation for total Immersions, which being continued

\* Effusi humoris pars, quæ per cutis meatus exire non potuit, in venas et lymphæ canales absorbetur: dum id, quod crassissimum est, membranis adhæret, et singulis doloris circuitibus, cumulatius interdum in duritiem quasi cretaceam, concrefcit, sensimque articulos opplet, et contundit. *Mead, de Podagra. Pag. 199.*





TO THE  
RIGHT HONOURABLE THE  
Lord Viscount DUPPLIN,  
PRESIDENT,

And to the other GOVERNORS of the  
BATH INFIRMARY.

GENTLEMEN,

WHEN your pious and charitable Design of erecting an Hospital at *Bath*, was first offer'd to the Publick, among other very good Reasons, I remember it was said, "That this Undertaking, " would contribute to render the " Nature and Efficacy of the *Bath* " Waters more certain and extensive; and thereby be a Benefit to " succeeding Generations."

The Publick therefore, by whose Generosity, and under your Direction,

rection, the Infirmary is now happily establish'd, may expect, nay, have a Right to be inform'd, how far their noble Intentions have been answer'd, and what Good their Benevolence has produc'd.

I think what is said in *this short Account*, in some Measure answers this Purpose, more especially as it determines a Doubt in a very material Point: And the Rich may *thereby* be encourag'd to partake of a Blessing they have given to the Poor; and *thus*, as they have open'd the *Fountain*, they will in a *physical*, as well as a religious Sense, have the *Streams* of it, flow upon themselves. I am,

GENTLEMEN,

*Your very humble Servant,*

Bath, October  
4th, 1751.

J. SUMMERS.

---

A SHORT  
ACCOUNT  
Of the SUCCESS of  
Warm Bathing, &c.

**T**HE Custom of Bathing in Paralytic Disorders, which Success has introduc'd, having been establish'd for many Years, and the Advantages of it being so generally known and allow'd, I was somewhat surpriz'd and concern'd, to find it discountenanc'd, and declared to be highly injurious, under the Sanction of so great a Name as *Dr. Mead's*. The distinguish'd Character that Gentleman has always justly maintain'd in the learned World; and the many great and eminent Services

B he

he has done in his own Profession, cannot but incline *All*, to pay a Deference to his superior Reputation, and prejudice every Reader in favour of his Authority: But his known Humanity, and constant Application to improve the Science he presides in, are so universally admir'd, that we are sure, he would with Pleasure receive an Information of any Error, and retract any Opinion he had deliver'd, that might tend to hurt the Publick, or not procure that Good he is so desirous of doing, and his extraordinary Talents have made him so able to promote.

In the Preface to his last Work \*, he speaks, as he has always acted, with so much Candour, and Zeal, for Truth,

\* Quocirea nec me puduit, quæ quandoque ipse, sive ignorantia, sive negligentia, perperam fecerim, monere, & agnoscere; convenit enim ut ait Celsus simplex veri erroris confessio, præcipueque in eo ministerio, quod utilitatis causa, posteris traditur. Vid. Pref.

that

( 3 )

that I am sure of his Pardon, when I venture to state a Matter of Fact, which will shew he was mistaken, in asserting, " that Warm Bathing is hurtful to *All* " paralytic People\*.

This Sentence alone is sufficient to alarm many, and gain such Influence on the Minds of despairing Cripples, as to deter them from pursuing a Method known to be useful; for many are the Cases that might be produc'd, and many Instances are *Here* daily seen, which would prove the Utility of it:—But as I would not oppose any single Authority from private Practice against so celebrated a Physician, I have chose to rest the whole Force this Expedient should have, upon Arguments that neither Prejudice nor Interest can be suppos'd to produce, or be suspected to convey more Weight than

\* *Calidæ vero immersiones omnibus paralyticis nocent. Vid. p. 62.*

the bare Relation supports; I mean the *Register of the General-Infirmary at Bath*; *There*, when Patients are discharged, it is not what Condition the Physician concern'd reports they are in, but what the whole Committee sees and examines, which is recorded: This therefore is a Testimony to be relied on, and such a Proof as none can dispute.

We have a great Variety of paralytic Patients, and upon exactly examining our Books, from the first opening the Hospital to this present Time, I find the Account to be as follows :

Admitted	}	Cur'd	Much better	No better	Incurable	Dead
in Nine Years.		310	57	151	45	42
			Remain in the House 3.			

From hence it appears, that more than two Thirds were either cur'd, or receiv'd great Benefit, and that only Twelve died in the Space of nine Years: All these Patients were bath'd twice a Week, and many of them three Times, And what

is

is very remarkable is, that of those who were cur'd, or discharged much better, above thirty were more than 40 Years old, fifteen of whom were turn'd of 50, and five were 60 and upwards. Now let Appearances have their Force, Conjecture hesitate, and Reason judge.

Here it is of some Importance to observe, that these poor People lie under many Disadvantages, unfelt by Persons of Fortune: They live in a close confin'd Air, have no Exercise, and are not allow'd a proper Use of the Bath, which as it is now regulated, subjects them to Inconveniences, which greatly obstruct the Good they might otherwise receive.

For want of a *sufficient Fund* too, (notwithstanding the Generosity of many Contributors) we are not yet enabled to admit the Number our Edifice was design'd for; by which means, many miserable



ferable Objects are obliged to wait so long after they are taken ill, that the Distemper becomes so fix'd and obstinate, that it is really surprizing that any Methods should be of Service.

And when I add, that the Generality of our Patients, come as Incurables from other Hospitals, where there are Physicians of the first Character, and consequently where the best Means are used ; How strong in Favour of Bathing (with such Obstacles) must be the above Account ?

I do not take upon me to distinguish the several Species of Palsies, or prove how one may be benefited by warm Bathing sooner than another : But as the Hemiplegia is the most obstinate, and the most skilful Practitioners so seldom succeed in it, I have selected what with Certainty I can vouch to be of that Kind:

Among

Among the 310, 43 were Hemiplegia's,  
the State of whom is as follows :

Cur'd	Much better	Better	No better	Incurable	Improper	Dead
4	13	14	3	4	3	3

In Confirmation of this Success, I must not omit to mention, that among *Guidot's* two Hundred Cases, there are 23 Paralytics, 17 were cur'd, 4 of which were Hemiplegia's, and the other 6 were much better by Bathing \*: These are Evidences so strong, that for the Good of Mankind I should hope they were sufficient to convince every Body, notwithstanding the Prejudices of the Faculty, or the Appearance of the Disorder.

\* *Guidot* says, in his Preface, " That Mr. *John Revit*, an aged Man, hath very lately publickly testified his Cure of an Hemiplegia, in a Month's Bathing, by an Inscription round a very fair brass Ring, on the right Hand of the Entrance into the Queen's Bath out of the King's, after this Manner: Thanks to God, I *John Revit*, his Majesty's Brazier, at 56 Years of Age, in this present Month of *July* 1674, in this Place, recover'd a Cure of Health and Limbs, of a Dead Palsy on one Side from Head to Foot." Vid. *Guidot's* Preface.

Hypo-

Theory but seldom coincides with Practice, and rather misguides and leads us to Error, than assists us in investigating the true Cause, or fixing on the proper Method of curing Diseases. And yet Hypotheses, and reasoning on the Efficacy of Medicines, so far as Facts direct us, will always be useful, as thereby the admirable Structure of our Machine may be better explain'd, and by a judicious Attention, be the better preserv'd.

Without these Guides, whatever the Learned have thought or advanc'd on this Subject must be little to the Purpose, and like an *Ignis fatuus*, will serve only to betray us into Danger, and lead us from Paths we ought to have taken : But the undoubted and manifold Examples which we have in the present Enquiry, will, I hope, keep the restless Spirit of Refinement within Bounds, and teach Reason the Way to Truth.

But yet to show, that warm Bathing is not so absurd and unreasonable as some have imagin'd, notwithstanding the Relaxation which attends this Complaint, I shall present the Public with the Opinions of the most celebrated Moderns, *Pitcairn*, *Boerhaave*, and *Hoffman*, who all anatomically prove, the original Cause of Palsies to proceed from Obstructions in the nervous System, or the interrupted Course of the arterial Blood, which, by means of the Nerves, is subservient to muscular Motion.

The first \*, after distinctly treating of the several Species, says, that an Obstruction of the Arteries of the Muscles, or the proper Influx of the nervous Fluids, will produce the several Symptoms; and mentions the common Experiment of tying the Nerve or Artery, either of which will bring on a Paralysis of those Muscles to which they were detach'd :

\* Vid. *Pitcairn de Paralyfi*, pag. 86.

He does not mention, why the arterial Blood is necessary to muscular Motion ; and *That* indeed is a Difficulty, no one as yet has clearly explain'd: *Boerhaave* says, that the common Coat of the Nerves, which arises from the Meninges, and is replete with various Kinds of Vessels, will often be inflam'd and obstructed, and so pressing \* upon the Nerves, prevent the Motion of their Fluids ; or, however, their Action, and thereby be the Cause of the Resolution of the Muscles ; and that the Arteries, distributed to the Muscles, will suffer the same Alterations, and produce the same Effects : Nay, he adds, that Astringents will cause a Palsy, and that attenuating, discutient Medicines, are the only means to resolve the impacted Humours.

And lastly, *Hoffman*, in various Places says, that Palsies proceed from the ner-

\* *Causa proxima est, semper impeditus fluor, liquidi nervosi in muscolum paralyticum, vel liquidi arteriosi in eundem. Vid. Aphorism. p. 261.*

vous Fluid being intercepted; and frequently mentions and recommends warm Bathing\*.

But adhering to no Doctrine or Authority whatever, let Bathing have *Experience only*, to lead us to its Use, or shew us the Danger of it: And if we take that for our Guide, what has been already observ'd, will, I should think, be sufficient to remove our Suspicions, and resolve our Doubts.

The Doctor observes, that he has known some, who after Bathing have died apoplectic. And I do not at all doubt it, but very much question, whether Bathing produced that Effect; for many Paralytics die in that manner, especially

\* *N. Piso* on this Subject, after enumerating the several Methods of Cure, says, Si adsint Balneæ calidæ naturales, præsertim nitrosæ, bituminosæ iis utendum, in eisq; resoluta membra, agitanda sunt: non ita probantur aluminosæ, quia nimium astringunt.

if the Disorder originally began in the Head; and indeed these Distempers are so nearly allied, as arising from affected Nerves, that they are frequently productive of each other, the Apoplexy bringing on a Palsy, and the Palsy ending in an Apoplexy. If we did not know this to be true, in Persons who never saw *Bath*, the Effects of Bathing might perhaps be more strongly suspected and impeached; and yet what makes much to the present Purpose is, that not *One* of the 12 who died became apoplectic; And this I assert, after the most exact Scrutiny I could make; and upon my own Knowledge I can say, that ever since I have attended the House, which is near three Years, no one was ever seized with a Fit in the Bath, or immediately afterwards, tho' thro' the Inconveniencies I have hinted, the Patients often stay in an Hour, and sometimes longer.

If

If Bathing therefore but remotely tended to such ill Effects, we must have had frequent Examples in the Infirmary, more particularly as we have great Opportunities of seeing the Consequence of this Method; for many continue on our Books 3, 6, 9, and sometimes 12 months: Which to me appears an additional Proof that no Harm attends even long and repeated Bathing;—I cannot therefore but conclude, that warm Bathing seems, nay, is *now shewn* to be the proper Means of restoring Health and Vigour in this enervated Situation, I am afraid to say *relax'd*, for fear the Effect should inadvertently be taken for the Cause. And here it is very material to observe, that we have only the Use of the *Hot-Bath* \*, when it is probable, that a more moderate

\* The moderate Warmth of the Cross Bath, as it does not so immediately affect, perhaps stimulate the Skin and Fibres, nor so suddenly rarefy and attenuate the Fluids, us'd to be in the highest Esteem; but thro' I know not what Caprice, it is not now so frequently us'd as I think it deserves.

one



one might sometimes be the best Beginning, and for *some Time* perhaps better succeed ; at least Circumstances often arise, that must make us wish to have such a Change in our Power.

It has been insinuated, that we might have done more good, had we not so indiscriminately bath'd our Patients, which seems rather an Experiment than a prudent Use of Bathing. But when Men once fall into a Prejudice, rather than sink under it, they will lay hold on Straws to support them ; for if it was an Experiment, all must acknowledge it ought to be continued, seeing how well, and how often it has succeeded ; and as Success has given us this Encouragement, we cannot but still persevere in the Use of it. I have therefore only to say on this Head, that I shall be very glad if any one can produce, from the same Number of Patients, the same good Effects, *without Bathing*.

A further Objection has been started, That all those who bathe, do at the same Time drink the Waters, to which all the Good obtain'd may be owing; at least the Virtues of Bathing cannot be so precisely ascertain'd. But when we consider that all those who *drink* the Waters *do not bathe*, Observation may remove this Difficulty; and it has been remark'd, that they who have bath'd, have in general become better, and many of those who did not, either died here, or soon after they left us, of which there are some recent Examples. But what should have great Force as to this Point is, that there are many Instances of People who following the Orders they had in *London*, only *to drink* the Waters, finding themselves no better, or rather worse, have been *prevail'd* upon to use the Bath, with such Success, as they themselves only should declare: For it would look too much like

Par-

Partiality in any of the Profession, to say how far, in Reference to *Drinking*, the Excellence of this suspected Method has surpassed all Expectation.

And if we compare the Numbers reliev'd in the Hospital with those in private Practice, I am well assur'd, the great Odds would settle this Question much to the Advantage of Bathing.

From what Cause arises this Dread of Bathing, this extraordinary Hydrophobia, I cannot imagine. The Waters themselves, it seems, will sit tolerably easy, but the Steams of them are more poisonous than those of la Grotta de Cani; and yet, I think, it is beyond a Doubt, that even *They* have Qualities, rather to be admir'd than shun'd, rather to be sought after than avoided.

In what manner warm Bathing produces these good Effects in Palsies, may

Be difficult to explain, tho' it is sufficient to shew, that *Experience* confirms the Propriety of it. But yet, as I have quoted some Writers who authorize and approve of the Method, I shall, in support of this Practice, suggest how I conceive the Fluids and Fibres may be so acted upon, by the Means of warm Water, as to bring about a Change in the Animal Oeconomy quite opposite to its present Circumstances.

Palsies appear to be, and really are, a State of Relaxation; but *That*, if the Doctrine of the Nerves is true, is but a Consequence of a previous Obstruction, or what will equally answer my Purpose in this Enquiry, an Inability in those Organs, which are allow'd to be the \*

D struments

\* The *Modus Agendi*, or how the Nerves perform the important Parts of Sensation and Motion, I have no Business with; all who have wrote on this

fruments of Sensation and Motion; when therefore *They* are render'd incapable of performing their Office, Part of which is, to *regulate* and continue the Circulation thro' the Muscles, the Arteries, upon whose Coats the nervous Filaments are distributed and inserted, lose their Force †, and cannot convey on the Blood, as they should, perhaps, to the muscular Vesicles, *They*, however, can no longer be inflated; so the Muscles themselves, for want of Support, and their *only Directors*, must remain inactive, soon become cold, flaccid \*, numb, and often wasted; in short, the

this Subject have rather confus'd and perplex'd themselves than inform'd others.

† That the Nerves and Arteries have a mutual Dependence on each other, is I believe true; we see that all Things that affect the nervous System, affect the Action of the Arteries; Anger, Grief, Joy, Fear, all the Passions make an Alteration in the Pulse and Secretions.

\* There sometimes will be a Rigidity and great Stiffness in the Tendons, which is but a Propensity in the Muscles to act, the Action of the Nerves being but partly suspended, the Vesicles are but  
is

the Body in those Parts will be in a paralytic State.

Now, whatever is of a Nature so volatile and penetrating as to be able to open Obstructions in these principal Organs, and give them Power again to recover their Action, the consequent Feebleness, Languor, and Inactivity of the Muscles, will be remov'd, and these Cases either cur'd, or in Proportion reliev'd.

The Effects of warm Water simply consider'd, we know is to *relax*; (*et hinc illæ Lachrymæ*, from hence is Bathing accus'd.) The Steams of it, soften, and entering thro' the Skin, become a Fermentation to every Vessel and Fibre they reach, whereby their Diameters will be

in part inflated, and the Circulation continuing, they must remain so; tho' *Boerhaave* says it is owing to the Animal Spirits: *Musculi rigor pendet a nervis spiritu plenis, et arteriis inflatis. Vid. de Paralyf. p. 9.*

D 2

enlarg'd,

enlarg'd, and the contain'd Fluid have a greater Space to move in, and thus, according to Hydrostatics, which prove that Fluids press *quaqueversum*, the Parts will be set at a greater Distance from each other, that is, will be attenuated—In this Light, warm Bathing may be justly look'd upon as a Deobstruent. But we are led into an Opinion, I may call it a *Mistake*, that the *Bath Waters* have no other Effect than *This*; whereas if we consider these Waters as impregnated with more active and mineral Principles, at the same Time that they act upon the Body as warm Water, their more powerful and volatile Contents will, by that Means, be better enabled to be convey'd to the remote Vessels, where penetrating the Coats, they stimulate *Them* to Action, and mixing with the Fluids themselves, attenuate, dislodge, and move on the obstructing Cause, and thereby fit it to be dis-

discharg'd by its proper Secretion : Thus the several Organs will be restor'd to their respective Offices, and the Oeconomy of the whole Structure be preserv'd \*.

When we consider the *Skin* as the general Emunctory of the whole Body, and that a due Secretion from *Thence* must contribute to the proper Action of the several Parts, and the general Vigour of the whole Constitution, it is likely that warm Bathing *only in this Light*, would be of Service in Palfies; but when we reflect, that it is more than probable, that the greatest Part of the nervous System is spread upon its Surface, we may reasonably conclude, that the Water and its Contents, will more immediately act

\* *Fernelius* says of Palfies, *Curationem ita instituemus, ut ratione causæ, humorem nervos occupantem, ab illis alio revellamus derivemus, vel & corpore expurgemus, aut alioquin discutiamus, vel absumamus*; and among other Ways, mentions *Warm Bathing*.

upon,



pecially as this Emunctory purifies the whole Machine, and when *That* is properly conducted, the several Parts are less interrupted, and better enabled to perform their respective Functions.

I am little solicitous whether warm Baths produce the Effects mention'd, in the Manner I have suggested or not, my Purpose being fully answer'd, in shewing that they really do Good; and I should conclude, (were there no other Instances) that it is beyond a bare Conjecture, that they do something more than *relax*, from observing how frequently their Efficacy appears in the *distorted Spine*, where one or more of the Vertebræ are started, and push'd outwards, whereby the lower Limbs become paralytic. But when the more superior Vertebræ are affected, as sometimes they will be, a Paralysis of the

the Hands enfues, with troublesome Symptoms in the Stomach. This Cafe generally proceeds from a Weakness of Constitution, a Want of the *Vis Vitæ*, as in the Rickets, after long Fevers, &c. And here warm Bathing always succeeds, the Arch becomes less, and the Limbs are restor'd to their Use.

In short, if Bathing serv'd to introduce Commotions in the Animal Oeconomy, or enfeeble the nervous System, we should methinks now and then see such Effects in the *Guides*, who are every Day in the Bath, and for several Hours together; and yet it is notoriously known to be true, that they enjoy a better State of Health than the Generality of People, and are remarkable long Livers. Bathing in Health, and Sicknes, is no doubt a very different Situation; but as what has been observ'd in the most apparent Lan-

guor, must justify its Use in that State, so the constant, continued, and long Use of it, in the *other*, not only without Inconvenience, but with an Addition of Health, will serve to strengthen the Proof, that it does not cause the Relaxation suppos'd, especially when we know, that Persons, after much Fatigue, violent Exercise, and great Weariness, are refresh'd and invigorated by Warm Bathing, more than by any other Means.

Upon the Whole, tho' I must believe that Dr. *Mead* founded his Opinion upon some Instances he had seen, yet I should imagine *They* were not sufficient for so general an Assertion, more particularly as the Account I have given, is so directly opposite: *Post Hoc, ergo propter Hoc*; is a Maxim never to be relied on, and a Consequence that may prove fatal to be observ'd; and from hence it is, that Ef-  
fects

fects have been attributed to the *Bath Waters* they never produc'd.

Without some stronger, and more evident Proofs therefore, I should think, that Warm Bathing ought not now to be discourag'd, since Time has added Experience to Probability, and Success has crown'd the Wishes of the most timorous; for the Use of it is again happily reviv'd, and become general, thro' Impediments which nothing but uncommon Success could have surmounted. We see *now* what Authors have said of it, to be true: *Guidot, Jones, Pierce, Oliver, and Baynard*, have shown us what heretofore it effected; and at this Time scarce a Day passes without having its salutary Effects conspicuous, in an Addition to the *deserted Crutches*, which are now of no other Use but to support the *Fame* of a better Supply.

Dr. *Baynard*, who liv'd above thirty Years at *Bath*, observes, that " He has  
 " seen wonderful Cures done by Bathing,  
 " in the *West-India* Gripes \* and Colics,  
 " where a Paralysis has been general,  
 " with a total Loss of the Limbs." And  
 indeed, as he says, there have been wonder-  
 ful Cures : At this Time we have a  
 remarkable Instance in the Infirmary, in  
 a Youth about 19 Years old, who two  
 Years ago was seiz'd with a *West-India*  
 Colic, after a Voyage to those Parts : He  
 was admitted a Patient *Here* in *September*  
 last, and was the most miserable Object  
 ever beheld ; his Arms hung entirely useless  
 by his Sides, the Hands drop'd quite in-  
 wards, greatly emaciated, and the Fin-  
 gers so strongly contracted, that it was

\* I know that this Species is not look'd upon in  
 the same Light as other Palfies ; for which Reason,  
 it may not be improper to observe, that among the  
 310 first mentioned Cases, there are but 11 nervous  
 Colics or *West-India* Gripes.

not in the Power of Force to move them; the Legs were so wasted as to appear only cover'd with Skin, and contracted up to his Buttocks; so that he always stood on his Knees. This Lad, by the Use of Bathing, soon began to recover, and has been for some Time able to walk *without Crutches*; he has now the free Use of his Hands, the Legs and Arms are become plump, and the flexor Muscles of the Thumbs have nearly regain'd their Size, tho' they were more wasted than I ever saw.—I mention this Case, because it is not among the Number of discharg'd Patients, and as any Body may be satisfied of the Truth of it, he still remaining with us.

In short, so many Authorities proving *a priori*, from the Structure of the Parts, the Reasonableness of this Practice; and so many Instances concurring *a posteriori*,

*rioni*, from its Success, must be such accumulated Proofs as to amount to a Demonstration evident to every Enquirer.

Here I must not neglect to observe, that the *Shaking Palsy* is the only Species we have but little Success in ; it is generally made worse by drinking the Waters, and Bathing but very seldom is of Service : For I find only one Patient, tho' we have had several, who was discharg'd better. — But even in this Case, I should hope, that a *proper Use of the several Baths*, and a suitable Regimen would, in Time, answer our Expectations.

What Dr. Mead observes about *drinking the Waters* any considerable Time, (even in Stomach Cases) that they bring on too great a Laxity in that Part, is certainly just ; and we often find that Aromatics, Bitters, and Steel Medicines are  
 necessary

necessary to be added to the Waters, to prevent as much as we can, this Inconvenience, which seems to arise from the Vehicle (the warm Water) being so large in Proportion to the Contents, from which alone we expect Benefit: *A fortiori* therefore, I should conclude, that a Method, which introduces into the Habit, the volatile Steel and Gas of Sulphur, would better answer our Purpose in Palsies, than loading the Stomach with such an unnecessary Quantity of warm Water, which must be more copiously drank, and longer continued, in this than in Stomach Cases. Warm Bathing effectually answers this Intention, and prudently us'd, is attended with no Accident.

It would have been a great Addition to the Improvements lately made *Here* for the better Accommodation of Bathers, if a Vapour Bath or two had been contriv'd,



triv'd, which frequently in this and several other Cases, would be extremely beneficial: The Steams are by far more subtle and penetrating than the Waters themselves; for their circumambient Weight on the Parts, I suppose, prevents, what the fine, volatile *Effluvia*, by a more gradual Application to the Skin, produce.

And now I have this Opportunity, it may not be improper just to mention, that Warm Bathing is of great Service in the Gout, which is usually defin'd as seated in the Joints, and when it is regular is always in the Extremities, with some Degree of Inflammation; where indeed, without considering the Danger it produces in other Parts, it sooner or later deposite a Load not to be remov'd, whereby the whole Man becomes debilitated, and generally a Cripple; but I believe it lies in the Power of every Man to retard

retard and put off this evil Day, even to old Age. As Indigestion seems one of the primary Causes, all Intemperance will but add Fuel to a future Fire; Temperance therefore, and a proper Regard to the Non-naturals will do a great deal towards lightening this Affliction, and, if warm Bathing *be early* made use of, I should not doubt of Success; and here I speak feelingly, having happily experienc'd the Efficacy of this Method myself, who am a very remarkable Instance of it.

What is the immediate Cause of the Gout, yet remains (and will, I fear, remain) to be known; but there are many Reasons to make us believe, that the Nerves are principally concerned and affected.

Its suddden Transition from the Extremities to the more vital Parts, seems

F

to

to prove it, especially: as no Inflammations so instantaneously bring Relief, or disappearing, produce such fatal Symptoms; which, if they proceeded from Inflammation, would not yield, as they generally do, to the highest Cordials.

As another Proof we may add, the great Spirits and Vivacity People have, when Nature is able to unload its Incumbrance upon the Extremities, and the terrible Train of Symptoms that arises, when it is suffocated and surpress'd, and the Constitution not strong enough to throw off its Malignity: With these Circumstances we may conclude, I think, the Disorder to be generally \* nervous; and in the Support of the Virtues of Warm Bathing in nervous Disorders, the great Number of gouty People who come

\* Notwithstanding this, I believe there are several Situations that require Bleeding,

*Here,*

*Here*, and the Benefit, under a proper Regulation, they receive, should convince us, that the Nerves are rather strengthen'd and fortified than relax'd by it; for if it brought on such a State, Nature would, in *this Case*, soon sink under its acquir'd Imbecility.

The wandering, erratic Pains are by this Means, either fix'd in the Extremities, or, by gentle Perspiration, the Cause is in some Measure carried off, the Vomiting, Diarrhœa's, and Head-achs, are remov'd by it, and the stiff Limbs become useful; not so much by being relax'd, as the volatile Parts of the Water rarifying and attenuating the thicken'd Defluxion which obstructed the Freedom of their Motion, it is thereby prepar'd, under a due Circulation, to be carried off, by its proper Secretion: But if this Expedient be long neglected, by

frequent Returns of the Fits, this Matter will be greatly accumulated, and at length harden'd into a cretaceous Substance not be disperfed, and Time will but add Pain to Weakness, and make the Patient but too sensible of every gouty Particle in his Frame.

But, at the same time, that the *Bath* Waters thus act upon the Fluids, they remarkably brace up, and restore to their Tone, the weakened, relax'd Fibres.

Bathing the Feet is, I think, a good and necessary Preparation for total Immersions, which being continued a proper Time, the Feet should afterwards be frequently immerg'd. And here I shall add, that bathing the Feet, when the Gout is in the Head, Lungs, Stomach, or Bowels, is sometimes not attended with Success; for unless we are cautious, instead of *relaxing*, as *Here* we  
 2 design,

design, we unwarily prevent the Effect, and fix or aggravate the Symptoms; which serves to corroborate all the Proofs I have brought, that the Waters do not introduce so injurious a State of Relaxation; the volatile Parts of which powerfully stimulating the Vessels, *They exert* a greater Force, and the Fluids are thereby drove from the Parts we intended to invite them to: This Effect, I believe too, in Part arises from the great Heat of the Water; for the Feet being put into a Water so much hotter than the Fluids of the Body, the Vessels are immediately affected by the Action of Heat, which constringes, and crisps up, as it were, the Fibres; so that the Fluids are, with an added Force, propell'd from the Extremities.

I should think therefore, that the Waters of the King's, and Hot Bath, should stand by a while, before they are  
us'd,

us'd, or the Cross Bath Water be employ'd in their Stead.

I have known some who have bath'd their Feet, without this Caution, complain, that just in that Part to which the Water reach'd, they felt a Sensation like being tied round with a Cord; which seems to favour the Conjecture.

There are many other Cautions necessary to be taken, both previous to, and during the Use of *Warm Bathing*, which can only be properly accommodated to particular Circumstances, and must be under the Direction of the Physician employ'd; I shall therefore leave this Matter, and what else I have advanc'd, to impartial Consideration, and the farther Examination of more curious Enquirers.

F I N I S.



A N  
I N Q U I R Y  
I N T O T H E  
E F F I C A C Y O F W A R M B A T H I N G  
I N  
P A L S I E S.

---

BY R. CHARLETON, M. D.  
PHYSICIAN TO THE GENERAL HOSPITAL  
AT BATH.

---

*Non quæ mihi suggestit phantasiæ imaginatricis temeritas, sed  
quæ phænomena practica edocuerunt. SYDENHAM.*

---

---

O X F O R D :  
At the CLARENDON PRESS. MDCCLXX.  
Sold by Daniel Prince in Oxford. By Benjamin White in London,  
and by Mr. Frederick and Mr. Lake at Bath.





# C O N T E N T S.

*General Palsies* - - - Page 14

*Hemiplegias* - - - 22

*Palsies of the Lower Limbs* - - - 41

*Dead Palsies* - - - 67

*Palsies from the Cyder Colic* - - - 73

————— *Bilious Colic* - - 82

————— *Mineral Effluvia* - 89

ERRATA

Page 25. line 4. ~~for~~ been healthy six months, ~~read~~ been healthy till about six months. P. 32. l. 10. ~~for~~ she had been, ~~read~~ she had not been. ~~Should have been for the intras, and re-~~  
~~gister.~~ P. 50. l. 11. ~~for~~ pustulas, ~~read~~ pustules. P. 62, l. 4.  
~~for~~ ~~Hydon~~, ~~read~~ ~~Britton~~. P. 84. l. 3. ~~for~~ of gallstones, ~~read~~ or  
gallstones. P. 92. l. 11. ~~for~~ together, ~~read~~ altogether. P. 93.  
l. 22. ~~for~~ Complaints, ~~read~~ complaint.

( 2 )

A N

INQUIRY

INTO THE

Efficacy of WARM BATHING in  
PALSIES.

---

**T**HE design of this Inquiry is to ascertain the question, whether Bathing in the *Bath Waters* be useful, or detrimental, in Palsies.

However unnecessary such an inquiry may at first sight appear, as we might reasonably expect the experience of many ages should long since have determined this question, yet, the diversity of opinions to be met with in writers concerning it is too plain a proof, that the subject demands a still further investigation.

A

What

What dependance can we have on authority, when a most eminent physician of the last century has highly extolled the efficacy of these Springs in paralytic diseases, and the most distinguished one in the present has interdicted their use?

*Willis*, in his treatise *De Anima Brutorum*, pronounces the Waters of this place to be a remedy superior to all others in the palsy; and that, where they suit the constitution of the patient, it is impossible to find out any that can be more effectual.<sup>a</sup>

At the time this favourable testimony was given, these Waters were seldom used but for the purposes of Bathing only: His character of them must therefore have been chiefly, if not solely, drawn from those happy effects which followed their external application.<sup>b</sup>

<sup>a</sup> Insuper omnium vero sunt *therma nostra Batbanienfes*, quibus (si temperamento aegrotantis aptè congruant) nullum praestantius remedium excogitari potest. Quod satis indicant plerumque a membris resolutis curatores *Gralla*, quasi totidem de morbo hoc diviso *trabaca* suspensa. p. 420.

<sup>b</sup> *Willis* his treatise *De Anima Brutorum*, was published in the year 1672; but it was not till the year after, that the custom of drinking *Bath Waters*, which had long been discontinued,

was

I have observed this principally to shew, that the opposition of opinions between the Doctors, *Willis* and *Mead*, is direct and real; the latter in his *Monita et Præcepta Medica* having expressly pronounced, that Warm Bathing does harm to all paralytics. His words are without any limitation, or distinction: “*calidæ vero immersiones omnibus paralyticis nocent.*”

The most respectable authority must give way to the force of Facts. Since the establishment of our HOSPITAL at *Bath*, I have seen so many and such manifest proofs of the virtue of these Waters in paralytic cases, that, as I am fully convinced myself of, Dr. *Mead*'s mistake, I have thought it my duty to communicate to the Public the grounds of my conviction: further urged thereto by the notoriety that nervous diseases are continually advancing; the Palsy, which formerly used to be for the most part the attendant of worn-out Nature, being, in our days, become, but too frequently, the miserable companion of Youth.

was again brought into use by the authority of Dr. *Guidot*; as appears from the Inscription on his monument in the Abbey Church.

By a clause in the act of parliament for the better regulation of this Charity, it is enacted ; that no patient shall be admitted till his case has been drawn up by some person in the place, or neighbourhood, of his residence, and sent to the hospital for the examination of the physicians and surgeons who belong to it ; on whose judgments it rests, from the inspection of the state of his case, to determine whether the object recommended labours under a disease in which these Waters are found to be beneficial.

All such cases as are deemed proper for admission are registered. Minutes are taken of each patient's disease, age, parish, time of admission, stay in the house, when discharged, and what degree of benefit he received. The original histories of their several diseases, which are sent upon their petitioning for admittance, are also carefully preserved ; and thus an exact account of our patients has been kept from the foundation of the hospital to the present time.

'Tis from these records I shall collect the vouchers which are to determine the subject in dispute ; and shall lay before the reader a state of our paralytic patients from *May 1751*, to  
*May*

May 1764. A period of time sufficient for the purpose: For it cannot be doubted, but that the same effects, which these Baths have produced in the course of *thirteen years*, may at all times be expected from them, in like circumstances; as they are invariable in their qualities, and not liable, like most other remedies whether prepared or unprepared by Nature, to change or adulteration. <sup>a</sup> — But before I enter on this examination it may be necessary to give a short detail of the causes and symptoms of this Disease.

The causes which give rise to paralytic complaints, are for the most part comprised in the following catalogue: apoplexies, internal tu-

<sup>a</sup> It is well known that the *Romans* were extremely careful to preserve, by great works, their most celebrated medicinal waters. We have a remarkable instance of this fact, in the *Bath Waters*: whose source and manner of conveyance to the places of eruption are so carefully concealed and secured, as not only to have remained undiscovered, but to have been also preserved from any the least injury, though buildings were erected every where round them, and wells dug, for the supplies of common spring water, in every point of the compass. — They have continued unhurt by the ordinary ravages of time; and change of season does not affect them: for chemical experiments are attended, in every part of the year, with the same phenomena, if made with equal exactness; and their heat is shewn by the thermometer to be invariable.

mors



mors compressing the brain and nerves; external injuries, mineral fumes; colics occasioned by these, or by the use of crude fermenting liquors, or the action of viscid acrimonious bile; extreme cold, excessive indulgence, or violent impressions of the passions, spirituous liquors, scurvy, rheumatism, gout, the suppression of natural evacuations, the imperfect crisis of acute diseases.

The symptoms of the Palsy are, sometimes, a total deprivation of the operations of the mind and internal senses; sometimes only a slight abatement of them. It affects either the whole body from the head downwards, except the heart and muscles of respiration, or one side only, or a particular limb. The parts affected are deprived of sensation alone, or of motion alone, or of both; they either swell and are bloated, or waste and decay; they are either too cold, or preternaturally hot. The palsied muscles yield to the power of their antagonists, which are unaffected; hence those parts, as the fingers for example, are drawn inwards when the extensor muscles are paralytic, and the contractor muscles are not affected. The pulse is usually small, slow and languid; or weak, quick and irregular. The body is generally  
costive,

coftive, and the appetite, commonly, voracious.

Such are the out-lines of this difeafe, and, as its feat is in the nerves or brain, it may readily be conceived, that it muft be extremely dangerous in its confequences, and the cure equally uncertain and difficult.

Hence writers have made the moft unfavourable prognoftics with refpect to its event. “It is generally incurable,” fays *Celfus*.<sup>a</sup> And in another place he obferves, that “ fuch as are univerfally feized with the palfy quickly fink under the attack, or, if they chance to furvive, they feldom obtain a perfect recovery; but for the moft part linger on, with lofs of memory, in a ftate of wretched exiftence.”<sup>b</sup>

In like manner has *Mead* defcribed the unhappy fufferer, “dragging on a miferable life, fhaking and tottering, deprived of memory,

a Fere infanabilis morbus eft.

b Solent autem, qui per omnia membra vehementer refoluti funt, celeriter rapi; ac fi correpti non funt diutius quidem vivunt, fed raro tamen ad fanitatem perveniunt; & plerumque miferum fpiritum trahunt, memoria quoque amiffa.

and all vigor of mind ; a spectacle of real misery, no longer a man, but an animal half-dead.\*

Of what powers these Waters are possessed to remove, or alleviate, such afflictions, will appear from the following Table. In which, it is presumed, the State of our Paralytics is so marked as to stand in need of little explanation, except in a very few instances.

The first column marks the several species of the palsy ; the last article of which contains the number of Cases, imperfectly, or improperly described in the accounts sent of such Patients for our information. In some of these accounts the parts affected are only mentioned, and no notice taken of the causes which gave rise to the disease ; in others, even less care has been taken, and neither the causes, nor effects, are particularized ; but only a general certificate vouchsafed, that the patient is a paralytic. Whereas the cause and effect of the disease, the age of the patient, and the length of time he had laboured under his malady, should have

a Miseram autem vitam plerumque trahit qui illo morbo (Paralyfi scil.) afficitur ; vis enim animi cum memoriâ deperditur, & luctuosum spectaculum, non jam homo, sed animal semi-mortuum, contremitt & vacillat. *Monita & Præcepta Medica.*

been circumstantially described. If this rule had been observed, we should not have had so many improper persons sent to the hospital: it would have put a stop to the inhumanity of suffering such poor wretches to undergo the fatigues of long and painful journies, to no manner of purpose; and, at the same time, have saved their parishes a very unnecessary expence.

The two columns, which are intitled *Improper*, and *Discharged at their own Request*, may also require some explanation.

In the first of these two columns are contained those, who, from unfortunately having other diseases joined with their palsy, are reduced to a state in which these Waters would be detrimental: as dropfical, or hectical patients; women far advanced in pregnancy; and, in general, all with whom the confinement and air of an hospital do not agree.

The other comprehends those, who through fear of taking the small-pox, when that disease happens to be *here*, or from unwillingness to comply with the rules of the house, or on account of their own private domestic affairs, desire to be discharged.

B

A state

## A State of the Paralytic Patients admitted into

Total Number admitted: ——— 1053.

viz.

45	General Palfies
283	Hemephlegias
144	Palfies of the Lower Limbs.
3	Dead Palfies
5	Shaking Palfies
237	Palfies from Cyder and Bilious Colics
40	Palfies from Mineral Effluvia
17	Fevers
27	Rheumatifms
9	Nervous Affections
2	Suppression of the Menfes
1	Mifcarriage
1	Lying-in
19	External Accidents
2	Schrophula
24	Extreme Cold
11	Palfies without any assignable Cause
183	Whose Cafes were not properly defcribed.

the Bath Hospital, from May 1751. to May 1764.

Cured and Benefited.	No. Retired.	Dead.	Improper.	Discharged for Misbehaviour.	Discharged at their own Request.	Eloped.	Total.
28	12	2	1		2		45
204	41	12	20	1	4	1	283
97	21	10	18	1	2		144
3							3
1	3		1				5
218	5	9	4		1		237
38	1	1					40
15	2		2				17
22	3	1	1				27
6	2		1				9
2							2
1							1
1							1
16	2	1					19
1	1						2
19	2		1		1	1	24
9	2						11
139	16	7	12	3	5	1	183
813	113	43	61	5	15	3	1053

Cured and Benefited ————— 813  
 Not Benefited ————— 240

From this Table it appears that out of 1053 paralytics (the total number admitted within the time of this Inquiry) 813 received benefit, and 240 little or none.

So irrefragably do these Facts support the credit of the *Bath Waters*, that it is almost unnecessary to take notice of an error in this calculation tending to their disadvantage; which is, that among the number 240, said to have received no benefit, there are 61 who could not make a proper trial of the Waters, and who were, therefore, discharged under the designation of *Improper*.

These ought to be struck out of the account, as they prove neither for nor against the question; to which it might be added that amongst those who left the hospital at their own request, or were discharged for misbehaviour, or who eloped, some, it may reasonably be supposed, had their stay there been longer, might have received dismissions favourable to the reputation of these springs. So that, if we take into our estimate those only who continued in the house and made a fair trial of the Waters, the evidence in their favour will be considerably increased;

increased; for the state of the account will then be as follows: viz. out of 969 paralytics, there were benefited 813 — not benefited, 156.

But before I proceed to make any deductions from the general evidence which this Table affords, I shall give some particular instances of the efficacy of these Waters extracted out of the histories of our hospital patients. These cases, except a very few, are such as being usually sent to us we must needs suppose to be common, and the publication of which I therefore prefer to that of others which are more rare; as they are more the public concern, and it is on them that Rules of Practice can with propriety be established. To which I must add, that my choice has likewise been directed to such Cases as required little or no medicine, and in which, consequently, the power of these Springs must appear the more clear and decisive.

*A general*



*A general Shaking palsy, from the imperfect crisis of a military fever.*

**M**ARY Ryan, of St. James's Westminster, aged 28, after enjoying a good state of health till the beginning of *April 1758*, was seized with a military fever, which lasted seven weeks. Sometimes the eruptions disappeared with violent sickness at her stomach, great oppressions of her spirits, and a delirium. The delirium became at length continual and lasted three weeks; after which she recovered her senses and was free from fever: but all her limbs from the small of her back downwards were numb, shaking and paralytic. Her urine frequently passed off involuntarily, her stools never. Soon after she had lost the use of her lower limbs, her arms began to be affected in the same manner, and at length her neck and the trunk of her body: so that, when she came into our hospital, *May 5<sup>th</sup> 1759*, she laboured under an *universal shaking palsy*; was incapable of standing without the assistance of two persons, and had not been able to walk for five months.

After

After having drunk the Waters for a month, she bathed twice a week, and continued in this course more than a month longer without perceiving any alteration. Soon after this, upon coming out of the bath, she complained of pain and heat in her hips and thighs, which left those parts extremely sore. From this time the paralytic tremors gradually decreased, and her limbs became stronger after every bathing; so that at length she was able to stand without being supported, and to walk about the Ward with crutches. The great heat of the summer, together with bathing, made her at times excessively low, on which account she was directed to take a decoction of the Bark occasionally; but continued to bathe twice a week and to drink a pint and a half of the Waters every day till the 12 of *December* 1759, at which time she was discharged (after having been 7 months in the hospital) perfectly cured.

When fevers go off without a due crisis, much mischief may justly be apprehended; for, besides other complaints which have from hence their origin, the relics of the disease will not unfrequently affect the nervous system and give rise to Palfics.

The

The present case is a proof of this observation, as well as a remarkable instance that the *Bath Waters* are extremely efficacious in such kinds of palsy; of which we have further proofs, in case the first and second among the *Dead Palsies*, and also in case the second of palsies of the *Lower Limbs*. But it will be here proper to observe that shaking palsies, unless they are the consequence of an imperfect crisis of some acute disease; or of suppressed gout, seldom receive any considerable benefit from these *Waters*.

*A general*

*A general palsy, from a suppression of  
the Menfes.*

**E** *Lizabeth Jordan*, of the parish of *Balden* in *Oxfordshire*, aged 19, had her Menfes suddenly suppressed, during the second time of their appearance, by catching cold in rainy weather; and was struck with a general palsy. The catamenia were restored to their regular periods, some months after, by emmenagogues and bathing in common warm water. By the repeated use of the latter, she recovered in some degree the action of her arms and hands; but found no alteration in her lower limbs, except, that, while they were immersed in warm water, their sensibility and motion returned, which were presently lost again upon their being taken out.

She staid in the hospital 251 days, and by drinking the Waters in small quantities, and by bathing in them, as often as her strength would permit, was discharged entirely cured.

This patient's case shews not only the good effects of bathing in common warm water, but at the same time the superior power of our Baths in palsies; as the cure received by the former was only partial and temporary, but that from the latter compleat and permanent.

*A general palsy, from Cold.*

**S**Amuel Blifs, a common soldier, from frequently lying on wet ground, during a winter's campaign, had his health much impaired, and became universally paralytic.

All proper care was taken of him while abroad; but finding no relief, he was sent home and admitted into the hospital at *Ipswich*; from whence he was removed to *St. Bartbolomew's* in *London*.

Being discharged from this latter hospital incurable, he was brought to *Bath*; where he received considerable benefit, notwithstanding his palsy was of four years continuance.

Sometime after he had left our hospital he relapsed, and petitioned for readmission. His paralytic complaints were now accompanied with severe spasmodic pains, which more particularly affected his arms, hips, and small of the back. The muscles of the thighs and legs were contracted, and those of the arms greatly emaciated.

The

The severity and obstinacy of his disease which was much augmented in consequence of this relapse, required a long perseverance in the use of these Waters; however at length it gave way to their powers, and he was a second time, though not till after a residence of 308 days, dismissed *Much Better*.

We have numbers of Cases on our books of bargemen, watermen, fishermen, &c. whose trades oblige them to go into cold water while hot with labour, or to stand in it for a long time, in consequence of which they contract paralytic complaints; to which gentlemen are not unfrequently liable, by doing the same thing for their amusement, which the poor are obliged to do for a livelihood.

We commonly find these Waters very efficacious in palsies which arise from Cold.

\* *A general*

\* *A general palsy, from an external accident.*

**G** *George Drinkwater*, Labourer, fell from a high tree and pitched upon the back of his head. This accident was followed by a paralysis of all his limbs, an involuntary and insensible discharge of his urine, a most obstinate retention of the fæces, a swelled tense belly, frequent convulsions of the abdominal muscles, and excruciating pains in that region.

These latter symptoms were somewhat alleviated before he was sent to our hospital (which was above a year after the accident) though with respect to his palsy he was still in a very bad condition. But it soon gave way to the efficacy of these springs; for he was enabled, after being a patient only 46 days, to return home greatly relieved.

\* On the death of *Dr. Oliver*, his medical papers were put into my hands, with liberty to make such use of them as I pleased. I am indebted to them for this case, as well as for all those which are marked with an Asterisk.

In

In this case the different effects occasioned by the fall on the sphincter muscles of the bladder and rectum are very remarkable : The latter being so contracted, that stools were with the utmost difficulty to be procured ; and the former so relaxed, that the urine was continually and insensibly discharged.

*Hemiplegia*



*Hemiplegia of the left side, from an  
Apoplexy.*

**R** *Ichard Davis*, aged 60, was seized with an apoplectic fit, which terminated in a hemiplegia of the left side. The palsied limbs were deprived of all motion, and their sensation was likewise greatly impaired. He continued in this state, receiving no benefit from any medicine he made use of, for seven months; when he became a patient in our hospital, *May 17. 1753.*

Having been duly prepared, he began with the Waters; of which he drank a pint and a half for some days, and then went into the bath twice a week. By these measures he soon perceived an abatement in his disease, and advanced fast in his recovery, till the beginning of *July*; when his progress was stopped, the Waters ceasing to make further impressions. On this account I ordered him to abstain from them totally for ten days, or a fortnight, and during that time to take an electuary composed of mustard seed and valerian. At the expiration of which time he left off the medicine, it having done him no service, and resumed his  
course

course of drinking and bathing; to which was added a strong stimulating liniment to be rubbed on the spine of the back, after rising from the bath. He quickly became sensible of the good effects of this course; the operation of which was so powerful and speedy, that he left the house, on the 25 of *August*, perfectly free from his complaint.

If the age of this patient, the cause of his disease, and the severity of its symptoms are considered, much credit will be derived to the *Bath Waters* by the cure. The effects of the waters, I am persuaded, were greatly promoted by the season of the year in which they were used. Our hospital affords frequent opportunities of observing, how much their power depends on the state of the atmosphere; or rather, how much more easily diseases give way, when the virtue of our Waters is not checked by the severity of the season: of which a remarkable instance occurred in the winter of sixty three; when a cold, tempestuous, season setting in about the beginning of *November*, and continuing till the end of *February*, scarce a patient, during that time, found the least amendment; on the contrary, no sooner was the weather changed for the better than almost  
all

all of them were immediately sensible of the efficacy of these Springs. How it ever, therefore, became a custom to discontinue them in the summer, and to limit their use to the less kindly parts of the year, is as difficult to conceive, as it is easy to shew the impropriety of such a practice. It is evident, that our ancestors thought the warmer months a properer time for their use, from the particular provision in a small hospital built in this place by Sir *Thomas Bellot*, secretary to Lord *Cecil*, in the reign of *Queen Elizabeth*; which admits and maintains, by a weekly allowance, a few persons from the beginning of *April*, to the end of *September*; but affords no supply for the remaining part of the year.

I would not, however, be understood to mean, that the weather may not be improper in the very hottest part of the summer; but, as in our variable climate the interruptions by excessive heat are few and of short duration, I can see no reason for the general prejudice against the use of our Springs in the summer months: especially, when, to my own observation, I add the experience of our ancestors, and the practice now observed, if I am rightly informed, with respect to every other warm mineral water in *Europe*.

*Hemiplegia*

*Hemiplegia of the Right Side, from the  
ceasing of the Catamenia.*

**M**argaret Bateman, aged 50, had in general been healthy six months after the menses had left her, when she suddenly fell into a fit and remained senseless a considerable time. Upon coming to herself she found her speech was lost, her mouth drawn to one side, and the right leg and arm deprived of motion. She was bled, though not till four days after the seizure, which was the only thing that was done for her. In *April, 1759*, she was sent to our hospital, when she could not stand, or make the least use of her arm, and her speech was scarcely intelligible.

She was again bled, and took several doses of opening medicines, before she was permitted to meddle with the Waters. After which preparation she drank them in moderate quantities for some time, then went into the bath, and on the days she did not make use of it her limbs were pumped.

By the 15th of *June*, she had entirely recovered her speech; her arm was almost well, and she

D

had

had perfectly regained the power of extending and contracting her fingers. Her leg was also much better, and with very little assistance she could walk.

From a continuance of this course, without any other helps, she mended daily, and on the 11th of *July* was discharged greatly recovered.

I have observed, that, in paralytic affections arising from causes peculiar to the Sex, these Waters prove singularly beneficial. Of which besides the present instance we have others in *Case the second*, among the General Palsies; *Case the third and fourth* among the Hemiplegias; and in *Case the second*, of Palsies of the Lower Limbs.

In palsies which happen either at the approach, or cessation, of the Catamenia, a pretty free use either of the Lancet, or Cupping Glass, as well as of Cathartics, will generally be requisite, before a course of these Waters can be advantageously commenced; and a repetition of these evacuations will most likely be necessary during the continuance of it.

\* *Hemiplegia*

*\* Hemiplegia of the Left Side, from catching Cold in a Lying-in.*

**E**leanor Thornton, aged 35, by a cold she caught a few days after delivery, had the Lochia stopped, which brought on a palsy of the left side. At first, she was deprived of her senses, and lost her voice; her face was much distorted, and the mouth so drawn to one side, that when she endeavoured to swallow any liquid it ran out on the other.

These symptoms, however, disappeared in a few days; but her arm and leg remained motionless and void of sensation. The action of the latter was, indeed, in some little degree recovered just before she came here (which was between 5 and 6 months after the attack) so that she was able with assistance to creep about her room.

As, notwithstanding her complaint, she had suckled her child, her breasts were full of milk at the time of her admission; which circumstance prevented her drinking the Waters for near a month. She then began to drink them every day, and to bathe twice a week. In pro-

portion as the weather grew warmer, the benefit she received by them increased; and in the months of *May* and *June* she found them particularly efficacious. But in *July*, the House becoming too close and hot, she was discharged, with orders to return if she found it necessary. As she never petitioned for a readmission, it is presumed that time, air, and exercise completed her cure.

She had been a patient 276 days; and when she left the hospital she could walk (though the leg still remained weak) without any assistance; had quite recovered the motion and strength of her arm; and in a great measure the use of her fingers,

*Hemiplegia*

*Hemiplegia of the right side, from  
frequent miscarriages.*

**M**ARY Balden, 36 years of age, was reduced by frequent miscarriages to a very infirm state of health, attended with convulsion fits. These fits returned frequently in a day and followed her for a considerable time: at length they entirely left her, and soon afterwards she was struck with a palsy of her right side.

She was bled, took various medicines of the cordial and nervous kind, and had blisters applied to the parts affected; which so far restored the action of her leg that, with help, she was able to walk. But her arm still continued useless, and with little or no sensation: the hand hung from the wrist without power in the muscles to raise it, a large swelling arose on the back of it, and the fingers were contracted and drawn into the palm.

Besides these paralytic complaints, her health in general was much impaired; for the catamenia were irregular, she had continual tremblings and flutterings of her heart, with a variety  
of



of other nervous affections: her appetite was lost, and her bowels obstructed.

The course taken for her recovery was the constant use of these Waters, both internally and externally; with the occasional assistance of warm stomach purges, and nervous medicines. The success of this plan corresponded with her wishes: her nervous symptoms soon disappeared, her general health was in all respects restored, and she regained the perfect use of her palsied limbs.

She came into the hospital the 8th of *October*, and left it the 19th of *December*.

*Hemiplegia*

*Hemiplegia of the left side, from Pain.*

**M**R.S *Whitby*, aged 23, from a severe pain which, suddenly and without any assignable cause, affected her whole left side was, in a few hours, deprived of its use. The palsied parts lost all sensation; the discharges of both stool and urine were involuntary; she was long deprived of sleep, which opiates could not procure; the most powerful medicines produced no effect, and the limbs were covered with blisters without exciting in them the least feeling.

On failure of these measures, she tried Electricity. The shocks were given first on the neck and shoulder, and then gradually down to the toes. She felt them in a slight degree on her neck and shoulder, but no lower; and particularly, the foot, though the strokes were so often repeated as to turn the skin black, still remained insensible to them.

She was now sent to *Bath*, seven months after her seizure; at which time she had neither feeling, nor motion, of the palsied side. She was moreover feverish, nervous, feeble and emaciated; her nights were restless, her appetite destroyed,

destroyed, her bowels costive, and the catamenia deficient.

Much preparation was in this case necessary. As soon as it was thought proper, she drank the Waters of the Cross Bath, in small quantities; which increased her appetite, restored the peristaltic motion of her bowels, and gradually procured her strength enough to enter upon bathing.

She had been many times in the bath, before the catamenia became sufficient; and being thus far advanced in her recovery, she was now order'd to have the palsied parts pumped, while in the bath. Her dead side, after being a few times pumped, perfectly regained its feeling, and soon afterwards she was able to move with crutches.

These benefits increasing as the means were continued, she so far got the better of her disease as to walk the streets with the help only of a common stick. But, as this poor woman unfortunately could not be received into the hospital from being unable to produce a parish certificate, which the act of parliament requires, her stay here at this time was not so long as it ought

ought to have been; though long enough to become a proof of the virtue of these Waters, and to do honour to that private bounty by which she was supported from the beginning of *December*, the time of her coming, to the end of *April*, when she left this place: To which she returned about a twelvemonth after, and was then so happy, as to have her palsy entirely removed.

When this patient was first brought here, she was not only in an improper state for drinking the Waters, on account of her fever, but when that was removed she still continued too weak to bathe. For when the palsied parts, by a long continuance, or a great severity, of the disease are grown totally flabby and inelastic, they do not second or assist the activity of our Baths, which operate like a temporary fever; by whose stimulus it probably is, that the nerves regain their natural powers. This, however, is very certain, that, when such a state of debility and feebleness prevails, little or no effect can be produced by bathing, unless the Waters are drunk for some time before the patient is put into the bath; by which means he will possibly obtain such a degree of strength, as may enable him to receive advantage from it.

The unsuccessful use of Electricity in this case corresponds with what the late Dr. *Harrington* told me, that, when it first became a fashion to electrify for medical purposes, he often tried this experiment on the hospital paralytics, but without success.

Several instances have occurred to me which support this remark, and among others the following one.

A young Gentleman, after passing a very intemperate evening, was, on his return home, flung from his horse, and, being alone, lay all night in the road. The shock he received by his fall was so great, that many days passed before the assistance of a very eminent physician could restore him to his senses; when it appeared, the fall had occasioned an hemiplegia of the left side.

He was sent to *Bath*, as soon as he could bear the journey. On his arrival, I found his leg and arm without motion or sensation; both his hearing and eye-sight, on the paralytic side, were extremely imperfect, and his speech so inarticulate as to be scarcely intelligible.

By

By the use of the Waters, and other necessary measures, he regained his hearing, eyesight, speech, the sensation of the whole side and the compleat action of his leg; but neither bathing nor pumping, with every aid that could assist their powers, had any effect on his arm: it remained always bent at the elbow, with the fingers shut into the palm of the hand, frequently agitated with convulsive catchings, but incapable of voluntary motion.

This disappointment suggested to him the trial of Electricity; and, as the proposal was his own, he underwent it with the greater resolution. He used it every day for a considerable time; gently, indeed, at first, but afterwards with a degree of violence I could by no means approve. The operation made the arm sweat profusely both during the time and for some hours after, but never, in the least, contributed to restore its use.

Palsies which are owing to Pain are greatly relieved by these Baths. The Woman's case last mentioned, as also the *first case* among the Dead Palsies, and the *first* of that division which comprehends those who were paralytic of their Lower Limbs, are sufficient evidences of their power in this Species of the disease.

\* *Hemiplegia of the left side, from a Convulsion Fit.*

**A** NN Lucas, aged 12, was suddenly seized with a convulsion fit, which, after most violent strugglings, took away the use of her left side. A few weeks after the beginning of her complaint, she became a patient in the *Westminster* Infirmary; where, among other remedies, she (as Dr. *Wilbram*, who sent her to *Bath*, mentions in his Letter to the Registrar of our hospital) was put twice into a warm bath, and, for a time, was the better for it. But her disorder returning and finding no relief from any measures, she at length petitioned for admission into our Charity.

The disease was then of two years standing: there was a great diminution in the feeling of the whole side, a wasting of the leg and arm, the almost entire loss of action in both, with an immoveable contraction of the fingers into the palm of the hand. The viscera were greatly obstructed; she was costive, short breasted, and chloretic.

She

She was received into the house on the 8th of *January*: was purged and vomited, and then ordered to drink two small glaffes of the Water every morning for a fortnight, with a tea-spoonful of Elix. Aloes in the first glafs.

The vomit and purge were then repeated, and her viscera being now sufficiently cleansed to venture on a larger quantity of the Water, she increased her dose, and omitted the medicine, which was become unnecessary. About the same time she, likewise, commenced a course of bathing, and, after a few repetitions of it, had the palsied side pumped while in the bath.

Her disease, which was very obstinate, gave no way till the warm weather came on. She then found a daily amendment, and by degrees her side recovered its sensation; the arm and leg their natural motions, though not their original strength and size: she regained the perfect use of her fingers, and lost all symptoms of a general ill state of health.

We have in this case another instance of the fitness of warm bathing in palsies; though the effects of the common warm bath were here,

as



as in a preceding case, only temporary. This history likewise affords us a farther proof of the increased efficacy of these Waters in the warmer months of the year.

When the hemiplegia is the consequence of an apoplexy, its cure is generally extremely difficult: yet we see from case the first of this division (and others might have been produced) that even *here* these Waters prove successful, after other expedients have been administered ineffectually.

The probability of the cure in this species of palsy may, I presume, be estimated by the violence of the apoplectic seizure and the more or less perfect state of the patient in the Hemiplegia. For it is not unfrequently found that, after the apoplectic fit is over and the hemiplegia is formed, though there is a return of the senses, yet it is so far from being perfect, that the faculties still continue in some degree impaired. Either the eye-sight, or hearing, or speech is defective, and sometimes all three; the memory is weakened, or the patient, though he knows what answer to make and to deliver his thoughts with propriety, yet is frustrated in his design by making use of words he did not intend, and  
which

which are neither appetite to, nor expressive of, his ideas. In others, a continual oppression or drowsiness is perceived; and some are subject to frequent returns of slight apoplectic impressions.

Where these symptoms attend the hemiplegia, it is evident that the brain is still injured; and under these circumstances less advantage is to be expected from the Waters. But, where the apoplectic seizure has been slight, where its termination has been perfect (the brain shewing no marks of any remaining injury) and, more especially, where no apoplectic symptom has preceded this palsy, it is most reasonable to hope much benefit from their use. And under these limitations we often find them singularly advantageous in hemiplegias which proceed from causes peculiar to the Sex, or from pain, or from suppressed Gouts, or from the stoppage of natural or habitual Evacuations, or from the imperfect crisis of acute diseases.

It is generally allowed, that a recovery from the hemiplegia does much depend on the age of the patient; for, when this disease happens in advanced years, Nature is already too much depressed to make any very effectual resistance.

And

And I must also observe, that the length of time in which the patient hath laboured under this complaint (as in every other species of palsy) proportionably retards the cure; for I am persuaded these Waters would prove more effectual than they often do, were they applied to as soon as possible after the attack. But the custom is (I speak with respect to the poor) to try every thing first; and, when every thing has failed, when the disease is grown more obstinate through time, and there is danger of their becoming burthensome to their parishes, then recourse is had to the *Bath*.

I have commonly observed, that, where the Waters make in hemiplegias a compleat cure, their good effects become speedily apparent; and that, where they operate more slowly, or the patient finds little alteration after some weeks trial of them, the service they then do is only partial. In these instances the Leg is most usually the only part, as in compleat cures it is the first, that recovers.

*A palsy*

*A palsy of the of the Lower Limbs,  
from Pain.*

**S**IMON Field, of Wokingham in Berkshire, aged 25, was brought to the hospital, the 30th of August 1760, for a palsy of the lower limbs. Upon examination I found him without the least motion, or sensation, from the middle of the body to the end of the toes.

The first symptom of his disease was a pain, which, without any apparent cause, suddenly fixed in his back between the shoulders, and continued with unremitting violence for near six months; when it began gradually to abate, and in proportion as it lessened a numbness of the lower limbs came on; at length the pain entirely ceased, and immediately those parts were deprived of all feeling and motion.

He had now been in this palsied state for a year and a half; had taken many medicines, had been often blooded, and blistered, but to no effect.

As soon as he could be prepared, he entered on the usual course of the Waters, which he  
F continued

continued for three months without the least advantage. His feeling began then to return, and he could, though with extreme difficulty, just move his legs as he sat in a chair.

About the end of *December* he complained of great weakness and dejection of spirits. The strict adherence to the plan first laid down, and which had been continued regularly for near four months, had sweated him too much. I therefore ordered him to leave off drinking the Waters, but to go on with bathing; and to take a decoction of the Bark.

In six weeks after this alteration he was able to walk the Ward with crutches; and, as his strength and spirits were now greatly recruited, the Bark was no longer continued; but the remainder of his cure committed to Bathing only.

Towards the conclusion of his recovery, he felt violent burning pains in his feet and ankles after rising from the bath; which symptoms at length ceasing, he went out of the hospital perfectly cured, *May 6. 1761.*

It is to be observed in this man's case, that, though he found no benefit from the Waters  
after

after a punctual and regular trial of them for three months, yet he was at length entirely cured by them.

Such Perseverance, however necessary it may be, is seldom to be met with in private practice. Those who resort to this place come generally for a limited time; and, if in the six weeks, or two months, allotted for their stay, they receive not the expected amendment, the Waters are blamed and quitted with contempt. But, had this person, and many others whose histories are here related, been sent to *Bath* under such restrictions in point of time, it is evident they would have returned without the advantages they received.

These truths which hospital-practice affords are an ample recompense made by the Poor to the Rich, by whose benevolence Charities of this kind are supported; for by these alone we have obtained the knowledge of facts, the discovery of which is of so much importance to mankind.

*A palsy*

*A palsy of the Lower Limbs, after  
a Lying-in.*

**A** NN *Grabam*, aged 31, from taking cold in her lying-in, which check'd the discharge of the *Lochia*, and from using fomentations to backen the milk, was seized with a fever, which terminated in a palsy of the lower limbs.

She was sent to *Bath* from the hospital at *Hyde Park* Corner, where she had been a patient seven months, and had received a good deal of benefit. For, at the time of her admission into our hospital, *August* 23, 1759, she could walk, though with much difficulty, by the help of crutches. But the palsied parts were still greatly numbed, always covered with a cold clammy dew, were relaxed and flabby, of a livid colour, and the circulation of the blood in their vessels imperfect and torpid. The action of her bowels was so much impaired, that she was obliged to have continual recourse to opening medicines. The *catamenia* had ceased for eleven months.

As

As soon as she had recovered from the fatigue of her journey, she was purged with the Tinctura Sacra; took the Gum and Aromatic pills, and drank the Waters sparingly.

*Sept.* 3. She was again purged, and then ordered to bathe twice a week.

*Oct.* 5. Her paralytic affections continuing much the same, except that after bathing she began to feel severe pains in her loins and hips, and her costiveness being still obstinate, the use of an Electuary composed chiefly of Gum Guaiac; was added to the course of the Waters.

*Nov.* 16. She could walk without crutches. The Menfes were returned. Her costiveness was abated. The feeling in her limbs was greatly restored, and the cold clammy sweats had left them. But the pains which were first felt after bathing (and which usually go off in some hours or by the next day at farthest) continuing, without any remission, about the lower part of the back and Os Sacrum, the parts affected were covered with a Mustard plaister.

She



She wore this plaister for some time ; but receiving very little benefit from it, it was left off, and she was ordered to have her back pumped. The pains soon began now to give way, and as they decreased the sensation and motion of her limbs grew more and more perfect ; so that by the 9th of *May*, being greatly recovered, she was dismissed the hospital.

Within the time to which I have confined this Inquiry, nine or ten more instances occur of women who became paralytic in their lower limbs from accidents attending their lying-in. All of whom were either cured, or considerably benefited, except two ; one of which had been thus diseased between seven and eight years, and consequently was more fit for an almshouse than an hospital.

It is much to be wished, that we were always fully informed of every circumstance relating to the patients recommended to us. We can only judge of their fitness for admission, from the particulars contained in the cases sent for our inspection, and we have often too much reason to be surpris'd at finding their real state so different from what we were made to expect.

Such

Such improper objects, indeed, ought to be discharged on the first discovery of their real condition ; but it is not always so easy to exert this necessary resolution, and to withstand the entreaties of a miserable Being petitioning for a trial of the only means, from which he can hope for an abatement of his disease : and thus the physician is reduced to the disagreeable alternative of being thought to want humanity, or of acting contrary to the duty of his trust.

*A palsy*

*A palsy of the Lower Limbs, from  
Convulsion Fits.*

**S**Amuel Manning, of Minchin Hampton, aged 22, had been always healthy till one day, having over-heated himself and getting wet immediately afterwards, he was taken in the evening with so severe a pain in his head and back, that he became speechless and lost his senses.

By bleeding, blisters, and other proper remedies, he was in a few days brought to himself; but the attack left behind a train of nervous spasms, which affected him for a fortnight and frequently occasioned convulsion fits.

When these fits left him, he had, for above a month, periodical returns of a numbness in his legs and thighs; which were preceded by a strange uneasy sensation in the Os Sacrum, and smart pains in the soles of his feet.

This numbness, which always began about eight in the evening and continued till four in the morning, at length ceasing, he was again seized with convulsion fits, for four days successively;

cessively; in which his strugglings were violent, and while they lasted he was deprived of his senses.

Two days after these fits had ceased, the same train of nervous spasms returned with which he had been affected in the beginning of his disorder. Their continuance, indeed, was short, but then they left him totally void of all motion in his Lower Limbs: for which complaint he was sent to our hospital.

About three weeks after his entrance on a regimen of these Waters, he fell ill of the small pox, and was then in so feeble a state, that his recovery was scarcely to be expected. He got, however, through that distemper, which was of the fullest distinct sort, but received no benefit as to his palsy in consequence of it. †

† I have seen many instances of paralytics having the small pox, but never knew one of them receive any amendment in consequence of those discharges which attend this disease, or from the alterations it sometimes produces in the constitution.

The fear of conveying other diseases along with the small pox has been to many persons a prevailing argument against the practice of inoculation. The evidence of Facts can alone determine the validity of this important objection. On this account, though foreign, indeed, to my present purpose, I shall mention the following very singular case, which I found among the medical papers of the late Dr. *Oliver*. "A person was  
G
received

He returned as soon as was proper to the Waters; drank them in moderate doses, and used bathing every third morning. This plan he pursued for two months, and obtained by it a considerable abatement in his paralytic com-

received into our hospital who was a Leper. He was universally covered with moist running scabs. Soon after admission he was taken ill with the small pox; they were of the confluent kind, and his life was with difficulty preserved. But it was remarkable that, as the Variolæ came out, the Leprous eruptions retired; when the skin was cleared of the small pox pustulas, the Leprosy returned, unchanged and in the same degree as before." We have here an instance of the small pox and the Leprosy making way for each other, continuing distinct, and suffering no change in their respective natures.

That the Leprous eruptions should retire, as the small pox came out, is singular; but that the Leprosy should return after the small pox were over is not so: For all the Leprous patients I have seen (and many have fallen under my observation in the hospital) have had their Leprosy break out, without any apparent abatement, as soon as the variolous scabs were fallen off, and their strength was recruited by returning to their customary diet.

Were a sufficient number of cases collected, from whence it should appear (as it certainly does with respect to the Palsy and Leprosy) that diseases, subsisting before the Small Pox, remained after the Variolæ were over, without change or abatement, it might fairly be concluded that the Seeds of disorders had no union with each other; and could not, therefore, be communicated together by *Inoculation*: Which would clear up a difficulty, that reason and argument never can remove, and which it would not be allowable to determine by Experiment, except upon condemned criminals.

plaints;

plaints; when, by an act of great imprudence, he not only put a stop to his progress, but endangered his life. For, as he was carried to the bath, he was taken with a shivering and a pain in his head, yet, notwithstanding these symptoms of a severe cold, he went into the bath and staid there much too long. On his return, the pain of the head increased to that degree as to render him dilirious, and a fever succeeded, which for many days subjected him to the most imminent danger.

When the ill effects of this accident were over, a pursuit of his former plan, uninterrupted by any sinister events, effectually restored his limbs to their native strength and activity; and, after a residence in the hospital of 127 days, he returned home free from all complaints.

It may be remarked from the enumeration of the symptoms in many of the preceding cases, that those disorders which are usually termed *Nervous* or *Hysteric* do frequently accompany the *palsy*; and, as it likewise appears from the present, as well as from a foregoing history (and other examples might have been produced) that they sometimes also give rise to the *palsy*; the connection of these diseases, it

is presumed; will render a state of such patients not unnecessary, who for nervous and hysteric complaints have been received into our hospital.

And this account I shall the more readily give, as there are physicians of good reputation, in the present age, who seem to have no favourable opinion of the *Bath Waters* in such disorders; contrary, indeed, to the judgment of *Sydenham*, by whom they are strongly recommended.\* But, waving all claim to authority, let us appeal to facts for the decision of their character.

Within the time allotted to the present Inquiry, I find by our Register books, that eight patients have been admitted, whose disease was the *St. Vitus's Dance*. — Of these 3 were discharged cured; 3 left the house much better; and 2 received no benefit.

\* His words are, “*À ob contumaciam ejus hic affectus ferreis aquis minus cedat, adeundæ sunt aquæ calidæ Sulphurizæ, quales sunt nostræ Batbonienses. — hoc sedulè notandum, quod in earum usû consueque ægro persistendum, donec non tantum levamen aliquale sentiat, sed, quo minus symptomata omnia brevi postliminio revertant, donec omnino convalescat.*”

*Dissertatio Epistolaris de Affectione Hysterica &c.*

Of

Of others, who laboured under various anomalous affections of the nerves, the total number amounts to 146. Of which 113 were either cured, or greatly benefited; 18 were no better; 5 died; 7 were improper; and 3 were discharged at their own request.

To this general evidence many particular instances might be subjoined of the efficacy of *Bath Waters* in Nervous diseases; but, this not being our immediate purpose, I shall only mention one case, whose singularity will apologize for its publication.

*Mary Ford*, of a sanguine and robust constitution, aged 26, was admitted into the hospital, under my care, *Sept. 29th, 1762*. Her complaint was an involuntary motion of her right arm. It was occasioned by a fright, which first brought on convulsion fits. She was uncertain how long these fits continued, but the first perception she had of returning sense was a most excruciating pain in her stomach. On a sudden this pain vanished; and her right arm was instantaneously flung into an involuntary and perpetual motion,

She



She had in vain made use of the most likely means to conquer her disorder; which, at the time she gave me this account, had continued, without any abatement, for upwards of sixteen months; nine of which she had been a patient in the *Exeter Infirmary*.

This motion of the arm was like the swing of a pendulum; which it resembled also in being regular and incessant. It was besides quick and so strong, that the hand was at every vibration flung up higher than her head. And what adds much to this singular phenomenon is, that it neither fatigued her nor abated her strength; yet, if by any means whatever it was stopped, even though by herself, a most severe pain immediately seized her stomach, and convulsion fits were the certain consequence.

Once, at my request, she took a light walking cane in her hand; which she had no sooner done, but, this motion becoming irregular and unequal, the pain of her stomach returned with extreme violence, and she fell into the strongest convulsion fit I ever saw; out of which she did not recover, till the arm had, after infinite struggles, returned to its accustomed vibration.

With

With respect to the general state of her health, this patient was no ways disordered. Her appetite and digestion were good, the catamenia were regular, and the other secretions and evacuations perfect. Her sleep indeed was too short; it seldom lasting longer than 3 or 4 hours. During sleep, the motion of her arm ceased; but the instant she awoke (and she was always awakened by a pain of the stomach) it returned, and continued, without intermission, for the remainder of the four and twenty hours.

After she had drunk the Waters and bathed for about a month, finding no amendment in her complaint, I prescribed for her a medicine composed of Asafœtida and Opium. She began with taking a grain of opium every day, and gradually increased the quantity to four grains a day.

In the use of this remedy, together with bathing, and drinking the Waters, she persisted for another month; but without any kind of benefit. On the contrary, those days she went into the bath her spirits and strength were much weakened. She was ordered, therefore, to omit bathing, and to have her arm and the spine of  
the

the back pumped every, or every other day, for as long a time as she could bear it. Drinking the Waters and her medicine were continued; for I observed the opium neither occasioned drowsiness, relaxation of the solids, nor any defect in the performance of those functions on which health depends.

It was near three weeks after she had commenced this last plan, before any alteration was made in her disorder: when, as she was one day using the pump, the motion of her arm suddenly changed; and, having been perpendicular, became horizontal.

This change made it evident, that a different set of muscles were now affected; on which account it was not unreasonable to suppose, that, by persevering in those measures which had occasioned such an alteration, the entire cure of the disease might in time be effected. Nor did the supposition happen to be wrong; for this horizontal motion grew gradually less and less, till it entirely ceased, and the arm became obedient to her Will. Before she left the hospital, *March 30th, 1763*, her arm was so perfectly restored to its natural motion and strength, that I have seen her carry with it  
a brass

a brass bucket full of water, and assist in washing the Ward she belonged to.

Upon her discharge, she went into service; but came back to us about two months afterwards. She had felt some slight attacks of pain in her stomach, and, therefore, dreaded the return of the involuntary motion of the arm. But by, occasionally, taking a few warm aloetic purges, and drinking the Waters daily, for about five or six weeks, (neither bathing, nor pumping, being necessary) her stomach was set to rights, and the return of the spasm of her arm prevented. As I have heard nothing of her since this last dismissal, it is to be presumed she has continued free from her complaint.

H

*A palsy*

*A palsy of the Lower Limbs, after  
a Fall.*

**J**OHN *Waterman*, aged 34, by falling from a loaded waggon, had the third and fourth vertebræ of his neck distorted, and in a few hours became paralytic in his lower limbs. His stools and urine at first passed off without his knowledge, and a most violent pain fixed in his stomach, accompanied with an inflation of the whole epigastric region. For some time, he was likewise deprived of the use of his arms; but he had regained their action before he was sent to this place.

He was admitted, *Nov. 11th, 1760*, six months after his accident. The vertebræ were still displaced; he felt severe pains in his neck; his lower limbs were incapable of motion; his belly was distended to a vast size, was sore to the touch, and if struck on sounded like a drum; his bowels were now grown costive, and it was with the utmost difficulty he could part with his urine.

Bathing was first used to abate the pain and tension which were occasioned by the distortion  
of

of the vertebræ of the neck: but, as it added much to his uneasiness, by increasing the distention of the abdomen, he was at length obliged to desist. Pumping on his neck was therefore substituted, by which he found an almost immediate relief. For, as the displaced vertebræ slid gradually back again into their natural situation, the perfect use and feeling of his lower limbs returned. And, wind in prodigious quantities being discharged from the stomach, the swelling of his belly subsided; and, in proportion to its decrease, the action of the bladder and the peristaltic motion of the bowels were restored.

Without entering into an anatomical description of the descent of the nerves from the brain and their distribution among the viscera, it will be sufficient to observe, that those nerves which are destined to actuate the stomach and bowels were, by this distortion of the vertebræ of the neck, impeded in their operations; and consequently, that these Organs became in some degree paralytic.

Under such circumstances neither digestion, nor the expulsion of the fæces, could be duly performed.

In the former case, much Wind would be generated from the defective concoction of the food; flatulency being generally in proportion to the weakness of digestion: In the latter, much Air would separate from the obstructed excrements.

Upon these principles, the enormous distention of the belly, in this man's case, may readily be accounted for; and what confirms the explanation is, the subsiding of the swelling upon the started vertebræ's being replaced by the use of the pump.

Hence we see why internal medicines (for many had been given him before he came into our hospital) had no effect in reducing this distention; it not having been occasioned by any defect in the viscera themselves, but from a want of their being duly actuated by those Nerves to whose influence they are indebted for their powers.

Two reasons have induced me to make these remarks.

The

The first is, that, could we always discover the seat of the cause which produces a palsy, and would the situation of the part originally affected allow of the immediate and direct application of the remedies, such diseases would be less difficult to cure. \*

The second (which may be of real advantage) is, that in the treatment of paralytic affections it should be a rule to have the spine of the back pumped, as well as the particular part which appears to be more immediately diseased †. This observation, however, does not seem to extend so much to that species of palsy which is produced by the colic, as to those which are derived from most other causes.

\* Maxime autem curandum, ut ad sedem causæ detectam omnia remedia, si possibile, applicentur. Boer. Aph. 1070.

† “Σκέλη τῶ χῆρου ἐκτὴ τῶ κράτιν εἰ παλαιὸν τῶν ἰσχυρῶν ἀνιστορεῖται ὡς φαρμάκῳι διεμαίνουσι, ἀμιγλίστων τῶ τέκνῳ κτλ’ ἢ ὁ ἰατρίῳς ἢ τι ἄπ’ αὐτῶ βλάβηται νεύρον,” says Galen. De locis affect. Lib. 4. Cap. 7. And in another Place: “ὄσκει ἑσυχλήσις τοῖς παρεπιληυθροῖς κάλοις, ἀφεις τῶν ῥάχην, ἀπ’ ἐπ’ ἐκείνου ἀφικιόμεθα ἐνδερμαπύσεις τὸ σπικονος.” — Ibid. Lib. 1. Cap. 6. The truth of which he confirms by the case of Pausanius-Syrus, who, by a fall out of a chariot on his back, became paralytic in one of his hands; which palsy Galen cured by the application of those very remedies to the Spine of the back, which had been before ineffectually applied to the Hand itself.

*A palsy*



*A palsy of the Lower Limbs, from a distortion of the vertebræ of the Back, occasioned by Pain.*

**J**OH*N* Lacy of Briton Gloucestershire, aged 26, was subject for many years, at times, to severe pains in his back; which at length occasioned six of the dorsal vertebræ to slip out of their place.

The distortion of these bones was followed by the entire loss of motion in his lower limbs; together with such a defect of sensation in these parts, that, unless his flesh was squeezed with a force which in a sound state would have been very painful, he had not the least feeling in it. The diseased limbs were cold to the touch, of a livid hue, always covered with a clammy sweat, and their blood vessels preternaturally distended. The pains in his back still raged by fits with extreme violence.

In this miserable state he had continued for above a twelvemonth, before he sought relief from these Springs.

When

When he had bathed a few weeks, his back was pumped ; and he was ordered, upon coming out of the bath, to be suspended in a swing, as long as he could bear it ; the started vertebræ were then anointed with an emollient liniment, and covered with a soap-plaister.

Such was the plan laid down for his recovery (for I gave him no medicines internally, except such as were necessary to keep his body open) and which finally proved successful ; though not till he had pursued it near 13 months.

For the first eight months, he perceived no other alteration, than a gradual abatement of his pain ; at the end of this period, he could move his toes ; it was two months after this, before he could walk with crutches ; and a continuation of the same measures were requisite for near three months longer, to restore the entire feeling, and perfect use of his limbs.

In this case the vertebræ did not get back again into their places, but the arch they formed grew flatter and broader ; by which means, the angles that these made with the others that remained in their original situation became less acute,

acute, and thus the pressure was removed from the spinal marrow: In consequence of which, though the patient was relieved from his palsy, yet, an unalterable deformity of the spine remained.

Various are the cases of this kind which come into our hospital. In general, all such patients have from time to time very severe pains in the neighbourhood of the started vertebræ; and, though the lower limbs should be insensible to the touch, at least in a great degree, yet they are subject to violent spasms which make them suddenly fly out and extend their muscles so excessively as to produce the most severe tortures. In some patients, there is a total inability of evacuating either the urine or stools, without having continual recourse to the Catheter and Clysters; in others, there is a perpetual and involuntary discharge of both.

Happy is it for such sufferers to be informed, that these Waters generally succeed in this kind of palsy. I have known the worst affected in this species perfectly cured (of which the present case is an instance) or at least the symptoms so greatly relieved as to render life comfortable, when compared with the state of misery

tery they had before undergone. But the disease most commonly requires a long course of bathing and pumping before the desired effect can be obtained : let such, therefore, who labour under this palsy, not be discouraged, if their recovery does not keep pace with their wishes.

The best method of treating this complaint has been found to be the following.

When the patient has bathed ten or twelve times to supple and relax the parts affected, he should then, after every bathing, be suspended in a swing ; sometimes by the neck, sometimes by the feet. After this extension of the spine, the vertebrae must be anointed with an emollient and moderately warm liniment, and the patient conveyed into bed. It is also useful to cover the displaced bones with some soft relaxing plaister, which is to be taken off when the patient goes into the bath.

The operation of the swing is, commonly, at first extremely painful. The patient must, therefore, be put into it in the most careful manner, and continue there but a very short time. By repetition it grows less painful ; which,  
I together

together with the benefit he feels from the operation, will encourage him to bear and prolong it; and he will find, as the disease abates, the pain proportionably to decrease.

I must add, that the Back should be pumped while the patient is in the bath, before he is put into the swing; and, in very obstinate cases, on the intermediate days also, when he does not bathe: but I would not then, generally, advise the suspension in the swing. Pumping, however, is not too hastily to be begun; and great care is to be taken, that it does not inflame the diseased parts.

By these measures, the started vertebrae will either slip back into their places, or the adjoining ones will give way, and, by enlarging the curve, lessen the angles which are made by the first displaced bones with their superior and inferior neighbours.

In either case the palsy is cured; but in the latter a crookedness of the spine must ever remain.

*A Dead*

*A Dead palsy of the Hand and Arm,  
from a Fever.*

**A**NN West, of *Glastonbury*, aged 24, was recommended to this Charity for a pain in her right arm and hand:

She had been ill of a fever, which after six weeks continuance terminated in a critical deposit of the febrile matter on these parts. For, immediately as the symptoms of the fever declined, she felt an acute pain between her fore-finger and thumb; from whence in a few hours it extended to the wrist, and in about a week reached as high as the elbow.

Such was the case when she petitioned for admission into our Hospital; but before a vacancy happened her disease was changed. The pain had entirely left her, and in its place a *dead palsy* possessed the arm and hand; which absolutely destroyed all sensation and motion from the elbow to the ends of the fingers.

As the patient was in all other respects well, and the disease appeared to be merely a local

one, it was thought unnecessary to have recourse to any other measure than that of pumping the dead limb; by which both its feeling and action were, in 131 days, perfectly regained.

This case is an exception to the general rule before mentioned, of pumping the spine of the back, as well as the palsied limb; though it seldom happens but that both are necessary.

*A Dead*

*A Dead palsy of the Leg and Thigh,  
from a Fever.*

**H**ANNAH Loscomb, of Huntspill, Somersetshire, of a florid complexion, strong and healthy, and of about 40 years of age, by sitting in the open air, after being much heated, was seized with a fever, attended with excessive pain in her hips, thighs, legs and feet.

By the use of sudorifics, the pain abated in the left leg and thigh, but became more violently fixed in the other side. The whole right limb began then to swell, and increased to a prodigious size, without the skin's being discoloured, or the pain abated. In which state it continued for near a month; when, upon the pain's growing less, and the swelling subsiding, the parts affected became more and more numb, and finally were dispossessed of all feeling and motion.

She passed many months in this helpless condition, and such was her state when received into our hospital.

Having first taken such medicines as were necessary to prepare her for the use of the Waters,



ters, she drank them daily, bathed thrice a week, had the limbs pumped while in the bath, and used the dry pump the days she did not bathe.

When warm immersion had been five or six times repeated, she complained of a return of pain in the palsied parts; which was particularly severe after every bathing. But, as this pain was judged to be an indication of returning health, she was ordered to persist.

At the expiration of about six weeks the deadness of her leg and thigh was removed, and she then felt no more pain from the bath; but by persevering in its use, together with the assistance of pumping, she had the strength and motion of the diseased limbs entirely restored.

Pains coming on, after bathing, in palsied limbs, I have generally found to be a pretty sure sign of their recovery.

From these *two cases*, as likewise from *case the fifth* among the Hemiplegias, and *case the first* among palsies of the Lower Limbs, it appears how successful our Waters are in palsies, where not only motion, but sensation also, is destroyed.

\* *A Dead*

\* *A Dead palsy of the Limbs, without  
loss of Motion.*

**J**OHN Westlake of Winchester, aged 38, attributed to his lying on damp straw a stiffness in his knees, which rendered him incapable of walking. This complaint increasing at length occasioned a paralytic affection of the lower limbs, and, afterwards extending itself to the arms and hands, it deprived all these parts of their sense of feeling; though it left them, in some degree, possessed of their powers of motion.

The parts more immediately affected in this manner were the hands and feet; which notwithstanding their being absolutely dead to the touch, he could move readily enough; though their actions were awkward and too weak to be of much assistance to him.

He followed the customary practice of the hospital as to bathing and drinking, for five months; and was *minuted* in our Register on his discharge *Much Better*.

I have

I have inserted this man's case, as it is the only one I ever knew of that species of palsy, in which the diseased parts retain their *motion*, after being deprived of their sensation. Though, as an instance of this uncommon affection, it was far from being so completely satisfactory, as the two facts mentioned in the Memoirs of the Royal Academy, for the year 1743.

*A Palsy of the Hands, from the  
Cyder-Colic.*

**W**illiam Bishop, of Dunster in Somersetshire, of a spare dry habit of body, was affected with an excruciating pain in his stomach, which soon extending to the bowels brought on a total obstruction that continued for 10 days.

These complaints were occasioned by his having drank freely of cyder.

A passage being at length procured, the pains of his stomach and bowels in some degree abated; whereupon a weakness seized his wrists and gradually deprived him of the use of both hands; the backs of which were covered with large hard tumors, that for a time were extremely painful.

It was a year and nine months, from the time this person first lost the use of his hands, before he was sent to *Bath*.

The hands fell pendulous from the Wrists, the power of raising them being gone: The Fingers were contracted into the palms of the hands, and could not be extended. Except the affection of these parts, he was in other respects well; his bowels having long been free from obstruction.

After a few doses of physick, he drank the Waters, and went into the Bath. When he had bathed about a fortnight, he was ordered to have his hands pumped every day, and by these means he, in a very few weeks, was entirely cured.

'Tis to be observed, that five or six other persons, belonging to the same place, were affected, about the same time and from the like cause, in their stomach and bowels, which terminated in a palsy of their limbs; and that they were all, together with this patient, discharged from the *Bristol* Infirmary without having received any benefit; but were afterwards perfectly recovered by these Waters.

*A Palsy*

*A Palsy of the Arms and Hands, from  
the Cyder-Colic.*

**J**OHN Holman, by drinking too freely of cyder, when heated with labour, was attacked with a colic, which lasted five weeks, and was accompanied with a constipation of the bowels, fever and delirium. As soon as his costiveness was removed, the fever and delirium left him, and the pains in his bowels were much abated. On the remission of these pains, his knees began to swell; but these swellings soon subsiding his hands became paralytic, and then the bowels grew perfectly easy.

This palsy of the hands did not continue above a month; the disease gradually abating of itself, till it entirely left him.

The next year, from the like indiscretion, his disorder returned, and was attended with the same symptoms; which having lasted longer than on the first attack, in the end, totally destroyed the action of his arms and hands. In this condition, near seven months after his relapse, he came to the Hospital. — He drank the

Waters, bathed and was pumped, and in a couple of months regained the perfect action and strength of his arm: but, the muscles of the fingers not advancing equally in their recovery with those of the arms, blisters were applied to the Wrists; by which these parts were also restored to their natural powers.

He was admitted a patient the 9th of *February* 1760, and was discharged the 28th of *May*.

• *A Palsy of the Arms and Hands,  
from the Cyder-Colic.*

**N**icholas Neale was taken with a colic, attended with a diarrhæa, upon drinking some new cyder; which complaints continued for fourteen weeks. He then found his voice begin to falter, and for some days could not speak to be understood. After this, his speech returned; and then his arms and hands became paralytic.

These limbs hung loose and helpless from the trunk of the body, and were affected with severe pains continually running from the ends of his fingers to the points of his shoulders.

In this state he was received into the hospital, the 1st of *April* 1759; and by the customary methods was perfectly cured by the 18th of *July*.

I have been induced to mention this case from a circumstance attending it, which is contrary to the usual progress of the disease: For, though a purging came on at the beginning of  
the



the seizure and continued till the colic ceased, yet a palsy first seized the organs of voice, and then shifting to the arms and hands entirely took away their use.

The colic which gives rise to this species of palsy was not unknown to the ancients. It is twice mentioned in a manner sufficiently descriptive by *Paulus Ægineta*. \* Of late years it has engaged the attention of some of our best medical writers. It will, therefore, be sufficient to observe, that in consequence of a most obstinate costiveness attended with exquisite pain in the bowels, upon the constipation being removed and the pain diminished, the patient loses the use of his limbs. The arms and hands are the parts most commonly seized with this palsy; though I have known many instances where the lower limbs have been equally affected. Rheumatic pains sometimes attack the limbs before they become paralytic, and sometimes continue after the palsy is formed: in the latter case, I have generally found the disease less difficult to be removed.

Whether this paralytic affection is owing to a translocation of the morbid matter from the

\* Lib. 3. Cap. 18 & 43. Edit. apud Med. Artis Principes.  
bowels,

bowels, to those nerves which actuate the limbs; or whether it is occasioned by that influence which some parts of our frame, when diseased, have on others, though situated at a considerable distance from them; is a point that remains undecided. It is certain, however, that anatomy has not hitherto discovered any communication between the nerves of the abdominal viscera and those of the arms: and yet this Palsy of the arms (as *Van Swieten* assures us) has been cured by medicines internally given, and applied externally to the abdomen only.\*

The fumes of minerals, and the imprudent use of new cyder, are reckoned among the causes of this colic.

In a very ingenious pamphlet lately published by *Dr. Baker*, † the *Devonshire* colic is attributed to lead, dissolved by the juice of the apples in manufacturing the cyder.

\* Probe memini me plures sanasse nullo remedio applicato ipsis partibus paralyticis ad dissipandam morbosam materiam, sed solis remediis internis, una cum frictionibus, unguentis aromaticis, emplastris similibus, Abdomini tantum adhibitis.

*B. Van-Swieten* Com. Lib. 3. p. 358.

† And since republished with additions among the *Medical Transactions*.

Lead

the colic  
gans of voice  
hands entirely

life to this species  
to the antients. It  
ner sufficiently de-  
\* Of late years it  
some of our best  
efore, be sufficient  
nce of a most ob-  
with exquisite pain  
stipation being re-  
ished, the patient  
he arms and hands  
ly

... hands entirely  
of voice  
of the  
... hands entirely  
life to this species  
to the antients. It  
ner sufficiently de-  
\* Of late years it  
some of our best  
efore, be sufficient  
nce of a most ob-  
with exquisite pain  
stipation being re-  
ished, the patient  
he arms and hands  
ly

... hands entirely  
of voice  
of the  
... hands entirely  
life to this species  
to the antients. It  
ner sufficiently de-  
\* Of late years it  
some of our best  
efore, be sufficient  
nce of a most ob-  
with exquisite pain  
stipation being re-  
ished, the patient  
he arms and hands  
ly

Lead we know is remarkably productive of this complaint. The sugar of lead has been recommended in some cases as medicinal, and perhaps, when judiciously used, may have proved so; but, when either given internally, or externally\* applied, without proper caution, is found to bring on the disease. The same effect is produced by correcting acid wines with sugar of lead: and a similar instance, not long since, fell under my own knowledge of six persons who became at the same time paralytic by drinking cyder brought to them, while at harvest work, in a new earthen pitcher whose inside was glazed; which glazing is made chiefly of lead, and was undoubtedly dissolved by the cyder, as appeared not only from those unhappy effects which drinking it produced, but also from its having given (as these persons informed

\* I was informed by a surgeon of great eminence, that a palsy of both legs and arms had been brought on, by an attempt to destroy venereal veruæ by rubbing them with Saccharum Saturni.

† Rhenish Wines, however acid, never produce this disease: they give rise to it only when sweetened with Lead. In *Germany* this practice is justly deemed a capital offence. I fear it is too frequent a custom in this kingdom, when cyder is grown so acid as to be unfit for sale, to hang a large ball of lead in the cask to sweeten it.

me)

me) that astringent sweetish taste to the liquor by which solutions of this mineral are peculiarly distinguished.

But whatever be the cause whence cyder derives this deleterious quality, this however is certain, that all such paralytics come to our hospital from the counties of *Devon, Somerset, Gloucester* and *Cornwall*. It is a very remarkable fact, that, during the 13 years to which this Inquiry extends, there has been only one such patient sent us from *Herefordshire*, and not one from *Worcestershire*.

*A palsy of the Hands, from the  
Bilious Colic.*

**M**Argaret Hobbs of Barnstaple in Devon, 31 years of age, had possessed a good state of health till within a twelvemonth before she was recommended to this Charity; when she was taken with violent pains in the region of the stomach, continual vomitings, and an obstinate costiveness. The vomitings and costiveness being with much difficulty removed, the pains left her stomach and settled in her lower limbs; of whose use she was deprived for two months. They then shifted to her shoulders, and the lower limbs regained their functions. From the shoulders the pains soon descended to the wrists, and her hands were rendered paralytic. Her fingers were so strongly contracted she could not move them, and large hard swellings rose on the backs of her hands. Her bowels were costive, and the catamenia were obstructed.

On account of these two last symptoms, the use of an opening electuary, and the occasional assistance of deobstruent medicines, became necessary with the customary regimen of the  
Waters;

Waters; by which all her complaints were cured, except the tumors on the backs of her hands. These, not giving way to the Pump, were removed by the application of blisters, and her recovery was perfected in 151 days.

Pumping will generally dissolve, and, by the perspiration it occasions in the part, discharge these swellings; but sometimes it will only soften them: in which case we find it necessary to cover the tumors with blisters, or plaisters, or cataplasms made of mustard-seed.

The use of *Bath Waters* in diseases of the Liver may, I think, be comprised under the following heads.

They increase the action of the Bile.

They prevent its viscosity; and by uniting its several component principles restore this fluid to a perfect and natural state.

Whether internally, or externally used, they abate spasmodic strictures of the biliary ducts.

In consequence of these properties, joined to their well known effects on the stomach and

L 2

bowels,

bowels, they become extensively useful in most disorders of the Liver and Primæ Viæ; as in jaundices when too obstinate to be removed by the common methods of cure; in preventing the formation of biliary concretions of gallstones; in bilious colics; loss of appetite; indigestion: and all those various complaints which, both among the rich and poor, are the effects of intemperance and excess. But it is to be observed, that these Waters should be carefully abstained from, if there is the least degree of inflammation attending any of these complaints.



*A palsy of the Arms and Legs, from  
the West-India Colic.*

**A** LLEN Lane, of Portbury in Somersetshire, mariner, aged 19, was in the year 1749. attacked in the *West-Indias* with the dry belly-ach, which brought on a fever, convulsions, and loss of senses. These complaints continued for some time, and, upon their quitting him, he was entirely deprived of the use of all his limbs. It was near a twelve-month after this paralytic seizure, before he came to *England*, and was, at my recommendation, admitted into the Hospital, under the care of the late Dr. Sommers.

His arms hung uselefs, like flails, from his body; his fingers were drawn into the palms of his hands, the backs of which were covered with large hard swellings. His legs were contracted close to his buttocks, and so fixt there, that no external force could displace them. In consequence of this contraction, which made it impossible for him to put his feet to the ground, he rested on his knees; and when he was to remove from one place to another, it was

was

was done by crawling on them and his elbows. The muscles of the whole body were greatly emaciated, particularly those of the arms and legs. His bowels were excessively costive and frequently tormented with pains; he was often sick at his stomach, and had little or no appetite.

The first intention in this case was to get the stomach and bowels into a natural state, by improving the appetite and digestion, and procuring a free passage for the excrements. These points were at length effected by a proper regimen of diet, the occasional use of mild aperient medicines, and the Waters drunk in small quantities. He now became able to venture on bathing, and to make use of the pump; which measures he continued till his stay in the hospital was no longer necessary.

It may easily be imagined, that it required a long use of these Waters before a disease of such inveteracy could be expected to give way to them; but it at last yielded, in a great measure, to their powers, though not till he had resided here 622 days.

He

He was discharged the 20th of *May*, 1752 :  
 minuted in our Register, *Much Better*. For his  
 general health was in all respects restored.  
 The contraction of his legs was entirely re-  
 moved ; their muscles were grown fleshy and  
 full, and the compleat action of the lower limbs  
 was regained. He had also the use of his arms  
 and hands ; but the muscles of these parts, par-  
 ticularly of the latter, were still weak and ema-  
 ciated. And it is most probable they never re-  
 covered their natural strength and size : as I do  
 not remember more than one or two instances,  
 where a compleat atrophy had once possessed  
 the muscles of the hands, especially those which  
 form the ball of the thumb, that the parts  
 ever recovered their natural fulness and  
 strength.

We have here another remarkable instance  
 of what *Bath Waters* can do, in the most un-  
 promising cases, by a steady perseverance in  
 their use. Such long trials, which are not un-  
 frequent in our Hospital, must lessen the num-  
 ber of patients discharged ; yet as we find by  
 repeated experience, that many chronical cases  
 require a long use of the Waters before we per-  
 ceive

ceive any great alteration for the better, and yet at last are cured; we think it our duty to persevere, while we find there is the least probability of success. By this conduct we have often the satisfaction of doing the most essential services, which a more hasty procedure would necessarily have prevented.

*Palfes*

*Palsies from Paint.*

**T** *Thomas Wooden*, painter of earthen-ware, was twice admitted into *St. Thomas's Hospital* for a colic and palsy, which were the effects of his occupation, and was both times much relieved; but still so great a weakness remained in his wrists, as to render him incapable of using his hands; on which account he was sent to our hospital, where he was perfectly recovered in 140 days.

We have a great number of instances of this kind on our Books; but this case I have particularly selected as it shews, that a very small quantity of that noxious mineral, Lead, (for very little, I am informed, is used in the business which this man followed) is capable of producing the most pernicious effects. Happy would it be, if some other pigment could be discovered, which might supply its place: For even the very effluvia which arise from newly painted houses have sometimes proved as hurtful to the inhabitants, as mixing the Colours and laying them on too commonly prove to the painters themselves.

The following instance of a patient recommended to us, by a Gentleman of great eminence in the profession, is a proof of this observation. I shall take the liberty of copying his Letter.

“ *Samuel Butts*, aged 41, of *St. George’s Hanover Square*, of a thin habit of body and pale complexion, was seized with colic pains in his bowels, attended with a little quickness of the pulse and costiveness, about the 20th of *August*, 1753. Proper means were used to relieve him by the advice of a very experienced physician. Notwithstanding all the assistance that could be given him, his pains continued about three weeks, sometimes very violent, at others more gentle; but he was never, during that period, quite free from them. As they began to abate, he gradually had a weakness of his legs and arms come on; which has increased so much in his arms and wrists as to disable him from feeding or dressing himself, and has reduced him to a very helpless condition. During the whole time of the complaint, stools have with great difficulty been procured. *He lived in a house while it was new painted, when taken ill.*

*Pall-Mall, 29 Sept. 1753.*

THOMAS GRAHAM.

This patient, whose complaints were exactly similar to those which painters themselves so often suffer, came into our hospital *October* the 15th, 1753, and was discharged cured the *May* following.

*A Palsy*

*A Palsy of the Hands, from Glass-Grinding.*

**E***Edward Erridge, of Willington in Sussex,* aged 29, by trade an optic-glass maker, which business he had followed for near twenty years without any inconvenience, was one day suddenly taken, as he was grinding glass, with a most violent spasmodic pain in his stomach, and continual vomitings. To which ensued so coftive a state of body, that he was frequently for a fortnight together without any evacuation; during which time the pains he felt in his belly were intolerable. For these complaints, together with wandering pains that more particularly affected his arms, he was admitted into *Guy's* hospital; where he found, with respect to the disorder in his bowels, a good deal of benefit, and was advised by his physician to repair to *Bath*, for the completion of his cure. But not following this advice, he continued for some months in a miserable condition, from the pains which had now fixed together in his arms; but which at length gradually wore away, and were succeeded by a paralytic shaking of these limbs. In this state he continued for five months;



months; when the tremblings ceased, and he lost the use of both his hands.

He came to our Hospital *March* the 14th, 1752: and was discharged in the *August* following, *Much Better*. He returned to us again in *December*, pursued the same course of bathing and pumping till the 5th of *April*, when he obtained a perfect Cure.

I find by Dr. *Oliver's* papers he was informed by a patient, who was paralytic in his arms from the same cause as the person whose history is above related, that, from the wheel used in grinding glass, which is turned by a rapid water-course, there is frequently emitted a blue flame which smells very sulphureous, and is excessively poisonous: that many who follow this business grow consumptive; some lose their senses; but the generality are subject to colics, which usually terminate in palsies of the hands. The person, who gave the Doctor this information, laboured under the latter complaints; of which he was cured by these Waters in 251 days: but relapsed by returning to his business, and upon a readmission into the Hospital received no benefit.

Painters,

Painters, Refiners, Gilders, and all who are employed in digging ore, or in the separation of metals from it, † are liable to colics which end in palsies. The symptoms are much the same with those which proceed from cyder, and the *Bath Waters* are equally a remedy, by whichever of these causes the disease is produced; with this difference, however, that palsies from mineral effluvia require the longest use of these Waters to effect their cure.

I shall here conclude the history of these cases; the number of which might have been much enlarged, \* were it not presumed that those I have given, with the assistance of the General Table of Paralytics, will fully answer the purpose of this Inquiry.

† Most probably from some portion of lead that it mixed with them.

\* I rather think the medical reader will wish I had troubled him with fewer: but as this Tract may fall into the hands of those who are afflicted with this disease, it must be a consolation to such should they find that palsies similar to their own (as arising from like causes) were relieved by these Waters; which consideration will, I hope, be deemed a sufficient apology for my having giving so large a number of cases.

It is apparent from these cases, that the patients usually recommended to our Hospital labour under palsies which have resisted the powers of medicine, and whose original obstinacy has, of course, been augmented by time; yet the Table informs us, that out of 969 paralytics, in situations so unpromising, 813 were benefited.

It cannot have escaped the Reader's notice, that BATHING in these Waters makes an essential part of the hospital practice.

We bathe all our paralytics, where no particular circumstances forbid. When a patient is sent to us whose limbs from a long continuance of the disease are totally relaxed, warm immersion in such a state would be manifestly improper; and he is, therefore, obliged to refrain till by drinking the Waters, or, if necessary, by the aid of medicine, he acquires a sufficient degree of strength to venture on its use. Where no such objections occur, he enters on this regimen after a short preparation. If the Bath weakens, as it sometimes does, he intermits it, and in the mean time has his limbs pumped. Some are able both to bathe and  
pump

refiners, Gilders, and all who dig ore, or in the pits from it, † are liable to palsies. The symptoms of those which proceed from the Waters are equally affected of these causes the difference with this difference, however mineral effluvia require the Waters to effect their

remedy is by  
disease is by  
However, that pal-  
require the longest  
effect their cure

I here conclude the number of which are enlarged, \* were it not have given, with the Table of Paralytics, purpose of this Inquiry.

It probably from some portion of the medical reader

pump at the same time, or else to use each alternately; while others stand in need of pumping alone: and thus the external application of these Waters is used in all such complaints, though varied according to the particular nature of the case and the constitution of the patient.

But it is said by Dr. Mead, "that warm bathing promotes a return of the apoplexy." † But why ascribe this *return* to the use of warm bathing? Since this disaster happens to those who have never used the warm Bath. For relapses of this sort are common, and are owing to that natural affinity which unhappily subsists between these two diseases.

The evidence which the Table of Paralytics affords will, however, best determine this matter; and to give the objection to warm bathing all due weight, we shall consider it both as a general prohibition to this practice in all palsies, and as a particular one in the Hemiplegia only.

† Ipse quidem novi nonnullos, qui, cum vana medicorum spe delusi ad thermas nostras *Batbonienses* profecti essent, ex aqua calida egressi, mox iterum apoplexia correpti sunt, ac perierunt. *Mon. & Præcep. Med.*

In the first instance it will appear, that out of 969, 43 have died; which in round numbers is as 1 to 22.

In the second we find, that out of 257, 12 have died; which is in the proportion of 1 to 21. †

Both calculations turn out nearly the same, and either of them is sufficient to shew the weakness of the objection. For supposing all those persons to have died from a relapse into the apoplexy (which is granting more than is true, as some of them were carried off by the Small-Pox) yet, these very few instances of ill success, among such a number of patients, whose cases were so hazardous, are proofs rather of a preventive, than an accelerating power in these Waters, as to the point in question. At least, this return will be considered, by those best qualified to judge, as an event very natural in itself, and too apt to happen to those who have never used warm bathing.

† In these calculations, the patients ranked under the four last divisions in the table of paralytics are not considered; they being no ways concerned in the question.

These considerations weigh still more strongly on the side of warm bathing in the Hemiplegia, to which the caution is peculiarly directed. \* For, as *Bellini* observes, “they who are paralytic from the apoplexy with difficulty and very seldom recover: on the contrary, they are more apt to relapse into the apoplexy.” In truth, this kind of Hemiplegia is a mere crisis, or effect, of the apoplexy: † Hence we see their alarming connexion, and hence follows the too frequent and fatal termination of the former, *in the disease from whence it arose.*

It is natural for Men to be governed in their judgments by what falls under their own observation: hence it is, that we are too often tempted to draw general conclusions from the good, or ill, success of a few particular Cases. But it is on full and repeated experience, not on partial or casual, that Aphorisms in the art of medicine are to be drawn, or can be well founded;

\* Non nisi difficile & raro contingit ut paralytici ex apoplexia evadant, imo e converso facilius tales paralytici in apoplexiam recident. *Bellini de morbis Capitis.*

† Definit ut plurimum, nisi mors intercedat, apoplexia in nervorum resolutionem, quæ morbi est solutio.

*Mead Mon. & Præcep. Med.*

and

and, therefore, as the evidences here produced are both numerous and decisive, I shall not hesitate to affirm, whatever authority there may be to the contrary, *that Bathing in these Waters is useful in Palsies.*

Should the curious Reader now want to know, after what manner the *Bath Waters* act in the cure of paralytic diseases, his first sollicitude should be employed in seeking, how animal motion and sensation arise from the brain and nerves. That these organs are necessary to the performance of those animal functions is well known; but how they perform them remains yet, and is likely to remain, an inexplicable secret. While nature, therefore, so industriously conceals from us the *manner* of her operations, it should teach us to confine our studies to the acquirement of that useful knowledge, which is the fruit of a patient attention to their *consequences* and *effects*; instead of pursuing speculations and forming systems, which, when well founded, have proved of little use in the art of healing, and, when ill founded, an eternal hinderance to our progress in it.



0135

0000

0000

*Med. Hist. 176*

A DISSERTATION  
ON  
ISCHIAS ;  
OR,  
THE DISEASE OF THE HIP-JOINT,  
COMMONLY CALLED  
A HIP CASE;  
AND  
ON THE USE OF THE BATH WATERS  
AS  
A REMEDY IN THIS COMPLAINT.

---

BY WILLIAM FALCONER, M.D. F.R.S.  
*Physician to the Bath General Hospital.*

---

---

Ἡ δὲ νόσος χαλεπὴ λίνῃσι καὶ χροίῃσι.

HIPPOCRAT.

---

---

London.

PRINTED FOR T. CADELL AND W. DAVIES, STRAND.

---

1805.

---

Printed by G. SIDNEY,  
Northumberland Street, Strand.

---

A  
DISSERTATION,

&c.

---

**T**HE complaint of the hip-joint, commonly called a hip-case, has (in modern times especially) been much overlooked in the enumeration of diseases.

It has, under the appellation of sciatica, been confounded with rheumatism and gout, and also with psoadic abscess; from all which it differs materially, both in its nature, seat, and method of cure.

I shall endeavour, first, to give some account of the appearance of this complaint, and of its attendant symptoms, and proceed to speak of its causes, and the method of cure, and conclude with some remarks on

what other writers have delivered on the same subject.

Few practitioners have seen this disease at its commencement. Its symptoms are usually inconsiderable and transient, sometimes disregarded, and at others considered only as the consequence of some casual strain or over-exertion, or of too long continued exercise; and, if the person affected be in middle life, or farther advanced, it is mistaken for a gouty attack. It is certainly true, that all these causes may produce symptoms nearly resembling those hereafter described, however different the nature of the several complaints may be.

In the state wherein persons labouring under this disease come to Bath for relief, the seat of the pain is generally described to be, rather behind the great trochanter of the thigh-bone, and nearly on the same level. The persons affected speak of it, as being, to their sensations, deep-seated, but still capable of being aggravated by moderate pressure with the finger on the part where the pain is felt. No external soreness of the skin is observed. The glutæus magnus, and the  
vastus

vastus externus muscles generally appear wasted and flabby, and the external line of division between the glutæus and the biceps, and semitendinosus seems in a good measure obliterated, and filled up with a flabby protuberance, as if the glutæus magnus was let down, or spread over the upper part of the muscles which lie immediately below it. Notwithstanding this apparent enlargement, the circumference of the thigh is, in reality, diminished; which diminution in large subjects, I have seen amount to three or four inches, when compared with the side not affected.

Sometimes the breadth of the nates on the diseased side is much increased, though its prominence and firmness are diminished; a man now \* in the Bath hospital, has the nates on the left side, at least three inches wider than on the right. The head and neck of the thigh-bone itself may be discerned, by feeling, to be much more prominent on the affected side; and the joint suffers, I believe, a partial dislocation.

A 3

The

\* August 27, 1801.

The tubercle, or lower part of the ischium, may, in many instances, (but not always,) be discovered, by feeling it behind, to be lower on the affected side than on the other. A man now in the hospital is a remarkable instance of this difference between the height of the bones on each side; and a pelvis of a person who died at the same place, and was preserved there many years, shewed it still more strongly. The leg on the side affected is sometimes shorter, though it is more frequently longer than on the other. Sometimes the difference is but little; but, I believe, always perceivable. A man, now in the hospital, has the left leg, which is the side affected, at least two inches and a half longer than the right. It often happens that the leg, which had been at first elongated, becomes, in the course of the disease, shorter than the other; but I have seen unquestionable instances, in private practice, as well as in the hospital, wherein the affected limb was shortened, without any previous elongation. Motion of the limb is, I believe, always painful, although not in any violent degree, unless in the advanced stages of the disease; but I have observed, in several instances, that the  
patients

patients could describe a circle with their toe, with as much ease as they could advance the foot forwards.

In general, they find it difficult to extend the legs sideways, far from each other, though sometimes the contrary is the case. It is, I believe, universally true, that they are unable to support any considerable proportion of the weight of the body on the affected side; or to stand alternately on the legs, as is usually done by persons in health.

The pain is not confined to the spot nearest to, or lying over, the real seat of the disease; but seems to be propagated downwards, in the course of the vastus externus, to the knee, and along the peroneus anticus to the outer ancle. Sometimes the pain of the knee has been so violent as to cause that joint to be mistaken for the seat of the malady, when the hip-joint only was affected. \*

It

\* There is a considerable analogy between the effects of a carious or inflamed tooth, and those of a similar event taking place in the hip-joint. The pain is, in both instances, diffused to a considerable distance from the seat of the disease; the tooth is raised from the socket, analogous to the lengthening of the limb in hip-cases; and



It is not uncommon for the seat of the pain to be on the upper part of the pectineus muscle,\* near to the spot where psodiac abscesses often appear; and, in such cases, the pain descends on the inside of the thigh, nearly in the direction of the adductores of the triceps, the vastus internus, and in a straight direction from the knee downwards to the internal angle.—In the general state of the disease, as above described, I have mostly found the pulse regular, and of the natural standard, in point of quickness, the skin cool, and the evacuations as usual in health;

and when the pain and inflammation subside, the tooth sinks lower into the socket than it was originally. This is analogous to the shortening of the limb after a previous elongation. The thickening of the membrane lining the socket of the tooth, which is caused by the inflammation, raises the tooth upwards; and the wasting or decay of the same membrane afterwards, allows the tooth to sink deeper into the socket, than it did when in its natural situation.

\* In a case now in the hospital, the pain began on the outer part of the hip, near the great trochanter, and almost entirely removed from thence into the groin, where it remains at present.

health ; and indeed very little change in the general system. But when the disease advances, and the part affected becomes sore and tender to a *slight* touch, and the pain grows acute, throbbing, and uninterrupted ; when the swelling increases, and the skin of the pained part changes to a red or pink colour, with an appearance of slight erysipelatous inflammation, the pulse *then* is accelerated considerably, the face changes alternately from a lead-colour paleness to flushing, and the contrary \* ; the skin is mostly covered with a clammy sweat, the tongue grows white, the flesh wastes, the strength declines, and the situation of the sick person becomes, in a good measure, similar to that of one in the advanced state of a pulmonary consumption. As the Bath waters are confessedly prejudicial in every situation accompanied with hectic fever, we *seldom* witness the last stage of this disease, such persons being usually sent home

\* I have been informed by Mr. Phillot, surgeon to the hospital, a gentleman whose judgment, as well as long experience intitle his observations to the highest regard, that he has remarked startings and catchings during sleep to be, in this stage of the disease, some of the most certain signs of the formation of matter.

home as incapable of receiving benefit from this remedy. Sometimes indeed we have been necessitated to retain such distressed objects, until the termination of their miseries; as when they have, through the indiscretion, ignorance, or unfeelingness of those to whose care they were intrusted, been sent hither in the last stage of the disease, and were too weak to be sent back. An abscess, in such persons, has been usually formed on the outside of the thigh, near the seat of the pain; and has either burst of itself, or been opened, and the patient either sunk presently under the excess of the discharge, or continued to linger some time in the same state with those who die tabid, as it is called, from long-continued, and excessive suppuratory evacuations. Every case, however, where suppuration takes place, does not prove fatal. Some escape, and I have been informed, that they have principally been those, wherein the abscess has been suffered to burst of itself, in preference to its being opened with the knife.

If the quantity of matter be not very large, and the hectic fever abates on the discharge of it, there are hopes that attention and professional assistance may prove successful.

But

But the advice of an eminent surgeon \*, when speaking of the empyema psoadicum, is here in a good measure applicable, “ that the instances of those who perfectly recover are so few, when compared with those to whom it proves fatal, that it will never be prudent to make a favourable prognostic.”

In such cases, where the patient escapes with life, an ankylosis, or great rigidity of the joint, often takes place, or at least a considerable shortening of the limb; which last, indeed, is often the consequence of the disease, under circumstances much more favourable.

Hectical symptoms, though they cannot but suggest a doubtful prognostic of success, are not always indications of impending suppuration. If proper management be used, and *timely* applications made, this disposition may *often* be checked. Even when there are the strongest reasons to believe, that a fluid has been effused into the sheaths of the muscles, it has been found possible to cause it to be reabsorbed, without coming to suppuration, or without its being again deposited on some other part, or producing any other bad consequences.

\* Mr. Pearson, of the Lock Hospital.

sequences. But matter, when completely formed, is, I believe, never taken up again, without producing some mischievous effects.

Some writers speak of the shortening of the limb as a mark of suppuration being formed. A sudden change from elongation to abbreviation may perhaps indicate, or rather afford a presumption of this kind. But this event will be manifested by many other symptoms at least equally decisive. The mere abbreviation of the limb often takes place early in the disease, and long before the commencement of the feverish symptoms; and may be satisfactorily accounted for, without supposing it to arise from the formation of matter.—This disease is sometimes acute and rapid in its progress, and at others slow and chronic. I have several times seen it come to an alarming height in a few weeks\*, and in other instances to continue several years without much perceptible abatement or aggravation.

In one person, two years elapsed after the beginning of the pain and lameness, before  
any

\* A man now in the hospital is an instance of this.

any perceptible alteration in the length of the limb took place. After that interval, the leg began to lengthen, and advanced so as to be nearly three inches longer than the other; in which state it still continues, (Sep. 24, 1801,) at the interval of full two years from the time it was first observed to become longer: During the above long period of the complaint he has suffered no symptom of fever, nor manifested any signs of suppuration.

In cases that terminate in death, anatomical examination obviously points out the nature of the disease. The head of the thigh-bone, and even the neck, is generally found carious; and the acetabulum, and sometimes part of the bones of the pelvis surrounding it, corroded, and sometimes in such a manner, as to open a passage internally into the cavity of the pelvis. Matter is often found in the cotyloid cavity itself, and in such a quantity as could scarcely be supposed to be lodged there; and it is said, without any marks of inflammation in the parts about it. To these appearances, however, I never have been an eye-witness.

The

The symptoms that occur at the first coming on of the disease, are so inconsiderable, and their advance so gradual, that it is difficult to recount them accurately. A sense of weariness and weight on the affected side are usually mentioned as the first marks of indisposition. This is followed by pain \*, slight at first, but which increases gradually. A difficulty of stooping forward succeeds, so that the patients feel much uneasiness when drawing on their stockings, and are often obliged to put them on by bending the leg backwards, and placing the hand behind the body.

Stiffness of the joint, and an aggravation of the pain on motion, soon follow, and, in some persons, a difficulty of separating the  
legs

\* A man now in the hospital, who came in August 27, 1801, informed me, that his first symptom was a violent pain in the right hip behind the great trochanter, which attacked him after lying on the ground when he had been working in the hay harvest, on July 14th next preceding. This pain continued some time in that situation, and removed in a great measure from thence into his groin, where it is at present. Some little uneasiness still remains in the hip where it first began, but very inconsiderable, compared with what it was at its commencement.

legs sideways ; and in some, though more rarely, an equal difficulty in bringing the legs together. In the former case it has been found necessary, at the hospital, to provide cushions, to prevent the knees galling one another ; and in the latter, a band or belt inclosing both the knees, to guard against a strain, by too great a laterel separation of the legs from one another.

It is perhaps, not difficult to account for several of the above, seemingly contradictory, symptoms, without supposing any real difference in the nature of the disease.

The thigh-bone stands in nearly the same direction with the trunk of the body, only a little obliquely, in such a manner that the upper parts of the bones are at a greater distance from each other than the lower. The neck of the thigh-bone is a protuberance, situated rather interiorly at the upper end of the bone, inclining upward, and a little forward, and making an angle with a right line drawn through the center of the thigh-bone, of about 48 or 50 degrees, but in some subjects the direction of the neck is almost transverse, or at right angles with the trunk of the body.

The



sequences. But matter, when completely formed, is, I believe, never taken up again, without producing some mischievous effects.

Some writers speak of the shortening of the limb as a mark of suppuration being formed. A sudden change from elongation to abbreviation may perhaps indicate, or rather afford a presumption of this kind. But this event will be manifested by many other symptoms at least equally decisive. The mere abbreviation of the limb often takes place early in the disease, and long before the commencement of the feverish symptoms; and may be satisfactorily accounted for, without supposing it to arise from the formation of matter.—This disease is sometimes acute and rapid in its progress, and at others slow and chronic. I have several times seen it come to an alarming height in a few weeks\*, and in other instances to continue several years without much perceptible abatement or aggravation.

In one person, two years elapsed after the beginning of the pain and lameness, before  
any

\* A man now in the hospital is an instance of this.

any perceptible alteration in the length of the limb took place. After that interval, the leg began to lengthen, and advanced so as to be nearly three inches longer than the other; in which state it still continues, (Sep. 24, 1801,) at the interval of full two years from the time it was first observed to become longer: During the above long period of the complaint he has suffered no symptom of fever, nor manifested any signs of suppuration.

In cases that terminate in death, anatomical examination obviously points out the nature of the disease. The head of the thigh-bone, and even the neck, is generally found carious; and the acetabulum, and sometimes part of the bones of the pelvis surrounding it, corroded, and sometimes in such a manner, as to open a passage internally into the cavity of the pelvis. Matter is often found in the cotyloid cavity itself, and in such a quantity as could scarcely be supposed to be lodged there; and it is said, without any marks of inflammation in the parts about it. To these appearances, however, I never have been an eye-witness.

The

affected limb, which, whether it be lengthened or shortened, cannot bear its part in the support of the body, but hangs a dead weight on the affected side; and probably drags the parts, with which it is connected, downwards along with it.

When the seat of the pain is situated in the groin, it is not easy, at first sight, to distinguish a hip-case from the beginning of a psoadic abscess; and indeed, some cases of the latter kind have been sent to the Bath hospital, supposing them to be hip-cases. They may, however, I think, be distinguished, by observing, that the pain in the groin in psoadic abscess, though it extends to the upper part of the thigh, and sometimes a considerable way down it, does not shoot downwards to the knee, and from thence to the ankle, as in hip-cases.

In psoadic abscess there is no actual abbreviation or elongation of the limb, though there is sometimes a contraction of the knee-joints.—The thigh-bone does not project in psoadic abscess, nor are the nates larger on the affected side, nor is the glutæus let down over the muscles below it.

CAUSE.



sequences. But matter, when completely formed, is, I believe, never taken up again, without producing some mischievous effects.

Some writers speak of the shortening of the limb as a mark of suppuration being formed. A sudden change from elongation to abbreviation may perhaps indicate, or rather afford a presumption of this kind. But this event will be manifested by many other symptoms at least equally decisive. The mere abbreviation of the limb often takes place early in the disease, and long before the commencement of the feverish symptoms; and may be satisfactorily accounted for, without supposing it to arise from the formation of matter.—This disease is sometimes acute and rapid in its progress, and at others slow and chronic. I have several times seen it come to an alarming height in a few weeks\*, and in other instances to continue several years without much perceptible abatement or aggravation.

In one person, two years elapsed after the beginning of the pain and lameness, before  
any

\* A man now in the hospital is an instance of this.

any perceptible alteration in the length of the limb took place. After that interval, the leg began to lengthen, and advanced so as to be nearly three inches longer than the other; in which state it still continues, (Sep. 24, 1801,) at the interval of full two years from the time it was first observed to become longer: During the above long period of the complaint he has suffered no symptom of fever, nor manifested any signs of suppuration.

In cases that terminate in death, anatomical examination obviously points out the nature of the disease. The head of the thigh-bone, and even the neck, is generally found carious; and the acetabulum, and sometimes part of the bones of the pelvis surrounding it, corroded, and sometimes in such a manner, as to open a passage internally into the cavity of the pelvis. Matter is often found in the cotyloid cavity itself, and in such a quantity as could scarcely be supposed to be lodged there; and it is said, without any marks of inflammation in the parts about it. To these appearances, however, I never have been an eye-witness.

The

are very distressful. Under such circumstances, after the exhibition of a gentle purgative, it is usual to enter on a course of bathing. If the patient be tolerably strong, and the symptoms moderate, they are directed to bathe in the hot-bath, which is the one specially appropriated for the use of the hospital patients, and is about 105 degrees of heat. The usual time for continuing in the bath is from 15 to 25 minutes, and it is generally repeated twice or thrice a week. After a few times bathing, the dry-pump, as it is quaintly called, or pumping the affected part without bathing, is advised, and this is tried on the part affected, on those days when the patient does not bathe, Sundays excepted. From 50 to 200 strokes of the pump are usually given, the latter of which numbers takes up about five minutes of time.

The first good effects of this application are to abate the stiffness and pain of the joint, and to afford a greater latitude and extent of motion. This is often perceived after using it three or four times. As the effects of the remedy proceed, the soreness and swelling diminish, the nocturnal pain, which is often very distressing, abates, the power of supporting  
ing

ing the body on the lower limbs, on the affected side, increases, the legs, whether shorter or longer, approach towards their proper dimensions, and the muscles, that were let down and wasted, regain their natural shape, firmness, and plumpness.

If the use of the waters succeeds as favourably as is above described, we seldom interfere farther, and have frequently the satisfaction to see a perfect cure performed by them, and sometimes in cases which, at the commencement of the trial of the remedy, did not appear very promising.

It happens, not unfrequently, that the waters will shew their beneficial effects to a considerable extent for some time, and then the amendment seems to be at a stand; but still without any accession of new morbid symptoms, or without any aggravation of the old. In such cases we find it requisite to suspend the use of the waters for some time, and to apply a blister upon the seat of the pain; after the healing of which, we often find the application of the waters may be repeated with advantage.—But the state and condition of the patient does not always allow us to pursue such an easy course of  
practice



practice as is just described. It sometimes happens, that the irritability of the patient's nerves is so much excited by the use of the bath, as to render much caution necessary in the trial, especially in females.—Sometimes it causes violent perspiration, and much reserve is necessary on that account. In instances of the latter kind, unaccompanied with fever, a light infusion of the bark, with aromatics, is generally serviceable.

But the tendency to fever is most to be apprehended. If the spot where the uneasiness is felt, be externally sore, and tender to the touch, the swelling and pain considerable, and especially if the latter be much aggravated by slight motion, it is necessary to be on our guard, even though *no* acceleration of pulse has *yet* taken place. Cupping-glasses, with scarification, and even sometimes without it, are applied in such cases with advantage; or, if the skin be too sore or tender to endure, without much pain, the suction of a cupping-glass, a large number of leeches, sometimes as many as fifteen, have been substituted in the place of the other, and repeatedly applied, and have proved of great service.

In

In aid of these applications, saline cooling purgatives, and the common saline draught, with antimonials, are administered with advantage.

For the relief of the pain, which often subsists without fever, or at least without any that is indicated, either by the tongue or the pulse, we find it necessary to employ opiates. I have generally used Dover's powder with this intention, in the quantity of from five grains to a scruple, once or twice in twenty-four hours, and commonly with good effect.

If these means prove effectual (as they often do) to procure the abatement of the symptoms, the bath is cautiously tried, the Cross-bath especially, which is cooler than the other, and that for a short time only, and directed to be conducted with as little fatigue and trouble to the patient as possible. If this can be borne without aggravating any of the symptoms, but rather with a soothing effect, it is directed to be repeated, after an interval of three or four days, repeating the purgative, above-mentioned, occasionally. When the bath can be borne with ease, we recommend the use of the pump in the bath,  
in

patients are sent, or from the tendency of the constitution to hectic fever, that suppuration will come on in spite of all our efforts to prevent it. Such cases being no longer fit subjects for a trial of the waters, are generally sent home with as much attention as possible to their ease and comfort.

If weather, distance, or the violence of the disease will not admit of their removal, consistently with their present safety, or with proper attention to their sufferings, they remain at the hospital; and four instances of persons who paid the last debt to nature under such afflicting circumstances, are recorded in the following table, and probably a similar fate attended a large majority of those who were sent home with proof, or strong suspicion, of matter being already formed.

*TABLE*

*TABLE of the State of the Patients at their Discharge, who were admitted into the Bath Hospital for Hip-cases, from May 1, 1785, to April 7, 1801, classed according to their Ages.*

Ages.	Cured	Much better	Better	No better	Im-proper	Irre-gular	Dead.	Total
Under 10 Years.	—	5	8	1	9	—	—	23
From 10 to 20	30	24	32	9	34	—	2	131
From 20 to 30	20	48	28	13	34	2	1	146
From 30 to 40	22	29	18	2	24	3	—	98
From 40 to 50	21	30	15	7	16	8	—	92
From 50 to 60	8	25	6	1	5	2	2. one of the Small-pox.	49
From 60 upwards	2	7	4	—	—	3	1. of the Small-pox.	17
Total	103	168	111	33	122	13	6	556

It is proper to apprise the reader, that by *cured*, in the second column of the foregoing table, is meant such persons who have completely recovered from their complaint, and who

who have *no* symptoms of the disease remaining, for which they were admitted. By *much better*, is understood such as have nearly recovered, but have still some stiffness, debility, or other mark of the disease remaining. This term, however, is never applied, unless to such as are nearly recovered, and never to crippled or helpless persons, however such may be circumstanced with regard to health.

By *better*, we understand persons who have received obvious and material advantage, but who have, nevertheless, strong marks of the effects of the disease. This term, however, is never applied to such as, although they may have received some temporary alleviation of their sufferings, still labour under hectic or other symptoms, that indicate their health to be declining.

It is much to the credit of the Bath hospital, that a great degree of candour has been uninterruptedly preserved ever since its foundation, above sixty years ago, in representing the state of the patients when dismissed. These, when minuted to be discharged by the attending physician, are again produced before some of the other professional persons,

persons, and examined as to the state they were in when admitted, which is compared with their state when examined, and both these are compared with the report of their state by the attending physician. They are again produced before the committee, and separately and regularly examined as to the same points; and I have repeatedly witnessed the committee requesting the attendant physician to alter the report, when it appeared to them that the amendment was more considerable than it was put down in the report; but I never knew the smallest hint offered, that the state of the patient was more favourably represented by the physician than it seemed to merit, on the examination before the committee. In short, it has been the invariable rule to err, if at all, rather on the side of caution, than on the contrary extreme, and to represent such patients only to have received benefit in any degree, whose cases exhibited obvious and undeniable marks of amendment, not such as are merely probable, or anywise equivocal.

It appears from the foregoing report of the state of the patients, that out of 556 persons admitted into the Bath hospital for  
hip-

hip-cases from May 1, 1785, to April 7, 1801, 103, or about 1 in 5.398 received a complete cure; that 168, or 1 in 3.3095 received great benefit, and were nearly recovered; that 111, or nearly one-fifth of the whole received some benefit, and that the aggregate of these three numbers, amounting in the whole to 382, or as 1 in 1.4555, or more than two-thirds, received advantage from a trial of the remedy. Of the above numbers four only died in the hospital of the disease, a very inconsiderable proportion, 33 or nearly a 17th part of the whole, were no better, 122 were deemed improper cases for a trial of the waters, and 13 were discharged for irregularity.

By those set down under the title *improper* are meant, in general, such whose cases were, on their first examination, or soon after it, thought to be improper subjects for a trial of the waters, as being in too advanced a stage of the disease, or from other circumstances of their health that forbad the use of the remedy; much the greatest part of whom ought not to have been sent hither at all. In 97 of these, out of 122, matter was discovered to be formed, or forming, very soon after their arrival,

arrival, which of course rendered a trial of the waters inadmissible. These therefore should be struck out of the account, as proving nothing respecting the efficacy or inefficacy of the waters. The same, it is obvious, may be said of the 13, who were discharged for irregularity, and indeed of those who died, as four of these were, when sent, not in a condition to be removed with safety and propriety, and two died of the small-pox.—This takes off 141 from the list, and reduces the whole number that should be considered on this occasion, to 415. The proportions then will stand thus.

Cured 1—in 4.1553 nearly.

Much }  
Better } 1—in 2.54, or nearly two-fifths.

Better 1—in 3.74.

Proportion of those who received benefit to the whole number as—9.2048.—to 10. or above nine-tenths of the whole.

It is unnecessary to observe how much the foregoing calculations, which are taken from the register of the hospital, a most accurate and authentic medical record, are in favour of the efficacy of the Bath waters in hip-cases, and it should *be noticed*, that they plead

c

strongly



strongly for a trial of them in the early stages of the disease. It is more than probable that a large proportion of the unsuccessful cases, amounting in the whole to 159, including those who were *no better—improper*—and those who *died* of the disease, would have received relief, had a timely application been made to this remedy.

Very few of those specified as improper were suffered to make any trial of the waters, and in 97 of them, as I have before observed, matter was discovered at their arrival, or soon after, and the hectic symptoms precluded all hopes from the use of the bath, and indeed left little from the trial of any other means.

It appears that the Bath waters, applied in an early stage of the disease, have been nearly equally successful at very different ages. Their good effects have been manifested as early as five years old, and as late as 70 years, and the proportion of those who received relief at 60 years old and upwards, was as large as in the early periods of life.

The average stay in the hospital, of the first thirty of the persons *cured*, is 105 days, of the same number of those who were discharged

charged *much better* 155 days, and of the same number of those who were discharged *better* 138 days nearly. The average of the stay of those who were benefited is nearly ~~133 days~~, or 19 weeks.

It appears that ~~the Bath~~ waters are more successful in hip-cases at a ~~warm time~~ of the year than at a cold one, as is indeed the ~~case~~ with this remedy, when applied to other disorders.

Of 88 persons taken in order, who received benefit, and who were admitted in the months of April, May, June, and July, 25 were *cured*, 39 were *much better*, and 24 *better*.

Of 105 persons received in October, November, December, and January, 25 were *cured*, 41 were *much better*, and 38 *better*.

It is obvious that a larger proportion of those who were admitted in the spring and summer, and who had a prospect of a series of warm weather, received a greater degree of benefit than those who were admitted in the autumn and winter.

I have thus finished my remarks on the tables, and trust I have established the efficacy

of the Bath waters in this obstinate, painful, and dangerous disease.

They are undoubtedly very effectual, but much time is usually necessary to complete a cure; and indeed, it needs be no cause of surprise, that a disease should take up as many months in its cure, as in some instances it has lasted years before the remedy was applied. In very recent cases I have seen a few weeks complete a cure.

I shall next add a few remarks on the history of the disease, as described by former writers, and the indications of cure, which they recommend or suggest.

The disease of the hip-joint was not unnoticed by Hippocrates. In his treatise on \* internal disorders, there are several † chapters on this subject under the name of *ισχιας*.—He says, that it sometimes happens from long exposure ‡ to the sun's heat, no improbable cause in a hot climate. It is described as accompanied with a difficulty of turning, or even of

\* *περὶ τῶν ἐντὸς πάθων.*

† Cap. LIV. LV. LVI. LVII. LVIII.

‡ *ἢν ἔλθῃ ἐν ἡλίῳ πολὺν χρόνον.* Hipp. ut supra. Cap. LIV.

of \* moving the hip-joint, on account of the pain and stiffness. The former of these is described to be in the † back and loins, those parts especially, which are connected with the hips, and also in the knees. Sometimes the pain is in the † groin, as well as in the hip, and when that is the case, it is aggravated by raising the body from an inclined to an erect posture, or on moving sideways. The pain he describes as acute, and accompanied with a sensation of heat. In some instances it is attended with convulsion || of the part, with rigor, and other symptoms of fever. He observes, that many become § lame from this disease, and that an anchylosis of the joint is a com-

\* ὁ γὰρ νοσίων σφόδρα ἢ κινεῖν τὰ ἄρθρα οὐ δύναται ὑπὸ τῆς ἐν αὐτοῖσιν φλεγμονῆς, καὶ τοῦ ξυμπεπηγέναι τοὺς δακτύλους. Hipp. ut supra.

† ἀλγείει δὲ μάλιστα τὴν ὀσφύν, καὶ τοὺς σπονδύλους τοὺς ἐκ πλαγίων τῶν ἰσχίων, καὶ τὰ γόνατα.

‡ ἴσασται δὲ ἢ ὀδύνη ἐν τοῖσι βουβῶσι πλείονος χρόνον, ἅμα καὶ τοῖσιν ἰσχίοισιν, ὀξεῖα καὶ κλυματώδης, κῆν τις αὐτὸν ἀνίσθῃ, ἢ μετακινῆθῃ ὑπὸ τῆς ἀλγηδόνος οἰμώζει, ὁκόσον ἂν μέγιστον δύνηται.

|| ἴσασται δὲ καὶ σπασμὸς ἐπιγίνεται, καὶ βίγος καὶ πυρετός. Cap. LIV.

§ ἐκ ταύτης οὖν τῆς νόσου πολλοὶ χαλοὶ ἐγίνοντο. Cap. LIV.

a common \* consequence. He adds, that it is a complaint of † long duration, and difficult to cure. The above account of the disease, though incomplete, is, as far as it goes, perfectly correct and agreeable to modern observation. The spasm or convulsion of the part, though little noticed in modern accounts, is, when combined with fever, as it is here described, not an uncommon symptom, and usually indicative of suppuration.

The method of cure, which he proposes, is more exceptionable on account of the articles which made a part of the *Materia Medica* then in use, than it is on account of the indications which he directs to be pursued. He recommends a vegetable ‡ and milk diet, the repeated application || of fomentations, the use of purgatives, especially of purging clysters, the application of cupping-vessels to the  
part

\* Ἦν δὲ ξυμφυῆ καὶ τὰ ἀεθρα ξυμπαγῆ πᾶσα ἀιόγκη χωλὸν γενέσθαι τὸς ἀνδρωπον. Cap. LVIII.

† Ἡ δὲ νοῶσος χαλεπὴ λήν ἐστὶ καὶ χρονίη. Cap. LVIII.

‡ Σίτω δὲ καὶ μάζη χειέσθω μαλδάκη ἀτρίπτω. Cap. LIV.  
καὶ γαλακτοποσίην. Cap. LIV.

|| Πυρῆσαι καὶ σικύνη προσβάλλειν, καὶ φλεβοτεμείειν τὰς ἐν τῆσι ἐγνήσι φλίβας. Cap. LVII.

\* Ἐν τούτῳ κλύζειν. Cap. LIV.

part affected, and the drawing blood from the veins in the hams. To this he adds a recommendation to move the \* joint frequently, to prevent an anchylosis. In some cases he advises suppuratory discharge to be made from the pained part by † means of several deep sores or ulcers to be produced, either by burning the part with fungous substances, suffered to consume slowly on it, or by means of a hot iron, or actual cautery. The plan of cure here laid down, is in a great measure agreeable to modern practice. Low diet, local bleedings, purgatives, clysters and fomentations, are our principal resources at present, as much as they were 2,500 years ago. Issues, indeed, and suppuratory discharges, where thought necessary, are made in a manner less painful and terrifying; but the purpose aimed at is pursued by discharges of the same kind.

Hippocrates, in the third section of the fifth Book of the Epidemics, relates a case where

\* Ἦν δὲ μὴ δύνηται ἴστασθαι, ἐν τῇ κλίτῃ χερὶ περιφέρειν ὡς πυκνότερα· ---ὅπως αὖ ἐν τὸς μὴ ξυμφυῖ ὁ χόνδρος. Cap. LVII.

† Καῦσαι αὐτὸν τὰ μὲν ὀστέα μύκησι, τὰ δὲ σαρκοῦσα σιδηροῖσι, πολλάς ἰσχάρας καὶ βαθείας. Cap. LVI.

where the pain was situated in the groin, and also in the hip-joint, in both of which a suppuration was formed.

Purgatives and bleeding were tried, but in vain, and the patient died at last, of the weakness occasioned by the excess of the purulent discharge. This case appears to me to have been rather a psoadic abscess than a hip-case.

In the succeeding case, which is more decidedly of the ischiadic kind, Hippocrates appears to have been more successful.

He, however, remarks, that in this instance the pain that extended down the leg was not violent, and no suppuration was formed, nor was the general health of the patient \* affected. Purgatives, bleedings, and cupping, were the remedies employed, which proved effectual towards a cure.

In the sixth section of the Aphorisms of Hippocrates, there are two that refer to this disease, which, I think, have been mistaken by the translators, who have expressed themselves as if there was an entire dislocation of the head of the bone, when the  
word

\* Καὶ οὐκ ἐγένετο ἔμπυος, ὑγιῆς δὲ πολλῶν χρόνων. Epid. V. §. 3.

word \* implies no more than a projection, which is, indeed, a partial dislocation. The meaning of Hippocrates is, I think, clear enough, that if the head of the thigh-bone be at first considerably protruded, or, as he expresses it, “stands out,” and again sinks back (suddenly is I think implied) into the socket or acetabulum, it indicates a suppuration to have taken place; and this I take to be true, provided, as we may reasonably suppose, that Hippocrates meant, that there be no general amendment, or abatement of the symptoms. The membranes which were at first thickened by inflammation, and which thrust the head of the bone outwards being melted down by suppuration, allow it to fall back again into the socket, from whence it had been pushed by the thickening of the periosteum, or of the lining of the cotyloid cavity. The succeeding aphorism implies no more, than that hip-cases of long continuance, accompanied with a projection of the head of the bone, are apt to induce lameness and wasting of the limb, unless a cautery be used.

Celsus

\* *Ἐξίσταται*—exstat—stands out or projects—literally translated.



Celsus \* appears to have been acquainted with the disease, but has left little concerning it.

He observes, that it is of the chronical kind, very painful and weakening, and in some instances mortal. He recommends first fomentations, then warm cataplasms, and afterwards the application of cupping vessels, and of a † plaster of hot brine, a remedy yet in use in some parts of our own country, for local pains. If these fail, he directs the use of the actual cautery, and that the ulcers it produces should be kept open a long time.

Cælius Aurelianus is more diffuse, both respecting the nature and description of the disease, and the means of cure.

He specifies ‡ cold as the principal cause, especially as produced by || lying on the ground, or digging in § moist earth, by such as are unaccustomed to work in that manner.

\* L. IV. c. 22.

† Sale calido et humido utendum est. Cels. ut supr. cit.

‡ Perfrictio profunda—frigoris susceptio.

|| Terrena cubatio.

§ Insueta humi fossio.

ner. To these he adds, accidents by falls or \* blows, violent strains from exercise, or exertions to lift † weights beyond the strength. He remarks, that it occurs at every time of life, but more commonly in middle age ‡, that it sometimes affects both sides, and calls it, when it appears in that form ||, *Ischias duplex*. He describes the symptoms to be, a sense of weight in § the part, and difficulty of motion, and in some a slight torpor ¶ and prickling sensation, attended by a sense \*\* of heat, fever, and restlessness, accompanied by a pain striking through the middle of the †† nates, and from thence upwards towards

\* Aut casus, vel repentinus percussus.

† Ponderis levandi ex interioribus conatio.

‡ Fit præterea in omnibus ætatibus, sed frequentius in mediis.

|| There is a man at present in the Bath hospital, who is affected in this manner by working up to his middle in water, a cause which it is evident must operate on both sides alike.

§ Gravedine et difficili motu. Cœl. Aurel. morb. chron. Lib. V. Cap. I.

¶ Levi torpore et fornicatione.

\*\* Quibusdam cum vehementi atque pungenti, et fervido dolore.

†† Usque ad mediam natem, ac superius ad inguen, vel ad ancalen perveniens, atque suram, dehinc etiam talum, et pedis summitatem.

towards the groin, and descending from thence through the calf of the leg, to the ankle and the foot. This is succeeded by a \* wasting of the leg and thigh from the nates downwards, attended with weakness, and sometimes with † a shortening, and at others with a lengthening of the whole limb. He describes the persons so affected as unable to begin ‡ to move without pain and difficulty, but these somewhat abate on continuing the motion. They are, however, often obliged to stop || suddenly in walking, and when they attempt to renew the motion, they find the same difficulty as at first. They are unable to set the § foot firm and flat on  
on

\* *Cruris totius tenuitas fit, quam Græci atrophian vocant, incipiens a clunibus.*

† *Brevitate cruris, aut ultra naturam longitudine passionis distensione suffecta.*

‡ *Initia motus impediuntur, fervore partium attestante: ac si perseverans fervor fuerit, motus facilius fit.*

|| *Tum rursus subsidunt, vel intenti resistunt repente, tanquam fuerant necdum grassu tentato.*

§ *Ambulant quidam, capitibus digitorum gradientes, alii extenti quidem, sed sinuatis clunibus, ut neque se pronos inclinare valeant: alii contracti atque conducti, qui pejus omnibus habere noscuntur.*

on the ground, but are obliged to walk on tip-toe, sometimes with the legs extended, but with the nates pressed inwards, so that they are unable to bend forward. Others have their legs drawn close together, which is esteemed among the worst symptoms.

He supposes the seat of the disease (and as I think rightly) to be in the \* peri osteum, or rather the cartilage, covering the head of the thigh-bone; which, when the disease becomes aggravated †, generates matter and sanies, and forms abscesses. The above account is all that is material which I have been able to collect from this writer, and argues him to have been well acquainted with the nature and symptoms of this disease; and the indications of cure, which he lays down, appear to me to be sufficiently judicious, and indeed agreeable to modern practice.

He

\* Patitur autem principaliter membrana, quæ ossa circumtegit, quam Græci periosteum vocant.

† Denique augmento passionis, intercreatus humor, et frequenti dolore corruptus, in sanie transiens partes aliquas collectionibus afficit.

N. B. All the passages quoted from this author are from L. V. C. I.

He directs the patient to be laid on a \* soft bed, in a warm place, and to use abstinence and rest. The part affected is ordered to be covered with soft wool moistened with warm sweet oil. He also recommends a vapour bath, and a fomentation of the oily kind. Bleeding †, a spare diet, and clysters, are also recommended, and the latter, not merely as evacuants, but as acting in the capacity of an internal fomentation; gentle ‡ laxatives are prescribed, but strong purgatives forbidden. If the pain resists these remedies, he advises scarifications (probably with a view to cupping) of the parts ||, and leeches, together with a fomentation of sponges soaked in

\* *Iacere faciamus ægrotantem mollioribus stramentis, calido in loco, adhibita abstinencia, et requie usque ad primam diatriton. Tunc lanis mollibus, ac limpidis oleo calido dulci prætinctis dolentia loca contegenda. Adhibenda etiam fomentatio jugis ex oleo dulci calido: item vaporationum commutatio.*

† *Phlebotomia tempore consueto.*

‡ *Adhibenda injectio—quo pariter fota atque vaporata interiora laxamento consentiant.*

*Tentanda denique ac properanda sequentibus diebus facilitas ventris.*

|| *Adhibenda scarificatio. Hirudines etiam adhibendæ.*

in\* warm water ; probably to encourage the bleeding

The actual cautery † is also recommended to be applied in such a manner, as to raise a superficial inflammation, but not to destroy the substance of the part to which it is applied. The fungous excrescences ‡ of trees are recommended for the same purpose to be placed on the part affected, and slowly consumed thereon. A cataplasm of mustard directed to raise a blister, or one of mustard, quick-lime and sulphur, made up with oil and water, || and in effect probably not very unlike

\* Tunc vaporatio spongiarum ex aqua calida.

† Tunc cauteris longi atque igniti immittendi, qui quidem cutem tangere minime debent.

‡ Alii ligneos fungos inferius ac superius angustos formantes, patientibus apponunt locis, quos summitate accensos sinunt concremari, donec cinerescant et sponte decidunt.

|| Sinapi admiscentes glebæ calcis æquis ponderibus et sulphuris partem, atque simul conterentes, parvo oleo et aqua admista.

A bag of hot salt is advised much in the same way as directed by Celsus, as above cited. Oportet sacellum linteum implere sale torrido, et apponere patientibus partibus.

like to the lime-poultice above described, but as it should seem more acrimonious.

Such is the basis of the practice recommended by this writer, which is selected from a farrago of strange frivolous additions, expressed in a dialect uncouth, and difficult to be comprehended, but still not so obscure as to prevent our discovering that the author was well acquainted with the appearance of the disease—with its nature—and with the objects proper to be pursued, in order towards its cure.

To come to modern times : it is somewhat extraordinary, that Boerhaave and his commentator Van Swieten, who paid so much respect to the ancient writers, and so frequently cite them, should have neglected the information they communicate, and have confounded this disease with rheumatism and sciatica, with which it has little or no connection, and from which it is clearly distinguished by the writers of antiquity. Van Swieten appears to have borrowed most of his information on this subject from Cotunnus, who probably had often seen the complaint, but neither Boerhaave nor Van Swieten give any description of it, nor suggest any remedies

dies or indications of cure worth repeating in this place. M. De Haen has left a Treatise of 38 pages de Morbo Coxario ; but I can discover little in it that can assist us either in distinguishing, or in curing the disease. I even doubt if he was properly acquainted with it, as distinct from rheumatism and sciatica, and the effects of external violence. He never mentions cold among the causes, although the most common of any. He, however, remarks the partial dislocation,\* occasioned by the enlargement of the synovial gland at the bottom of the acetabulum, by which the head of the thigh bone was thrust upwards, and the limb shortened.

His method of cure is founded on a blind veneration for the writings of Hippocrates, whose opinions, though curious and far surpassing what might have been expected at such an early age, and under other disadvantages

\* Tumida admodum glandula in cavo acetabuli ut caput ossis femoris intra illud excipi non posset.—Unde demum caput ossis femoris ex cotula trudi cœptum, crus sensim brevius redditum, et integra sed extensa adhuc capsula idem caput ossis ad superiorem cavi acetabulo marginem applicatum. *De Haen de Morb. Coxar.*



tages, it were absurd to introduce to supersede modern experience and observation, which has added much to the history of the disease itself, and suggested means of relief more effectual, as well as more easy to the feelings of the patient, than the coarse and painful applications recommended by the older writers.

Mr. Sauvages seems to have had only a gross and indistinct idea respecting this complaint.

The species called the *Ischias ex Abcessu*, and the *Ischias rhéumatica*, come the nearest to the one here under consideration; but the former is little more than an advanced stage of the disease, and the latter is erroneously connected with rheumatism, and both of them are so imperfectly described, as to make it doubtful if the author had any personal experience respecting it.

Dr. Cullen has not included *Ischias* among his genera, or species morborum, but confounded it with rheumatism, with which it has no connection.

Dr. Francis Home, professor of *Materia Medica* in the University of Edinburgh, has noticed this disease in his chemical experiments

ments and histories, and has produced seven cases to prove the efficacy of the oleum terebinthinæ. I have no experience of the remedy, but am confident most of the cases sent to the Bath hospital would not admit of the trial of such a medicine without danger. It seems very doubtful to me if any of those he describes were properly ischiadic cases, except the two first, and even those are not decidedly so.—According to his experience men are more subject to it than women, and this nearly in the proportion of five to two. This coincides nearly with my own observation. Of 556 patients, 413 were men, and 143 women, which is nearly as 5 to 1.7312.

His next conclusion is altogether confuted by the foregoing table.

He says, “ that it is a disease of advanced age, and that he does not recollect ever seeing one in this disease in the vigour of life.” Unfortunately for this observation it happens, that of 556 patients, 375, or more than two thirds, were from 10 years old to 40, an interval that certainly includes the prime and vigour of life. The Doctor’s experience in this complaint was too limited to

warrant his conclusion. The late Dr. Charlton, who was himself many years physician to the Bath hospital, and had frequent opportunities of seeing this complaint, has given (collaterally) a brief, but, as far as it goes, a very accurate, account of it, which is indeed the first I have seen which bears the marks of extensive personal experience.

The method of using the waters, which he recommends, is nearly the same with the one above-mentioned. \*

It

\* Dr. Charlton says, that "Dr. Oliver justly remarks, that when the case is recent, and the patient young, our waters frequently effect a cure. To which he adds, that when the disease has been of long standing, they seldom do much service; and, if the parts are much inflamed, but particularly if matter is formed, the use of them is highly injurious. Recent cases in all diseases admit most easily of relief, but in the present, we need not despair from the long continuance of the disease, provided it has not advanced to the state of suppuration, and hectic fever. A man now in the hospital is in a fair way of being relieved, though his complaint is of four years standing; and indeed most of them are from twelve months to two years duration.—It is not the long continuance only of the disease, but the advanced stage of it, that renders the trial of the waters improper.

It appears from his account, that the number of hip-cases sent to the Bath hospital, in twelve years, namely, from May 1, 1761, to May 1, 1773, amounted to 296, of whom 192 were cured or benefited, two received no benefit, two died, one was discharged for irregularity, and ninety-nine were improper. The proportion of the persons benefited to the whole number admitted, is greater in the Table I have exhibited above, than in Dr. Charleton's account.

Either of them, however, sufficiently prove the efficacy of the Bath water in relieving such cases.

Mr. Edward Ford, surgeon to the Westminster general dispensary, published, A. D. 1794, a work, intitled, "Observations on the Disease of the Hip-joint, &c."

This gentleman has given a good description of the disease, and has added several useful plates, particularly the first, which shews the state of the muscles covering the nates, and those immediately below them, which afford some of the earliest and most decisive signs of the presence of the disease.

His

His indications of cure appear to me to be proper and judicious ; I am, however, inclined to think that he places too much dependence on the benefit to be derived from issues, and too little on the effects of the warm bath.

Had he considered Dr. Charleton's report of the proportion of those benefited by the warm bath, he would probably have ranked it higher in his estimation. I have thus finished what I mean to say on this subject. I have endeavoured to be as concise as possible, consistent with a sufficient explanation of my meaning. I have candidly stated the facts that have fallen under my observation, having no temptation to make an empirical display of the advantages of the remedy, but merely wish to lay before the public, from evidence not to be questioned, such an account of its effects, as may assist those who are intrusted with the care of persons so affected, to form their own judgment on the probability of success in each individual case.

I cannot, however, conclude without earnestly recommending to those to whom the  
testi-

testimonies above recited appear satisfactory, to make a trial of this remedy, in as early a stage of the disease as possible ; since, if it be delayed to a late period, it will serve only to aggravate misery, and hasten dissolution.

THE END.



AN  
ACCOUNT  
OF THE  
USE, APPLICATION,  
AND  
SUCCESS  
OF THE  
**Bath Waters,**  
IN  
RHEUMATIC CASES.

---

---

By WILLIAM FALCONER, M.D. F.R.S.  
PHYSICIAN TO THE BATH HOSPITAL.

---

---

BATH:  
PRINTED FOR W. MEYLER;  
AND SOLD BY  
E. G. AND J. ROBINSON, PATER-NOSTER-ROW, LONDON.

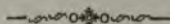
---

M.DCC.XCV.





## P R E F A C E.



THE advantages arising from the use of the Bath Waters in rheumatic cases, have scarcely, I apprehend, been noticed as they deserve. This remedy has indeed of late years been generally understood to be applicable to these complaints; but the particular circumstances that lead to, or dissuade from its use, have not, as far as I know, been specifically pointed out.

To determine in what cases, situations, or stages of this disorder, the use of the Waters may be advisable, what seasons of the year are most favourable to their good effects, at what periods of life the greatest relief may be expected, and what continuation of the use of the remedy may be deemed a sufficient trial, is undoubtedly a matter of no small consequence; as it may suggest, on the one hand, the means of relief in a painful malady,  
and

and on the other, save to those, whose cases may not be suited to the use of the Waters, the trouble and expence, both of which are often important considerations, of undertaking so long a journey.

Such are the motives which induce the Author to publish the ensuing accounts, which he trusts will prove satisfactory, as far as regards the propriety of the attempt. How far he has succeeded in accomplishing what he proposes, he submits to the judgment of the public.

It is proper to apprise the reader, that little more than a plain statement of facts is here meant to be exhibited, together with the addition of such (as he deems) probable analogies as have occurred to him, and which he thinks may conduce to extend the use of the Bath Waters, on reasonable grounds of expectation of success, to other cases which may not precisely tally with those which he has had an opportunity of seeing.

The general account of the disorder which is the subject of this work, is taken in a great measure from personal observation. It  
may,

may, probably, on that account, be defective; but the reader may be assured, that no fact is related on the authority of the writer, to which he himself has not been an eye-witness. The memorandums of the cases sent to the Hospital, which had fallen under his care, together with the additional observations made at the time of the patients being first visited by the Physician, which are all carefully preserved, have furnished the greatest part of the materials from which the present account is compiled, and the author has the satisfaction of being able to declare, that no testimonials can be more authentic or impartial.

The Tables which follow the general account of the disorders, are taken from the Hospital Register, and extend from May 1st, 1785, to November 19, 1793, or the space of eight years and two hundred and three days, and comprise the general result of the whole Hospital practice, respecting the disease here treated of, during that period.

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE

THE HISTORY OF THE


THE HISTORY OF THE

THE HISTORY OF THE

---

---

ON THE USE OF THE  
BATH WATERS  
IN THE  
RHEUMATISM.



DESCRIPTION OF THE DISEASE.

**B**EFORE I treat of the use of the remedy, it will be proper to give some account of the nature and symptoms of the complaint.

The rheumatism is well known to be a painful affection of the muscles, and principally of those parts of them which are in the neighbourhood of the joints. The larger muscles, as those of the thighs, legs, and back, are most subject to be affected ; but those of the arms, shoulders, and hands, often suffer, and indeed every muscular part of the body has, in its turn, been liable to this disorder.

The muscles of the neck, perhaps from their being usually more exposed, are more commonly  
B affected



affected in women than in men, and those of the face are, in young subjects, very liable, in either sex indiscriminately.

This disorder has been generally divided by authors into two kinds or species, the ACUTE and the CHRONICAL, but I think without sufficient grounds for such a distinction, as the disorder is varied only by circumstances respecting the subject it attacks, not by any thing inherent in the nature of the complaint itself.

The acute and chronic rheumatism differ indeed in some of their symptoms, and in the mode of treatment proper for their cure; but these differences are not greater than what take place between the early and the advanced stages of other inflammatory disorders.

I have here spoken of the rheumatism as a muscular pain, whereas most writers describe it as principally affecting the joints; but the truth I apprehend to be, that it is really a muscular affection only, at least at its commencement, but that the pain is mostly felt about the joints, as the muscles are in general inserted there, and the pain is always observed to be most acute where they rise or terminate. This circumstance has occasioned the rheumatism to be termed a disease of the articulations.

It is allowed on all hands, that the pains shoot along the course of the muscles, from one joint to another, and are liable to be aggravated by the action of the muscles belonging to the joints affected.

The pain in the rheumatism is sometimes dull and obtuse, though very fatiguing and troublesome; and at others, especially where the disorder has been aggravated by the admission of fresh cold, during the painful paroxysm, acute and lancinating, inasmuch as sometimes to produce spasmodic efforts, and contractions resembling the cramp, especially in the lower extremities.

External marks of inflammation, particularly swelling, are generally, but not always found at, or near the seat of the pain, but the swelling is more diffused than in the gout, nor does it assume that deep scarlet, or rather crimson appearance, which generally characterises gouty tumours.

The parts so affected are mostly sore and tender to the touch; but are not, I think, endued with that exquisite sensibility which attends the gout. I have not observed that rheumatic patients were at any time unable to endure the contact of the bed-cloaths, or any other light covering, which is often the case in the inflammatory stage of the gout.

It may also be remarked, that in gouty complaints, the pain generally, if not always, abates



when the part affected begins to swell; but this does not take place in the rheumatism, either so constantly, or to so great a degree; since I have often observed the pain to continue as violent after the part had been swelled, as it had been during any stage of the disorder. Some abatement of the pain is, however, usual in both complaints, on the parts swelling.

At its first attack, and often at several of those succeeding, it is accompanied with considerable signs of fever and inflammation. The heat of the body is much above the natural degree, and the pulse strong and quick, often to 120 strokes, or more, in a minute, with the tongue commonly white, and sometimes, though not generally, rather dry; but the head-ach, depravation or weakness of the mental faculties, prostration of strength, want of sleep, unless from pain, and failure of appetite, do not, as Dr. Heberden \* very justly observes, take place in nearly the same proportion as they do in most idiopathic fevers.

The cold stage in rheumatic fevers, I have observed to be rather indistinctly marked, and to be short, and seemingly disproportionate, to the hot stage that succeeds. Some writers † on the rheumatism speak of the fever as preceding the pain, but in

\* Medical Transact. Vol. I. on the Pulse.

† Sydenham, Cap. V. Processus integri de Rheumatismo. Clerk de Rheumatismo Thesaur. Medic. Tom. I.

those cases which I have had an opportunity of observing at the Hospital, the pain seemed rather to precede the feverish symptoms. Perhaps at the first attack, which we seldom have an opportunity of seeing at the Hospital, this may be the case; and I think I have remarked it in private practice: but as Physicians are seldom applied to in the beginning of this complaint, which is generally thought not to be dangerous, and as enquiries of this kind are very liable to be misunderstood, I cannot speak with certainty on the subject.

The blood drawn in rheumatic cases attended with fever, is said to be usually covered with a white, firm, and tenacious crust, such as appears commonly on the blood of pleuritic patients. This exactly accords with my own observation.

The circumstance mentioned by Dr. Clerke, from Payan-Dumoulin, of the inflammatory crust in rheumatic fevers being thicker, but not so hard as in pleurifies, has never occurred to my notice, and I suspect has been accidental, and owing to something that took place in the manner of conducting the operation.

The heat of the body, though usually pretty great at times, is rarely constant or uniform. Sweats frequently break out, which are, however, mostly partial, and often confined to the neck and breast; and seldom produce much alleviation of the

pain and distrefs. When, however, the pained parts perfpire, which they feldom do until the fweats become univerfal, the pain abates, and the paroxyfm of the diforder ufually draws towards a termination.

Some authors represent the partial fweats in rheumatic fevers, as of a clammy or glutinous confiftence. There may poffibly be fome foundation for this, though it has not fallen under my obfervation, as the pain and confequent fatigue are often fo great as to produce faintnefs, which is often attended with a colliquative perfpiration, which is well known to confift of the oily and mucous particles, whereas healthy perfpiration is thin, and confifts of little more than watery fluid.

It is not uncommon for the urine to continue of a natural colour and quantity during the courfe of the paroxyfm. This is, however, variable, as I have fometimes feen it very pale, and at others high coloured. Towards the decline, provided the perfpiration be moderate, the quantity of urine is generally increafed, and a fediment, moftly of a yellowifh caft, is depofited. If the perfpiration be profufe, the urine is apt to be high coloured and turbid, often refembling, when fresh made, muddy table beer, and on ftanding, depofiting a heavy and often a dark coloured fediment.

The continuance of the inflammatory stage of the rheumatism is very uncertain, being in a great measure symptomatic, and depending on a local affection. I have seen it last from three or four days, to seven weeks, and to depart at last without any specific or particular crisis, but merely in the way of gradual amendment ; and, I believe, instances are not uncommon of rheumatic fevers of a still longer duration. This fever is said to terminate sometimes fatally ; but such an instance has never occurred to my observation, either in private practice, or at the Hospital. In the former, however, I have seen cases that occasioned, by their long continuance, no small concern for the event.

Rheumatic pains are frequently described as being liable to be translated from one part of the body to another, somewhat in the same way with the gout. But the translation is, I believe, far from being so compleat, as takes place in the gout, nor does it happen on so slight occasions. When a part remote from the one first affected is attacked with rheumatism, it does not of course follow that the complaint should leave the one first seized, it being agreeable to the nature of the rheumatism to occupy several parts of the body at the same time, which is seldom the case with the gout. The presence of the rheumatism, in any part of the body, increases indeed the irritability of the whole, and renders it liable to have the complaint excited, in various parts of it, by occasional causes, which, probably,

at other times, would not have produced such an effect. It is likewise true, that these accumulated attacks are often highly painful and distressing, and often directed to parts of the body which are not the usual seat of the complaint, as the throat, head, and abdomen. In the first of these I have seen it very painful, but it did not obstruct the power of swallowing, and yielded soon to warmth and local applications.

Its appearance in the head is more alarming, as it will sometimes occupy the whole surface of the head, and produce exquisite pain; but I never knew it prove fatal, or even to excite delirium or vertigo. It is likewise attended with great pain, when it attacks the abdomen. It is not, however, accompanied with constipation of the bowels, sickness, vomiting, or other symptoms, that denote inflammation of the viscera; but, like the foregoing, generally soon yields to sweating and warm applications. Indeed, in all these cases the pain may, I think, by accurate examination, be discovered to be superficial, and seated in the external muscles.

Rheumatic attacks, if of long duration, and frequently repeated, diminish considerably the strength of the body in general, but particularly that of the parts affected. This is most observable, when either from inattention, or excess of pain, the limbs have remained long confined to the same posture. From the same causes the muscles of the limbs affected,

fects, particularly those that form the calves of the legs, are subject to waste very much. The joints also, especially those of the fingers and knees, are apt to enlarge. The tendons also become rigid and hard, and sometimes, when the inflammation has been communicated to the joint, the disease terminates in an ankylosis of the articulations. When this takes place, and generally sometime before, the pain abates, and for the most part soon ceases, though the enlargement of the joint continues, and the limb remains lame and stiff, and often nearly useless.

It frequently, however, happens, that an induration of the tendons belonging to the muscles that move the joint, is mistaken for an ankylosis ; nor is it very easy for one who has not had an opportunity of observing the disorder in its progress, to distinguish them. The sphere of motion of the limb (if such an expression may be allowable) becomes gradually more and more confined, until it becomes immovable, although the joint itself be not injured. It happens not infrequently, in such cases, that immersion in a warm bath will restore the power of relaxation and contraction, and impart a free motion to the joint. This, however, subsists no longer than the part affected continues immersed, as, upon its being taken out, it becomes as rigid as before.

In rheumatic cases, wherein the attacks have been violent and frequent, I have frequently seen the



the extremities reduced into a state nearly resembling that of a palsy, being nearly deprived of strength, pale, emaciated, and cold, even to a degree that seldom takes place in paralytic affections.

The sense of feeling I have not observed to be extinguished, though indeed it is sometimes diminished; nor is there the same depravation of that sense which is so common in palsies, that of experiencing a prickly sensation on the surface of the skin, when pressed by the finger. Nor have I observed that confusion of sensations from the contact of bodies of opposite temperatures, as that cold bodies should be mistaken for hot, which I have several times seen take place in the palsy. The recovery of strength, flesh, and warmth, was also (except in some few unhappy cases, which I have seen so reduced by extreme hardships, as to be near the termination of life) much quicker than in cases of the true paralytic kind.

Rheumatic limbs, in consequence of repeated attacks, and long confinement with little change of posture, are sometimes liable to œdematous swellings in various parts; but I do not think, from experience, that the original complaint has any direct tendency to produce them, nor, that they occur in rheumatic cases so commonly as they do in the gout.

Rheumatic

Rheumatic limbs are, however, subject to swellings of a different kind, which are apt to continue after the symptoms of inflammation have subsided. These swellings are usually in the neighbourhood of the joint, but sometimes appear towards the middle of the limb, and in the course of the muscles, and are often puffy, and yielding to the touch, and when pressed by the finger, give a crackling sensation, somewhat resembling what is felt on pressing an emphysematous swelling, save that it is not perceivable by the ear, and totally distinct from œdematous tumours, in not retaining the impression of the finger.

This swelling is supposed, and probably with reason, to be caused by “the effusion of a transparent gelatinous fluid, into the sheaths of the tendons,” as is observed by Dr. Cullen,\* and has been remarked by Storck,† Morgagni,‡ and others.§

As rheumatic paroxysms seldom prove in their immediate effects mortal, and as this effused fluid seldom requires to be discharged by external openings, but is either soon re-absorbed, or changed in its nature and appearance, few opportunities have occurred for ocular demonstration, though little doubt can be entertained concerning the fact, it being

\* *Præctice of Physic.* Chap. of the Rheumatism.

† *Annal. Medic.* II.

‡ *Epist. Anatom. Medic.* LVII. Art. 16, 17.

§ See Dr. Clerk's *Thesis, Thesaur. Medic.* Tom. I.



related on the best authority. It may afford grounds for a curious discussion, whether this effused fluid, which is thus lodged in the sheaths of the tendons, be not the efficient and immediate cause of that stiffness and ossification of the tendons which we so often see take place in this complaint. All the Physiologists agree that the bony parts are generated from a gelatinous\* fluid, which is first perfectly clear, † and, as the process of ossification goes on, becomes gradually opaque, ‡ elastic, § cartilaginous, || and at last bony. ¶ The same progress is observable in the formation of a callus \*\* in a fractured limb ;  
and

\* Initia omnium ossium gelatinosa sunt.—*Halleri Physilog.* Lib. XXIX. Sect. IV. § XXIII.

† Invenies os femoris & sic reliqua ex chrySTALLINO gelu facta.—*Ibidem.*

‡ Paulo post nondum apparente sanguine tamen in medio osse longo, aliqua particula opaca apparet.—*Ibidem.*

§ Quam primum aliqua adest opacitas, flexilitas ossis jam multum imminuta est, ut elatere aliquo resiliat, seque restituat, quando flexisti.—*Ibidem.*

|| Quando nunc ossa elastica sunt, tunc puto pro cartilagine haberi posse cui sunt simillima.—*Ibidem.*

¶ Ex glutine cartilago & ex ea os.—*Ibidem.*

\*\* Succus osseus effluit de osse in fracturis, ejusque progressus in singulis deligationibus apparet & os reparat. Ex fisso osse gluten exiisse constat, quod crustæ modo osse adnascatur, deque fracto osse ex omnibus fere punctis, mucilaginem quæ os consolidaret exsudasse legimus.—Lib. XXIX. Sect. IV. § XXV.—Roridæ guttæ, quasi cruoris, sunt calli initium, quæ sensim durefcit in marmoris speciem. Gluten videas ex diploe prodire quod vulnera cranii conferrumet, & ex cellulis osseis gelu emergere quod callum faciat, cum simili a tendinibus  
veniente

and what is more to our purpose in anchylofis,\* which, especially that of the knee-joint, and sometimes that of the wrist, we know to be no uncommon consequence of rheumatism. This fluid appears, in the cases just mentioned, to be effused from the secreting parts, when in an inflamed state, which is also the case in rheumatism, in which this fluid is probably poured forth from the surface † of the tendons, and detained within the sheaths that envelope them, and is liable, by its remaining there in a stagnant state, to contribute towards the ossification of the tendons, by its being absorbed into their substance.

Whilst the powers of nature remain unimpaired, there seems to be a provision in the system to absorb this fluid into the general mass, and probably to discharge, by the proper outlets, such parts as are redundant, or improper to remain. To effect this, however, motion and exercise of the limbs and parts affected, seems necessary, perhaps to prevent the stagnation or decomposition of the mucous liquid, and to preserve it in a fluid state.

But when by repeated attacks the parts are

*veniente gelatina. Succus ex tibiæ membranis exsudans, primo mucus, dein gluten, porro callus, demum os factus, jacturam complevit.—Ibidem.*

\* Anchylofes ex eodem succo fiunt qui coarticulata ossa conglutinet.—*Ibidem.*

† See note \*\*, p. 12.

weakened,

weakened, and their motion obstructed by pain and swelling, the power of absorption begins to fail, and in consequence, therefore, this fluid is left to remain in contact with the tendons, which take their rise from the periosteum,\* and are intimately united or connected with the bones, and have a disposition themselves to become bony, which is probably accelerated by the contact of this glutinous fluid, which contains, in its own substance, the materials as it were of ossification. But to return to the subject.

At the first attacks of this disorder, and particularly when it appears in young subjects, the pain is generally aggravated by warmth, and that of a bed particularly; but after repeated attacks, or if the disorder continues a long time, and especially if evacuations have been liberally employed, warmth becomes gradually more tolerable, and, in time, even agreeable, as it procures some abatement of the pain and uneasiness. About the same time the patient experiences some relief after taking victuals, which before seemed to increase his uneasiness. In a short time, animal food and fer-

\* Quando vero periosteum in homine incremente ad os vehementius adhærescit, non sine confusione ossæ substantiæ, & periosteï & tendinis, tunc quidem videntur fibræ tendinæ ex ossium soveolis cristisque prodire, non quod periosteum perforent, sed quod cellulosa periosteï natura, cum tendine, cumque osse, eodem loco inseparabili nexu nunc conserbuerit.—*Haller, Phys. Lib. XI. Sect. I. § XVII.*

mented liquors, which during the former stage excited disgust, become acceptable to the palate. Next the patient begins to find his pains easier, during the night, which was before the season of their aggravation.

Notwithstanding these flattering appearances, the pain still continues, though its exacerbations are less acute, and on the whole not so harrassing and fatiguing as before, as they afford some respite during the night.

The colour of the pained parts gradually declines from a dull red to a pale yellowish hue ; the swelling abates, though it seldom disappears altogether, and the temperature changes from a troublesome degree of heat, to an uncomfortable and damp coldness, attended with an apparent languor of the circulation, both of which are most observable in the lower extremities. When these symptoms, which are always accompanied with an abatement, though not constantly with the cessation of the fever, take place, the complaint is denominated the chronic rheumatism, which Dr. Cullen \* has, I think, with perfect propriety, stated to be a stage in the progress of the disorder, rather than as a different genus, or even species.

In young subjects, and where the attacks of the

\* Rheumatismi sequela est Arthrodynia, Rheumatismus chronicus auctorum.

disorder have either not been very violent, or frequently repeated, the above symptoms appear but in a small degree, and continue but a short time after the termination of the acute paroxysm ; but every return of the complaint marks their presence more strongly, and prolongs their duration ; until at last, especially if due attention be not paid to the patient's situation, the inflammatory stage seems to be absorbed into the chronic, and, like what sometimes takes place in the gout, a dull and heavy, but lasting pain succeeds, in place of one that is acute but temporary, until stiffness and ossification, often combined with great distortion of the joints affected, the fingers especially, put an end to the painful suffering, but leave the patient, and sometimes at an early age, in a state of incurable lameness and imbecility. This termination of the complaint, however unfortunate it may seem, is less distressful than some of its other consequences. It is observed, that "rheumatic swellings differ from the nature of others of the inflammatory kind,\* in not being liable to terminate in suppuration." This account of them must, however, be understood with considerable limitation. Rheumatic swellings in the head, the trunk of the body, and upper extremities, rarely, if ever, produce suppuration ; but rheumatic pains may, and not unfrequently do, after occupying various parts of the body, settle in the hip or knee joint, and there produce a most painful, deep-seated, and dangerous abscess. But of this

\* Cullen's Practice of Physic.



this I mean to speak more particularly in another work.

This complaint sometimes terminates unfortunately in another way. When violent attacks of the rheumatism come on at an early period of life, the irritability of the body seems sometimes to be increased to such a degree, that the slightest occasional cause will produce a renewal of the inflammatory paroxysm. Under these circumstances the patient is seldom free from the complaint, and the distress arising from this unremitting pain and torture are such, as to wear out the strength and spirits, and bring on an hectic disposition, which soon puts an end to life, already nearly exhausted by fatigue, distress, and anxiety. This happens the more frequently, as the circumstances of the patient are unable to afford the comforts of a warm dwelling, sufficient cloathing, nourishing diet, and an exemption from violent labour.



#### CAUSE OF RHEUMATISM.

COLD has been assigned, by all the writers who have treated of this complaint, as the PRINCIPAL cause. This, I think, might be extended farther, as I am satisfied it is the ONLY cause, though it is by no means improbable that the application of cold may excite rheumatism in some constitutions and states of the body more readily than in others. Cold however is a term of considerable latitude, and

it is proper to explain under what circumstances cold is most liable to produce this disorder.

The sudden application of cold to the body when in an heated state, has been assigned as the \* most usual and powerful cause of the rheumatism. But I have not found that the sudden application of cold to the body, however heated, provided the application of cold be transient only, is apt to produce this effect. Cold so applied is indeed by no means void of danger, but it seldom produces rheumatism. When it does not affect the health by any sudden or immediate effect, the leprosy, a disease that bears no similarity in symptoms to the rheumatism, is the usual consequence. No application of cold can be more immediate, than the drinking largely of cold liquids. This I have known to be the evident and acknowledged cause of the leprosy in literally more than an hundred instances; and indeed there are so few exceptions, that I am satisfied that this or some other sudden and transient application of cold is the only cause of † leprosy, and that in the few instances

\* Hac ut plurimum occasione nascitur, æger scilicet sive exercitio aliquo vehementiore, sive alio modo excalescens, mox repentinum frigus admittit.—*Sydenh. Cap. de Rheumatismo ad initium.*

Calescens corpori subito admissum frigus.—*Boerhaavii Aph.* 1491.

Nulla inter causas rheumatismi frequentior est, nulla validior.—*Van Swiet. Comm. in Aphorism. precedent. Vol. V. p. 647.*

† I never saw, except in two cases, rheumatism and leprosy conjoined; and I had reason to think that the two disorders were contracted at different times.

in which it could not be traced, the patients were either unwilling to acknowledge their rashness, or that the circumstance had escaped the memory, which might easily happen, as the disagreeable consequences of such imprudence do not manifest themselves until some time after.

But in looking over the accounts of more than 300 rheumatic cases, I find such a cause assigned in FOUR of them only, though the disorder was, in the other instances, almost always ascribed to cold under some other mode of application. Besides, out of the above four, two were affected after drinking largely of cyder, a liquor apt enough, from accidental impregnation, to produce pains resembling rheumatism,\* but which are in reality of a quite different kind. It is therefore, I think, highly probable that the real cause was overlooked in these instances.

Nor is it necessary to the production of the disorder, that the body should be in an heated state at the time when the cold is applied. It often indeed happens that this is the case, from the impatience of rash, unthinking people to get rid, as soon as

\* Sometimes it shoots into the scrotum, groins, thighs, and legs, or, mounting into the breasts, shoulders, or arms, resembles a violent fit of the rheumatism, always leaving so great a degree of soreness in the external muscles, that the weight of the bed-cloaths, or the slightest touch of the finger, is painful.—*Medic. Transf. Vol. II. p. 69.*—*Dr. Warren on the Colica Pictonum.*



possible, of the uneasiness arising from excess of heat ; and it is probable that the effect of cold so applied may be more likely to produce rheumatism, than it would, had it been applied to the body when moderately cool ; but it is nevertheless true, that cold, long continued, will produce rheumatism, when the body, to which it is applied, is in the most temperate state. Thus rheumatic pains are frequently caused by sleeping near an open window, and by other partial exposures to currents of air, which seem to be more injurious than a general exposure to cold.

The bad effects of cold appear to be aggravated by its being combined with moisture, probably from the constant evaporation rendering the impression of cold more permanent, by keeping it continually in a state of renewal.

Hence damp beds are with justice assigned as frequent causes of rheumatism ; and, what is nearly allied thereto, lying down, and often sleeping, on the moist ground, a piece of imprudence common enough, especially in time of harvest, and what often produces disorders of a more dangerous kind.

Those likewise who are obliged to labour in the open air, in rainy seasons, or in grounds overflowed with water, as frequently happens in agriculture ; those who work in mines of coal or of other minerals, washer-women, and others employed where  
moisture

moisture is concerned, are particularly liable to this disease.

A liberal or free diet \* has been introduced by some writers among the causes of rheumatism, but I think without reason.

Some years ago, it seems to have been usual with the writers on medicine, to lay almost every complaint to the charge of luxury and excess in diet.

The catalogue of disorders, which may be justly ascribed to these irregularities, is sufficiently large to serve the purpose of caution in a moral view; but to ascribe every complaint to such indulgences, betrays want of observation, and an absurd acquiescence in the rotin of declamation, and indeed furnishes arguments in favour of those who are disposed to practise such excesses, by shewing that some of the bad effects they are said to produce, were wrongfully ascribed to that cause.

\* Rheumatismi & Arthritides eos maxime affligunt qui in lautâ fortunâ consenuerunt. — *Morton Prolegomena ad Pyretologiam.*

Vitius lautior. — *Boerh. Aph. 1491.* — *Sic too Van Swieten's Comment.*

Crapula, pocula. — *Home Principia Medic.*

Dr. Buchan, with more propriety, says, that "the rheumatism is most common among the poorer sort of peasants, who are ill clothed, live in low damp houses, and eat coarse unwholesome food, which contains but little nourishment, and is not easily digested." — *Domestic Medicine, Chapter on the Rheumatism.*

If cold be properly assigned as the cause of rheumatism, it is obvious, that the poor (who are little exposed to the temptations of luxury) must be more liable to suffer by cold, than those who can afford a liberal diet, who can, in general, also furnish themselves with defences against the inclemency of the weather, by dry and well-built houses, fires, and warm cloathing, conveniences of which the poor are in great need, and of which they are often totally destitute.

The state of the Bath Hospital affords a strong confirmation of what is here advanced. From the first day of May, 1785, to November 19, 1793, 444 rheumatic cases, and about 278 hip cases, a disorder nearly connected with rheumatism, and often proceeding from the same cause, were admitted.

The whole number of patients, of every description, admitted, during that period, amounts to 2689, which sum divided by 722, the aggregate of the rheumatic and hip cases, gives 3.7244 nearly; so that the rheumatic and hip cases amount to considerably more than one-fourth of the whole. From this calculation it must, I think, appear, that so large a number of persons, and so large a proportion of the whole, could scarcely have applied for the use of this remedy, had the disorders been confined, in any degree, to persons in the higher ranks of life.

Obfer-

Observation leads us to think, that a liberal and even free diet of those who are most exposed to the causes which produce rheumatism, provided such indulgence does not degenerate into intemperance, tends rather to prevent, than to invite attacks of the rheumatism. Warm food and fermented liquors, if not taken in over proportion, form the best defence against cold and moisture, by supporting the strength, and keeping up a regular perspiration; and it is owing in no small degree to such accommodations, that hospitals are enabled to remedy the bad effects such hardships are apt to occasion.

It is probable that this mistake may have originated from another, which is the considering gout and rheumatism, which undoubtedly resemble one another in many of their symptoms, as being derived from the same or nearly similar causes. However close the resemblance may appear in many circumstances, the nature of the two disorders varies very materially.

They are produced by almost opposite causes, affect opposite ranks of people, and admit of considerable distinction in their respective remedies. Indolence, high living, warm apartments, together with other indulgences of ease and pleasure, undoubtedly often, and indeed generally, produce gout; whilst hard labour and fatigue, spare and poor diet, thin cloathing, and cold lodging, almost as certainly produce rheumatism. Of course the



gout must be deemed the disorder of the rich, and the rheumatism that of the poor.

It is almost unnecessary to add, that this proposition must not be understood as universally true. Exceptions on each side will occur; but the proportion shews sufficiently, that the observation, considered as a general one, is founded in fact.

I have also observed that when the gout appears among the lower ranks of people, it is almost always combined with symptoms of rheumatism. During the period above mentioned several cases of the gouty-rheumatic kind were admitted into the Bath Hospital; but though the Waters are well known to be equally adapted to the relief of both complaints, the number of rheumatic cases wherewith the gout was intermixed, have been comparatively small.

Whilst the number of simple rheumatic cases amounted to 444, those of gout conjoined with rheumatism were no more than 29, or somewhat less than one-fifteenth part.

The review of the account of patients at the Bath Hospital, suggests a melancholy reflection on the number of disorders occasioned by imprudence and rashness, the danger of which there was, to appearance, little temptation to incur.

It

It is foreign to the present subject to speak of more than a part of these, namely, those occasioned by unnecessary and wilful, or, at least, careless exposure to cold, which, it should be observed, is no more than one out of many forms in which imprudence may manifest its dangerous consequences.

Besides the above-mentioned 444 simply rheumatic cases, there were 451 others of persons afflicted with pain and stiffness of the limbs, lumbago, hip and knee cases, a large proportion of which derived their origin from the same source with rheumatism. If we suppose one-half of them to be owing to cold, which will not, I think, be an unreasonable calculation, it will amount to 225, which added to the rheumatic cases, make in all 669 in number. I would not, however, be understood as suggesting that ALL these disorders could have been avoided or prevented by any care that could be expected to be taken by persons in such a situation.

Labour is indispensable in employments of a hazardous nature to health, as well as in those of a safer kind ; and this necessity renders danger unavoidable ; and where danger is necessarily present, some mischief must, in a succession of events, take place.

But

But I am, nevertheless, of opinion, that a large proportion of the number of persons so afflicted, might have remained free from their complaints, had they used such caution only as is in every person's power to employ.

A necessitous person may, indeed, suffer an attack of the rheumatism, from want of sufficient cloathing, scarcity of fuel, by being obliged to labour in cold wet seasons, or in moist ground, or in other employments exposed to the vicissitudes of heat and cold; but neither poverty, not any duty a man owes to his employers, obliges him, when heated by exercise, or by the weather, to pull off what cloaths he has, and to expose himself, when at rest, to a current of air, to plunge into cold water, to drink enormous draughts of cold liquors, or to lie down, and even to sleep on the moist ground, and often in the autumnal season; all which, and many similar instances of rashness, are so common, that I am convinced more than two-thirds of the rheumatic and hip cases, mentioned above, might be traced to such causes. Many of these causes are assigned in the cases of the patients sent to the Hospital; others I have discovered by the confession of the parties themselves; and many more, I had reason to suspect, were owing to similar causes, which shame or obstinacy induced the parties to dissemble.

Did such exposures to danger take place from ignorance of the mischievous consequences likely to ensue, we might spare our censure, however we might be concerned for the unfortunate event. But the truth is, that they who commit these acts of imprudence know the danger of them, as well as those whose business it is to direct the remedy.

The bad effects of a chill, or a surfeit, by the former of which they mean a rash exposure to cold, and by the latter the drinking cold liquors when the body is heated, are almost proverbial among that rank of people; but I am convinced, that the hazard attending such irregularities is no small reason why they are practised.

The apprehension of reproach for timidity, effeminacy, or imbecillity, induces many to neglect even the most common and obvious precautions for avoiding danger.

The abuse of a principle so nobly and generously founded, and the sacrifice of the lives and health of so many of our countrymen to such misplaced exertions of courage and resolution, is a just subject of concern!

If the computation before-mentioned be just, 446 persons out of 669 must have incurred this complaint through their own misconduct or neglect; a melancholy proof, though it includes a  
single

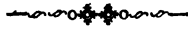


single instance only, how much indiscretion and obstinacy are capable of adding to the unavoidable misfortunes of life!

We must not, however, conclude that rheumatic complaints, and hip cases, are the ONLY consequences of such irregularities. Fevers, both intermittent and continued, pleurifies, inflammations of the brain, of the bowels, and of the other viscera, palsies, and many other disorders, might be added to the catalogue. Among these, I mention the leprosy particularly, of which loathsome disease no less than 239 cases have been brought to the Bath Hospital within the space of time above-mentioned; nearly all of which, I am persuaded, might have been avoided, as the disease owes its rise entirely to the sudden application of cold to the heated body, and is occasioned, in a great majority of instances, by the drinking of cold liquors in such a state, which no one can alledge to be a necessary circumstance.

On the whole, I am persuaded, that the indolence, luxury, and pleasures of the higher ranks of mankind, though sufficiently numerous, and each of them contributing to injure health and shorten life, are, notwithstanding, by many degrees, less mortal than the indiscretions of the lower ranks. — Were the catalogue of these, and of all their consequences, collected, and laid before the public, it would astonish the world, by exhibiting a source of mortality

mortality hitherto little noticed, but, perhaps, equally fertile with mischief with any hitherto discovered.



METHOD OF CURE OF THE RHEUMATISM.

THE method of cure, or, rather, the application of the Bath Waters to that purpose, remains now to be considered.

It seldom happens that patients are brought to the Bath Hospital during the continuation of the inflammatory stage of the rheumatism. The delay occasioned by the conditions of admission, and the waiting for a vacancy, together with the known impropriety of using the Bath Waters in any form during the continuance of a feverish state of the body, from whatever cause it may proceed, prevent the admission of patients in general until the inflammatory paroxysm has subsided.

It happens, nevertheless, sometimes, that a fresh attack, occasioned often by some accidental circumstance taking place during the patient's stay in the Hospital, will exhibit nearly the same appearances as the original seizure; and in such cases the usual remedies for fever must be employed.

Of these, bleeding, the most effectual of any, is sometimes necessary. As, however, the disease is mostly in an advanced state when it comes under our care, bleeding by the arm is less frequently used than bleeding from the part affected. Cupping is employed for this purpose, and is often repeatedly used as symptoms may indicate, and in general with good effect.

When the part affected is too sore and tender to endure the suction of a cupping-glass, which is not an uncommon circumstance, a large number of leeches, as ten, or more, applied as near as possible to the seat of the pain, will commonly serve the same purpose.

The indolent life, the confinement, and want of free air in an hospital, situated in a town, do not suit large and sudden evacuations by bleeding. The state of chronical debility comes on sufficiently fast, without its being precipitated by artificial means.

Purging is sometimes employed for the same purpose, and, where costiveness is a symptom, often with good effect; but the frequent use of purgatives is inconvenient, both on account of the necessary motion of the pained parts, and the hazard of contracting fresh cold. We use on this occasion mostly the Infus. Sena, with the addition of Glauber's Salt,  
and

and find it to be most successful when it acts as a diuretic as well as a purgative.

Antimonial medicines, as the Antimonium Tartarifatum, James's Powder, and the Pulvis Antimonialis of the London Dispensatory, are also employed with an antiphlogistic intention, and mostly with success. Some years ago, on account of the high price of James's Powder, I attempted to form a substitute for it, by mixing one grain of Tartar Emetic, as it was then called, with fifteen grains of powdered starch, which proportion admitted a convenient division into aliquot parts of the grain.

The mucilaginous quality of the starch appeared to abate the stimulus of the antimonial, without depriving it of activity; and I found this composition useful, particularly in acute complaints, wherein some active operation, provided it was not too sudden and violent, was desirable.

Since the Pulv. Antimonialis has been discovered, and sold at a more moderate price, the use of the above substitute has become less necessary, and I have seldom used it of late.

The effect of these remedies, as indeed of all antimonials, is well known to be extremely uncertain. No observation I have ever been able to make, has enabled me farther than to conjecture, which has often proved fallacious, what effect even

a small dose, e. g. three or four grains, of either the Pulvis Antimon. or of James's Powder, would produce, or indeed whether either of them would produce, any effect at all.

This uncertainty, however, provided some operation of the evaculatory kind take place, and that not too violent, is of less consequence to the patient than might be apprehended. Every practitioner in medicine has witnessed the good effects of antimonial medicines in abating fever, whether their operation be by stool, vomiting, or as diaphoretics.

I have no prepossessions in favour of either James's Powder, or the Pulv. Antimonialis, so as to induce me to believe that the use of either of them in fevers is nearly so universal as the empirical and inconsistent recommendations given with James's Powder would lead us to believe; but candour requires me to say, that in simple fevers, although the vomiting, sickness, and evacuation downwards, which is caused by these remedies, be highly distressing for the time they continue, yet that their duration is seldom very long, that they appear to diminish the strength much less than might be expected, and that the appetite for food returns sooner after the sickness has subsided, than could well be imagined.

The above effects, joined with the consequences of them, namely, the abatement of the fever, have caused the James's Powder formerly, and of late the  
Pulvis



Pulvis Antimonialis, to be much in use at the Bath Hospital in such cases, wherein the support of the strength is so necessary, in order to enable the patient to go through the chronical stage that usually succeeds.

When, by means of the above or similar remedies, the fever is abated, the season for the trial of the Bath Waters in general commences, even though the pain and swelling should in a good measure continue.

The progress of the symptoms furnishes a pretty obvious as well as accurate criterion of the time when the use of the Waters may with propriety begin.

When the inflammatory disposition has so far subsided, that warmth begins to be agreeable, or even tolerable, to the pained parts, we have reason to believe that a cautious external application of the Waters is proper, whatever may be the state of the other symptoms.

On such occasions we often recommend the use of the Cross \* Bath, which being of a lower temperature, admits of being used at an earlier

\* It must be understood, that what is here said is meant to refer to the Hospital-practice only. I have often found, in private practice, that a lower degree, as eighty-eight or ninety, is still beneficial at the first trial; but such varieties of temperature cannot be accommodated to the patients at the Hospital, though they may be had at the private Baths.

stage of the complaint, than would be proper for the trial of the hotter springs. At the commencement of its use, it is employed as a simple Bath only, and the patient's stay is usually limited not to exceed ten minutes, or one quarter of an hour; and no more motion is directed to be used in the Bath, than is consistent with ease.

A temperately warm Bath so applied, is generally favourable, not only to the abatement of the particular pain, but also as affording a wonderful refreshment to the system in general, by relieving the foreness, lassitude, restlessness, and general uneasiness, which a long series of painful sensations never fails to induce.

The spirits are no less relieved than the bodily feelings. The distress and anxiety which the fatigue of pain long continued is sure to bring on, is generally removed, and the natural functions of the body, which always sympathise with those of the mind, regain, in a good measure, their activity. As the recovery proceeds, a longer stay in the Bath, to twenty minutes, or half an hour, may be indulged, but not longer; as I never knew any that reaped benefit by a longer stay. When this stay can be borne without fatigue, or uneasiness, it is usual to direct the use of the Pump on the parts affected, to the number of fifty or one hundred strokes, each time of bathing. This being used at first, when the patient is in the Bath,

the

the contact of the surrounding fluid abates the force of the stream, and renders its application perfectly mild and easy.

The Bath and Pump are thus used, ONE, TWO, or THREE times a week, according to the symptoms and state of the patient. As the amendment advances, the Hot Bath, which is warmer than the Cross Bath, is employed; and on the intermediate days the dry Pump,\* as it is quaintly called, is used, to the number of from fifty to two hundred strokes at a time.

If the body has been regular, and symptoms of gradual recovery have appeared, I have seldom used any other remedy, and have generally been gratified with a favourable event in the course of a few months. But a progress so uniformly favourable does not always occur, even in cases where the event terminates in the patient's recovery.

It is not uncommon for the perspiration to remain obstructed, after the feverish stage has in a good degree subsided.

\* The stream of water passes through a flexible leather tube, which admits of being applied either in a direction perpendicular to the part, or at any angle that may be desired; of course the force with which the water strikes, may be varied at pleasure.



To restore perspiration, as the pain seldom departs until this can be accomplished, diaphoretic medicines are often necessary.

Two medicines \* have been principally in use for this purpose at the Hospital, namely, the Pulv. Ipec. compof. and the Pulv. Antimonialis of the last edition of the Pharm. Londin. Both these act powerfully as diaphoretics. I think the former the more certain, as it seldom operates unless by the skin, whereas Antimonials will sometimes operate by stool, or by vomiting. When, however, the fever is not entirely reduced, I think the Antimonial preferable, on account of its effects in reducing the pulse; but in dryness of the skin, unattended with fever, I think the Pulv. Ipec. comp. more efficacious.

\* Several other remedies have been occasionally given with this intention at the Bath Hospital, as the Volat. Tinct. of Guaiacum, the Volatile Alkali by itself, or in composition, and other things of less consequence. I believe, however, no great dependance has been placed on any of these, as I have never been able to trace any benefit from their use. The Volat. Tinct. of Guaiacum particularly, whose efficacy in large doses has been so extolled of late years, has by no means answered my expectations. Indeed, I have never been able to give half an ounce at a dose, the quantity recommended, without much trouble, difficulty, and inconvenience; and where it has been taken, it totally destroyed the appetite for food the day it was given.

The

The Antimonial is given from two to six grains at a dose, sometimes twice a day, but generally at night only, and continued often for several weeks. The Pulv. Ipec. comp. is administered in the same manner, and in quantity from gr. 5 to 21; but I have seldom directed more than ten grains, as I have found that quantity, and often a smaller one, answer sufficiently the purpose of a gentle diaphoretic, which produces less hazard of getting cold, and is more effectual towards the cure, than a violent sudorific.

I have several times given the two remedies above mentioned in combination, but cannot say that I have found them succeed better than when separately administered.

Formerly there was a large consumption of James's Powder at the Bath Hospital; and it was in use for about three years after I became Physician to that charity; but little or none has, I believe, been purchased during the last seven or eight years, as the professional persons have had reason to be satisfied with the effects of the substitute:

In order to gain the most complete information on this head, I have repeatedly enquired of the Apothecary to the Hospital (a most intelligent and candid man), if he could perceive any difference between the effects of James's Powder, and the Pulv. Antimonialis of the London Pharmacopœia,

a question he was well qualified to answer, from his large experience as well as his judgment; since for several years after his coming to the Bath Hospital, James's Powder was in use, and during the course of the last eight years, eight pounds and a half of the Pulv. Antimonialis has been administered. His opinion is, that the Pulvis Antimonialis shews somewhat, but very little, more of a purgative tendency, than James's Powder; but that in other respects, and in every beneficial consequence, it seemed to be fully equal. I am disposed to pay much respect to the above opinion, but am confident that the difference in this respect from James's Powder must be very small, as I have paid attention to this circumstance in several instances; but such an effect has not yet occurred to my observation. If the advantages to health of the two remedies are equal, as I am induced to think them to be, from the most candid enquiry and pretty considerable opportunities of observing their comparative \* effects, the difference of price is a material consideration in large charitable institutions. The eight pounds and a half in weight of the Pulv. Antimonialis, which was consumed at the Bath

\* The proportion of benefit received in rheumatic cases was rather greater, in proportion, from May 1, 1785, to Nov. 19, 1793, than from the beginning of the year 1775, to the end of the year 1779; yet, during the last mentioned period, James's Powder was much in use at the Hospital, and in the other, the Pulv. Antimon. was substituted in its place. See Observations on Table I. towards the end of this work.

Hospital,

Hospital, in the space of about eight years, cost that charity 9l. 9s. only, at the rate of twenty-two shillings per pound. Had the same quantity of James's Powder been used, which would have been the case, as both the medicines have been given in equal doses, it would have cost the charity upwards of 177l. so that by this substitution the charity has saved no less than 167l. 11s.

Mercurial medicines have been pretty largely administered, internally, at the Bath Hospital, in cases of chronic rheumatism. Whether they have been given with a view to promoting perspiration, or any other evacuation, or with a specific intention, I cannot determine. The Calomel Bolus, I observe, has been generally used, and a purgative given the next morn, and this has been repeated three or four times. The account of the recovery of those who have tried it, appears to be favourable; but from my own personal experience, I could not perceive any benefit which might not be procured by milder means, and on that account have scarcely used it. I would not, however, be understood to offer any determination of the question respecting the effects of mercurials in rheumatism, as they appear to meet with the approbation of some of the profession, for whose opinion I have the greatest respect. If a trial is to be made of their efficacy, it can never be done to greater advantage than at the Bath Hospital, where the use of



the warm Bath contributes to obviate the most disagreeable effects attendant on the use of mercury; without any diminution of the advantages to be received from a trial of it.

But to return to the subject: It happens sometimes that the stimulus of the Bath Waters, externally applied, begins, by long use and frequent repetition, to lose its effect. In such cases some external applications have been found of advantage. The most usual, and indeed the most powerful, are Blisters, which are, for the most part, laid as near as possible to the parts affected. These are particularly serviceable in swellings, which do not go off together with the symptoms of inflammation. These swellings, blisters contribute to diminish, not only by their effect in promoting absorption by their stimulus, but also by the drain they occasion from the seat of the disease. When the blister is healed, recourse may again be had to the Pump, which will generally, after such an interval, exhibit nearly the same good effects as at first.

It is not uncommon, in obstinate cases, to repeat the blister once or twice, and to return again to the use of the Waters; and a course of this kind is often attended with success.\*

In

\* In some cases, both in private practice, and that of the Hospital, I have made trial of the Emplastrum Calidum, but have never been able to proportion the quantity of Cantharides

in

In delicate cafes, wherein the application of a blifter might prove too fatiguing and irritating, I have made ufe of the Tinct. Cantharidum, made of treble or quadruple the common ftrength, rubbed diligently upon the part, which is often of fervice, and feldom proves fo ftimulant as to require any interruption of the ufe of the Waters.

In private practice I have employed the Lini-mentum Volatile, and Horfe-radifh, frefh scraped, rubbed in confiderable quantity on the part affected, but think both of them inferior in good effect to the Tincture of Cantharides.

In rheumatic fwellings of the joints, which refift the above applications, we have often recourfe to the \* Lime Poullice. This, if dexteroufly managed, will generally produce a confiderable difcharge, without breaking the fkin, and is often of great fervice in refolving obftinate tumours. If much inflammation enfues on its ufe, it is feldom found to anfwer.

It

in fuch a manner as to produce a difcharge without raifing the fkin. It either acted as a blifter, or produced no fenfible effect.

\* The Lime Poullice is made of *one part* quick-lime, that has been expofed to the air and is fallen into powder, and of *two parts* of oat-meal, made into a poullice with hog's-lard.

This

It is, however, necessary to employ, in this stage of the complaint, stimulant remedies, internally as well as externally. Of these, the Bath Waters are the chief; and these, drank with caution and moderation, are often of the greatest service in assisting the recovery of appetite, of flesh, strength, and spirits, and in restoring free and equable perspiration. Their use is, however, improper, whilst the tongue continues white or furred, or whilst the pulse beats more than ninety pulsations in a minute.

But the Bath Waters, it is well known, are apt, by long use, to nauseate and disagree with the stomach, and in cases of such a chronical nature as those of rheumatism, cannot be continued during the patient's stay, whilst at the same time some medicine of a similar efficacy is required.

When therefore the Bath Waters have become less agreeable to the palate or stomach than they were when first tried, I have often employed a preparation which goes under the name of IN-

This is spread upon a cloth, to the thickness of half an inch or more, and renewed every twenty-four hours; and is often continued for a month, or longer. I have in such cases sometimes employed a scruple of the stronger Mercurial Ointment rubbed in twice or thrice a week, or oftener, and in some few cases with advantage; but I think it has failed much more frequently than it has succeeded.

**FUSUM PARALYTICUM**, \* to the quantity of four or six ounces, twice a day; and this often succeeds, either as a substitute for the Bath Waters, or in cases wherein they do not **ORIGINALLY** agree with the stomach.

It sometimes happens in the Bath Hospital, and, I presume, in others, wherein complaints of a chronic nature are received, that patients, after a stay of some months, although they had been in a progressive state of amendment for some considerable time after their admission, begin at last to lose flesh, strength, and spirits, and often to be affected with a hectic fever.

When these symptoms first appear, the Peruvian Bark is often a good remedy, and will obviate most of the worst symptoms: but if they recur, as they sometimes do, nothing will be of service, save a return to the family and domestic occupations of the persons affected, which will in general be effectual towards a cure.

\* Infus. Paralytic. Pharm. Bathon. Nosoc.

℞ Radic. Raph. rust. ras. rec. ℥ii.

Sem. Sinap. contus. ℥i.

Rad. Valer. sylv. ℥ss.

Aq. bullient ℔iiss.

Stent simul per horas ij. in vase clauso & cola.

Colat liquori adde aq. raph. comp. ℥iv.

Whether



Whether this disorder be owing to the confined air of an hospital, to an indolent life, or to the separation from their friends and acquaintance, which the patients of an hospital must necessarily experience, I cannot pretend to determine. I am inclined to attribute it to the last-mentioned circumstance, joined to a manner of life necessarily indolent and uninteresting; which last is the general source of that mental infirmity which goes under the name of *Tædium Vitæ*, a distress more unsufferable than, perhaps, any positive disorder whatsoever.

I have often reflected that those so afflicted must have received from it one of the best moral lessons possible in favour of industry and activity, blessings of which most of those who are constrained to partake, have but an imperfect idea.

Virgil's rustics, whom he describes as wanting nothing to complete their happiness, except the being sensible of \* it, owed more to the constant employment of their minds † and bodies, than to the beauty of the objects with which they were ‡ sur-

\* O fortunatos nimium, sua si bona norint,  
Agricolas.—*Virg. Georg. II.* 458.

† At patiens operum, exiguo adsueta; juvenis. — *Ibidem*,  
472.

‡ ————— at latis otia fundis,  
Speluncæ vivique lacus; at frigida Tempe,  
Mugitusque boum, mollesque sub arbore somni,  
Non absunt, — *Ibid.* 468.

rounded, or any other of the circumstances, a good \* conscience alone excepted, which the elegant pen of the Mantuan Poet has described as concurring to their felicity.

It is somewhat remarkable, that I have scarcely ever observed in the Bath Hospital any person who was desirous to prolong his stay, for the sake of enjoying a portion of idle time, which the lower ranks of people, in many situations of life, seem so much to desire; and which, in other hospitals, as I have myself witnessed, often occurs.

The length of stay, which the cases fit for the Bath Hospital require in a great majority of instances, makes the persons who are there confined more sick of inactivity, than they had been before of labour, and willing to fly, as a relief, from plentiful diet, warm rooms, comfortable accommodations, and a life without employment, to hard fare, cold apartments, scanty cloathing, and incessant labour.

It is worth notice, that this complaint, if it may be so termed, resembles, in many of its characteristic marks, the Nostalgia, so common among the Swifs, and is cured by nearly the same means.

\* At secura quies & nescia fallere Vita.—*Ibid.* 467.

Sacra Deum, sanctique patres, extrema per illos  
Justitia excedens terris, vestigia fecit.—*Ibid.* 473.

I remarked, in the former part of this work, the mistake respecting a free diet PRODUCING this disorder. It is proper to mention here, that a nourishing warm diet, with the moderate use of fermented liquors, is as necessary in the latter stage of this complaint, as in any disease with which I am acquainted. Great pain is an exercise of the most violent kind, and produces much fatigue and exhaustion of the spirits, as appears by the tendency to sleep, which constantly accompanies the cessation, or even the abatement of pain.

Violent exercise requires strong and powerful support, and food is the only method by which support can be afforded. The hectic cases which we sometimes witness in this disorder, when it has been of long continuance, often owe their rise, as I have before observed, to a want of the necessaries of life.

Nothing that is here said must be interpreted into an apology for excess of any kind. Such intemperance frustrates the end of food, and converts support and refreshment into the causes of debility and sickness. This is especially the case when spirituous liquors are employed as the means of indulgence, as they invariably tend both to embitter and to shorten life, and frequently produce, among other mischievous effects, pains in the limbs, very similar in appearance to those of the rheumatism,

tism, but proceeding from a very different and much worse cause.

The prevention of this disorder is an important consideration, not only in the light of humanity and general benevolence, but also in a political view.

Those to whom the defence of this country is entrusted, must, from the nature of their situation and employment, and the unavoidable hardships incident thereto, be especially liable to this disorder, which, though less destructive to life than the dysentery, or other infectious diseases incident to camps, equally tends to disable them from performing the duties of their station. Fortunately, warm cloathing is perhaps the most effectual remedy for the disorders in general which are attendant on a military life.

The good sense and humanity of our countrymen has led them to furnish a large supply of such articles to their brave defenders, and there is reason to think that no contributions could be more beneficially or œconomically expended. The care of the health of persons engaged in these arduous services, is far less expensive to the country than the procuring others to fill their places, whilst it contributes to obviate the depopulation which is one of the principal mischiefs of war.

Nearly



Nearly the same arguments are applicable to those who have the care of the poor. By furnishing such persons with sufficient warm cloathing, they might be enabled to exert their industry, and to contribute towards their own maintenance, which exposure to cold disables them from doing, and of course enhances the expence of their support.

CALCU-

**CALCULATIONS**  
RESPECTING THE  
**USE AND SUCCESS**  
OF THE  
**BATH WATERS,**  
IN  
**RHEUMATIC CASES;**  
EXTRACTED FROM THE  
*Register of the General Hospital*  
OF THAT CITY.  
EXTENDING FROM  
MAY 1, 1785, to NOVEMBER 19, 1793.

## TABLE I.

OF THE NUMBER OF PERSONS RECEIVED INTO THE BATH HOSPITAL FOR RHEUMATIC COMPLAINTS, FROM MAY 1, 1785, to NOVEMBER 19, 1793, WHO DID OR WHO DID NOT RECEIVE BENEFIT FROM THE USE OF THE WATERS.

THE whole number of Patients admitted for this complaint, amounts to.....	} 444	
Of these were Cured.....	154	} = 386
Much Better .....	167	
Better .....	65	
No Better .....	53	
Dead .....	5	= 58
Total .....	444	

Of those included under the article No Better, were as follows :

Deemed improper for the use of the Waters, as being <i>hectical</i> , <i>having ulcers</i> , or what rendered confinement in an Hospital improper .....	} ..... 13
Discharged at their own request, contrary to the opinion and advice of the professional persons who attended them .....	} ..... 3
Eloped from the Hospital .....	2
Total .....	18
	Of

TABLE I. CONTINUED.

Of those included under the article	}	..... 2
Dead, <i>one</i> died of the Small Pox, and		
<i>another</i> of an intestinal disorder, to which he had been long subject .....		
To these add the eighteen before specified .....	}	..... 18
Total.....		20

These twenty Patients therefore, as they furnish no conclusion respecting either the efficacy or the inefficacy of the Waters, should be struck off, and the account of *No Better* and *Dead*, will then stand as follows :

No Better.....	35
Dead.....	3
Total....	38

The whole account then, so corrected, will appear much more favourable to the efficacy of the Bath Waters.

Cured.....	154	}	= 386
Much Better.....	167		
Better.....	65		
No Better .....	35	}	= 38
Dead.....	3		
Total ....	424		



## TABLE II.

OF THE STAY OF PERSONS ADMITTED FOR  
RHEUMATIC COMPLAINTS INTO THE BATH  
HOSPITAL.

---

THE number of days stay of the whole number of patients admitted, except as above mentioned, amounts to 47851.

This sum divided by 424, gives 112.86, or nearly 113 days for the average stay of each person indiscriminately.

The stay of the patients *Cured* in the Hospital, amounts in the whole to 13667 days. This sum divided by 154 (the number cured) gives 88.747, or nearly 88 days and  $\frac{3}{4}$  for the stay of each person.

The stay of the patients discharged *Much Better*, amounts in the whole to 22120 days. This divided by 167 (the number discharged *Much Better*) gives 132.45, or nearly 132 days and  $\frac{1}{2}$  for the stay of each person.

The stay of the patients discharged *Better*, amounts in the whole to 8334 days. This sum divided by 65 (the number discharged *Better*) gives 128.22, or rather more than 128 days for the stay of each person.

The stay of the persons *Benefited*, being the aggregate of the foregoing three numbers, amounts in the whole to 44121 days. This sum divided by 386 (the number benefited) gives 114.3, or rather more than 114 days for the stay of each person.

The stay of the persons discharged *No Better*, amounts to 3620 days, and that of the three who died in the Hospital to 110 days. The sum of these is 3730 days, which divided by 38, gives somewhat more than 98 days for the stay of each person,

TABLE

## TABLE III.

SHEWING THE PROPORTION BETWEEN THE SEXES  
OF PERSONS ADMITTED FOR RHEUMATIC COM-  
PLAINTS INTO THE BATH HOSPITAL.

=							
NUMBER admitted in general, with exceptions as above spe- cified .....	<table> <tbody> <tr> <td>Men.....</td> <td>278</td> </tr> <tr> <td>Women .....</td> <td>146</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">Total .. 424</td> </tr> </tbody> </table>	Men.....	278	Women .....	146		Total .. 424
Men.....	278						
Women .....	146						
	Total .. 424						
Cured .....	<table> <tbody> <tr> <td>Men.....</td> <td>110</td> </tr> <tr> <td>Women ...</td> <td>44</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">154</td> </tr> </tbody> </table>	Men.....	110	Women ...	44		154
Men.....	110						
Women ...	44						
	154						
Much Better.....	<table> <tbody> <tr> <td>Men.....</td> <td>113</td> </tr> <tr> <td>Women ...</td> <td>54</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">167</td> </tr> </tbody> </table>	Men.....	113	Women ...	54		167
Men.....	113						
Women ...	54						
	167						
Better .....	<table> <tbody> <tr> <td>Men .....</td> <td>33</td> </tr> <tr> <td>Women ...</td> <td>32</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">65</td> </tr> </tbody> </table>	Men .....	33	Women ...	32		65
Men .....	33						
Women ...	32						
	65						
No Better .....	<table> <tbody> <tr> <td>Men .....</td> <td>19</td> </tr> <tr> <td>Women .....</td> <td>16</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">35</td> </tr> </tbody> </table>	Men .....	19	Women .....	16		35
Men .....	19						
Women .....	16						
	35						
Dead .....	<table> <tbody> <tr> <td>Men .....</td> <td>3</td> </tr> <tr> <td>Women .....</td> <td>0</td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;">3</td> </tr> </tbody> </table>	Men .....	3	Women .....	0		3
Men .....	3						
Women .....	0						
	3						
	Total .... 424						

TABLE

## TABLE IV.

AGES OF RHEUMATIC PATIENTS RECEIVED INTO  
THE BATH HOSPITAL.

## C U R E D.

Clafs of Ages.	Ages of Individuals found in each Clafs.	Number of Perfons of each Age.	Number of Individuals in each Clafs.
CLASS I. Under 10 years old.	9 Years old.	1	1
CLASS II. From 10 inclusive to 15.	10	1	6
	12	1	
	13	1	
	14	3	
CLASS III. From 15 inclusive to 20.	15	3	18
	16	3	
	17	5	
	18	4	
	19	3	
CLASS IV. From 20 inclusive to 25.	20	9	26
	21	3	
	22	3	
	23	7	
	24	4	
CLASS V. From 25 inclusive to 30.	25	8	26
	26	7	
	27	2	
	28	6	
	29	3	
<i>Carried up . . . . 77</i>			

## CURED CONTINUED.

Clafs of Ages.	Ages of Individuals found in each Clafs.	Number of Persons of each Age.	Number of Individuals in each Clafs.
CLASS VI. From 30 inclusive to 35.	<i>Brought up... 77</i>		
	30	8	26
	31	2	
	32	8	
	33	3	
	34	5	
CLASS VII. From 35 inclusive to 40.	35	1	16
	36	3	
	37	5	
	38	5	
	39	2	
CLASS VIII. From 40 inclusive to 45.	40	8	14
	41	2	
	42	2	
	44	2	
CLASS IX. From 45 inclusive to 50.	45	3	10
	46	3	
	47	1	
	48	2	
	49	1	
CLASS X. From 50 upwards.	50	5	11
	51	1	
	53	1	
	55	1	
	56	1	
	60	1	
Total Cured . . . .			154

TABLE IV.—CONTINUED.

---



---

 MUCH BETTER.

Class of Ages.	Ages of Individuals found in each Class.	Number of Persons of each Age.	Number of Individuals in each Class.
CLASS I. Under 10 Years old.	0	0	0
CLASS II. From 10 inclusive to 15.	12	2	3
	14	1	
CLASS III. From 15 inclusive to 20.	16	3	8
	18	3	
	19	2	
CLASS IV. From 20 inclusive to 25.	20	5	19
	21	3	
	22	3	
	23	3	
	24	5	
CLASS V. From 25 inclusive to 30.	25	3	21
	26	7	
	27	1	
	28	6	
	29	4	
CLASS VI. From 30 inclusive to 35.	30	9	26
	32	6	
	33	6	
	34	5	
<i>Carried up ----- 77</i>			

## MUCH BETTER CONTINUED.

Clafs of Ages.	Ages of Individuals found in each Clafs.	Number of Persons of each Age.	Number of Individuals in each Clafs.
CLASS VII. From 35 inclusive to 40.	<i>Brought up -- 77</i>		
	35	4	18
	36	5	
	37	2	
	38	5	
39	2		
CLASS VIII. From 40 inclusive to 45.	40	10	18
	41	2	
	42	2	
	43	1	
	44	3	
CLASS IX. From 45 inclusive to 50.	45	1	13
	46	7	
	47	2	
	48	2	
	49	1	
CLASS X. From 50 inclusive upwards.	50	8	41
	52	4	
	53	3	
	54	1	
	55	1	
	56	1	
	57	1	
	58	2	
	59	4	
	60	3	
	61	2	
	62	1	
	65	1	
	66	2	
	67	1	
68	2		
69	1		
74	2		
75	1		
Total Much Better . . . .			167

TABLE IV.—CONTINUED.

## BETTER.

Clafs of Ages.	Ages of Individuals found in each Clafs.	Number of Perfons of each Age.	Number of Individuals in each Clafs.
CLASS I. Under 10 Years.	7	1	1
CLASS II. From 10 inclusive to 15.	10	1	1
CLASS III. From 15 inclusive to 20.	16	1	1
CLASS IV. From 20 inclusive to 25.	20 22 23 24	1 2 2 3	8
CLASS V. From 25 inclusive to 30.	25 27 29	3 2 2	7
CLASS VI. From 30 inclusive to 35.	30 31 33 34	6 1 1 4	12
<i>Carried up . . . . 30</i>			

## BETTER CONTINUED.

Clafs of Ages.	Ages of Individuals found in each Clafs.	Number of Perfons of each Age.	Number of Individuals in each Clafs.
	<i>Brought up . . . 30</i>		
<b>CLASS VII.</b> From 35 inclusive to 40.	35	1	7
	36	2	
	37	1	
	38	2	
	39	1	
<b>CLASS VIII.</b> From 40 inclusive to 45.	40	7	11
	41	1	
	42	1	
	43	1	
	44	1	
<b>CLASS IX.</b> From 45 inclusive to 50.	45	1	4
	46	1	
	47	1	
	48	1	
<b>CLASS X.</b> From 50 inclusive upwards.	50	3	13
	52	3	
	54	1	
	57	2	
	62	1	
	63	3	
<b>Total Better . . . . 65</b>			



TABLE IV.—CONTINUED.

## BETTER.

Clafs of Ages.	Ages of Individuals found in each Clafs.	Number of Persons of each Age.	Number of Individuals in each Clafs.
CLASS I. Under 10 Years.	7	1	1
CLASS II. From 10 inclusive to 15.	10	1	1
CLASS III. From 15 inclusive to 20.	16	1	1
CLASS IV. From 20 inclusive to 25.	20	1	8
	22	2	
	23	2	
	24	3	
CLASS V. From 25 inclusive to 30.	25	3	7
	27	2	
	29	2	
CLASS VI. From 30 inclusive to 35.	30	6	12
	31	1	
	33	1	
	34	4	
<i>Carried up . . . . 30</i>			

## BETTER CONTINUED.

Clafs of Ages.	Ages of Individuals found in each Clafs.	Number of Perfons of each Age.	Number of Individuals in each Clafs.
	<i>Brought up . . . 30</i>		
CLASS VII. From 35 inclusive to 40.	35	1	7
	36	2	
	37	1	
	38	2	
	39	1	
CLASS VIII. From 40 inclusive to 45.	40	7	11
	41	1	
	42	1	
	43	1	
	44	1	
CLASS IX. From 45 inclusive to 50.	45	1	4
	46	1	
	47	1	
	48	1	
CLASS X. From 50 inclusive upwards.	50	3	13
	52	3	
	54	1	
	57	2	
	62	1	
	63	3	
Total Better . . . . 65			

TABLE IV.—CONTINUED.

## NO BETTER.

Class of Ages.	Ages of Individuals found in each Class.	Number of Persons of each Age.	Number of Individuals in each Class.
CLASS I. Under 10 Years.	0	0	0
CLASS II. From 10 inclusive to 15.	0	0	0
CLASS III. From 15 inclusive to 20.	18 19	1 1	2
CLASS IV. From 20 inclusive to 25.	21 23	1 1	2
CLASS V. From 25 inclusive to 30.	25 26 28 29	1 1 1 1	4
CLASS VI. From 30 inclusive to 35.	30 31 32 33	2 2 1 1	6
		Carried up . . . .	14

## NO BETTER CONTINUED.

Clafs of Ages.	Ages of Individuals found in each Clafs.	Number of Perfons of each Age.	Number of Individuals in each Clafs.
<i>Brought up . . . . 14</i>			
CLASS VII. From 35 inclusive to 40.	36	2	3
	37	1	
CLASS VIII. From 40 inclusive to 45.	40	2	5
	42	2	
	43	1	
CLASS IX. From 45 inclusive to 50.	45	1	2
	49	1	
CLASS X. From 50 inclusive upwards.	54	2	8
	55	2	
	56	1	
	58	1	
	61	1	
	64	1	
Total No Better . . . . 32*			

\* The ages of three of the patients discharged No Better, were omitted in the Hospital Register. Those likewise that died are not included in this account.

## TABLE V.

OF THE SEASONS OF THE YEAR AT WHICH THE  
BATH WATERS APPEAR TO HAVE BEEN MORE  
OR LESS SUCCESSFUL.

Number of Patients admitted during the Course of each  
Month.

	Cured.	Much Better.	Better.	No Better.
January .....	7	16	2	3
February .....	11	12	5	3
March .....	15	10	4	4
April .....	13	7	2	2
May .....	19	12	8	4
June .....	15	13	6	2
July .....	13	18	4	4
August .....	13	16	4	0
September ..	15	14	11	5
October .....	11	14	8	2
November...	9	19	7	4
December...	13	16	4	2
Total .....	154	167	65	35

Average Stay of Patients admitted during the Course of  
each Month.

	Cured Stayed.	Much Better.	Better.	No Better.
	Days.	Days.	Days.	Days.
January .....	82.57	119.25	122.75	108.66
February .....	96.36	124.9	115.2	115.
March .....	78.6	123.5	107.	121.8
April .....	93.92	121.57	116.	42.
May .....	86.68	141.08	87.25	76.
June .....	84.53	138.08	113.	67.5
July .....	72.3	121.17	159.2	84.25
August .....	18.8	148.75	149.5	—
September ..	107.05	138.	123.27	89.6
October .....	87.72	131.37	141.5	167.
November...	99.67	105.3	154.28	155.
December...	91.3	170.1	126.2	41.5

AVERAGE STAY OF PATIENTS ADMITTED DURING THE SIX SUMMER AND THE SIX WINTER MONTHS, EACH TAKEN COLLECTIVELY.

Six Summer Months.

Cured Stayed.	Much Better.	Better.	No Better.
Days.	Days.	Days.	Days.
83.481	132.358	121.99	65.258

Six Winter Months.

Cured Stayed.	Much Better.	Better.	No Better.
Days.	Days.	Days.	Days.
94.115	131.49	130.525	112.63

The six Summer Months are accounted to be, March, April, May, June, July, August.

The six Winter Months, September, October, November, December, January, February.

OBSER-

## OBSERVATIONS

RESPECTING THE FOREGOING CALCULATIONS.

## T A B L E I.

THE Table here referred to affords a full and decisive testimony of the advantage to be reaped from the use of the Bath Waters in rheumatic cases. The safety of the remedy is manifested as well as its efficacy. Few, if any persons, appeared to have their complaints materially aggravated by the trial of the Waters, and the proportion of cases that terminated unfavourably, is smaller than could well be supposed. That the period here stated may not be thought to be selected as one that was *particularly* favourable to the effects of the Bath Waters, I have produced another \* formerly published, of five years duration, and the result of each will appear as similar as could be expected in the natural fluctuation of such events.

During the period from May 1st, 1785, to November 19th, 1793, the proportion of *Cured, Much Better, Better,* and *No Better,* was to the whole number admitted, with the exceptions as above specified (424), as follows :

The persons <i>Cured,</i> were to the whole, as . . . .	1 to 2.7532
Those discharged <i>Much Better,</i> as . . . . .	1 to 2.5389
Those discharged <i>Better,</i> as . . . . .	1 to 6.5231
Those discharged <i>No Better,</i> as . . . . .	1 to 11.158
Those who received Benefit were to the whole,	
as . . . . .	1 to 1.0984
Those who received Benefit, were to those who	
received No Benefit, as . . . . .	10.158 to 1
	During

\* Medicinal Effects of the Bath Waters, p. 148.



During the period from the beginning of the year 1775, to the end of the year 1779, including the space of five years, three hundred and sixty-two patients were admitted into the Bath Hospital. Of these, one hundred and twenty-seven were Cured, one hundred and forty-four were Much Better, forty-two were Better, forty-one were No Better, and eight Died, four of whom died of the Small Pox. This last circumstance reduces the whole number, from which any calculation should be drawn, to three hundred and fifty-eight. The relative proportions of these numbers are as follows:

The number of persons Cured, is to the whole,	
as.....	1 to 2.8189
Those Much Better, as.....	1 to 2.4861
Those Better, as.....	1 to 8.5238
Those No Better, as.....	1 to 8.7317
The number Benefited is to the whole, as..	1 to 1.1438
The number Benefited is to them who received	
No Benefit, as.....	6.9556 to 1

The success of the Bath Waters, during the two periods above mentioned, does not materially differ. The proportion of persons Benefited, is considerably greater in the period which is latest in point of time; but the two most important articles, namely, of those who were discharged Cured, and those discharged Much Better, are nearly on a level.

Both these accounts prove the advantages of the Bath Hospital to the improvement of the knowledge of the effects of the Bath Waters, as well as to the immediate relief of many suffering individuals.

I have been informed by the late Mr. Wright, who was appointed Surgeon to this charity, at its first institution,



about the year 1741, and was a most unexceptionable authority, that it was then proposed to exclude rheumatic cases from the Hospital, on the idea of their being unlikely to receive benefit from the Bath Waters; and that it was with difficulty that he and some other of his friends could prevail so far as to have a trial made. We may fairly presume that this opinion was founded on very partial experience, and trust that no doubts will again arise on this subject, as long as the Bath Hospital, or its records, are suffered to remain.

### T A B L E II.

THIS Table requires no explanation. It affords, however, a very important piece of information, respecting the time of stay necessary to reap the advantages of this remedy. How few of those afflicted with rheumatism, who resort to this place for relief, exclusive of the Hospital Patients, make a stay of 57 days, which is no more than one-half of the average time of stay of the persons discharged *Benefited!* It is not therefore extraordinary that more persons, in proportion, should receive benefit in the Hospital, than in private practice.

### T A B L E III.

IT is observed by Hoffman, that women \* are more liable than men to complaints of this kind. The proportion that men bear to women in this table, would lead to an opposite conclusion, the number of men admitted being to that of women, as 1.9041 to 1.

It is however observed that women, perhaps from a shyness and modesty natural to their sex, are less forward in general to apply for admission into Hospitals, than is the case

\* Medic. Rat. Syst. de Rheumatismø.

case with men. There are, accordingly, fewer beds for women than for men, in the Bath Hospital; nevertheless the balance is kept pretty exact in point of satisfying all the applications from both sexes. The success of the Waters is rather in favour of the men,† but the difference is not considerable. On the other hand, three men died, which was not the case with any women.

#### T A B L E IV.

THIS Table may require some explanation. It is arranged, like the others, under the heads of *Cured*, *Much Better*, *Better*, and *No Better*. The *first* column of each head towards the left, contains the ages of the persons admitted who are ranked under that head. These are divided into ten classes; the first containing all under ten years old, and proceeding upwards, by intervals of five years each, to fifty years, all beyond which are accounted as one class only. The *second* column contains all the ages found in each class; the *third* contains the number of persons of each of the ages set down in the second column; and the *fourth* column expresses the whole number of individuals collectively, which are contained in each class. Thus, if we look at the *third* class, under the head of *Cured*, we find in the first column, that it contains all the ages from 15 inclusive to 20. The second column indicates, that there were under this head persons of the ages there set down, namely, of 15, 16, 17, 18, and of 19 years of age. The third column informs us, that there were three persons

† As 146, the number of women admitted, is to 130, the number benefited, so is 278, the number of men admitted, to 247.53, which last would be the number of men who received benefit, supposing the proportions to have been equal. But the *real* number of men benefited was 256, which does not amount to a difference of proportion greater than as 31 to 30.

of 15 years old, three of 16, five of 17, four of 18, and three of 19. The fourth column gives the sum of these (namely 18), being all the persons of the ages specified in Class III. under the head of *Cured*.

This Table points out a period of 15 years, namely, that which extends from 20 inclusive to 35, as the most liable to the rheumatism, and at the same time the most capable of receiving relief from the Bath Waters. We find that 78 persons, out of the 154 Cured, which is rather more than one-half, were within these limits of age. Of those discharged *Much Better*, 66 out of 167 were comprised within the same bounds, which is in the proportion of nearly two parts out of five. Of those discharged *Better*, 26 out of 65 were contained within the same limits, which is exactly the proportion of two-fifths. Of those discharged *No Better*, 12 patients out of 32 are within these limits, which proportion is less than two-fifths, but more than one-third. It should however be observed, that this head of the Table is set down as imperfect. If we take the whole number Benefited (namely 386), we shall find that 171 of these were within the ages of 20 inclusive and thirty-five years. This proportion is nearly as  $22\frac{1}{2}$  to 10.

If we reflect that the interval from 20 to 35 years of age, includes the most vigorous, active, and enterprising stage of life, and the one of course most exposed to inclemency, fatigue, and hardship, it will sufficiently account for the frequent appearance of a disorder which originates from such causes; and the same vigorous and active period will account for the numerous recoveries that are observed to take place from the use of a remedy, so well calculated to restore strength, and to excite the powers of life.

But though recoveries and amendments may be more frequent at the stage of life just mentioned, it is comfortable

to reflect that this disorder, even at an advanced period of life, is not incapable of relief. Eleven persons, of fifty years old and upwards, received a complete cure, and two of these were 60 years old. Under the head of those discharged Much Better, the report is considerably more flattering. Forty-one persons, all of them upwards of 50 years old, 16 of whom were above 60, two of 74, and one of 75 years of age, received great benefit, and were indeed nearly cured.

Besides these, 13 persons, all of them upwards of 50 years of age, received evident and real benefit, though not to the degree of those included under the two former heads.

Eleven persons only, upwards of 50 years old, were discharged No Better, and three died.

The proportion of those of the above age, and upwards, who received Benefit, to those who received no Benefit, is nearly as 4.6428 to 1, or somewhat more than  $4\frac{1}{2}$  to 1.

## T A B L E V.

THE intent of this Table is to assist our judgment respecting the seasons of the year at which the trial of the Bath Waters, in this disease, is most likely to prove successful.

We may form our judgment on this question from two circumstances, one referring to the *numbers* cured or relieved at particular seasons, and the other referring to the *time of stay* necessary to complete the cure, or produce the amendment.

I mean to examine, though in a cursory manner, each of these separately.

We

We find in the preceding Tables, that the numbers *Cured* (of those admitted during the six months of Spring and Summer) amounted to 88; whereas of those admitted during the Autumn and Winter months, 66 only were *Cured*, the proportion between which is nearly as 1.33334 to 1, or somewhat less than as 4 to 3.

The month of May is, as might be expected, found to be the most favourable, as the warmth of the weather at that season is, for the most part, permanently set in, and there is the longest prospect of its continuance.

The account of Patients discharged *Much Better*, is less favourable than the former, to the above supposition respecting the advantage of warm seasons.

Seventy-six persons only were discharged *Much Better*, who were admitted during the Spring and Summer months; whereas 91 were discharged in the same state, who were admitted during the Autumn and Winter.

The account of those discharged *Better*, rather corroborates, in fact, what had been before advanced, respecting the advantage of warm seasons: 28 persons out of 65 having been discharged in this state, of those admitted during the Summer months, whilst 37 were so discharged of those admitted during the Autumn and Winter. The imperfect nature of the relief afforded may possibly be in part owing to the unfavourable season.

Of those discharged *No Better*, 16 were admitted during the Spring and Summer months, and 19 during the Autumn and Winter, which in some measure corroborates the opinion before held.

The number of Patients *Benefited* (of those admitted during the Spring and Summer months) amounts to 192, and those *not Benefited* to 16. The proportion of these is as 12 to 1.

The



The number of Patients *Benefited*, of those admitted during the six Autumn and Winter months, amounts to 197, and those *not Benefited* to 19. The proportion of these is as 10.393 to 1.

But the number of Patients discharged *Cured*, or otherwise *Benefited*, is not the only criterion on which our judgment respecting the seasons of the year, which are most favourable to the use of this remedy, should be founded. The time of stay necessary to procure this relief should also be taken into consideration, it being obvious, that the shorter the time in which the benefit is procured, the more effectual the remedy.

In order to illustrate this part of the Table, it will be proper to refer back to Table II. in which we shall see that the average stay of the Patients in general was .....

was .....	113 days nearly.
Of those dismissed <i>Cured</i> .....	89 days nearly.
Much Better .....	132½ nearly.
Better .....	128 nearly.
Of those <i>Benefited</i> .....	114.
No Better .....	98.

On comparing the above Table with the one now properly under examination, we shall find that the stay of the Patients dismissed *Cured*, who were admitted during the months of February, April, September, November, and December, exceeds the average of the Patients *Cured* by somewhat less than 1-10th part, whilst the remaining months fall short about 1-18th part. Also, that four out of the five months above specified, fall in the Autumnal or Winter division. Also that the average of stay of the persons discharged *Cured*, who were admitted during the six Summer months, falls short of the general average about 1-17th part, whereas the stay of those admitted during the six Winter months

months exceeds it rather more than that proportion. That the whole difference of stay between those admitted during the Summer, and those admitted during the Winter months, amounts to full ten days, a time sufficient to authorise a decided opinion in favour of the former.

The time of stay of those discharged *Much Better*, varies but little from the general average.

Under the head of *Better*, the time of stay amounts to about 1-12th part, or nearly ten days, in favour of the Summer months.

If then we take both the above circumstances conjointly, namely, the difference of the number of Patients, and the difference of the time of stay, it affords sufficient foundation for our judgment respecting this question.

---

I have thus finished what I meant to say on this subject. Little more than a plain statement of facts was meant to be delivered, and these expressed in as plain and intelligible a manner as I was able. This has, I apprehend, rendered the style less agreeable than might be wished, from the repetitions which are often necessary to render the sense unambiguous. If, however, the meaning be clear, the reader will, I trust, be disposed to excuse the other defect in a work which aims professedly at no more than being a narrative of events, with the addition of such conclusions only as were natural and obvious.

FINIS.

