The new method of inoculating for the small-pox : delivered in a lecture in the University of Pennsylvania, on the 20th of February, 1781 / by Benjamin Rush, M.D. professor of the institutes and of clinical medicine in the University of Pennsylvania.

THE

NEW METHOD

OF

INOCULATING

FOR THE

SMALL-POX.

DELIVERED IN A LECTURE IN THE UNIVERSITY OF PENNSYLVANIA, ON THE 20th OF FEBRUARY, 1781.

BY

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M.DCC,XCII.

THE

NEW METHOD

OF

Inoculating for the Small-Pox.

GENTLEMEN,

IT muſt afford no ſmall pleaſure to a benevolent mind in the midſt of a war, which daily makes ſo much havoc with the human ſpecies, to reflect, that the ſmall-pox which once proved equally fatal to thouſands, has been checked in its career, and in a great degree ſubdued by the practice of INOCULATION.

IT is foreign to my purpoſe to deliver to you the hiſtory of this art, and to mark the various ſteps that have attended its progreſs to its preſent ſtate of improvement. We have yet to lament the want of uniformity and of equal ſucceſs in the practice of it among phyſicians. A great number

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of pamphlets have been written upon the ſubject without exhauſting it. There is ſtill ample room left for the man of genius to exerciſe his talents for obſervation and reaſoning upon it. The facts I mean to lay before you are ſo inconſiderable, compared with what ſtill remain to be known upon this ſubject, that I have to requeſt, when your knowledge in it is compleated, that you would bury my name in ſilence; and forget that ever I ventured to lay a ſingle ſtone in this part of the fabric of ſcience.

In treating upon this ſubject, I ſhall

I. Consider the proper ſubjects and ſeaſons for inoculation.

II. I shall deſcribe the method of communicating the diſorder.

III. I shall conſider the method of preparing the body for the ſmall-pox.

IV. I shall mention the treatment proper during the eruptive fever; and,

V. Point out a few cautions that are neceſſary after the diſeaſe is over.

I. For-

I. FORMERLY there were great difficulties in the choice of the ſubjects for *Inoculation*. But experience teaches us that it may be practiſed in every ſtage of life, and in almoſt every condition of the human body. In infancy the periods before and after dentition are to be preferred. But we ſeldom ſee any great inconveniencies from ſubmitting to the general neceſſity of inoculating children between the ages of three months and two years. Indeed we often ſee children cut three or four teeth during the preparation and eruptive fever, without the leaſt addition being made to any of the troubleſome ſymptoms which accompany the ſmall-pox. There is one inconvenience attending the choice of the firſt months of infancy for inoculating, and that is, the matter often fails of producing the diſorder in ſuch young ſubjects. I have frequently failed in two or three attempts to communicate the diſorder to children under four months old with the ſame matter that has ſucceeded in a dozen other patients inoculated at the ſame time. When the inoculation ſucceeds in ſuch tender ſubjects, they generally have leſs fever, and fewer puſtules, than are common in any future period of life.

ALTHOUGH a phyſician would prefer a patient in good health to any other as a ſubject

ject for inoculation, yet caſes often occur in which it is neceſſary to communicate the ſmall-pox while the body is affected with ſome other diſorder. I can with pleaſure inform you, that the ſmall-pox is rendered ſo perfectly ſafe by inoculation, that there are few chronic diſeaſes which ſhould be conſidered as obſtacles in the way of it. I have inoculated patients labouring under a tertian fever, obſtructed viſcera, the hooping cough, the hypochondriaſis, the aſthma, the itch, and other cutaneous diſorders, and even pregnant women, with the ſame, and in ſome inſtances, with greater ſucceſs than perſons in perfect health. Doctor *Cullen* informs us that he has ſeen inoculation ſucceed in ſcrophulous patients. A phyſician in *Jamaica* informed me that he had inoculated Negroes with ſucceſs in the worſt ſtage of the yaws. To theſe facts I muſt add one more extraordinary than any that has been yet mentioned: Doctor *Brown*, my late colleague in the care of the military hoſpitals, informed me, that he had ſeen inoculation ſucceed in patients who were ſeized, after the infection was communicated, with the hoſpital fever. The preparation of the body ſhould be accommodated to the diſeaſe which affects it. Some phyſicians have thought the ſmall-pox, received in this way, was a remedy for other diſeaſes, but my experience has not con-

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firmed this opinion. On the contrary, I am diſpoſed to think that no other change is produced by inoculation, than by the regimen and medicines that are uſed to prepare the body for the ſmall-pox. Nor does the ſmall-pox, during its continuance, afford any ſecurity againſt the attacks of other diſeaſes. I have ſeen the moſt alarming complication of the ſmall-pox and meaſles in the ſame perſon.

The ſeaſons commonly preferred for inoculation in this country are, the ſpring and fall. It may be practiſed with equal ſafety in the winter, a due regard being had to the temperature of the air in the preparation of the body.

The principal objection to inoculating in the ſummer months in this climate, ariſes from the frequency of bilious diſorders at that ſeaſon, to which the preparation neceſſary for the ſmall-pox probably diſpoſes the body. This caution applies more directly to children who at a certain age are more ſubject than grown people to a diſorder in their bowels in warm weather.

II. The methods of communicating the ſmall-pox by inoculation, have been different in different countries, and in the different æras of its progreſs towards its preſent

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ſtage of improvement. The ſcab, doſſel of lint, and the thread impregnated with variolous matter and bound up in a gaſh in the arm, have been laid aſide.

We are indebted to Mr. *Sutton* for the mode of communicating it by a ſlight puncture with the point of a lancet, or needle, dipt in freſh matter. As it is difficult ſometimes to procure matter in a freſh ſtate, I have been led to uſe it with equal ſucceſs by preſerving it on lint in a box, and moiſtening it with cold water juſt before I uſed it. Matter may be kept in this way for a month without loſing its infectious quality, provided it be not expoſed to heat or moiſture. The former deſtroys its power of infecting as certainly as the ſalt of tartar deſtroys the acidity of vinegar. Moiſture, by remaining long upon the matter, probably deſtroys its virulence by ſubjecting it to fermentation. The longer matter has been kept in a general way, the longer the diſtance will be between the time of communicating the diſorder and the eruptive fever. It will be proper always to yield to the prejudices of our patients in favour of matter taken from perſons who have but few puſtules. But I am perſuaded from repeated obſervations, that the diſeaſe is no ways influenced by this circumſtance. I am ſatisfied likewiſe that there is no difference

ence between the effects of the matter, whether it be taken in its watery or purulent ſtate. The puncture ſhould not be larger than is ſufficient to draw one drop of blood, but it ſhould always be made by a *ſharp* lancet, for the ſudden inflammation and ſuppuration, excited by a dull lancet, ſometimes throw off the matter ſo as to prevent its infecting the body*. No plaſter or bandage ſhould be applied over the puncture. It ſhould be made in the left arm of all ſubjects. The objections to inoculating in the leg are too obvious to be mentioned. I have heard of the diſeaſe being communicated by rubbing the dry ſkin with the matter. My own obſervations upon this ſubject give me reaſon to ſuſpect the facts that are contained in books relative to this mode of infecting the body. I have bound large pieces of lint dipt in freſh matter for twenty-four hours upon the arm, without producing the diſorder. A practitioner of phyſic in *New-Jerſey* informed me that he once gave a conſiderable quantity of freſh variolous matter in a doſe of phyſic without infecting his patient. I ſuſpect the matter that produces the diſeaſe is of the ſame nature with certain poiſons,

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* I am diſpoſed to believe that the external applications which are uſed by the Indians for the cure of the bite of poiſonous ſnakes, act only by exciting inflammation and ſuppuration, which diſcharge the poiſon from the wound before it is abſorbed. All their external remedies are of a *ſtimulating* nature.

which require to be brought in contact with a wound or ſore in the body before they produce their effects. I deliver this opinion with diffidence. The ſubject ſtands in need of more experiments and inveſtigation.

III. I COME now to conſider the beſt method of preparing the body for the ſmall-pox. This muſt be done, 1ſt by DIET, and 2dly by MEDICINE. The DIET ſhould conſiſt chiefly of vegetables. I have never ſeen any inconvenience from the free uſe of milk as a part of the preparative diet. In ſome habits, where a morbid acid prevails in the ſtomach, we may indulge our patients in a little weak fleſh broth two or three times a week with ſafety. Tea, coffee, and even weak chocolate, with biſcuit or dry toaſt, may be uſed as uſual, by perſons accuſtomed to that kind of aliment. Wine and ſpirits of all kinds ſhould be withheld from our patients during the preparation. The more aceſcent their drinks are, the better. It is unneceſſary that this change in the diet ſhould take place till a day or two before the time of communicating the diſorder. The ſyſtem accommodates to a vegetable and low diet in the courſe of three weeks or a month, ſo as to defeat in ſome meaſure the advantages we expected from it. The good effects of it

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appear to depend in a great degree upon the *ſuddenneſs* with which we oblige our patients to conform to it. For this reaſon, when we are called upon to inoculate perſons who have lived more than three or four weeks upon a low diet, we ſhould always direct them to live a few days upon animal food before we communicate the diſorder to them. By theſe means we may produce all the good effects of the *ſudden* change in the diet I have already mentioned. 2. The MEDICINES moſt commonly uſed to prepare the body for the ſmall-pox are antimony and mercury. The latter has had the preference, and has been given in large quantities under a notion of its being a ſpecific antidote to the variolous matter. Many objections might be made to this opinion; I ſhall mention only three.

1. WE often ſee the diſorder in a high degree after the ſyſtem is fully impregnated with mercury.

2. WE often ſee the ſame ſalutary effects of mercury when given before the diſorder is communicated to the body, that we perceive when it is given after inoculation; in which caſe we are ſure the mercury cannot enter into mixture with the variolous matter ſo as to deſtroy it.

3. If mercury acted ſpecifically in deſtroying the variolous matter, it would render every other part of the preparation unneceſſary, but this we know is not the caſe, for the neglect or improper uſe of the vegetable diet or cool regimen is often attended with an extraordinary number, or virulence of the ſmall-pox, even in thoſe caſes where mercury is given in the largeſt quantity.

The way in which mercury prepares the body for the ſmall-pox, ſeems to be by promoting the ſeveral excretions, particularly that by perſpiration, which, by diminiſhing the quantity of the fluids and weakening the tone of the ſolids, renders the ſyſtem leſs liable to a plentiful eruption of the ſmall-pox. But I object to the uſe of this medicine for the following reaſons:

1. It effectually deprives us of all the benefits of the cool regimen; for mercury, we know, always *diſpoſes* the ſyſtem to take cold.

2. All the good effects of mercury may be produced by purges, which do not ſubject the body to the above-mentioned inconvenience.

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THE PURGES may be ſuited to the conſtitutions, and in ſome caſes, even to the inclinations of our patients. I have ſeen jalap, rhubarb, ſenna, manna, aloes, ſoluble tartar, glauber and epſom ſalts, and the butternut pill, all given with equal ſucceſs. The quantity ſhould be ſufficient to procure three or four ſtools every day. A little magneſia ſhould always be mixed with rhubarb and jalap in preparing children. It will be ſufficient for the mothers and nurſes of infants to conform ſtrictly to the vegetable diet. I have never ſeen any advantages from giving them even a ſingle doſe of phyſic.

IT is hardly neceſſary to obſerve, that the quality, doſe, and number of purges are to be determined by the age, ſex, and habits of our patients. A conſtitution enfeebled with a previous diſeaſe forbids the uſe of purges, and requires medicines of a reſtorative kind. Patients afflicted with cutaneous diſorders bear larger and more frequent doſes of phyſic than are indicated in more healthy ſubjects.

IN adult ſubjects of a plethoric habit, blood-letting is very uſeful on the third or fourth day after inoculation. We are not to ſuppoſe, that every fat perſon labours under a plethora. A moderate degree of

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fat is ſo far from rendering the diſeaſe more violent, eſpecially in children, that I think I have generally found ſuch ſubjects have the ſmall-pox more favourably than others.

MODERATE exerciſe in the open air ſhould be uſed during the preparation. But hard labour, and every thing that promotes ſweat or fatigue, as alſo the extremes of heat and cold, ſhould be avoided.

IV. WE come now to conſider the treatment of the body during the eruptive fever. On the eighth day after inoculation our patients are *generally* ſeized with the common ſymptoms of fever. Sometimes this fever appears on the ſixth and ſeventh day after inoculation. But when it is irregular, it is often delayed till the ninth and tenth days. I have ſeen many inſtances of it on the fourteenth, a few on the fifteenth and ſixteenth, and *one* caſe in which it did not come on till the eighteenth day after the infection was communicated to the body*. The place where the puncture was made with the lancet, or needle, generally ſerves as an harbinger of the approaching fever. A flight

* Since the publication of the firſt edition of this lecture, I have heard of two caſes, in one of which the fever did not come on till the twentieth, and in the other till the twenty-firſt day after the infection was communicated to the body. In ſome of theſe tedious caſes, I have ſeen an inflammation and ſuppuration on the punctured part of the arm on the eighth day without any fever. Perhaps in theſe caſes the inflammation and ſuppuration are only cuticular, and that the ſmall-pox is taken from the matter which is formed by them.

A ſlight inflammation appears about it, and a pock riſes up in the centre. But this remark is liable to ſome objections. I have ſeen *four* inſtances in which the fever came on at the expected time, and the diſorder went through all its ſtages with the greateſt regularity, and yet there was no ſign of an inflammation or pock near the ſpot where the puncture was made: even the puncture itſelf became inviſible. On the other hand, we ſometimes ſee an inflammation and pock on the arm appear on the eighth and ninth days without any fever accompanying them. Some phyſicians pretend that this inflammation and ſolitary pock are ſufficient to conſtitute the diſeaſe; but repeated experience has taught me to be very cautious in relying upon theſe equivocal marks. It is true, I have ſometimes ſeen patients ſecured againſt the ſmall-pox both in the natural way and by inoculation where theſe marks have appeared; but I have as often ſeen ſuch patients ſeized afterwards with the ſmall-pox in the natural way, to the great diſtreſs of families and mortification of phyſicians. Upon this account I make it a conſtant practice to adviſe a ſecond or third inoculation where a fever and eruption have been wanting. As the abſence of theſe ſymptoms is probably occaſioned by the weakneſs or age of the variolous matter, or the too high ſtate of preparation of

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the body, we ſhould always guard againſt both, by making the puncture the ſecond time with *freſh* matter, by ſubjecting our patients to a *leſs* abſtemious diet, and by giving fewer doſes of phyſic. I have heard it remarked, that if a ſlight redneſs and a ſmall pimple appeared on the arm on the third day after inoculation, it was a ſign the matter had infected the whole conſtitution. I acknowledge I have often ſeen a greater degree of redneſs on the third than on the ſecond day after inoculation, but I have not been able to eſtabliſh a diagnoſtic mark from it; for I have ſeen the diſeaſe produced on the uſual days where the redneſs has appeared on the ſecond day, and in ſome caſes where it has not appeared until the eruptive fever.

I AM led here unwillingly to diſcuſs the old queſtion, Is it poſſible to have the ſmall-pox in the natural way after inoculation?—In many of the caſes ſuppoſed to be the ſmall-pox from inoculation, it is probable the matter has been taken from the chicken-pox, which reſembles the ſmall-pox in many of its peculiarities, but in none more than that of leaving pits or marks on the ſkin. But there are certainly caſes where there are the moſt irrefragible proofs of the infection implanted by inoculation being of a variolous nature, where the diſ-

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order has been afterwards taken in the natural way. In theſe caſes I would ſuppoſe the variolous matter produced only a topical or cuticular diſorder. We ſee ſomething analogous to this in nurſes who attend patients in the ſmall-pox. But further, this topical or cuticular infection may be produced by art in perſons who have had the ſmall-pox in the natural way. Some years ago I made a puncture on my left hand with a lancet moiſtened with variolous matter. On the eighth day an inflammation appeared on the place, accompanied with an efflorescence in the neighbourhood of it, which extended about two inches in every direction from the ſpot where the puncture was made. On the eleventh day I was ſurpriſed to find two pocks (if I may venture to call them ſuch) the one on the outſide of the fourth finger of my left hand, and the other on my forehead. They remained there for ſeveral days, but without filling with matter, and then dropped off rather in the form of a ſoft wart than of a common ſcab. Doctor *Way*, of *Wilmington*, repeated the ſame experiment upon himſelf, but with an iſſue to his curioſity more extraordinary than that I have juſt now related. On the eighth day after he had made a puncture on his hand, a pock appeared on the ſpot, which in the uſual time filled with matter, from which he inoculated ſeveral

children, who ſickened at the uſual time, and went through all the common ſtages and ſymptoms of the ſmall-pox. It would ſeem from theſe facts, that it is neceſſary the ſmall-pox ſhould produce ſome impreſſion upon the *whole* ſyſtem, in order to render it ever afterwards incapable of receiving an impreſſion of a ſimilar nature. A fever and an eruption therefore ſeem neceſſary for this purpoſe. As the inflammation of the arm on the eighth day is a ſign of the *topical* and cuticular infection, ſo an eruption (though ever ſo ſmall) ſeems to be the only certain ſign of the infection of the *whole* ſyſtem. The eruption is the more deciſive in its report in proportion as it comes out and goes off in the uſual manner of the ſmall-pox in the natural way. In thoſe caſes where patients have been ſecured againſt a ſecond attack of the diſorder, where there have been no *obvious* fever or *viſible* eruption, I think I have obſerved an unuſual inflammation, and a copious and long continued diſcharge of matter from the arm. Perhaps this may ſerve as an outlet of the matter, which in other caſes produces the fever and eruption. I am the more diſpoſed to embrace this opinion from the teſtimony which ſeveral authors have left us of the effects of ulcers in ſecuring the body from the infection of the plague. The effects of iſſues are ſtill more to our

purpoſe.

purpoſe. We obſerve a plentiful diſcharge of matter from them every time the body is expoſed to cold, and the febrile effects of it upon the ſyſtem are thereby frequently obviated. How far a ratio exiſts between the degrees of inflammation and the diſcharge of matter from the arm, and the degrees of fever and eruption, muſt be determined by future and very accurate obſervations. If it ſhould appear that there are the leaſt inflammation and ſmalleſt diſcharge, where there have been the higheſt fever and moſt copious eruption; and on the contrary, if it ſhould appear that there are the greateſt inflammation and diſcharge where there have been the leaſt fever and ſmalleſt eruption, I muſt beg leave to add, without attempting in this place to explain the reaſons of it, that the remark, if generally true, is liable to ſome exceptions. But the ſubject is involved in darkneſs; I ſhall be ſatisfied if I have brought you within ſight of the promiſed land. Your own ingenuity, like another Jewiſh leader, muſt conduct you thither.

The indications in the treatment of the body during the eruptive fever are,

1ſt. To regulate the degree of fever.

2d. To

2d. To mitigate troubleſome and alarming ſymptoms.

The fever which produces the eruption is generally of the inflammatory kind. It ſometimes therefore comes on with the ſymptoms of great heat, preceded with chillineſs, and determination to the head and breaſt, and a full hard pulſe. The remedies proper in this caſe are,

A. Blood-letting. The quantity to be drawn muſt be regulated by the violence of the ſymptoms, the conſtitution, habits, and even country of the patient, and by the ſeaſon of the year. I have never found more than one bleeding, to the quantity of twelve or fourteen ounces, neceſſary in any ſtage or degree of the eruptive fever of the ſmall-pox by inoculation.

B. Cool air is of the utmoſt conſequence in the eruptive fever. The uſe of this remedy in fevers marks an æra, not only in the management of the ſmall-pox, but in medicine. The degrees of cold ſhould always be increaſed in proportion to the violence of the fever. Stove-rooms, ſo common in this country, ſhould be carefully avoided. The more we oblige our patients to ſet up and walk in the open air, the better.

ter. Even in thoſe caſes where they languiſh moſt for the bed, they ſhould be encouraged rather to lie upon, than *under* the bed-clothes. Children ſhould be ſtript of flannel petticoats that come in contact with their ſkins; and even clouts ſhould be laid aſide if poſſible, without great inconvenience, and at any rate they ſhould be often removed. Great and obvious as the advantages of cold air appear to be in the eruptive fever, it has ſometimes been uſed to an exceſs that has done miſchief. There are few caſes where a degree of cold below forty of *Fahrenheit*'s thermometer is neceſſary in this ſtage of the ſmall-pox. When it has been uſed below this, or where patients have been expoſed to a damp atmoſphere ſome degrees above it, I have heard of inflammations of an alarming nature being produced in the throat and breaſt.

C. The bowels, more eſpecially of children, ſhould be kept open with gentle laxatives. And

D. Cool ſubacid drinks ſhould be uſed plentifully until the eruption is compleated.

Sometimes the ſmall-pox comes on with a fever the reverſe of that which we have deſcribed. The heat is inconſiderable, the pulſe is weak, and ſcarcely quick-

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er than ordinary, and the patient complains of but ſlight pains in the back and head. Here the treatment ſhould be widely different from that which has been mentioned when the fever is of the inflammatory kind. Bleeding in this caſe is hurtful, and even cool air muſt be admitted with caution. The buſineſs of the phyſician in this caſe is to excite a gentle action in the ſanguiferous ſyſtem, in order to produce the degree of fever which is neceſſary to the eruption of the pock. For this purpoſe he may recommend the uſe of warm drinks, and even of a warm bed, with advantage. If the eruption delays beyond the third day, with all the circumſtances of debility that have been mentioned, I have frequently ordered my patients to eat a few ounces of animal food, and to drink a glaſs or two of wine, with the moſt deſirable ſucceſs. The effects of this indulgence are moſt obvious where the weakneſs of the fever and the delay of the eruption in children, have made it neceſſary to allow it to mothers and nurſes.

The ſmall-pox by inoculation ſo ſeldom comes on with the ſymptoms of a putrid fever, that little need be ſaid of the treatment proper in ſuch caſes. I ſhall only obſerve, that the cold regimen in the higheſt degree, promiſes more ſucceſs in theſe caſes

caſes than in any others. I have repeatedly been told, that when the ſmall-pox appears confluent among the Africans, it is a common practice for mothers to rub their children all over with pepper, and plunge them immediately afterwards into a ſpring of cold water. This, they ſay, deſtroys a great part of the pock, and diſpoſes the remainder to a kindly ſuppuration. From the ſucceſs that has attended the uſe of the cold bath in putrid fevers in ſome parts * of Europe, mentioned in a former lecture, I am diſpoſed to believe in the efficacy of the African remedy.

THE fever generally laſts three days, and the eruption continues for a ſimilar length of time, counting the laſt day of the fever as the firſt day of the eruption. But this remark is liable to many exceptions. We ſometimes obſerve the eruption to begin on the firſt, and often on the ſecond day of the fever; and we ſometimes meet with caſes in which a ſecond eruption comes on after the fever has abated for ſeveral days, and the firſt eruption conſiderably advanced in its progreſs towards a complete

* In a diſſertation entitled "*Epidemia verna quæ Wratiſlaviam, Anno* 1737 *afflixit,*" publiſhed in the appendix to the Acta Nat. Curios. Vol. X. it appears, that waſhing the body all over with cold water in putrid fevers, attended with great debility, was attended with ſucceſs at *Breſlaw* in *Sileſia*. The practice has ſince been adopted, we are told, by ſeveral of the neighbouring countries. CULLEN'S FIRST LINES OF THE PRACTICE OF PHYSIC.

plete ſuppuration. This is often occaſioned by the application of exceſſive cold or heat to the body, or by a ſudden and premature uſe of ſtimulating drinks or animal food.

I COME now to treat of the beſt method of mitigating troubleſome and alarming ſymptoms.

THE only *alarming* ſymptom is convulſions, to which children are ſubject during the time of dentition. Theſe have been leſs frequent, ſince the liberal and judicious uſe of cool air in the eruptive fever than formerly. They are often relieved by putting the feet in warm water. But a more effectual and ſpeedy method of curing them, is to expoſe our patients ſuddenly to the open air. The colder the air the quicker relief it affords in theſe caſes. To prevent the return of the fits, as well as to allay any diſagreeable and troubleſome ſtartings, a few drops of laudanum ſhould be given. They generally yield in a little while to this excellent remedy.

THE next ſymptom which demands the aid of our art, is the inflammation and ſore on the arm. Poultices of all kinds ſhould be laid aſide, as tending to increaſe the in-

flammation

flammation and ſore. Inſtead of theſe, the part affected ſhould be waſhed three or four times a day with cold water*. This application is not only agreeable to our patients, but ſoon checks the progreſs of the inflammation, and diſpoſes the ſore to heal about the time the eruption is compleated. The eyes ſhould likewiſe be waſhed frequently with cold water, to ſecure them from puſtules and inflammation. With reſpect to thoſe alarming or troubleſome ſymptoms which occur in thoſe caſes where the pocks are numerous, or confluent, they happen ſo ſeldom in inoculation, that they do not come properly under our notice in this place. They are moreover fully diſcuſſed by Doctors *Boerhaave*, *Huxham*, *Hillary*, and other practical writers.

V. I COME now, in the laſt place, to deliver a few directions that are neceſſary after the eruption and ſuppuration are over.

IT is well known that eruptions of an obſtinate nature ſometimes follow the ſmall-pox. Theſe I believe are often occaſioned by a too *ſudden* and ſpeedy uſe of animal food. To guard againſt theſe diſagreeable conſequences of inoculation, it is of the ut-

* Where the inflammation on the arm has been ſo conſiderable as not to yield immediately to the application of cold water, I have uſed the vegeto-mineral water with advantage.

moſt importance to enjoin a cautious and *gradual* return to the free uſe of an animal diet; and at the ſame time it will be neceſſary to give our patients a doſe or two of purging phyſic.

THUS, Gentlemen, have I delivered to you a ſhort hiſtory of the new method of inoculating for the ſmall-pox. I am aware that prejudices are entertained againſt ſome parts of it by phyſicians of the moſt ancient name and character among us. I have witneſſed the effects of the old and new methods of preparing the body upon many thouſand patients, and I am ſatisfied not only from my own obſervations, but from the experience of gentlemen upon whoſe judgments I rely more than upon my own, that the new method is by far the ſafeſt and moſt ſucceſsful. Added to this, I can aſſure my pupils, that I have never known a ſingle inſtance of a patient, prepared and treated in the manner I have deſcribed, that ever had an abſceſs after the ſmall-pox, or even ſuch an inflammation or ſore upon the arm as required the application of a poultice.

THE END.

A

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