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**Contributors**

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LONDON  
Experienc'd Measures  
How to Manage the  
SMALL POX;  
AND  
DISSERTATIONS  
UPON THE  
INGRAFTMENT of that DISEASE.

By EDWARD STROTHER, M. D.  
Of the COLLEGE of PHYSICIANS,

The Second Edition Corrected.

With a New Prefatory ADDRESS  
to the INOCULATORS.



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THE UNIVERSITY OF CHICAGO

PHYSICAL CHEMISTRY

THE UNIVERSITY OF CHICAGO

AND

DISSERTATIONS

BY

THE UNIVERSITY OF CHICAGO

BY EDWARD M. D.

OF THE FACULTY OF PHYSICIAN

OF THE UNIVERSITY OF CHICAGO

WITH A NEW PREFACE BY A. D. R. 1922

CHICAGO



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A Prefatory

# ADDRESS

TO THE

## INOCULATORS.



HE many Inventions lately made known to the World, in other Arts and Sciences, must convince the thinking Part of Mankind, how large a Tract of Physick also lies yet uncultivated; and it is the Duty of every Physician to embrace every, tho' the minutest, Discovery made in this Art; but if any Advance of a momentous Nature shou'd be display'd to us; it behoves us to waite as our Ancestors did in former Days; for History informs us, that Patients, either



gave others what was found to succeed in the same, or like Cases, or brought them to the Road-side, that Passengers might tell them what they had found beneficial to themselves in the like Circumstances, which their Priests carefully registred in their Archives: In those Days then Physick was purely Empirical, they were contented with curing by Analogy, they wanted the Assistance of our present Discoveries, and happy were the Sick, when they found the Passenger's Case to tally with their own. So that in those Times, Chance added Bulk to the Register's, and the only Glory the Priests had, besides the Diligence of inrolling, was giving Titles or Names to the Diseases and Medicines.

From whence it appears, that *Invention* is twofold; the Invention of *Names* and of *Things*. To distinguish Things the easier, it was necessary to impose *Signs* upon 'em; and so far the Invention of *Names* may properly be said to be necessary; but

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I fear we are more *Occamists* of late, than is consistent with good Sence; since I see it usual to give Names to Parts, Diseases, Medicines, and Operations, which were well enough christen'd before; and young Students believe they have convinc'd the World of the Insufficiency of the Skill of the advanc'd, when they chance to give their new Name to a *Part* or *Disease*, which their elder Brother has never been appriz'd of. This *Foible* we owe to the *Reveries* of low Wits; for surely 'tis the lowest and most abject Piece of Vanity, to load a Science with bare Titles; what Art has more Names already, than Physick, without any other Reason, than that some of its Professors were sick of the old, and did therefore add new ones? And as each Age has abounded with such Triflers, the present seems to be in Humor not to degenerate. For my own Part, I am very easy under such a State of Affairs, I can receive Names as I have always done,

done,



done, and submit to pay all the Honour such Inventors can justly claim of me; and thus much for Invention of Names.

The second and truly valuable Invention is that of *Things*. What Honours are not due to the *Names* of *Harvey*, to *Wharton*, to *Nuck*, to *Steno*, to *Ruyfcth*, to *Willis*, to *Sylvius*, to *Sydenham*, and to all the late Authors, who have augmented the Certainty of Reasoning in Physick? That Physician, who gives us a new Prognostick, a new Diagnostick, whether of the Disease, or its Cause, or a new Method of Curing, is a valuable Man in his Profession, he points us out a Road to elude Death: And what greater Obligation can he lay upon Mankind, than to save their Lives? As I have mention'd the Discovery of the Cause of a Disease, give me leave to affirm, that this is a Discovery of the greatest Importance of any in Physick; for it leads us directly to the Method of curing a  
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Disease: Now I readily conceive, that the ordinary and common Methods, made use of for this Discovery, are defective and fall short of leading Practitioners, especially the younger Sort, into a sufficient Scrutiny of this Part of our Profession: We are sure of Honour, in such Proportion as we discover the Causes of Diseases; because we are respected proportionably to our Success; and as no Cure can be completed, but by Medicines or Methods contrary to the Causes; so those Causes being discover'd, are a sure Introduction to Cures, and those to Honour. If then an easier Method were ascertain'd how to come at the *antecedent* and *conjunct* Causes, Physick and Physicians might again be brought to the same Pitch of Honour *Hippocrates* himself was advanc'd to; they might again be courted by Kings. To what a Pitch was one of our own Body advanc'd to of late, for his Reputation, real or feign'd, of this Part of Knowledge! Lives were deem'd lost, who



who had not the Sanction of his Pen! He cou'd advance an Empirick, and tumble down the learned and truly experienc'd Physician, with a Frown, or a Nod! How he rais'd this Confidence in Mankind, is another Point: If Men raise their Reputations thus high, by a fancied Ability, what will a real one advance them to? Perhaps it wou'd be no unpleasent Speculation, to digress further into the Measures proper to lead us into the Knowledge of these Discoveries, nor shou'd I be unwilling to give myself a Loose in this Affair: But the Bounds of a Letter must not be exceeded, and an Enquiry into the Comparisons between regular and vitiated Functions, Secretions, and sensible Qualities; a full scrutiny into the natural and preter-natural Quantities, Qualities and Motions would be the Work of an Age; and by Consequence wou'd prove an unheard of and unwieldy Letter, and therefore I shall drop this bulky Affair, and only give  
some



some short Hints how we may set about to fish out such Inquiries, in order to raise a lasting and satisfactory Reputation to our selves, and to prove beneficial to such Persons as commit themselves to our Care. I believe the sincere Part of the Profession will agree with me in affirming, that Inquiries, as manag'd at present, do often only answer the End of Gain; to say further, wou'd discourage or disoblige: But if Causes of Diseases lay at the Surface, Hurry's were more excusable. In fine, the readiest Method to discover Diseases and their Causes, is to be Masters of the regular Functions, Secretions, and Qualities; for if we be not well appriz'd of *these*, how shall we distinguish the depraved from them? If the Office, for Example, of the Liver be to separate Bile, and the Bile's Office be to advance Concoctions, by correcting the Acidities, and hindring Coagulations; as also to irritate the Intestines, that they may push off the grosser Excre-



ments by Stool; and give them a proper Colour; is it not natural to conjecture this Secretion to be vitiated, when we perceive our Stomachs inflated upon Digestion: When we see our Stools of a white, black, or other vitiated Colour; these are Signs, that that the Function of the Liver is vitiated; and the *Seat* of the Disease being thus known, we are then to inquire what *Genus* or *Head* of Vitiation the Disease residing in the Liver appertains to; to wit, whether the Fluids or Solids, *Superflua*, or all of them are vitiated; also their *Species*, to wit, whether their *Vitia* retain to the Quantity, the Quality or Motion, singly or jointly: *Lastly*, in what *Order* they invaded us, the *Number* of Causes, their *Quantity*, and the *Manner* of the Disease; whoever fails in any one of these Points, fails in all. To descend to Particulars here, as I have already said, is impossible; but giving a Sketch of the Management in any one Case, will incite young  
Gen-



Gentlemen to imitate the same Method in all : Wherefore in the Case now mention'd, by the Concoction deprav'd, and the whiteness of the *Faces*, I know the *Seat* of the Disease to be in the Liver; and if a violent Pain accompanies this Viti-ation, always on the right Hypo-chondre, without a Fever, and not removing its Place, and a Jaundice attends, it is a Sign of the *Stone* in the *Ductus choledoctus*; which is a Disease in *Number* : if the Per-son, thus diseased, has been greedy of a Tartareous-Diet, in which stony Particles reside and lurk, or Con-cretions have preceeded : If Convul-sions succeed, they are secondary, and the *Order* is thus denoted : The Stone in the Duct and Convulsions are two distinct, tho' not independ-ent Disorders, and to be remedied differently. *Lastly*, In order to pro-portion the Remedy, we have a Regard to the *Violence* of the Pain, &c. For the *Manner*, it has no



Consideration in the present Case. Now all these Circumstances, in every individual Case, being nicely consider'd ; we are lead by the Hand into a proper Method of Cure for each Cause of such Cases: If to this Method we were possess'd of an abridg'd Manner of Prognostication (as surely is very possible, as I could convince any reasonable Person of) it could not fail of being a natural, and complete Body of Practice.

I hope I need not explain myself more exact, or fully to such Gentlemen, as have heard the *Lectures* I made last Winter on these Particulars ; this Comfort they have, that they have seen it prov'd full and regular in every Branch and Article. And as I have expended a Quarter of a Century on the reducing it to this Regularity, and Perfection, it will not be look'd on as vain to tell the World, I will stand in the Defence of it against all Opponents



ponents whatever; for Facts will bear Defence.

Good Inventions carry their *Criteria* along with them; for as *Ovid* informs us, *nil, nisi quod prodest, charum est*: The Increase therefore, or Preservation of Health and Life, are the only *Criteria* of good Inventions in Physick, *Names* are out of this Question. Methods then which are shorter, more easily retain'd, in a more natural Order, which distinguish Causes into their minutest Circumstances, and which also are nearly demonstrative in Physick, must merit a Character proportionable to their Certainty: Here I shall drop any favourable Assertions concerning a Method of Practice thus regulated; and pitch upon a late Practice introduc'd amongst us, that is, *The Inoculation*.

All useful Inventions ought to be encourag'd by Men of Probity and Learning. To what other Purpose has this Nation erected Societies,  
com-



compos'd of Men equal to their Underdertakings, great and learned, ingenious and indifatigable, sincere and generous, careful in their Inquiries, yet modest in their *Rationale's*. If an Invention be started, where we may reasonably doubt, whether it will be useful, Time and repeated Trials are requir'd to pronounce upon it. I look upon it to be as unreasonable a Proceedure to decry such Inventions, as to raise their Value, before sufficient Proofs: This Custom seems to take its Origin from Fear on the one hand, and Gain or Ambition on the other, and therefore these Praises and Dispraises ought to be deem'd Prejudices on either Hand, which Men of Honour on either Side of the Question will always disclaim.

I presume neither the Inoculators, or its Antagonists, will be so foolhardy, as to affirm, there is any Demonstration made on either Hand. Deaths happen by Infection, and  
Deaths



Deaths also happen by Inoculation: The Inoculators affirm, that one dies in Ninety-one, the Antagonists on the other hand say, fewer dye by Infection, and that the Inoculators have never suffer'd some Deaths to come to publick Notice. I see no probability of these Gentlemen's coming into Measures, and therefore I shall reason according to my own Sentiments, which either Side may approve of, as they think convenient. As I am byass'd by neither Party, I will act impartially, and, I hope, upon sufficient Grounds.

*First,* The *Inoculators* affirm, that in *Turky* none dye of the *Inoculation*; tho' I don't discredit *Timoni*, I believe a narrow Inquiry would be necessary to determine this Point; he was a Favourer of Inoculation, and I'me afraid too much Credit is not to be given to Party-men. Our Inoculators were full as well assur'd of the like Success in *England*, at their first setting



setting out; nay Mr. *Maitland* wou'd not allow *Pilarini's* History in the Transactions to be a dangerous Kind; Time and Trials have made it out, that two, nay more, have dy'd in *England*, and six in *New-England*, after Inoculation: This Assertion then is notoriously false, say the Antagonists.

Secondly, They affirm, That none have the Flux-Kind upon Inoculation, but that such, as chance to have this Sort, have receiv'd the Infection before. This say their Adversaries, is an ill-natur'd Evasion, somewhat like a Calumny too commonly practis'd with some dishonourable Men of the Faculty, to wit, that the Patient dies of the Physician first employ'd. Since then they have no *Criterion* to discover whether Patients have receiv'd Infection before Inoculation, it may be reasonably demanded of them, why they ever inoculate at all? Or however it may be asked, whether Preparations



rations have not the same Effects upon Humours before Infection as before Inoculation. For if there are no Signs to discover the Infection receiv'd into the Blood, then Inoculation is always precarious; and those, who allow Preparatives useful to fit Persons for Inoculation, must also grant 'em necessary before Infection: For if taking off the Plenitude does good, that Good is equally useful before either Mode: From whence these two Diductions are demonstrative, to wit, that Preparatives are equally useful before Infection, as well as before Inoculation, and that Inoculation is always precarious. So that either Infection can be made equal to Inoculation, or Inoculation is always a dubious Operation. Therefore it lies upon the Inoculators to prove that Preparatives are not useful before Infection, which will also prove, that they are useless before Inoculation; and they must admit the Inoculation always to be precarious: Or if they



agree, that Preparatives are of use before Inoculation, they must by virtue of the same Reasons allow them useful before Infection, and then Infection would always bring on a kindly Sort : But the full Truth of the Fact is this, to wit, that Preparatives are found of no use for preventing the Number of the Small-Pox ; and both Parties have found by Experience, that Patients will fall Sick of the Flux-Pox after due Preparatives, whether they have them by Infection or Inoculation.

*Thirdly, They affirm, That the Small-Pox, given by Inoculation, never infect others ; which is quite otherwise in Infection ; and therefore Inoculation is preferable to Infection. This the Antagonists have prov'd to be a mere Baite to catch the unwary, for which they produce the Infection brought on at Hertford by Inoculation ; and it appears reasonable to think, that this Poison put into Motion*



tion will exhale and act again as Poison; methinks it appears fully as reasonable, that *Barme* taken off from strong Beer, and put to ferment Wort again, shou'd make this strong Liquor also, without having the Power of fuddling. There are the identick Quality's communicated by Inoculation, as well as by Infection, as there are in these strong Liquors, by Virtue of the Ferment: Expose this Ferment of the Inoculators to the Air for a while, and it loses its Force, altho' the Weight be nothing diminish'd; which plainly shews its Energy is in the *Steam*; this they will not deny, because they look upon it as necessary to keep this Ferment warm in some thin Vessel in their Bosom's, till it is inoculated; But Effluvia from Matter taken out of the Pustules differ in nothing from the same Effluvia exhaling thro' the Pores of the Skin; wherefore both Effluvia are identick: Now identick Causes produce equal Effects; wherefore



fore Inoculation cannot fail of infecting, and this may also serve to prove, that when Persons are inoculated or infected the *Effluvia* will produce equal Effects. From whence it may justly be inferr'd, that the same Person infected or inoculated, will have the same Sort of Small-Pox either way. And that the Poiton communicated differs not from itself, but only varies its Effects, according to the Disposition of the infected, which was what I advanc'd before, as may be seen in the following Pages.

The certain Assurance given us of Success put the Question, concerning the Legality of such an Operation, out of Countenance. But now the Inoculators are call'd upon to give good Reasons, why some few have died by Inoculation, for one died of Fits, and another of a Pleurisy. I knew a Person dye of Convulsions, who had swallow'd a Dram of *Arsenick* twelve Hours before ; by  
this



this Reasoning, the Man dy'd of Fits, not by *Arsenick*; the same Argument wou'd excuse a Criminal, who had given this Poison to the Man; for 'tis only answering the Judge, he dy'd of Fits; and as Judges are Men of Sense, and will favour Life, surely the Prisoner is no Criminal.

At best, Inoculation is giving Poison, the Intention excuses the Murder indeed, if any dye; but the Antagonists affirm, that some were inoculated at *Hertford*, without the Consent of the Parents; therefore this is giving Poison, say they, to Persons against their Will: *A Man carried his Father (being sick, and against his Will) in a frosty and cold Time, from one Town to another, and the Father dyed thereof, this was adjudged Murder in the Son. 2 Eliz. 3. 18. One layeth Corruption at another Man's Door, — — and the other Party taketh Infection by the Savour thereof, and dieth; this is Felony, Lect. M. Cocks.* How far these two last Points favour



favour the Inoculators, where Poison communicated to Persons against their Wills destroys, I will not take upon me to determine, but leave it to the Antagonists to dispute: The Design is to try to lessen a Mortality too common from this raging Distemper; and the Question is how far it can be effected. Deaths having follow'd Inoculation gives rise to a Question, *whether in Foro Conscientia such a Practice ought not to be prohibited; or whether it be a probable Opinion which may be lawfully follow'd.* It is not the Numbers who live after Inoculation, that determines this Question; for suppose only one in a thousand to dye by Inoculation, and one in five by Infection, the Question still lies upon the Inoculators to answer, how far they may *In Foro Conscientia* pursue this Operation. Upon inquiry, I find *a probable Opinion may be follow'd, provided all Danger and Injury to our Neighbour be seclud'd;* for in Supposition of Danger

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ger or Injury, the safer Way is to be follow'd; and it is suppos'd less safe, because it is directly opposite to a Precept *Thou shalt not kill*. Now the Antagonists say, the Inoculators cannot affirm, that this Person, they are about to give the Disease to, will live, and therefore they are not sure but Death may ensue, which they occasion'd. The Inoculators may reply, we are not sure that cutting off a Cancer, or a Limb will save Life, and yet we attempt it and advise it daily: But this Answer falls short, for here we are endeavouring to procure Relief to a Disease, we did not give. So that when we give a Disease, and by that Disease Death to a Patient; tho' we kill but one in a thousand, 'tis the voluntary Destruction of one Subject to the King in a thousand by my Hands, and is question'd how far it is lawful: For who has given us a Power over the Life of our Neighbour? And I don't only hold this a Moot-Point, as to *Inoculation*, but shou'd



shou'd be very scrupulous also to expose those committed to my Guardianship, to Infection from a kindly Sort; because I am not sure, that I don't expose them to Danger of their Lives here also.

But if this Danger shou'd be greater, and if more than one in a thousand shou'd dye, as the Inoculators easily allow; then the Validity of the Argument increases, and our Caution ought to be greater. The Inoculators have frankly allow'd, that more than one dies in a hundred by Inoculation, for out of 482, 8 died of this Operation, that is nearly one in fifty. Now allowing this Computation just, out of 1500000 of People, which we may upon tolerable Grounds compute to be in this *Metropolis*, (if we consider the increase of Houses and Souls since 1684), 20000 dye yearly, that is, a 75<sup>th</sup> Part dies yearly of the whole, and as out of  $\frac{1}{75}$ th Part, only  $\frac{1}{14}$  Part dies of the Small-Pox; then only one out of



1050 dies of the Small-Pox. Now as far as my Practice has given me opportunity to observe, the Chance of having the Distinct, to the Chance of having the Flux-Sort, is nearly as 6: to 1. the Chance of having the Coherent-Kind, to that of having the Flux-Sort, is as 3 to 1. So that the Chance of having a Small-Pox, easily curable to that of having a dangerous Sort is as 9 to 1. And lastly, the Chance of being cur'd of the dangerous Sort, is nearly as 9 to 1. if well manag'd; or however, I have found that more than 8 out of 10 have been sav'd by Methods truly regular: So that the Chance by *Infection* and *Inoculation* will still be found to be equal; which is what I have always believ'd, and truly I have no Reason yet assign'd to draw me over to a contrary Opinion. It will not be denied, that many die, who by good and proper Means might have been sav'd; and if the Phyfici-



ans employ'd to fish out the Numbers dying by Infection, had been call'd to their Assistance when ill, I make no doubt, we shou'd have had a Bill of Mortality much more moderate, than 856 out of 4626. So that this Computation wou'd on that Supposition, have been abated considerably, and will always be found to do so upon Physicians truly skilful, being employ'd.

Funerals then are often the Consequence of improper and irregular Managements; nor can such as dye of ill *Regimen* be brought into the Number. If we wou'd aim at an Equality in this Affair, let a certain Number of Physicians agree to follow the different Methods propos'd in Authors; let their Patients be equal by Election, in a dangerous Condition; let them pursue these Methods for a considerable Time, and they will then discern, which Method is the most eligible: Let them



them follow the most successful Method by Consent: Let them lastly, inoculate and infect (for both are equally lawful); and compute the Escapes and Funerals. Till some such Method is agreed upon, we reason in the Dark.

For my own Particular, I declare I am no Enemy to Inoculation, because I am fully perswaded it will be found a trifling Invention; and therefore I am very little concern'd, how much it goes forward, so that I have no Hand in the Advancement of it. The Antagonists are too warm against it, and this Heat makes it appear to the Spectators, a Policy in them. The Number of Physicians that advance and promote it are few, and perhaps may not effectually bring it into Vogue. And as it is certain, they will come off with Confusion, let them proceed: Where will be the Difference at last, to be call'd in to visit a Patient dying of Inoculation, or of Infection?



People will be taught by frequent Deaths, that Providence is only to be entrusted: It will at length appear, that *Inoculation* is only a good, but not the true Reason of their Sect: For the Inoculators being in Possession of their Patients, must not be deserted by them; in which Case Inoculation and Fees become inseparable: From whence perhaps it is, that the Summer Season being, for the most Part, a vacant one, Inoculation will save them expensive unprofitable Journies.

*Non Ego omnino Lucrum omne esse  
utile homini existimo.*

*Scio ego, multos jam lucrum lucu-  
lentos homines reddidit.*

*Est etiam ubi profecto damnum  
præstat facere, quam lucrum.*

I have



I have endeavour'd to bring those Arguments only against Inoculation, which I perceiv'd others had not touch'd upon, and the Subject seems almost exhausted: So that People are now left to choose which Side they judge the safest, which I am convinc'd, will be found at last their confiding in Providence.

Since I am of the Opinion, that Inoculation, how closely soever pursued, will never Answer the Ends of the People, give me leave to say something concerning a Method, which I have spoke of heretofore in my \* *Criticon Februm*; to wit, *The Application of Suppuratives to the Pustules of the Face.*

To make this Advance appear reasonable, it will be necessary to trace the Parts of the Face, the Motion of the Humors, the Injuries done by the

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\* p. 131. Ed. 2.



Small-Pox residing there, and then the Application of Remedies, and their use.

The Parts which the Small-Pox are troublesome to in the Face and Jaws, are the Glands inserted into the Mouth, and the miliary Glands of the Skin: the Glands which separate the *Saliva* into the Mouth are the *Parotides*, (*conglomerata* and *conglobata*); the *Maxillares*, the *Amygdalæ*, the *Sublinguales*, and the Glands of the Palate and Jaws; these Glands have Ducts from whence a constant Supply of *Saliva* is afforded to the Mouth, to serve for various uses; to wit, it moistens the Victuals and mixes with them, so that it occasions a Fermentation, or intestine Motion in the Parts of the Victuals, by which it divides them into Parts, and they are thereby prepar'd to part with the alimentary Tincture, and to turn the more easily into Chyle.



But this is not the only Use Nature makes of these Ducts and Secretions for in Fevers they do often throw out the morbifick Matter, and such an Evacuation is at all Stages of the Disease critical, that is, useful, alleviating, evacuating noxious Humours; and in this Manner it is, that Fevers are most certainly and suddenly cur'd and carried off; whenever this Evacuation becomes considerable, all the perplexing Symptoms first are abated, and then do vanish; we study to promote this Flux and keep it on foot, as long as the Disease requires, and the Strengths of the Diseas'd will bear it: If it runs plentifully, the Driness, the nervous Symptoms, the Suffocations, the Watchings; the *Deliria*, and all the dangerous Consequences are avoided; but if it is by any Chance suppress'd, the Fever rekindles, and all that is, or may be call'd Dangerous ensues, and in the Small-Pox the Patients seldom survive the Suppression many Hours.

As



As it is natural to admire, how such an Evacuation shou'd be of so great Consequence, 'tis necessary to take a short View of the Nature of it, and of the Fever also.

We see that *Saliva* is of a very cohering Nature, and the Glands and Ducts which seperate it, must be much larger than other secretory Ducts elsewhere; and notwithstanding Persons labour under a Fever, yet still this Liquor continues to stick close together, and is glutinous: Nay, tho' in a Fever, the Heat is equal to Water boiling on a Fire, yet still this Liquor continues glutinous and Coheres; which shews the attractive Force of this Liquor to be great, when so much Fire, does not separate its Sphere of Attraction.

In the Beginning of Fevers, the morbifick Matter has a peculiar *Lentor* and *Cohesion* in it, which in Procces of Time becomes more attenuated, and more fitted for Expulsi-  
on



on by the usual Draines. It appears manifestly, why these Ducts can at any time throw off this morbifick Matter, more conveniently than smaller ones, provided they run that way plentifully, and consequently why a Flux thro' these Ducts, is reputed Critical at all Times, but not elsewhere; for any cohesive Liquor will flow this way easily or any Degree of Cohesion in a Fluid, does scarce hinder its Efflux thro' these Ducts, provided it turn not a Solid by a strong Coagulation: So that its Suppression seems oftner to be the Consequence of the Fault of the Ducts, than of the Fluids, and we frequently experience the cold Air to suppress this Flux more readily than any other Cause whatever; 'tis true the Air has a mighty Influence over the Fluids of human Bodies, but then the Fibres being more immediately under, its Influence; 'tis great odds, that they, generally speaking, are primarily affected;



fected; that is, they are constring'd, indurated, inflam'd, and become thereby impassable : The Strainers of the Humours being thus bung'd up, it is easy to Measure the Consequences of such a sudden Check ; and therefore we find, that assoon as the Disease ceases to run off this Way, the Body is thrown into all the Spasms and Struggles that can be imagin'd, and what Ills may not be foreboded from this unlucky Stop, when the Diseas'd has hardly Spirits left him to grapple with the ordinary Course of the Malady. If the Patient has not the good Fortune to be speedily reliev'd, he falls under it. It is also certain, that the Fluids themselves may be reduc'd to such a State of Grossness, that they will not flow, but then this is owing to a peculiar State of the Fluids within us, before we were seiz'd, or from Medicines or Diet administred, in the Time of our Illness, injudiciously. The  
strict



strict Favourers of either the cool or hot *Regimen*, surely introduce this bad Symptom: For 'tis equally certain, that our Fluids will be reduc'd to a Solid, by too volatile or evaporating Medicines, as by concentrated Acids: Since by the former, the more aqueous Parts are exhal'd thro' the Pores; and by the latter, the more Sulphureous are rendred Cohesive.

'Tis then easy to guess at the Injuries done us by a Suppression of the Salivation, by knowing that a Retention of morbidick Matter within us, is confining a mortal Enemy within our Bosoms: And here all Tribes of Physicians allow of Applications to the Part affected, in order to take off the Continent and immediate Cause of this Suppression: But as these Causes are equivocal, or rather are very numerous, it wou'd be vain to expect that any one stated Method will reproduce it. And altho' I am neither at Leisure, nor in



Humour at present to descend to all Particulars on this Head, yet it may safely be affirm'd, that gentle Emetics, Epispasticks, Gargles, &c. may be further assisted, than has been yet dreamt of.

*Lastly*, The maturated Pustules are Impostumations on the miliary Glands; now it sometimes happens, that the Numbers of Pustules are so many, that each presses upon its Neighbour, in so violent a Degree, that Gangrenes very often, and perhaps oftner than suspected, ensue; nothing is more common in the Flux-Pox, than a deprav'd Pus, that is instead of white and laudable Matter, we meet with *Ichor*, *Sanies*, or *Virus*. In the Pustules, the various Consistence and Colours depend upon numerous Causes; but upon none more frequently than this *Compression*. 'Tis owing to it, that the Matter becomes watry and indigested, 'tis owing also



to Compression, that it becomes green, or fetid : For where there is a total Stagnation, Humors contain'd do not run their usual and stated Course of Fermentation, or Maturation ; but some Part of the Surface becomes good *Pus*, whilst the Remainder at the Bottom becomes green or black. These Colours manifest to us the depriv'd State of the Fibres they were contain'd in, and no doubt, if Measures cou'd be found out to hasten Maturation in the Face, the Glands, or their Ducts underneath wou'd not so often faile of throwing off their Contents ; for instead of growing softer, the Pustules become harder every Day, and more rigid : and pressing upon these Ducts, they cannot vibrate or oscillate, and therefore cannot throw forth their Liquid contain'd. Now I conceive, that such Applications as would soften the Fibres, and call out the Contents to the Surface, wou'd bring all the viscid



cid contain'd in every individual mi-  
liary Gland, to a due Maturation, and  
the Face wou'd then swell of Course,  
which is reckon'd amongst the best  
of Signs in the Flux-Pox, the Saliva-  
tion cou'd not easily be suppress'd,  
which is another promising Conco-  
mitant; and thus we might place a  
Patient dangerously afflicted in a fair  
Posture: And as every Pustule is  
thrown out by an Effort of Nature,  
it is her original Design, that each  
shou'd be truly maturated, as *much* as  
it shou'd be in a *Parotis* or a *Bubo*:  
And to conclude, as there is the same  
Parity of Advantage, there ought to  
be the same Endeavours us'd; which,  
for any Reason I see to the contra-  
ry, will be a more useful Advance,  
than the mighty *Inoculation*.





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# Experienc'd Measures

How to MANAGE the

## S M A L L P O X.



**A**S this *Disease* of late Years has been very frequent and fatal; and as this Season has given us sundry Stroaks of its Malice, and, in a particular manner, among the First Rank, I believ'd it would not be taken amiss to thrust into the Hands of the People, who have either never been afflicted with this Ailment, or who have any Concern for the Safety of their Progeny, these few Remarks upon so cruel a Malady. And I am yet the more inclin'd to undertake the Task, because I find Physicians, Empiricks and Nurses, of late, are judg'd pretty near upon a Level in their Skill of Curing it. This is a Prejudice which ought to be remov'd; and since Appeals in these Cases are ultimately made to the People, I have



good Reason to begin to open the Cause on the Behalf of the Faculty, and to demonstrate to the World, how far our Skill can reach in the rooting the Distemper ; what Methods are to be followed ; whether there be any Reason to think, that one Secret Remedy, or any one Way of Acting, will always serve the Turn ; or whether, if there be any Difference in the Manner of being so affected, it is not reasonable to change the *Regimen* and Remedies, suitable to the Variety of being affected ; who are likely to be the best Judges of this Variety to be follow'd ; and whether it be always in our Power to accomplish our Desires.

These are the Views of my present Thoughts, on which I design to be as plain, as the Nature and design'd Brevity of the Subject will allow me.

We all know, that the *Small Pox* are Pusles which first break out all over us, then inflame, turn into Matter, Scab, and lastly scale off ; and in this they differ not from a common *Pimple* ; and were it not that they are so numerous, and that they are attended with a Fever and all its Symptoms, there would be as little Danger of Life in having 'em, as in being troubled with the Itch.

Whether the Ancient Physicians knew any thing of 'em, and why they bear their Name, is neither a material nor a diverting Inquiry ; neither is it of any Use to know in what Age they begun : But I wish it were in my Power to know how soon they will end ; for 'till that  
wish'd-



wish'd-for Day, Physicians will ever and anon be loaded with Calumny.

Tho' the Skin, or rather its exterior Surface, should be the chief Seat of these Pustules, yet they too often lie deeper; and frequently it has been found, that they have seiz'd upon the Lungs, Stomach, Bowels, Liver, Spleen, and other internal Parts, and have left many Imposthumes there; nay, it has appear'd upon Dissections, that the Bowels and the Bones have been gangreen'd. Histories also do testify, That Infants in the Womb have not escap'd, but have labour'd under this Malady; of which Deaths and Miscarriages have given us too plain Demonstrations. And this ought to be well remark'd for the sake of your Managers.

What are the Causes of this Distemper, is a difficult Point to determine; however, since it may be of Use for the Readers, I shall descend to some few Particulars on this Head. I believe it is out of all doubt, that the *Air* is often prejudicial, and truly instrumental in introducing this Disease; and where-ever any one is so dispos'd as to receive the Injury, Contagion communicates that Poyson to Numbers, which the *Air* had only infus'd into One: Why it should at all give Rise to this Disease, is not past our Comprehension, indeed; but it has as yet escap'd our Natural Experiments. If it would not seem too curious an Inquiry for this small Sketch, I could shew the Reader, that the Air does abound at certain Seasons, more or less, with an *Acid*, as it appears by the *Nitre* on



Brick-walls and in Cellars, and as is evident in the Example of *Vitriol*; which, tho' it has been distill'd once, yet if it is expos'd to the Air for some Time, and then again committed to the Fire, it will a Second time afford an Acid Spirit, stronger than it did at first. I could shew him also, that the lower Parts of our Air do abound most, if not only, with this Acid, since Bodies apt to imbibe *Nitre*, expos'd in a Garret, are void of it; but, if deposited in a Cellar, do presently afford it. And that it is, at least, *probable* an *Acid* does contribute to produce a Fever with so many *Imposthumes*, will appear from the following Observations: Because strong Acids will corrode the Skin, if apply'd to it, as daily Observation makes manifest; next, because it appears, that when any Tumor is to be prevented to come to Suppuration, it is usual to observe, that we succeed best when such Remedies are apply'd as are contrary in their Nature to an Acidity; so it is an avow'd Truth, that Spirits of Salt-Armoniack or Harts-Horn, will sooner dissipate, than any Remedy known. And, moreover, it is also very well known, that Ulcers are always sooner cur'd, if Medicines which correct Acids are often apply'd. Again, it is also Fact, that if Ulcers don't afford so much Matter as is necessary, or, at least, that they are *Sanious Ulcers*, as they are call'd; that is, what runs from 'em is rather a brownish Gleet, than true Matter, you need but apply Acid Spirits, or some Mercurials made up with Acids, and you will presently find



find this Gleet will turn into such *Matter* as they call *Laudable*: Then again, the Pains which attend Ulcers, are reliev'd by Remedies that obtund Acidities; and Matter it self has an Acid Taste. And, lastly, if to a red Liquor, like Blood, made up of Salt of Tartar, common Sulphur, and Water digested upon the Fire, you pour on any Acid Liquor, a Matter like that in Ulcers is thrown down to the Bottom; and moreover, if to Choler kept in a Glass for some Time, you pour on any Acid Spirit, there will fall to the Bottom a Substance differing in nothing from the Matter observ'd in Ulcers. These few Instances may serve to convince my Readers, that the Air has a great Influence over Bodies, and may therefore be allow'd to be the frequent Occasion of the *Small Pox*, especially if they become at any Time *Epidemical*.

The undoubted Cause of the Fever attending this Disease, is a Secession of an acrimonious viscid Matter fix'd upon the Habit of the Body, part of which is thin and evaporates, and part is gross and tenacious, and sticks upon the Surface, and there inflames and comes to Suppuration: The Fever is indeed double; one precedes the Eruption, and sometimes accompanies it all the while, as well as the Maturation it self, but then it acquires the Name of a *Putrid Fever*. It is to be confess'd a great Difficulty to explain how this *Separation* is made; some few have recourse to the natural Constitution of the Blood *originally contracted in the Womb*, which



which is unequally gross, and tho' it lurks in our Vessels for some Time, yet in a certain Space, it farrows and appears; and from this Cause they suppose it is, that few escape 'em: But besides that Children have been known to have 'em before their Mothers, it appears, as well from the History of the *West-Indies* (where it is certain we barter'd our *Small Pox* for their *Great*) as from the Silence of Ancient Authors in Physick, that the Cause does not necessarily lodge in the Womb; but is produced slowly, or on a sudden, from the Blood peculiarly vitiated in its Motion, in its Quantity, or some of its Qualities, jointly or apart.

So that if we descend to some few Particulars on the natural and deprav'd Juices, we shall be likely to make the Readers in some measure sensible, how this Cause produces its Effects. Our Victuals after a small Stop in the Stomach, are there made into a Liquor, and by virtue of a contorsive Motion in it, and the Muscles of the Belly, this Liquor, Juice, *Chyle*, or what you please to call it, is thrust lower into the Bowels, where it is mix'd with Gall and another Juice, and by their Assistance is made thinner; this Juice at last arrives at the gaping Mouths of Vessels, which we call *Lacteals*, and there is squeez'd into 'em by the former Mechanism, 'till it mounts up through proper Passages, which are needless to be mention'd here, into the Heart, from whence it is convey'd through the Lungs into every individual Part of the Body; from whence it is return'd back to  
the



the Heart again ; and this reciprocal Motion is continu'd for Life. Thus have I given you a short Notion of the Circulation of our Blood.

So that whatever Nourishment we receive, is hurried forward and backward in the manner I have here recited ; and as we are nourish'd by this *Juice*, it is reasonable to conclude, that to afford us good Blood, it ought to be of a certain and determinate Nature ; that is, it ought to enjoy a certain Degree of Motion ; it ought neither to exceed, nor be deficient in its Quantity ; and its Qualities ought to be very temperate, and well blended ; because if it offends in one or more of these Conditions, we fall into Diseases suitable to the Cause that produces 'em. And as it is certain, we do fall into Diseases, it must be from some one of these Faults I have nam'd, that the Disease is produc'd. If then the Blood becomes *viscid* and *acrimonious*, (and this seems the properest Condition, and the most convenient, for the Production of this Disease ) then a *Fever* seizing such a Person, will, probably, be of this Stamp, and produce this Disease. By a *Fever*, I chiefly mean, an *increas'd Motion of the Blood* ; and whether at this Time there be not some *Fermentation*, *Effervescence*, *Ebullition*, or some *intestine Motion*, tho' it is more than a bare Assertion, yet it is what I have no Inclination to dispute at present : I shall not therefore insist on it. However, there is, I say, somewhat, call it what you please, that fits the Blood to throw off these Particles into the exterior Parts, and fixes 'em there,



there, and raises all the Symptoms attending this Malady.

And what I have advanc'd, will appear more evident, by recounting to you the ordinary Causes introducing this Disease. And, first, The Air, as I have told you, stock'd with some sharp Particles: Secondly, All Diet which is sharp, and apt to putrify, and which usually brings on a Disease call'd the *Cholera*; such are New Wines, and Summer Fruits: Thirdly, Late Hours: Fourthly, Immoderate Exercise: Fifthly, Hard Drinking: Sixthly, Passions of the Mind, so they be vehement: Seventhly, Some natural Evacuations suppress'd: Eighthly, Infection; which, in the Nature of a Ferment, communicates its Venom to the Air, *Vireſque*, as we say, *acquirit eundo*.

As for Liquor too copiously pour'd in, we have late Examples of its Force of producing 'em; whether it be that the Spirit has the same Effect upon our Blood, that it has upon Urine, I shan't affirm; to wit, it is certain, if we blend Urine with the Spirits of Wine, the Urine putrifies much the sooner for it: However, there is great reason to believe the Blood is rendered more gross, and more sharp by it; which is evident from the Heat of this Fluid, and because if we blend Serum of the Blood with rectified Spirit of Wine, Mr. *Boyle* first inform'd us, the Mixture turns into a Jelly.

Now, as it is the Nature of every *Ferment* to take gradual Steps 'till it comes to Perfection, so it looks very natural to conclude, that this  
*Matter*



*Matter* in the Blood, of what Nature soever it is, leaps into Form upon any external or internal Cause that produces it: And from this *peculiar Nature* it is, that few are twice attack'd by the *Small Pox*; they seldom, indeed, do happen twice, because generally all the Matter is expell'd that is proper to raise the Disease; so that after all, it must be confess'd, there is a *peculiar Texture in this Matter*, the Seeds of which lodge in the Blood of such as never have had 'em, and which, if once totally expell'd, never arise again into the same Texture; and this is evident to a considering Person in many Natural Experiments, the Reasons of which will always lie hid to us. For Example, Altho' it is a known Experiment that the Fumes of Lead will coagulate Mercury; yet, who can tell, why it should only be the Fumes of Lead that has suffer'd melting the first time, and not of such Lead that has been often melted? Why, in short, common Forms destroy'd should never be in our Power to reproduce? 'Tis sufficient for Mortals to know Properties, not Textures; to know the peculiar Attributes, and not the Essence of Things. God reserves these Secrets to himself, and leaves us room to admire.

Our next Inquiry must be into the Symptoms of this Disease, and their Causes. The first that occurs to us, is the *Fever*; but because in this Part, the whole Difficulty of the Distemper is couch'd, I hope it will not be look'd upon as an useless Digression, if I give

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my Readers a clear Notion of this Fever. It must then be observ'd, that in every Stage of this Distemper, whether it be the *Middling* or *Flux-kind*, a Fever attends the Patient; and, abstracting from any Consideration of the other Symptoms at present, this *Fever* may rather be said to be *increas'd* at some Times, than that a *Second Fever* comes on; for before they appear, the Decumbents have a quick and frequent Pulse, the Heat is more than a natural One, and they are attended with all the other, usually subsequent, Symptoms of a Fever. This State of Commotion does not cease even when they begin to appear; nay, it continues the whole Space of the Eruption: And, furthermore, when they have fully appear'd, nor are there any more observ'd to be thrown out at all; when the Pushes begin to spread at their Bottoms and rise; when they begin to throb and be so painful as to disturb their Sleeps; this Fever may reasonably be suppos'd not to cease at this Season; which, indeed, it is so far from doing, that it increases with the Pain, 'till they are fully ripen'd: And it cannot well be imagin'd, that a small Ulcer of the Lungs, or any other internal Ulcer, will raise a *putrid Hectick* in the Blood, and yet that so many Imposthumations can fail of having the same Effect. Therefore, the Fever which continu'd from the Beginning, is kept on foot still, but is now stil'd *Putrid*; because it proceeds from the Re-  
turn



turn of the Matter lodging in the Puffes, into the Blood; so that now the *Skin* returns the *Blood* those Favours it had receiv'd from it, for some preceding Days, with fatal Improvements. This Return of the Matter is begun sooner or later, as it is more or less sharp or malignant; and our Danger from this Return is nearly proportion'd to this *Acrimony* or *Malignity*; so that from the *Eleventh* 'till the *Seventeenth*, nay, sometimes the *Twentieth*, Life is at Stake; nor can it positively be determin'd in all that Time, how the Remedies will succeed. This is a succinct Account of the *Continuance* of the Fever in the *Small Pox*.

But there is yet a *Condition* of this Fever to be mention'd, which is so material to the Assistants, that, without the strictest Regard had to it, Prescribing is a mere Lottery; which is as follows: It is Matter of *Observation*, that the Fever which attends the *Small Pox* is variously circumstanc'd, and differs widely from it self in different Subjects; nay, and sometimes it is even various in one and the same individual; whether we speak of the Space of Time before they appear; whether we understand the Time of their Appearance; whether we take it in the Increase of them, when they begin and continue to throb; or, lastly, whether we speak of the Time of Imposthumation: Because it is Fact, That the *primary Signs*, by which we discover the Presence of a Fever,



differ to very wide Degrees; that is, The *Heat* of the Blood is in one Person intense, and in another remiss: The *Pulse* is very vehement, full, great, and strong in one; and, on the contrary, in another it is languid, empty, small and weak. When therefore we find Persons, under the *Small Pox*, attended with an intense Heat and a vehement Pulse, we say, That Person's *Small Pox* is accompany'd with a *brisk Fever*; but if, on the contrary, their Heat be remiss or moderate, and their Pulse be languid, we say, They are seiz'd with a *slow Fever*. Now, altho' these are the simple Circumstances which usually attend the *Small Pox*, yet there is another Condition of this Fever not well understood by all; and that is, it often happens, that Persons under this Malady are attended with an intense Heat, but yet have not a strong Pulse: This Case, I must confess, is attended with Difficulty; and here it is, Miscarriages under good Hands, as well as Mistakes in Practice, are too common. However, as, I hope, I have given the Readers a plain Description both of the *Continuance* and the *Conditions* of the Fever, so I shall defer the further Consideration of them, 'till I come to speak of the proper Methods of Cure; and now go on to enumerate the *common Symptoms attending either State of Fever*.

A *Head-ach* is a very obvious Symptom, and it arises from the too exorbitant Acrimony in the Blood, as well as the increas'd  
Motion



Motion of the Fluids, by both which the Vessels and Membranes are twitch'd and overstretch'd ; and, as it happens in common Brooks, that there is not Passage for too large a Quantity of Water to run in their Channels freely, so they swell, bear hard upon the Sides, and often run over their Banks ; so it is in the present Case.

A *Redness of the Face* is a common Symptom, and draws its Origin from the too impetuous Motion of the Blood, as we see it happen in Anger, and other grievous Passions of the Mind. For, upon this Account, the little Twigs of the Arteries and Veins, which are every where distributed thro' the Surface of the Face, are stretch'd more than usually ; because Particles that are briskly and more nimbly mov'd, bear with greater Force against the Sides of the Vessels, than is consistent with the Condition of the returning Veins ; so that they stop at this Barrier longer than usual, and make their stretch'd Vessels transparent, and shew the Colour of the Liquor they contain.

A *Pain of the Back* is look'd upon with us, as one of the most distinguishing Marks of the *Small Pox*, and it is a throbbing, severe, and burning Pain, which is occasion'd by the Distension of the vertebral Arteries, which being surrounded with Membranes, give great Uneasiness ; for as the Blood is in a violent Commotion, and as it is exceedingly acrimonious, and also as these capillary  
Twigs



Twigs are stretch'd far beyond their usual Tone, such a sort of Pain is almost inevitable.

A *Loathing* and *Vomiting* are Forerunners of the *Small Pox*; They are the same Species of Symptom, only, a *Loathing* demonstrates the Cause to be weaker, and the *Vomiting*, stronger; so that they proceed from the same Cause; that is, from sharp Humours in the Stomach, which twitch the Orifice of the Stomach, and provoke it to this perverse Contraction of it self. And if the Question be put, How this Matter is supplied? It is easy to see, that the Stomach is supply'd from the Blood it self; for such as the Blood is, such are all the Juices it secretes into the different Parts; so that as the Blood it self is now become a Mass of acrimonious, putrid and hot Fluid, so must the Juices of the Stomach be. And, moreover, it frequently happens, that the *Gall* is pump'd into the Stomach; and if this Liquor will, in an ordinary State, afford, in Distillation, a great deal of a Volatile Salt; What may we not believe it will do, at a Time when the Blood is become extremely stock'd with Particles of a caustick Nature?

*Inquietudes* and *Anxieties* are common Attendants in all Fevers; they seize us in the following Manner: They feel an Uneasiness, and somewhat *confusedly troublesome* on their Breasts, which feels to them as if they had swallow'd something that stuck in the Passage; but, in short, they are forc'd to describe it like a Load upon them, and, at last, to confess to the Physician, that there is somewhat of an Uneasiness upon their Breasts,



Breasts, which they don't know how to explain. And this is a sufficient Description to such who are skill'd in Physick; and this Symptom we call *Anxiety*: It causes the Patient to toss from Side to Side, to try if Motion will relieve it; and if this Symptom runs high, it brings on Fainting-Fits, and sometimes Death it self. I think, all Accounts we have of it are trifling, save what *Dr. Boorhaave* gives us in a few Words; to wit, It proceeds from a Stop put to the Egress of the Blood from the Heart; and he confirms it by an Example he saw of the like Symptom, happening from the Circulation impeded in the *Vena Porta*. And thus it happens with the Heart, as it does with the Head and Back, that the Fluids bear too hard against the Sides of the Heart; so that it nearly loses its contractive Power, that is, the Power of continuing the Circulation.

*Difficulty of Breathing* arises from the increas'd Motion of the Fluids; and if the Lungs are rendred nearly inflexible and stiff with the vast Quantity of Fluids they circulate thro' them at this Season, which they are unacquainted with, in so short a Time, when they are in Health, they are oblig'd to suck in the Air faster, to get rid of the Load they contain. For whereas, in Health, we draw our Breath once every third or fourth Pulsation of the Heart, here too our Breath and our Pulse will keep pace with each other: For if we suppose Seventy-five Pulsations, and Fifteen Inspirations, in the Space of a Minute, in Health; we will find



find Thirty Inspirations to answer to a Hundred and Twenty Pulsations in a Minute, in a High Fever; as Sir *John Floyer* judiciously observes. And if the Fever runs so high, that the Lungs are stretch'd beyond all the usual Limits of Nature, don't we see it usual for such Patients to die choak'd, because *the Lungs can't play*? no more than we see 'em capable of being blown up when the Vessels are first inflated: For Experiment shews us, That if the Artery of the Lungs be blown up with Air, and if it continue so, both it and the Vein being close ty'd, so that none escapes; then no Air thrown into the Pipe of the Lungs, by any means can move 'em, or lift 'em up. And this is the very Case in prodigious Distensions of the Lungs.

*Sneezing* is another common Symptom preceding the *Small Pox*, which arises from the Humours rendred too sharp and too rapidly mov'd to the Nostrils.

But as it would be too tedious, in this small Sketch, to proceed to all the supervening Symptoms; so I shall content my self to recount to you the Manner of their seizing us.

Such as are about to have the *Small Pox*, do first find a shivering upon 'em, and a Chilliness, which lasts a longer or a shorter Time, as the Nature of the Disease is like to prove; then their Pulse grows quick, and they grow hot; their Heads ach; they vomit; they breathe short; they often have a violent Pain in their Backs; they sneeze frequently; their Eyes gush into involuntary Tears; they are thirsty,  
and



and loath all Victuals, very often they fall into Convulsions, especially Children: Sometimes they are seiz'd with a Flux; Palpitations are very frequent, Anxieties, Watchings, Redness of the Cheeks, and often racking Pains precede the Eruption; and these Symptoms continue more or less violent, 'till the Matter that occasion'd 'em is thrown out into the Skin: For then Pustules, Pushes or Pimples, call 'em as you please, appear the third or fourth Day, and sometimes sooner or later, which are rough and uneven, which grow redder; the Symptoms begin to abate, the Pushes grow gradually higher and broader, 'till the seventh or eighth Day from their first Appearance, when they begin to suppurate or change into Matter, and then the Putrid Fever begins, and seizes the Place of the other Fever, which continues 'till now; and Symptoms of dangerous Consequence supervene, such as Chcakings, a Stoppage of the Salivation, Ravings, Convulsions, and many more which are needless to be repeated here.

Before I descend to the Cure, I think it not amiss to shew you the Difference of the *Small Pox*, as well as to give my Readers a small View of their Hopes and Fears. They differ then in their Number, their Eruption, and their Continuance: Some of 'em appear quickly, and are soon suppurated; and these are such as are of the *Distinct Sort*, which I have omitted to speak of here, because they are only Nurses Work: Others again appear slowly, and some-



times too soon, and these are generally of the *Coherent and Middling Sort*, or of the *Flux-Kind*, which this Discourse is chiefly fram'd on. Some again vary in the Place they seize upon; for they are often internal, as well as external: Others again are red, or white, and these are not amiss; but the black, or brown, are bad; and some are more, others less contagious. If they appear at a proper Season, that is, the fourth Day; if they come out kindly, that is, without any bad Symptoms attending 'em; if they come to a Head soon; if the Fever is not excessive in its Degrees, and insensibly goes off, or at least abates after the Eruption; and if the Pimples are first red, then white, soft, round and plump, and only seize upon the Skin, without affecting the interior Parts; we may pronounce such a Sort of *Small Pox* to be kindly, and such as, with Care and Skill, will yield to proper Remedies: But if, on the contrary, the Fever is excessive in its Condition; if it abates nothing upon the Eruption; if there be a Difficulty of Breathing; if a Flux, and more especially a Flux of Blood, accompany 'em; if they appear very late; if they flag, or disappear after Eruption; if the Swelling of the Face goes off, and they recover their Sight too soon; if they rave; there is great Danger: For all these Symptoms denote an Irregularity in the Motions of the Blood, or a great and excessive Acrimony in the Humours; and few escape with such Symptoms, unless they are very skilfully manag'd.



It is moreover to be remark'd, that such *Small Pox* as are contagious, and reign at particular Seasons, are very dangerous, and are generally of the worse Stamp, and such as are accompany'd with purple Spots also.

Before I proceed to determine upon the Method to be follow'd in the *Small Pox*, I believe, it will be necessary to premise some Observations on the Force and Efficacy of the various Remedies and Regimen us'd by Physicians, for the Security of their Patients; because it is not possible for any Persons to pass a Judgment, unless the Measures to be taken, and the Case to be remedied, be duly weigh'd.

First, I shall speak of *Bleeding*. In which it is to be consider'd, That all the Advantages we receive from it, arise originally from the Diminution of its Quantity: The other Advantages are then only subsequent and secondary to this; that is, if we diminish the *Fulness of the Vessels*, we lessen its Motion, its Heat, its anomalous Affluxes, its Acrimony, its Obstruction, its Efflux, its Siziness, its Impoſthumation, its Seceſſion, its Inflammation, and many other Inconveniencies arising from the exceeding Quantity; but, on the other hand, the lessening the Quantity is prejudicial to the Spirits, and withdraws 'em; it hinders critical Eruptions; it suppresses all critical Evacuations; it increases the Faintings; it hinders Expectorations, and, in many other Cases,



too tedious to be enumerated here, it has very dangerous Consequences attending it. And the Reasons are, Because, if the Vessels are crouded with too much Blood, the very succeeding Impulse will press hard upon the Quantity that is before it, and push it forward with a Violence proportionable as well to the Swiftness it is hurried on with, as the Weight of the whole succeeding Blood. And as Physicians are provided with no other Means of lessening this *Impetus*, but by administering cooling Drugs, or taking off a Quantity of the Fluid, they are often oblig'd to have recourse to this latter Method, because it obtains its wish'd-for Ends instantaneously, which the former may possibly fail of executing, with any Certainty, at least; and this alone would be sufficient Grounds to reject it from any Competition with the former: But, on the other hand, there may occur many Circumstances forbidding the Use of this *Draught*, and which, at least, may render the Practice of it dubious. And tho' there may be others encouraging us at the same Time to unload the Vessels; yet, in such a wavering Condition are wise Practitioners plac'd at this Season, that he who should attempt it, without a prudent Assistant (if he can be had, and Time allows it) ought to be deem'd a daring and fool-hardy Person, altho' the Success were even answerable to his Wishes: For as the Weight of forbidding and encouraging Circumstances,



ces, must determine the Physician; he who looks on the Encouragements, without giving an Eye to the reverse Side, may be said to act boldly, but not wisely. But as I judge this a sufficient Hint at the Advantages or Inconveniencies expected from Bleeding, I shall only descend to one further Particular, in which Mistakes are frequent, and they are the more to be fear'd, inasmuch as they who act, have plausible Arguments for the supporting 'em in their Error. No one doubts, that Bleeding becomes sometimes *absolutely necessary*; and yet it often falls out, that the very Persons who deem it necessary for the Condition of the Patient, when they were not scar'd from it by an *unpromising Pulse*, are now afraid, that if the Patients should grow worse in some Time after, it would be ascrib'd to this *Evacuation*, which then would be stil'd *unseasonable*, and particularly if there should chance to be another of the Faculty present, who affects to play the *Momus*. In such a Case, I am mov'd with Compassion at the unlucky Situation of Affairs: The Gentlemen concern'd dispute the *Necessity* or *Danger*, as best suits their *Genius*; and if the Patient sinks, he who gain'd his Point in the Execution, or Non-Execution, at first, is now deem'd to have err'd, and accordingly suffers in his Credit. All this is but the Consequence of artful Faction. For if the contending and jarring Gentlemen cannot act abstracting from



from Party, they must be ty'd down to have an Umpire of the Patient's choosing, whose Confident is certainly the properest. The Arguments are generally of such a Nature, as are easily comprehended, because they are only the Result of common Sense. In such a Circumstance, therefore, the Dispute I speak on, is concerning *the Pulse*, whether, to wit, it can bear Bleeding, or not; it may be affirm'd by one to be *weak*, and that therefore this Evacuation cannot be made to the Advantage of the Sick, when perhaps it may *not be so in Effect*; but there may be an *Oppression* on the Pulse only: Now let it be agreed, that tho' a *depress'd Pulse can't bear Bleeding*, yet, it is certain, that *an oppress'd Pulse not only can, but requires it*; and yet nothing is more common, than to see the Notion of these very differing Pulses to be confounded.

As for *Emeticks*, they are found of use to promote the Circulation, to pump up sharp Humours from the Stomach, to relieve Anxieties, to promote Expectoration, to renew the Salivation, and to promote a slow Eruption; but then they are injurious in Spittings, or any other Evacuation of Blood, in Costiveness, in Diseases of the Eyes, in choaking Catarrhs, in Women with Child, in Weakness of Spirits, and, in short, in whatever Case there is a dangerous Commotion rais'd in the Blood. Now it often happens in the *Small Pox* that gentle Vomits are necessary, but yet the Patients are under Apprehensions



fions of 'em. The two Seasons they are found necessary in, are the *Beginning*, and the *Time the Salivation ceases too hastily*: I shall give you therefore some Signs, whereby you may judge, whether they will be, in all Probability, successful. At the Beginning of the *Small Pox*, that is, before they begin to appear, there is no present Danger in giving a Vomit, but it may prove of ill Consequence many Days after: Therefore, if a Patient is seiz'd in the *Beginning* with a Loathing, or with a Vomiting; if particular Symptoms seize other Parts, which Practice has taught us are reliev'd with this Remedy (such are Obstructions in the Bowels, such are *Vertigo's*, such are Pains in the Stomach, and the like) Vomits are plainly requir'd; because the Humours lodging in the Stomach are immediately thrown off by 'em; after which it is easy, and retains either Diet or Medicine. And when the Salivation begins to decline too early, as it often does, by some Mismanagement, whether too cold or too hot a *Regimen*, then a gentle *Puke* is therefore of Use; because we find it a constant Observation, That as soon as a Vomit begins to make us sick, our Mouths gush full of Spittle, and begin to run apace when the Vomit works upward. It would be too tedious to weary common Readers with a *Rationale* upon this Event; but since it is Matter of Fact, I leave them to imagine how serviceable it must be, when the Heat of the Humour and Lungs has



has dry'd up the Sluices, and has made all the Humours so gross and tenacious hereabouts, that they stick in the Passages, and risque our Lives thereby. However, as the Strengths of the Patients are now much exhausted, I hope, they can't believe I design to persuade 'em to strong Vomits: No, I would have 'em the gentlest in Nature; nay, sometimes they are to be quite omitted for provoking *Gargles*, and plentiful Draughts of warm'd Liquors drank down with a free Hand.

*Purging* is naturally requir'd where Bile or sharp Humours lodge below the Stomach; in Concoction in Fevers complete or well advanc'd; in Costiveness, and some few other Symptoms: But they don't very well agree in any inflammatory Cases, unless at the Close of the Disease; nor in any Ulcers of the Bowels; in Fluxes, whether of Blood or Humours; nor in many other Circumstances. From whence, I think, it may be justly inferr'd, that they *seldom* will agree in the *Small Pox*. Not that I believe it impossible to find out any Emergencies at all in this Disease, where they are requir'd; but yet such as have endeavour'd to bring this Evacuation into a *general Vogue* at any Stage of the Distemper, or however at the Maturation, are best able to answer for its Sufficiency. For it would be bad Reasoning to argue, That it is universally serviceable, because it may sometimes succeed; or that, if  
it



it were equally indicated with a succeda-  
neous Evacuation for any one Symptom, it  
would therefore be indifferent to the Pre-  
scriber, which of the two were exhibited ;  
because I am well assur'd, this is not an  
*Agreement with one Third* : Inasmuch as the  
Cathartick might equally carry off the Load  
of putrid Matter returning into the Blood  
with any other *Species* of Evacuant ; but then,  
I am satisfied, there are twenty forbidding  
Circumstances against a Cathartick, to one  
against many other evacuating Medicines ;  
which are easy to be enumerated, if my  
Design were to descend to all Particulars.  
Few have this Disease eminently, whose  
Bowels are not as full of Pustules as their  
Body ; What, I pray, would be the Conse-  
quence of Physick in Persons thus affected ?  
Why, truly, the Bowels would be contra-  
cted ; the Guts (stiffen'd with Scales or Pu-  
stules fill'd with Matter) would be tortur'd ;  
Gripes would arise ; or, however, purulent  
Matter would be thrown out ; and what  
we would glory in To-day, would To-  
morrow become our Confusion : For now  
would ensue Inquietudes, Watchings, unex-  
pressible Itchings within us, *Deliriums*, and  
Death. It is true, I have nam'd one of the  
worst Cases that could befall the Patients ;  
because, I would convince my Readers,  
that there are Cases where Physick can't  
be given ; where, however, other evacua-  
ting Medicines would be necessary ; tho', in  
d another



another respect, the Physick might be equally pointed out to us with this other Evacuant. But, as these are Disputes which would require large Treatises, so, I believe, I have said enough to convince the Perusers, that Physick is not to be *indiscriminately* us'd in this Distemper, whatever some Authorities have boastingly said. Indeed, at the ceasing of the Fever, which, by the way, Physick at other Times inevitably augments, it is often required. However, when this Sort of Remedy is soundly indicated, it ought to be gentle and easy, not compos'd of Drugs too bitter or acrimonious, which would serve only to heat and dry the Body, and parch us, at a Season when we want diluting and levigating Remedies.

*Glysters* are of use to soften the Excrements, where Physick can't be administered without Danger; to draw down Winds in Colicks, to ease the Head, to cool us, and to draw down the Humours in a Vomiting; but they are not of use in Malignant and Pestilential Fevers, nor in critical Eruptions or Evacuations; nor are they of use if the offending Matter of a Colick lodges in the small Guts. However, they often supply the want of a Vomit or of Physick, where these can't be exhibited by reason of Weakness, or some other forbidding Circumstance. From whence it may be inferr'd, that we can safely throw in a Glyster before the Appearance of the *Small Pox*, if the Fever

runs



runs high, or before Blood be drawn off; or we may, at any Time of the Disease, with Safety, use a common House Glyster, without Salt or Seeds, if the Excrements are very troublesome to the Patients: But, however, when the Fever runs low, and the Patients are low-spirited, before, or when, the *Small Pox* have begun to appear, it is not very safe to use 'em; because, if the Humours should take a Bent downwards, we should be oblig'd to have Recourse to Remedies that would retard the Eruption. When I said, they might safely be us'd at any Time of this Disease to unload the Bowels, I don't mean, that there may not be certain Circumstances which forbid their Use; for in an obstinate and painful Suppression of the *Feces* of the Belly, to throw 'em in, would be adding to the Pain and Distension; and, however, it would be a fruitless Labour.

*Blisters* are convenient in comatous Ravings, in moist Coughs, in a slow Circulation, in Coagulations, in colder Constitutions, where the Extremities are cold in Fevers; in Fevers with a weak Pulse, Coldness of the Parts, and Coma's; in critical Separations; and in many other Circumstances, too tedious to be mention'd here: But then it is to be observ'd, that they cause Stranguries, increase Phrensies, augment the Thirst, hurt Inflammations, promote Bleedings, and heat us. From whence it  
may



justly be said, That if they add any of their Salts to the Blood, (which the Stranguries and increas'd Thirst, after their Application, do make manifest) then if the Blood is under any great Commotion, to apply them, is augmenting, and not quenching the Flame; and the Symptoms, which they are design'd to relieve, will, in such a Case be doubled, instead of ceasing. And it is very natural to argue in the following Manner: Can that Application which is made up of Drugs so heating, that swallowing a little of 'em is immediate Death, or, at least, that Vomiting and Pissing of Blood do ensue, be so indifferent when us'd outwardly, as to be of certain Advantage? or, Can that Medicine be us'd at Discretion, which puts us to so much Torture when apply'd to the Skin, and which shews its warming, inflaming and caustick Quality, in so eminent a Manner in a few Hours, as to flea us, and which gives us, for some Days, Uneasiness and Pain? Does this Medicine reach into the Blood it self, and even so far as the Bladder? Do its Ravages enter into our very Bowels, and promote Miscarriages in Women with Child, altho' only applied to the Skin? Have not many Persons in Fevers, been disturbed of their sweet Slumbers, and barter'd 'em for racking Stranguries? Have not Bleedings at the Nose been often rais'd by their unseasonable Application, even to such a Degree, as to indanger the  
Patient's



Patient's Life ? It is, however, to be confess'd, that they may be us'd in certain Circumstances ; and if they are apply'd with due Caution, the Success is often very surprizing.

I am well aware, that the Caution I have inculcated, is contemn'd by some Men of Learning ; and, in a particular manner, I know, it is now the present Practice of some of the principal Physicians in Town. And Dr. Freind, in his *Commentaries*, gives 'em very large *Encomiums* : For in him we find the following Words ; *Of which (Cantharides) they had so absurd a Notion at that Time, that Adolphus Occo would not so much as suffer any one to carry 'em in their Pockets, because one who had carry'd 'em thus, made bloody Water. But these are the Whims of dreaming, not disputing Physicians. And below, Which Experience testifies to be useful in many Diseases, but particularly in Fevers ; but with what Force, or in what Manner they arrive at or move the Humours, no one has yet explain'd. — In Acute Fevers Blisters do afford a most safe and expeditious Assistance ; which, tho' they revulse the febrile Matter most powerfully from the Brain, yet, they also promote, at least they don't suppress, Sweats and Urine. Nor must we pry too curiously into the Habit of the Body ; for whatever be the Constitution, however it burns by reason of a bilious or thin Blood, if the Fever rage beyond measure, little Inconveniencies*



niencies can not be so momentous, as to make us regardless of Life. ——— The same do we daily Experience in the Small Pox, Measles, Scarlet and Erysipelatous Fever: In which Diseases, altho' the Blood is fiery hot, and burry'd on with Fury; yet we use this Application without Hesitation, and with Success. Wherefore those who reject the Use of Blisters in nervous Cases, in Ardent and Continual Fevers, even tho' a Sleepiness or a Delirium should accompany 'em, are not in the least to be hearken'd to.

But do we not know that Spanish Flies afford a large Quantity of a Volatile Caustick Salt in Distillation? And do Volatile Salts affect the Blood in so eminent a Degree, and yet may be administred with Safety in the Cases here mentioned? Does he not justly cry out against the indiscriminate Use of these Volatile Salts, and heating Medicines, as the Causes of a *more rapid Circulation*, of *Delirium's*, and even *Convulsions* (a)? Does he not expressly own, that

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(a) Siqua acerbior inciderit febris, verè mihi videor esse affirmaturus, varissimè per sudores solos ad integritatem veniri. Hinc consuetudo illa ad nos etiam defluxit, ut febricitantes *Cardiacis* maximè, utpote jucundam curationem promittentibus, uterentur. Ita facilè voluptatis causâ in errorem incidimus; qui nusquam periculosior est, quam ubi de salute agitur. Hanc medendi institutionem, ut nimiàm in calidioribus remediis positam, jure repudiat *Sydenhamus*: quæ tamen ex hodiernâ



(b) that the Flies act by entering the Blood, and that they are a Volatile Salt (c)? Will not the Blood, impregnated with these Salts, always be affected in one and the same manner, whether they be swallow'd, or enter by the Skin? Will they cool us by entering the Pores, and heat us by being swallow'd? Would it not then be lawful to say, That Volatile Salts apply'd to the Skin, are an excellent Remedy against the same Volatile Salts swallow'd down? Are we curiously to inquire into the Habit of the Body, into the State and Condition of the Fever, and into the dangerous Symptoms that arise from the internal Administration of Volatile Medicines; and yet neglect this Scrutiny, when the Blood receives

nâ medicinâ non videtur penitus, uti debuit, exulâsse. Quid enim hâc curandi ratione assequuntur medici, nisi ut calidissima quæque exhibendo, sudoresque affatim provocando, rapidior fiat sanguinis circuitus, quod & fatentur ipsi: unde febre paulatim invalescente, & cerebrum tandem occupante, deliria nervorumque distentiones, si non accersi, saltem haud arceri videmus. Idque constanter experiuntur ii, qui in febribus acutis nihil nisi *Serpentariæ* radicem, *Salemque* de *Cornu Cervino* expressum, & similia, amant ingerere. *Freind Comment.* p. 44, 45.

(b) Verique simile est eas (*Cantharidas*) etiam cum cuti admotæ sint, altius pervadere, humorésque eodem planè modo (*Sanguinis Cursum incitando*) commovere. *Id.* p. 166.

(c) *Sales acerrimi* cum iis, quos fert urina, adhæserint, has tragœdias (cruciatus & exulcerationes in meatu urinario) excitant. *Id.* p. 167.

these



these individual Medicines by the Pores? Do Volatile Medicines, taken by the Mouth, attenuate, dissolve and heat the Blood (*d*), and yet injected, have quite different Effects (*e*)? Were it not more adviseable in hot Bloods, acute Fevers, and strong Pulses, to *Bleed*, than to *Blister* (*f*)? The Truth appears from his

(*d*) Ut vero efficacius tollatur sanguinis *Lentor*, atque invalesceret *momentum*, hæc, quæ viribus idoneis tollere docet experientia, præscripta sunt remedia. — R. Sp. Sal. Armon. Elix. pp. à Oz. ij. — *Emmenolog.* p. 112, 113. *Ed. 1ma.*

(*e*) Cum Spir. Salis Armoniaci (injecto ʒ.) Floridus admodum color, & compages fluida. *Id. Ib.* p. 160. — Nullum fere est Emmenagogum, quod calorem non excitet. *Id. Ib.* p. 159.

(*f*) D. Pool, in nave *Barfleur* præfecti vicarius (febre correptus) die prima questus est de *æstu*. — *Pulsus velox & validus.* 2do. eadem. — 3tio. sub noctem *vehementer incalescebat*, *Pulsus celer & inæqualis*. — Adhibitum est *nachte vesicatorium*. — 4to. post meridiem *recredebant omnia* (1.) — *vesicatoria ampla* utriusque brachio. — 5to. *Pulsus valens, velox, duriusculus* (2.) Itaque cum frustra fuerint *vesicatoria*, *missus est sanguis ex jugulari*: unde *caput maxime recreatum est mensque sibi constitit*. *Æstus remissior*. — 6to. *Febris* — admodum *ingravescebat* — admotum capiti *raso vesicatorium*. — 7mo. Eadem *omnia* (3.) *nulla delirandi intermissio*. — 8vo. *Calor vehementius* (4.) *excanduit*. *major tendinum subsultus & utriusque femori vesicatoria*. — 9no. *Nihil omnino intellexit* (5.) aliquando *singultu correptus est*. — 10mo. Quia *omnia*, etiam *vesicatoriis toties adhibitis*, *in pejus ruere visa sunt*, & quia *Pulsus adhuc satis valenter se habuit*, iterum ex jugulari *eductæ sunt sanguinis Oz. xij.* A quo quidem tempore (6.) *statim fere cessavit delirium*, & cætera signa paulatim in melius mutata sunt, ita ut ex toto tandem *secuta sit integritas*. *Freind Com.* P. 39, 40, 41, 42.



own Concessions, That *Blisters* have an Effect of over-heating the Blood, of increasing its Motion, and of bringing on various dangerous Symptoms; such are (1.) *Exacerbations* of the Fever; (2.) Hardness and Vehemence of the Pulse; (3.) *Deliriums* without Intermision; (4.) *Burnings*; (5.) And a Total Loss of Understanding; (6.) All which were evidently and *instantaneously* reliev'd by *Bleeding* in the Jugular. Thus are their Assertions, which stand in Opposition to the best of Theories, *Bellini's*, founded on Reason and Experience, confuted by themselves. And, indeed, they can never be apply'd, but Danger or Success will attend their Application. And in Case of *Phrenzies* attended with strong Pulses and burning Heats, they are generally dangerous; or, indeed, where-ever the Commotion in the Blood is violent, as the excessive Heat, and too vigorous Pulse, do plainly convince us.

It is said again, *Very often Things are come to such a Pass, that there are no Hopes left but in Blisters, as it happen'd lately that a Gout seiz'd upon a Patient's Head and rais'd a Fever; If Blisters had been neglected for fear of heating the Patient, how vain would it have been to have expected Health from any other Quarter?*

As there are sundry Methods of recalling an *Anomalous Gout*, besides *Blisters*; I make no doubt, but this Gentleman had done the Patient all the Justice imaginable, before he had Recourse to this *Asylum*: But even in this



Supposition, there is no small Disparity between a Retreat in the Gout, and in the *Small Pox*; because there is great Difference between a Disease and its Symptom. That which is primary, is most commonly superior in its Order of indicating, to that which is secondary: And this Retreat is the Cause of, and prior to, this Fever: And Effects cease upon the Removal of their immediate Causes. For this Fever, this Symptom, or this Effect, is found not to subsist after the Removal of its Cause, to wit, the Retreat; because it is but a bare *Hurry of the Blood*, because it is found by Experience, to be slight, and to cease of Course, upon the vanishing of its antecedent Cause; whereas the Fever in the *Small Pox* is continual, very dangerous, and productive of surprizing Symptoms, if it is augmented by any heating Methods, inasmuch as this Second Fever of the *Small Pox* is a regular and stable Fever, and is in Truth a *Property* of the Disease. *And should it be urg'd, that both these Fevers are no more than Symptoms, or a Part of the Disease; and therefore if one is to be regarded, the other also ought; I have already observ'd, that the Disparity is very considerable; and I shall add, that it is not very material, if the Fever, in a Retreat from a Gout, be augmented for a while; because, in this Case, the whole Danger is plac'd in the Retreat, and very little, if at all, in the Fever. Not that it may not happen otherwise sometimes: For have we not seen a Peripneumony,*



a Phrenzy, and other inflammatory Symptoms, introduc'd from the Retreat of a Gout? And are we not oblig'd in such Cases to postpone the Retreat, that we may cure the Symptoms? And don't all heating Methods aggravate these Symptoms, and frustrate our Endeavours of making the Gout return to its usual Station, 'till they are remedied? I hope, these few Considerations will make it appear, that we ought *always, and at all Times*, to be careful, how we make use of Measures which will augment the *Second Fever* in the *Small Pox*; but that it is not *constantly necessary* we should have so strict a Regard for the Fever in a Retreating Gout; which, however, sometimes also we see becomes absolutely necessary. Therefore, this Comparison or Argument is not demonstrative, and, by Consequence, not conclusive against *Bellini*, nor his Followers, for the use of Blisters, in the Case mention'd, where the Fever is highly aggravated by their Application in so momentous a Circumstance.

*Volatile or hot Medicines* are now to be consider'd; they are divided into *very hot*, or *middling*. The first Sort, by their Volatile Parts, do exagitate the Blood, and hurry it on with great Violence; and they are dangerous in the beginning of Fevers, in inflammatory Cases, in furious Phrenzies, in Hæmorrhages, in plethorick Habits, in choaking Catarrhs in Fevers, and in Convulsions in *Burning Fevers*; but, on the contrary, they are useful in *Coma's*, in *Deliriums*, Con-



vulsions *in Slow Fevers* ; and, in short, wherever the Blood and Spirits are too lazily mov'd in their Channels : Wherefore, to administer in the *Small Pox* in the beginning *Venice Treacle*, *Red Powder*, or any such heating Drugs, is, generally speaking, rather tampering, than curing. However, this Remark is not without its Exceptions ; for it is very often necessary, when the Spirits are dejected, and upon a weak Pulse, from what Cause soever they proceed, to administer moving and warming Remedies to a certain Degree ; but to hold your Hand so soon as the Case changes, and you have Grounds to hope it will persevere in this State ; for then you have proceeded so far as is required for a *Solution* of the Disease. And as these are the Measures of the Administration of Drugs, so we must have a strict Regard to these Limits, which it is not lawful to transgress, but upon Demonstration it self ; and the only Difficulty resting upon the Patient, is to be able to distinguish between Men. The Merits of Vogue are best discover'd in Times of Danger ; Success then crowns the Man, whom Misfortunes deservedly crush. He who goes no farther for Prognosticks than *Prosper Alpinus's* Third Page, will serve the Turn of the Vulgar ; but, surely, not of the Men of Brains (g). Cool

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(g) Ignari semper prædicunt mortem vel periculum, & mortis culpâ, si moriantur, vacare solent ; & si vivant, eorum diligentia



*Cool Remedies and Methods*, are necessary where the *Hot* can't come in play. Dr. Sydenham is generally in the Right, if we speak of such a Fever attending the *Small Pox*, as is mostly observ'd in warmer Climes and Foreign Countries: And here it is, that the *Italians* and *French* are observ'd to give him larger *Encomiums*, than his own Country-men can allow of, in all the Seasons of their Fevers. Not that I would have my Readers believe I am decrying this Great Man; but must I not, therefore, speak the Truth, lest I should seem to thwart his Opinions or Practice? Every Man has his Title to that share of Credit, which he can make good. And whoever uses this *Cool Regimen* indiscriminately, may very justly be said, to be guilty of the Sacrifice of such, as have the Misfortune to drop under his Rules, which he will answer for to a Supreme Power, and should be called to an account for, if he is not allowed a legal Liberty to practice, by the Legislature. Whenever then the Fever runs high, in any Stage of this Disease, the Physician's Care must be to use all cool Methods, whether of Drinks, Meats, Rooms, Coverings, or of whatever can be refreshing, to arrest this Hurry, Commotion, Effervescence, Ebullition or Fermentation of the

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gentiæ & studio sanitatem imputant; undè ex hac regulâ generali, nil incommodi. Lib. 1. Præf. p. 3. *De Præfag. Visa & Mortis agrosantium.*

Fluids;



Fluids; to hinder the Symptomatical Sweats; to allay the furious Ravings; to quench their Thirst, to supple their parch'd Members; to give them Rest, and to gratify their Palates. However, we too often find, that these Cool Methods are ill apply'd in low and slow Fevers; the more Liquids we glut ourselves with, the more are the Spirits dejected, and many dangerous Symptoms, which hang by this Chain, are hurried on, and increas'd, if present, by them. So that the Golden Rule, *Medio tutissimus ibis*, holds as true in Physick, as in Morals.

*Opiates* are Medicines which either carry certain Life along with 'em, or Death in *Ambuscade*: They are useful in Deliriums, Watchings, Throbbings, Pains and Hurries of the Spirits; but then they are dangerous in Coma's, in short Breathings, in the Crisis and State of a Distemper. They cannot be administred in languid Persons, in slow Fevers, in Suppressions of the Belly, in moist Coughs, nor *comatous* Phrenzies; and they are observ'd to retard Suppurations. But on the other Hand, strong Bodies can bear 'em; they are requir'd in Fluxes, in Vomitings, in dry *Asthma's*, in Convulsions with strong Fevers, and in many other Cases; so that it is hard to be Master of all the Circumstances they are forbid, and requir'd in, without an exact Knowledge of the *Animal Oeconomy*, which there is not room for in this Pamphlet: Only I shall give the Readers some few proper  
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Remarks, and then proceed. In the present Disease, it is common for Persons, under the third Stage of it, to be *Delirious* from the Pain of so many little *Boils*, which are hot and fiery, and disturb our Rest; and Want of this necessary Condition, brings on both Ravings and innumerable other dangerous Symptoms; for the Relief of which, nothing is more fitted than Opiates judiciously administred: And yet it may so fall out, that we dare not administer 'em. For, in the Time of the Eruption, we have seen such Circumstances, as would require their Use; but then have been oblig'd to look on 'till a more favourable Opportunity. What Dr. *Sydenham* says of their promoting the Salivation, 'till a wish'd-for End of the Fever, only a remote Promotion of it can be spoke of: For there is no Physician but knows, that Opiates will curb a Salivation. But the Removal of such Symptoms as retard this wholesome Evacuation, is rather to be call'd a Secondary Indication, than a Primary one; for when once they are remov'd, the Cause of this Stoppage ceases, and consequently it returns of Course.

To come therefore to the Point. It ought to be remark'd, That a Physician's Business is often, in the Beginning, to act the *Spectator's* Part; because, *what is perfectly judg'd, must not be reprovok'd with any Medicines whatever*, according to the Divine *Hippocrates*.

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(b). However, when Nature fails, or exceeds in her Duty, the Physician, as a faithful Servant, must lend a Helping-hand, that our Oeconomy may suffer no Detriment; he must find out the Causes of the Damage; that is, he must know, whether the Fault lies in the Solids, or in the Fluids, apart or jointly, and proceed upon a mature Judgment.

I must subjoin, as to Bleeding, that no Season forbids its Use, upon a *Proviso*, That a Fulness of the Vessels, Age, and Strength permit it, when it is requir'd from some pressing Occasion: Nay, even upon their Eruption, if it be requir'd from a violent Commotion of the Blood, and other urgent Symptoms, and the Circumstances just nam'd, do concur.

As to *Physick*, altho' it is certainly forbid from the Nature of the Disease; yet, there are certain Circumstances which do encourage us to give a gentle Potion, which will unload the Bowels.

As for Remedies which expel the *Small Pox*, some are for 'em, others against 'em; but both are to blame in their Turn. For, doubtless, and I speak by daily Experience,

(b) Τα κρινόμενα καὶ τὰ κεκρυμένα ἀρτίως, μὴ κινέειν, μὴ ὀνεωλεροποιέειν, μήτε φαρμακείησι, μήτ' ἀλλοιοῖσιν ἐρεθισμῶσι, ἀλλ' ἑαίν.

Αφορ. Βιβλ. α'. Τμήμ. κ'.



the Fever is our chief Care. And I have seen too high a Fever attending the Appearance of 'em, as I have seen also too slow an one; and as the one requires a Bridle, the other demands the Spur. When they begin to ripen, Medicines and Applications, if there be any such best experienc'd, ought to be us'd; the *Return* of this Matter into the Blood, ought to be prevented by a little Sack now and then allow'd, if nothing gainsay it; and the *Putrid Fever* ought to be prevented, if possible, by administering such Medicines as will unhinge the Consequence of the Matter's entring the Blood. But in these two last Indications, greater Skill is requir'd, than most can pretend to; and it were to be wish'd, that we knew the Nature of *Matter* better than we do. So much is affirmed of it, That *neither Acids nor the Fire will coagulate laudable Matter*: And I wish more Experiments were made to try how to answer such an Indication as would make its Return harmless. *Sylvius* is very profuse in the Praises of *Diaphoretic Antimony* at this Stage of the *Small Pox*, and assures us, that the *Ripening, Drying, and Fall* of them, are promoted and rendered easy by it.

I believe these Hints are sufficient for this small Sketch; I shall therefore descend to give some Directions for the Preservation of the Parts, and then take Leave of the Subject.



The *Eyes* are to be guarded from Injury by Washes, call'd *Collyriums*, made of Rose-Water, Woman's Milk, Saffron, Chervil, Fennel-Water, and such Things, mix'd and apply'd to 'em with a Sponge warm; and if they are so swell'd as that they can't be open'd, (and so it ought to be in the *Small Pox* I speak of) they may be bath'd with emollient Fomentations, in order to render 'em supple, and to make the Pustules of 'em ripen sooner.

The *Nostrils* are to be preserv'd with Camphire in Vinegar, or, at last, with Oil of Almonds rubb'd on 'em; or the Patients may smell at Vinegar before the *Small Pox* break out.

The *Face* is by some wash'd with Rose-Water, by others it is rubb'd over with Oil of Almonds, before they break forth; and, as a Preservative, some have advis'd the Feet to be bath'd in warm Milk; the Reasonableness of which Practices I have no Room to enter into a Detail of at present; only there is no doubt, but that safe Inventions ought to be encourag'd: But what such are, it is not too safe to be too communicative.

The Sick ought to be kept in such a Warmth, as gently to promote their Eruption; the Women, I know, do use Scarlet-Cloaths to preserve such Places from Infection as are most tender. The Air of the Room ought to be moderate, or suited to the Condition of the Fever. The Diet must be thin and  
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moderate ; and all sharp or hot Diet is to be avoided.

I am sensible, there are yet behind some other Cautions, which every one ought to inquire into from the Physician, who only best knows how to suit the Advice to the Question. But my Time not allowing me to expatiate further into this copious Subject, I shall only subjoin one Remark, which it is very obvious for the Readers to make from the foregoing Discourse.

From what has been said above, it is very evident and plain, That the *Small Pox* are not always so univocal, as to have the same Symptoms in all Persons ; nor is the Fever always so alike circumstanc'd, as to require the same Remedies at all Times : Nay, it is a Demonstration supported by Reason, and confirm'd by daily Practice, That the Methods which would relieve any Symptom in one Person, will inevitably destroy another under the same, when it proceeds from various Conditions of the Fever, Strength and Age of the Person labouring under this Malady. So that he who would pretend to any one Method of Cure in the *Small Pox* for all Constitutions, for every State of the Fever, and at all Seasons of the Year, would soon put an End to the Lives of his Patients, and acquire an odious Character : For an Uniformity fits all Conditions in the *Small Pox*, as one Boot fits all Legs. And as short Methods



thods are only synonymous Terms for Methods which fall short of their Aims ; so they who affect to have more Practice than they have study'd well to deserve, generally pretend to Secrets which no others have ; and which others well-skill'd would, indeed, be asham'd to put in Practice.



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