

A practical essay concerning the small pox / By William Douglass.

Contributors

Douglass, William, approximately 1700-1752.

Publication/Creation

London : Printed for W. Innys, 1730.

Persistent URL

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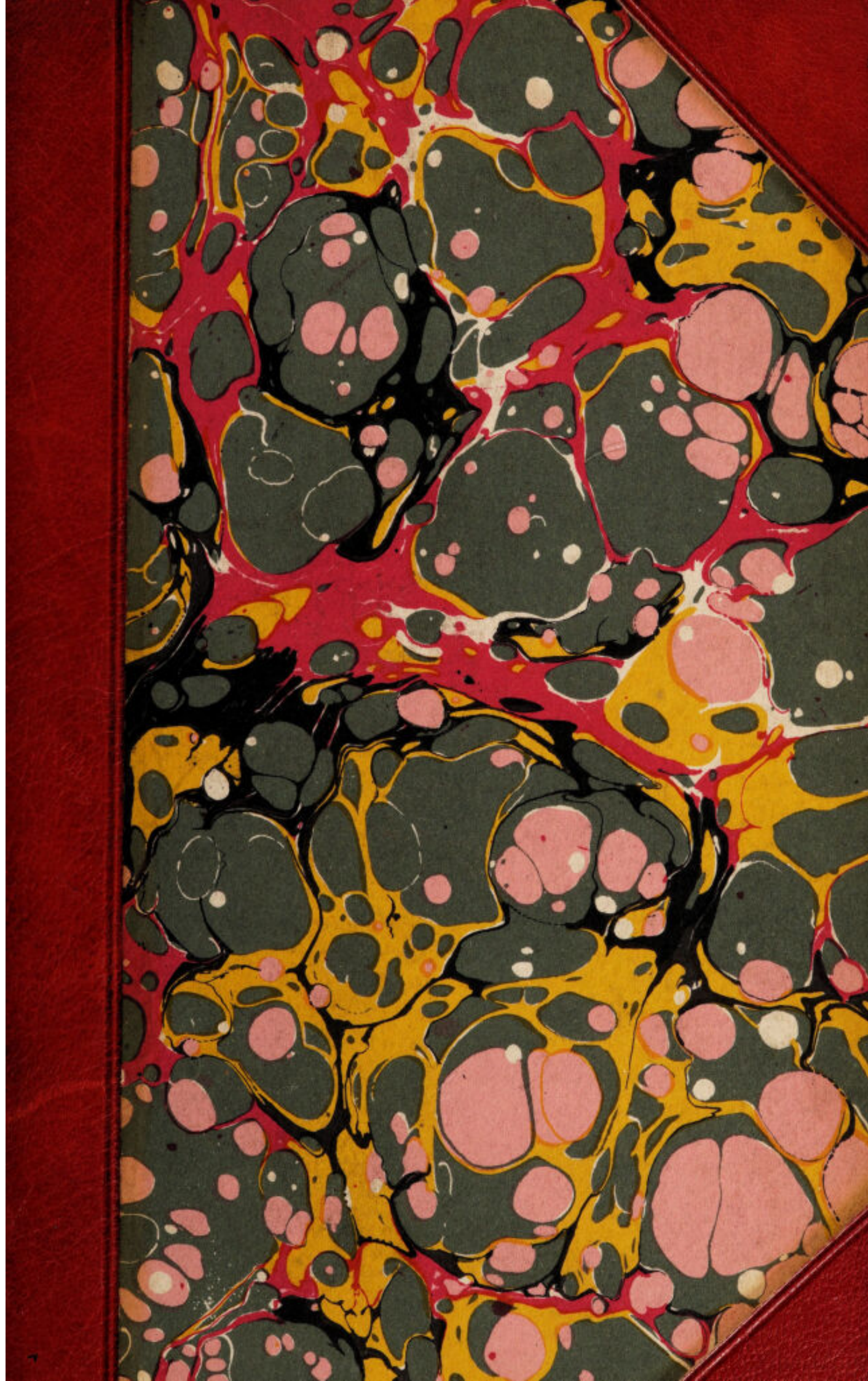
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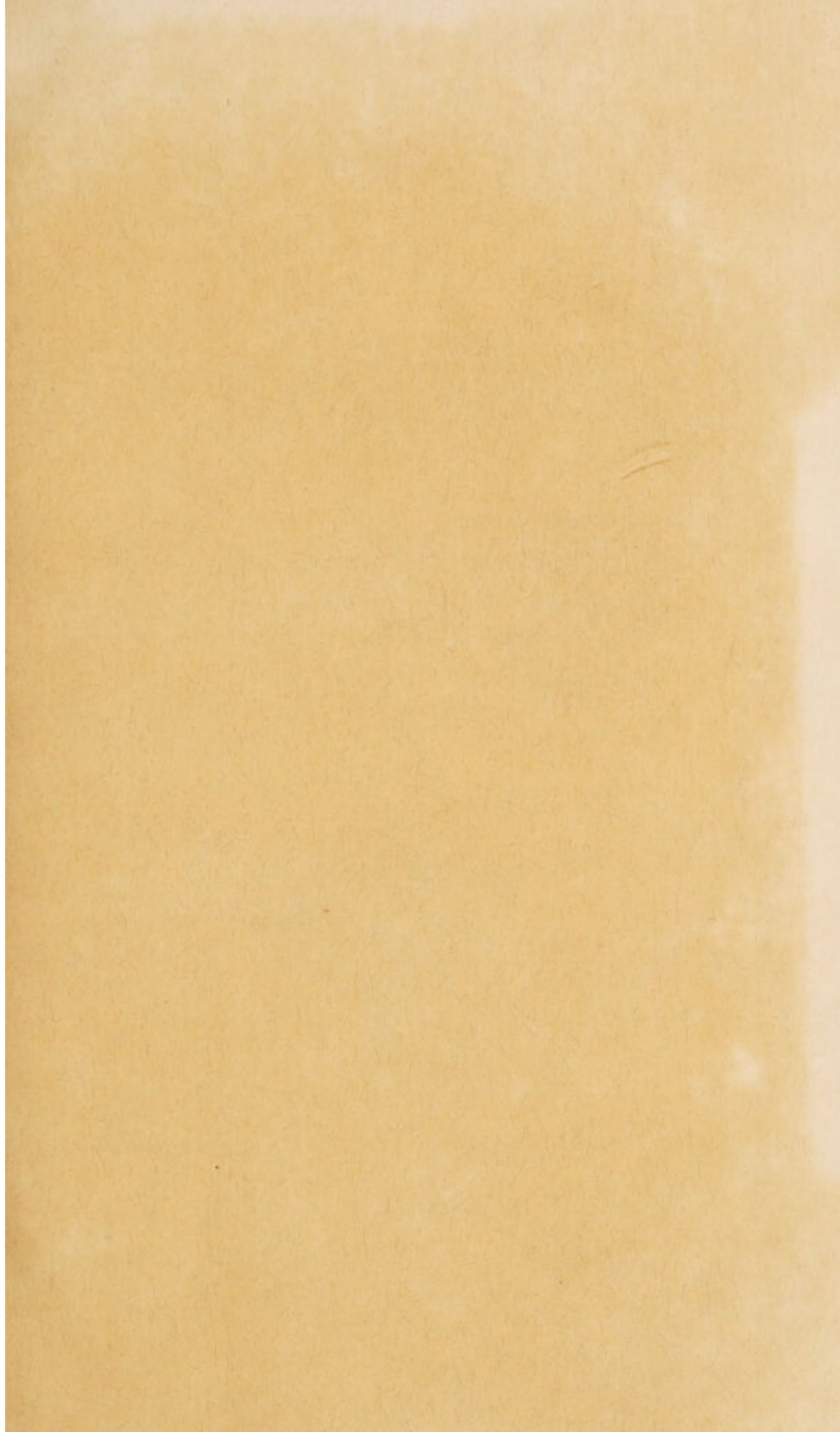
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To Path.

A PRACTICAL
ESSAY

Concerning the
Small Pox.

By WILLIAM DOUGLASS, M. D.

Homo est erranti comiter qui monstrat viam.
Publius Syrus.



L O N D O N:

Printed for W. INNYS at the West End of
St. Paul's. MDCCXXX.

43418





TO
Dr. ALEXANDER STUART,
Physician to Her MAJESTY.

SIR,

OUR former Intimacy at the Universities in Holland, and Hospitals in Flanders, inclined me to this Address. The Station which you have acquired by your Merit, being one of the highest which our Profession admits of, I mean of being a Court Physician, seems naturally to demand it, even at this Distance. But more especially your Knowledge in this Affair or Subject, obliges me to submit this Practical Essay upon the Small Pox, to your better Judgment.

My former Inclinations to several Branches of Natural History, I have now contracted to that of Medical Cases; more particularly I

continue to make Observations concerning the Endemial Distempers of this Countrey and Climate, especially of a certain Anomalous ill-condition'd Autumnal Fever, which sometimes galls us much. In the Year 1721, after an Absence of about twenty Years, the Small Pox render'd this large and populous Town of Boston, in New England, a mere Hospital; such Opportunities are seldom to be met with in Europe, and there being no likelyhood of such another as to Numbers and Varieties, in this Countrey in my Time; I secluded myself from all other Company but that of my Patients, during the Small Pox Illness, and committed to Writing for my own Reminiscence and private Use, the remarkable Small Pox Cases which occurred in a very extensive Practice. This last Summer, after fifteen Years Absence, the Measles prevailed here, which afforded me a very extraordinary Opportunity of observing the Varieties which attend that Distemper.

It is the Duty of a Man, in Times of any publick Calamity, to lend a helping Hand, as his Station, Profession or Capacity may enable him: This induced me at this Time, when the Small Pox begins to annoy the Town again, to reduce into some Method, the Observations I made concerning the Small Pox in Boston 1721. with what other Knowledge I formerly had of this Distemper. Observations reduced

to Method, and Analogy from thence, is all we know or can learn in any Distemper. I have candidly, and without Reserve, imparted all that I know of this Disease, so far as can be reduced to Writing in a short Abstract. I have by Choice expressed some few Things in the Words of some celebrated Practitioners, rather than in my own. To have inserted Formulas of Medicines would be trifling; they are soon conceived where the Indications and Intentions are known. I design'd to have interspersed Histories of remarkable Cases, by way of Practical Illustrations; but the Nature of an Abstract does not give Room, and more especially being recent, most of the Subjects alive in the Place, I was afraid it might not be so greeable, as certainly it would have been useful.

SIR,

Your obliged humble Servant,

WILLIAM DOUGLASS.



A

PRACTICAL ESSAY

Concerning the

SMALL POX.



HERE the *prima stamina Vitæ* are good, the whole Affair of *Health and long Life* would consist in *Temperance and moderate Exercise*, were it not for some *malignant acute Diseases* which have something *Mysterious* in their Nature, invading the Healthy and Valetudinarians indifferently: Of those some are *Endemial*, peculiar to Countries, Climates, Seasons, and Constitutions of the Air; but *not communicable* by Infection from Man to Man; Most Countries have at Times *Fevers* of this Kind, in
this

this and the neighbouring Colonies, especially in the Autumn we are afflicted with a certain *febris mali moris*, not reducible to any Classical Name of Fevers described by Authors. It begins, as all Fevers do, with *Horripulations*, &c. has no perfect Intermissions, but, without any more Horrors, *Remissions*, and *Exacerbations*, sometimes periodical but more frequently uncertain, the Symptoms are various, being the most *anomalous Fever* that ever came to my Knowledge; the most general Symptom is *oppressio gravitativa circa cordis regionem*, which the Patients express by a Pain at their Heart, and in all Fevers except the Eruptive is reckoned a Symptom *mali ominis*.

Some *malignant Fevers*, although originally *Endemial* or the produce of Climates, Seasons, &c. may by *Infection* be spread at home, and in some Constitutions of the Air, may be conveyed and disseminated in Countries abroad where they are not Natives but *Exotics*, and therefore cannot thrive so well there as in their native Soil. Thus the *Plague* Endemial in the *Levant* and *Egypt*, does sometimes get footing in *Europe* (I cannot learn that it ever visited the *American Continent*;) it was in *London* from 1602 to 1648, every Year there died a few of it, but did not spread except in 1603, 1625 and 1636; ever since the Year 1665 notwithstanding a con-

tinued

tinued Trade to the *Levant*, it has not taken Root in *England*.

The *Small Pox* is a Disease of a more *singular Nature*, it is of a very uncertain Original, we know of no Countrey where it is a Native or Endemial, that is, where it is the Produce of Seasons, Winds, &c. as is the Plague in the *Levant*. It owes the Continuation of its Being to a *variolous leaven* communicable in all Countries and Seasons, but some Constitutions of Years favour its Propagation and Mortality more or less; from *London Bills of Mortality* there died there of the *Small Pox* 1702 only 311; in the Year 1706 died 721; in the Year 1719 died 3229. There is another *Circumstance very singular* in its Nature, that it never affects a Person oftener than once; in the *Plague* some have died in the 2d, 3d, 4th, &c. Seisure, as Dr. *Hodges* informs us: It is therefore an Infection essentially different from the *Pestilential*, and cannot be the Effect of some antient violent *Plague in Egypt*, as some Authors surmise.

We are beholden to the *Arabians* or *Saracens*, not only for many *Drugs and Medicines*, as the *Purging Rhubarb*, *Manna*, *Mercurial Unguents*, the *Epispastick Use of the Cantharides*, &c. but also for the first Accounts we have of several Diseases, as *Small Pox*, *Measles*, *Lepra Arabum*, *Spina Ventosa*, *Vena Medini*, or *Guinea Worm*, &c. The *Small*

Pox was a Stranger in Medicine until the Time that the *Arabians* or *Saracens* settled in *Egypt*, which was soon after *Mahomet's* Death. As this People in less than thirty Years did vastly propagate their *Religion* and *Empire*, so they did the *Small Pox* in a short Time, and might introduce it into *Europe* by Way of *Spain*, where they settled powerful Colonies. The various *Exanthemata* of the *Greeks*, and *Pustulæ* of the *Romans*, with other *Eruptive Fevers* mentioned by them, were no ways analogous to the *Small Pox*: At the Discovery of this Continent of *America*, not the least Resemblance of it was to be found.

The *Small Pox* is an *Inflammatory Fever*, but with a peculiar Malignancy or Poison; which requires the Indications of Cure to be taken principally *a juvantibus & lædentibus*. Inflammations, as purely such, require *U. S.* and the Body to be kept soluble; but in the *Small Pox* the Body ought to be bound; and Dr. *Sydenham* gives us an Instance of a young Man, who, notwithstanding he had some short Time before Seizure been frequently let Blood for *Rheumatick* Pains, had the worst Sort of confluent *Small Pox* he ever did see. In some Families, by a *jus hæreditarium*, it is always very malignant, or fatal; Mrs. *A*—— and her Daughter, Capt. *R*——'s Wife and her Child, two Children of *F*——
a Fish-

a Fisherman, two Boys at *L* ——— Cousin Germans, all died with Purples and Hæmorrhages, Mr. *W* ——— and his Sister died in the inoculated Way: To other Families it is always favourable; Dr. *Morton* says, that he could not recollect, that any Person of his own or his Wife's Family ever died of the *Small Pox*. We find by Experience, that a *confluent*, or a very full Kind, does not always proceed from a more intense Inflammation of the Blood, or from driving by Cordials: Frequently it is in the Nature of the Person's *Constitution* to be so affected with the *Small Pox*, having very little of a Fever, no Phrenzy, Coma, or any other violent Symptom; but merely from a too profuse *Suppuration*, to die of a *tabid Inanition*, in all Stages of Life; thus died *J. B* ——— Esq; an old Man, *W. H* ——— Esq; a middle aged Man, *W. S* ——— a young Lad, *M. G* ——— Housekeeper, a young Woman whose Eruptions were too early after *Inoculation*. Further we may observe, that any violent Symptom proceeding from an *accidental Error*, is not of that bad Consequence as if it did proceed from the *Constitution* in the natural Course of the Distemper: Thus the Purples in *J. C* ——— at 19, were from *violent Exercise*, in running after Cattle in the Countrey a few Days before Seizure; Captain *T* ———'s Negro Man in a confluent Sort, had *bloody Urine*, having

lately received a Blow cross his Loins; Capt. H——'s Son, *æt.* 5, had interspersed *Vesicles* full of a sharp *blewish Serum*, from an intense *hot Regimen*; they could not have survived these Symptoms if they had been *constitutional*.

Most *malignant Distempers* have their *Crisis* in the Glands; the *Plague* in the Inguinal, Axillary, and Parotidal Glands; the *Small Pox* in the Miliary Glands of the Skin. The *Caustick* acrimonious Quality of the *Small Pox* Infection is evident from the Pittings. That this Malignity is *colliquative*, appears by the profuse Sweatings or Diarrhœas in some, in others Salivation, Swellings of Face, Extremities, *Scroti & Præputii*, Diabetical *Profluviums*, Purples and *Hæmorrhages*. The *Small Pox* seldom arrives to that Degree of Malignity, as to be attended with sudden Death; there were but two Instances came to my Knowledge here, being both young Women, and *died before Eruption*, by a violent *Necrosis* of their Spirits, intense *Coma* and *Stupor*.

The Cure of a *Fever* in the first Intention is by some *Specifick* to extinguish it, without allowing it to come to a *Crisis*; because *Crisis's* are frequently precarious: So that the Cure of the *Small Pox*, properly speaking, is so to manage the infecting *Miasma* in the first Period or *Apparatus* of the Disease, that it
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shall not come to *Eruption*, i. e. Suppuration, with a tedious Train of Symptoms; thus if a Prickle or Splinter is lodged in the Finger, the proper direct Cure is *Extraction*, whereby Suppuration, Ulceration, &c. are prevented. If we could find an Antidote to destroy the *Small Pox* Infection in *Embryo*, it would be a genuine *specifick* Cure; we cannot say it is impossible, but hitherto it is not discovered to Mankind; may it be the Happiness of future Ages.

Next to a specifick Cure, would be a *Method to alleviate the Crisis*, as to the Quantity and deleterious Nature of the Inflammations and Suppurations. The *Circassian* Method of procuring the *Small Pox* by *variolous Pus*, applied externally to fresh cutaneous Incisions, lately introduced in *Great Britain*, and *New England*, seems to bid the fairest for this; but it is not an absolute certain Remedy against a bad Sort. Much of the same Nature is what Dr. *Williams* of *Haverfordwest*, says, has been an immemorial Custom in some Parts of *Wales*, called, *buying of the Small Pox*: The Person procures a few *fresh Pocky Scabs*, and holds them in the Hollow of the Hand a considerable Time; about ten or twelve Days thereafter the Person sickens, &c. An old Midwife, *Jane Jones*, aged seventy, told him, that she knew it practised at Times above fifty Years, and knows but one

one dying of the Distemper so communicated. Considering the Cases of several of my Patients who had at the Time *Issues*, I was very inclinable to think, that by their Vent they did contribute towards alleviating the Distemper, particularly in *Children* abounding with *gross Humours*, or Feculencies. *Mercurialis* says, that he observed few to die of the *Plague* who had issues running.

What is commonly called, *the Cure of the Small Pox* at present, is only from the Experience of the *juvantia* & *lædientia*, to prevent, alleviate, or remove the various disturbing *Symptoms* in the several Periods of this Disease. Formerly Practitioners were zealously bigotted, some to a *cool Regimen*, others to a *hot Method*, reckoning the opposite Practice of pernicious Consequence. That the Patient ought to be kept in a *moderate natural Temper* as near as can be, we learn from Experience. We find that Nature performs her Office best in a moderate Season; Heat dissipates, and Cold depresses the Spirits too much.

For the *cool Regimen*, Dr. Sydenham, ever to be celebrated for his Diligence in observing, and Candor in communicating, was a great Stickler, especially in the former Years of his Practice, and has been much blamed on that Head; but after more Years Experience, he was not so rigorous in this Method; and
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says,

says, that after the *Eruption compleated*, the Patient ought to be kept *close a-bed*, not so much as to expose an Arm or Hand, that by the agreeable and mild Heat of the Bed, the Plumpness of the *Pustules* may be kept up, as also the Swellings of Face or Hands. He considered it chiefly as an *Inflammatory Disease*, and he supposed the *Confluent*, and other bad Kinds, proceeded from the Fever assimilating and expelling of too much *variolous* Matter. I never observed any Benefit, but frequently Hurt, by exposing the Patients to the *Air colder* than the natural Temper of the Body required. I remember some Cases, wherein the Eruption being *exposed to the Cold*, it was *check'd* for some Time; but soon after followed a *second Crop* generally mortal. We find by Experience, that *Intermitting Fevers*, and such continued ones as are allied to them, are *protracted* by a cold Regimen. In other Diseases we may observe, that *Coolers* so retard the Circulation, that there may arise a Sort of Ferment from Stagnation; and instead of allaying Heat, may change a *simple Inflammatory Fever*, disposed to a *Diaphoresis*, into a *putrid* and malignant one. In the *Small Pox* the more *perspirable* the Body, (I do not mean Sweating, which is a Colliquation) the better; thus we find, the Face, Neck, Arms and Hands, being continually exposed to the Air, are *indurated*, and suffer most from the *Small Pox*.

Pox. Extreme cold Weather is bad in all *Eruptive Fevers*: In 1713, the *Measles* raged here in the *Winter*, and there died about 150 Persons; in 1729, it prevailed in the *Summer*, and there died only about 15.

In the *Hot Regimen*, Dr. Morton and others alledge, that some Part of the *Virulency remaining not protruded* to the Surface of the Body, was the Reason of the *Luēta*, and Fever, and other Symptoms still continuing; and that this *Languor* of Nature *protracts* the Periods of Maturation and Desquamation to many Days; and therefore, the more malignant, the more generous *Alexipharmicks* are by them administered; thus by a *hot Method*, they inadvertently conspire with a most inflammatory Distemper to kill the Patient. The formerly received Notion of *Alexipharmicks* being *Antidotes* to Malignity, has by a dangerous vulgar Error, in violent *inflammatory Cases*, sent many prematurely to their cold Graves. I observed in the most malignant *Small Pox* with Purples and Hæmorrhages, they immediately and most notoriously multiplied these Symptoms, and soon procured an *Exit. E. G*—— *æt. 18*, by generous *Alexipharmicks*, had his Purples multiplied to Millions, with inflated purplish Eyelids, and bloody fetid Stools, *expired soon*, before the Eruption was compleat. Capt. B——'s Child, *æt. 8*, having Purples, by this Method, the
Blood

Blood was forced thro' the Pores of the Skin under the Nose, on the Lips, and Corners of the Eyes; with many others I could mention. Cordial Spirits and Volatiles in all Fevers push Nature precipitately to a Crisis, and besides other Inconveniencies, their natural Tendency being to the Brain, they sollicit along with themselves the Violence of the Disease, occasioning Phrenzies, Delirias, Comas, &c.

It would be tedious to insert here the *general Methods of Cure* which have been used by the most celebrated Practitioners. Dr. Sydenham, by a cool Regimen, by acidulating all their Drinks with *Sp. Vitriol.* which he calls a *Specifick* in this Distemper, and by Paragoricks at Night, managed his Patients. Dr. Pitcairn lets Blood where there is much of a Fever, and repeats it even after Eruption, if the Fever continues; if the Pustules subside too early, he lets Blood and blisters; he gives any simple Water in which Sheeps Dung is infused cold, and for common Drink, Barley Water and Watergruel: In the confluent Kind, towards the End, he opens the Body. Dr. Morton drives all before him with his *Alexipharmicks* or hot Method. Dr. Freind has very much obliged the World by recommending early Purging in the Declension in several Cases.

That I may be the more distinctly understood, I shall reduce my *Subject* under the following Heads.

1. *The Small Pox complexly considered.*
2. *Preparatories tending towards the more kindly Reception of this Distemper.*
3. *The Apparatus, or first Fever preceding the Crisis.*
4. *The Eruption, or efflorescence.*
5. *The Maturation, or Suppuration of the Pustules.*
6. *The Declension, or Desquamation, or Scabbing thereof.*
7. *Relicks, and Consequential Ails.*

Small Pox Complexly considered.

In the *accidental Contagion*, from Infection received to Sickening, are eighteen to twenty one Days; from Observations which I made in several Families; and as to the Town in general, we may recollect, that about the Middle of *June 1721*, Eruptions appearing in many Houses, the Watches which had been appointed to prevent its Spreading, were discontinued; in the next Parcel of Decumbents, the Eruptions appeared about the 7th and 8th of *July*; and in the End of *July*, and Beginning of *August* it spread much.

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The Change and Full of the *Moon* may more or less *dispose* Bodies to receive the Infection; but Sickening and Eruptions do happen in all Times of the Moon: In Southerly close Weather the Infection is most susceptible. In the *Small Pox received by Incision* the Patient sickens the fifth, sixth, or seventh Day, and after one, two, three, or sometimes four Days, the Eruptions begin.

There are *vast Varieties of the genuine Small Pox*; but in general, *the sooner* the several *Stadia* are accomplished, the *more benign*; and most frequently, the *Danger* is in Proportion to the *Number of the Pustules*: There are some Exceptions where a distinct Sort has been very malignant, and even attended with Purples, Mr. F——'s *Indian Peter*, &c. From the Quantity and Nature of the *Pustules in the Face* we generally judge of the more or less *Violence* of the Distemper. H. P—— *æt.* 13, Face and Extremities confluent, but scarce any Pustules in the Trunk of her Body; she died 11th from Eruption.

To form a *general Idea of the Distemper*, we must take the *distinct plump Kind as a Standard*. It may be inscribed thus; begins with the common Symptoms of a Fever, but more particularly is attended with *Pain in the Head, Back and Loins, and about the Region of the Stomack, weeping Eyes, sore Throat, Vomiting, Drowsiness, Startings, and in Children*
C 2 sometimes

Sometimes Convulsions: The End of the third, or Beginning of the fourth Day, the Small Pox Pustules begin to appear distinct; the fifth they grow round and enlarge their Bases of a lively red, the sixth Day they come to a Point, the seventh the Points or Apices turn white, the eighth they turn yellow, the ninth they are full of laudable digested Pus, the tenth they begin to crust or scab, the twelfth they are dry Scabs, and Appetite returned.

We may comprehend all the *Varieties* of Small Pox under these. 1. *A distinct dry Sort*, being the most favourable of all; yet sometimes with considerable Apparatus Symptoms; they are few, not large, Bases scarce inflamed, small Digestion, being hard with a little white Point; fifth or sixth Day from Eruption they begin to dry away, and gradually vanish, leaving only a Freckle behind them, but no Redness; I have seen *Indians* with this Kind. 2. *A distinct plump Kind*, already described as the Standard. 3. *The Coherent*, or small frequent Sort; they are not exactly round, pointed and vivid, but sessile and depressed; the Symptoms do not intirely cease upon Eruption, but after some Time they intermit until the *Stadium* of Maturation; then arises a Fever, &c. 4. *The Confluent*; they appear sooner than the fourth Day, or are retarded by the violent Symptom later; their first Appearance is frequently *Erysipelas* like, and at last appear
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of an Ash-coloured Crust or white Skin, &c.
 6. To these add the Small Pox with interspersed *Petechiæ* brown or red, with *Vesiculæ miliares*, or small Blisters full of a limpid or bluish Serum, and with *purple Spots* from the black to the more diluted Purples, and Hæ-morrhages, which are more mortal than the Plague itself.

Some general *Directions* for the *Regimen* in the *Course* of the *Small Pox*.

1. *Let not Numbers be pent up in one Room*, which can scarce contain Air enough for the Maintenance of Health in one single Person, especially if kept from Communication with the free external Air; for the *Spring* of the inspired *Air* is the continued Cause of the *Circulation* in our Bodies. 2. *Where the Design of Nature is obvious, and her Intentions right, we ought not to disturb Nature by Medicines.* 3. In this or any other acute Distemper, Nature or the *Spirits* ought not to be disturb'd by *Noise* or *Confabulation*. 4. Where Medicines are required, we are *not to insist on any Medicine that continues to be disagreeable to the Stomach.* 5. In this Distemper any violent Symptom appearing must be immediately obviated; Delays here are dangerous: But we are to expect in this as in most other acute Distempers, that the Symptoms should

should have a Sort of Exacerbation towards Night. 6. *Let not your Mixtures be too much compounded*, that you may be more certain of the Effects of the several Ingredients. 7. *The Belly is not to be kept soluble*. It is observ'd by every Body, that in the Small Pox (Dr. Freind's Cases excepted) Opening of the Body by Catharticks, however mild, confounds the Course of Nature, and gives the *Small Pox* Fever a Determination to the Bowels of bad Consequence: The Body sometimes bound up for two Weeks, without any Inconveniency except the Pain of a labouring Stool at last, shews that this Distemper does not allow of Nature's being disturb'd in her Office: If there happens in any of the *Stadiums* any undue Evacuation or Colliquation, use moderate Astringents, Opiats, and mild Cordials. 8. *Avoid Grief, Study, intense Thinking, and the like*; they hinder Perspiration, and all other Tendencies to the Surface or *ad extra* of the Body.

In the malignant Kinds, a Fever accompanies all the *Stadia*; the *Absence or Presence of the Fever in the three last Stadia, Deliria, Vigilæ, Stupor profundus, Subsultus tendinum, are always principal Indications of Safety or Danger*. In this, as in all acute Diseases, we ought to observe the *Patient's Pulse, Tongue, Urine, Breathing*, as also the Eyes, Temper of the Skin, and Posture of lying. The best
Pulse

Pulse is the strong, full, equal, and flow; the nearer it approaches these the better. Because of the Continuation of the Membrane which invests the *Tongue*, with that of the Stomach and Intestines, Physicians judge of the inward Temper of the Body by the Aspect of the *Tongue*. In all Eruptive Fevers, the *Urine* settles from the Beginning; *Urine* pretty high coloured with Contents is best; thin, clear and pale is bad; where Suspensions follow a laudable Sediment Nature is in Danger; large Quantity of *Urine*, especially if without any considerable Thirst, is always a good Symptom. *Respiration* is most to be attended to of all Symptoms; just upon the *Crisis* it may be *magna & celeris*, and yet salutary.

Dr. *Sydenham* is much extolled for introducing *Opiats* into the Management of this Distemper. Dr. *Morton* says, without the Use of *Laudanum* not much is to be done in the Cure of the *Small Pox*. It is certain that Inquietudes, Watchings, Deliria and the like, so exhaust the Spirits in this Distemper, that they make the Use of *Anodynes* unavoidable. *Opiats* relax the Skin, and give a proper Determination *ad extra*; *Laudanum* in that Sort of *Small Pox* which is accompanied with a Salivation, &c. concocts the Spittle, and promotes the Swelling of the Face and Hands. Discretion however is required in their Use; for where the Blood is languid, they leave
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the Patient more languid and faint, Tongues drier, Pulse weaker, gravitative Headaches, and the like: The indifferent Use of *Narcotics* fix the feculent Humours, and occasion *Pittings* and *Scars*. The *Testacea* ought to supply the Place of *Opiats* in Children; for they moderate the inordinate Commotion of the Blood more kindly and salutarily.

Vesicatories by their *Stimulus* increase the Oscillation of all the Fibres, and squeeze out the impacted Contents. In *Comatose* Cases the most generous *Alexipharmicks* without *Vesicatories*, do not rouse the Spirits. *Epispasticks*, by their *Stimulus*, not only attenuate and derive the Humour to the Parts, but also discharge them: Translations of morbid Matter from one Part to another, is sometimes of the greatest Service, especially where it has a Discharge: All critical Evacuations are of this Nature. When Symptoms threaten the *Brain*, *Vesicatories* are of excellent Use, not neglecting *suppedanea irritantia*, live *Animals*, and the like, to the Soles of the Feet.

Let the Patient drink plentifully of diluting Liquors; for there is something *Causlick* and acrimonious in the Infection. *Herb Teas* much used in this Countrey, I cannot recommend; they seem to wash away that soft mellow Moisture of the Mouth and Throat, and do frequently rather occasion than alleviate Thirst: The more mellow Diluents I always

ways found to answer better, as *Barley Water*, *thin Water Gruel*, *Sack Whey*, *Vin. Canarin.* *ad medias coct.* as the Patient's Temper, and Condition may require. After Eruption in all their Drinks and Medicinal Mixtures give *Sp. Vitriol.* *Sp. Sulph. per camp.* *Sp. Nitr. d.* they keep the great Effervescence of the Blood under, and as *Sydenham* says of the *Sp. Vitriol.* are a Sort of Specifick against the variolous Putrefaction or Feculency, shorten the *Stadiums*, prevent Pitting, and are a *Succedaneum* to *U. S.*

As for *Preservatives* against the *Small Pox* Infection, we know of none really such, excepting *Flying* from the Place where it rages. Some Constitutions, and in some Seasons or Times, are more or less susceptible of it. Towards *Prevention* may conduce, the keeping the Mind *cheerful*, and the Body *healthful*. When the Vessels are impregnated with rich Food, and generous Liquors (I do not extend this to *Crapula* and *Ebriety*, which are Violence done to Nature) we are less liable to receive the Injuries of the circumambient Air, as in catching cold, Epidemical contagious Distempers, &c. because the Excretories of Perspiration are full, and in a State of emptying, not imbibing; thus the Poor suffer most in Times of a Plague.

Preparatories.

1. The best *Preparative* for the *Small Pox*, is to keep the Mind as *cheerful*, and the Body as *healthful* as we can. 2. *Proper Evacuations*, U. S. in the Plethorick, vigorous, and youthful, and in those, who have accustomed themselves to V. S. Sydenham's young Man who had been frequently blooded for Rheumatick Pains, was too much lowered; *Purging* in gross full Habits, but the *Catharticks* ought to be given some considerable Time before the Infection is received, lest they should weaken and dissipate the Spirits too much. 3. I found gentle *Mercurials*, as is *Æthiop's Mineral*, procured frequently a favourable *Small Pox* in Children. 4. *Issues*, especially in Children, by their Vent and Derivation are found beneficial.

Avoid violent Exercise when *Small Pox* is expected. J. C—— from thence had a few Purples, and narrowly escaped. The Patient ought not to be *kept too low* in his Diet, lest the Eruption should not proceed so well. All Fevers when not distracted by *Anxiety* perform their Course best; this is reckoned one of the Reasons why the *Small Pox* is most favourable to Children.

Apparatus.

Apparatus.

Of all Distempers this especially requires Advice in the *Apparatus*, because on this depend all the other *Stadia*, altho' it is too common not to send for Advice until the Eruption. Unless you see some *Exanthemata prænuncia*, or Fore-runners of the *Small Pox* (especially when the *Small Pox* first enters a Town) which sometimes appear the first Day of Seizure, be cautious how you foretel the *Small Pox* before Eruption; frequently in the Beginning the Feverish Symptoms are so general, that we cannot say the *Small Pox* are to follow, but by Conjecture, from the Decumbent's having never had them, and that he has lately been exposed to the Infection. In the Beginning of any Fever, v. g. of a *Pleuritick Fever*, we cannot positively say it is *Pleuritick*, before we observe the Determination to the *Pleura*.

Seeing there are such very different Varieties, and sometimes contrary Indications in the following Stages, in some the Spirits to be lowered, in others the Spirits to be raised, &c. How *Empirically* do they act (the Care of a discreet Nurse only is much more safe) who in the first Stage, or *Apparatus*, indifferently tread the same Path, Blood-letting, or Alexipharmicks, or Emeticks, or Opiats,

&c. to all? We ought not, by *Alexipharmicks*, to set Nature in a more violent Flame and Rage; neither are we by *V. S.* and other *Evacuations*, to depress the Spirits; but we ought to *study Nature*, and when all seems to be in a regular Course, tending to its proper Periods in due Time, we are not to disturb Nature with Medicines, but direct to a suitable Regimen, and a natural Temperature, with a thin and spare Diet.

This *Apparatus*, or *first Fever*, is attended with some or all of the following Symptoms of Fevers in general, Chilliness, Shiverings, Horripulations, Yawning, Stretching, Giddiness; then Heat, Thirst, with Tongue foul or dry; Pulse stronger, quicker, unequal; a deficient Spittle, Loss of Appetite, Nausea and Vomiting; Pains in the Head, Back, and Loins; Inquietudes, or Comatous Affections: Besides these, in Eruptive Fevers, particularly in the *Small Pox*, there is a certain *Oppression circa cordis regionem*, Sneezings, Coughs, *Asthmatick Breathings*, Hoarseness, sore Throat, Weeping, or Splendor of the Eyes, Drowsedness, and sometimes in Children Convulsions.

In *Eruptive Fevers* (in other Fevers such Symptoms only happen towards their fatal End), the *Apparatus Symptoms* are mostly *nervosi generis*, viz. *Oppression at the Breast*, *Asthmatick Breathings*, *Vomitings*, *Deliria*, *Comas*, *Lumbagos*, *tendinum Subfultus*, *Insultus*

tus Epileptici in Children. Notwithstanding this dismal Catalogue of Symptoms, in some Constitutions the Conflict between Nature and the Distemper is with so little Violence, as not to be sensible before the Eruption point it out; in others very few of these Symptoms are sensible. In some Constitutions with very malignant Kinds, the Symptoms are mild; the *Necrosis* being so very intense, Nature is so oppressed from the Beginning as not to be capable of any *Lucta* or Struggle with the Distemper, as was the Case of many who died with *Purples* and *Hæmorrhages*. In some Constitutions, violent Symptoms in the Beginning are not always followed by a bad Kind, providing that Weakness of the Pulse, and a languid Eruption do not concur. Mrs. F—— began with a strangled tumified Countenance, a *Diarrhæa* and *Profluvium*, threatening *Purples*; she had a distinct Kind, and did well. Several Children had violent Convulsions, but a favourable Kind of *Small Pox* soon appeared.

Prognosticks. From the Intenseness and Continuance of the *Horripulation*, we judge of the Hazard in all Fevers; in some rare Cases, the *Necrosis* is so Pestilence like, that this Symptom does not happen. *A Bar* cross the Chest (as they express it) with involuntary Sighings, Anxiety, Dejection of Spirits and Despondency, great Complaints of the Throat,
violent

violent fixed Spasmodick Pains, in Back, Sides, Loins, Bowels, &c. are bad Symptoms; and according to their Intensity generally speaking, the more violent *Small Pox* does follow. *Dolor versatilis* of Sides, Limbs, &c. are not so bad. *A strangled bousy* Countenance, with a Diarrhoea, frequently prognosticate Purples and Hæmorrhages. *A dry Tongue*, quick but weak vacillating Pulse, Urine clean, thin and pale, intense Coma are bad Signs. *Voiding* of Urine involuntary, or inscious (where there is no other violent Symptom) in the *Apparatus*, is no bad Symptom. *H. P* — *æt.* 18, *M. R* — *æt.* 15, had favourable *Small Pox*. *Notwithstanding* the Violence of other Symptoms, if there be a true feverish Heat, a strong and equal Pulse, Urine high coloured, with Contents, they indicate well the Strength of Nature.

Where the Symptoms are any Ways considerable, let the Patient immediately upon Seizure be *put to Bed*, but not with too many Cloaths. The Temper is not to be *lowered* too much by catching Cold, *V. S.* or any unnecessary Evacuation, so as to produce a late, imperfect, unequal, or second Crop, which are of bad Consequence; neither ought it to be *raised* by Cordials, and a hot Regimen, to drive the Humours into a Separation more than was design'd by Nature, *i. e.* a confluent, or very full Kind; as we are not

to expect a kind Sort of *Small Pox* until the fourth Day, why should we endeavour to drive them sooner? The Blood may be thus so harrassed as not to allow of any regular Separation, but occasion an *Erysipelas* like, or very unequal, or tardive Sort, which are the worst Kinds. *Emollient Cataplasms*, especially in Children, to the Feet, have been observed manifestly to alleviate the Symptoms, and sometimes to solícite the *variolous* Matter more plentifully that Way, to the Relief of the other Parts.

Blood letting in the Beginning, without any Exception, would be always useful, if the *Small Pox* were a simple inflammatory Case, and not complicated with some deleterious *Miasma*, which requires Strength of Nature to subsist under. Where there is a *Plethora*, *V. S.* is requisite to ease Nature of its Load, that it may the better perform its Office. In *Athletick* Habits, Wine-bibbers, those accustomed to *V. S.* it is advisable, to prevent a too great Assimilation of variolous Matter. In *violent Vomitings*, violent spasmodick Pains of any Kind, intense Coma, or Convulsions threatening some Apoplectic Symptom, especially if the Pulse be strong, *V. S.* is necessary, and afterwards an Emetick (in some Cases Anodynes) Vesicatories, a cool Regimen, and plentifully to dilute. *Excepting in these*, and the like Cases, *V. S.* disturbs the Course
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of

of Nature, and a good *Succedaneum* for it is, a cool Method and Regimen. *In all Depressions*, and Obstructions, if *V. S.* does not relieve, it confirms them, by lessening the Force of Circulation.

Vomituration in the Apparatus is from the Scene being in the nervous System; most Affections of the Nerves, v. g. Hysterical and Hypochondriacal Paroxysms, Concussions of the Brain, Nephritick Pains, &c. occasion Vomiting; so that reaching to vomit does not always signify a foul Stomach. This Symptom ought to be left to itself, unless there be Suspicion of a foul Stomach, then an Emetick is of use to clean the Stomach, and prevent Feculencies being carried into the Blood already morbid: In some Cases, by a universal Horripulation and Concussion, *Vomiting* conduces to render the Circulation more free. Let your *Emeticks* be gentle, not violent, lest they may dissipate and put the Oeconomy of the Spirits in too great a Hurry, and so divert the Eruption. My *Emetick* was generally *Sal. Vitriol.* which occasions no great Dissipation of Spirits, it is easily kept within Bounds, by its Astringency it strengthens the Stomach; is not to be forced downwards by too large Quantities of Drink, but rather repeat small Doses of the Salt.

Where the Symptoms threaten the Brain, apply Vesicatories. We are to take Notice
that

that a *Stupor* is peculiar to this Distemper, and is not of bad Consequence, unless it turns to an intense *Coma*. In Childrens Convulsions and Comatoes Affections preceding Eruption, if violent, don't glyster, nor confound Nature by Evacuations, but blister and give moderate Cordials. *Vigiliæ* and *Deliria* are in this Distemper worse Symptoms, because they waste and confound the Spirits; when the Pulse is strong, *V. S.* and Vesicatories are good, but especially *Opiats* (*Sydenham* will ever be celebrated for his introducing *Opiats* in the Cure of this Distemper) are essentially requisite and unavoidable.

A Diarrhæa, especially if attended with Gripings, in this, and all other Fevers, (a few excepted where it is critical) confound the Course of Nature, and must be moderated by *Opiats*, which will not retard the Eruption so much as the Purging would have done.

Eruption.

The End of the third or Beginning of the fourth Day the best Sort appeared with us, An. 1721; so much as the Eruption antevects the fourth Day, or is retarded beyond it, so much greater the Danger; either from the Violence of the Fever, or hot Regimen, in the first Case; for the more violent and hasty any Inflammation is in its Course, the

Danger of a subsequent Gangrene is the more to be apprehended. Dr. *Huxham* says, that *An.* 1724, 1725, there was in *Plymouth* an anomalous *Small Pox*, that appeared in less than twenty four Hours after Seizure, and was always of the fluxed Kind: The other Case of being retarded, is from a too cool Regimen, officious Bleeding, catching Cold, or some considerable Evacuation.

The more universal the Appearance is at first, the more perfect and more benign is the Crisis; the more gradual, especially with new Sprouts in the Interstices, the more imperfect is the Crisis, and the Distemper is the more malignant. *F. S* ——— *æt.* 22, no violent Complaint in *Apparatu*, the first and second Day of Eruption came out like a distinct good Sort, but the third Day came out infinite Multitudes of a small Purplish Pox, he died the seventeenth of Seizure. *W. W* ——— *æt.* 25, violent Pain at his Stomach, and dull, was *V. S.* in *Apparatu*, the Eruption very slow and languid, so as not to appear in the Extremities until the third or fourth of Eruption, a distinct, but frequent sessile Kind; he spit, and swell'd well, died the fourteenth of Seizure. *Mr. H* ——— *r*, *æt.* 30, a few Purples, with *Hæmorrhagia narium*, the Pox in his Face had the regular Course of the confluent Kind, but in his Extremities, at the Time of his Death, being the fourteenth of Seizure,

Seizure, the Pustules had scarce begun to mature. Mrs. Y—— *æt.* 20, just given over Suckling, violent Pain in her Back, and Reachings, was brought from an adjacent Island to *Boston*, the second of Seizure some Appearance of the *Small Pox*, and after three or four Days more a Sort of second Crop, reddish, with some watery Blisters interspersed, she did not spit, a continued *Nausea* and *Delirium*, died the sixteenth of Seizure. B. I—— *æt.* 1, by catching Cold the Eruption is checked, and after two Days came out a second Crop, of a very unequal crude Kind, she died soon.

The Eruptions appearing in the *Extremities* before they appear in the *Face*, presage ill, as in many of the Purple Cases, being from a stifled Fever; for the Circulation being freer in the Extremities, the Eruptions come out there more kindly.

If there attends the Eruption a profuse Sweating, *Ptyalism*, *Menstruatio tempore non debito*, *Diarrhæa*, &c. they are bad Symptoms; because they denote much of a Colliquation, and divert Nature from her principal Work. Sweating is a Separation of a different Nature from that of the *Small Pox*; and therefore by Reason of its Diversion it is not to be encouraged; a gentle Breathing and Relaxation of the external Habit, solicites the Eruption, and is good. A *Diarrhæa tormi-*

nosa (unless from an habitual Cholick, as in Mr. L —'s *Negroæ Cæsar*) even in Children is no good Symptom; with us it frequently attended the Eruption in Children, and might be sometimes a Complication with that Looseness incident to Children in the Autumn, or from Worms. In violent *Cholick* Pains emollient Glysters may be allowed, but with Discretion.

Upon the Eruption the *Throat complains*. *Ptyalism* begins with the Eruption.

A *Christalline Small Pox* is a Colliquation, and therefore not good. *Looseness* with a very hot Temper presage a confluent Sort. The *Confluent* Sort appear sooner than the fourth Day, or by some violent Symptom are retarded until after the fourth Day; the Symptoms continue after Eruption; they make the first Appearance *Erysipilas* like.

Strong *Diaphoreticks* in any Fever, administered before a perfect Concoction of the morbidick Matter, carry the Humours crude into the Brain, occasioning *Deliria*, *Comas*, *Convulsions*; they likewise dissipate and expend the smooth *Lympha* of the Blood. *Opiats* in some Cases, administered with Discretion, by their relaxing Quality, conduce to the Eruption of the *Small Pox*; it has been a generally received Opinion, that they check all Secretions, but *in partu difficili*, & *Lo-*
chiorum

chiorum fluxu impedito, the modern Physicians find nothing more serviceable.

In the *Winter Small Pox*, Coughs, and sore Throats, are great Complaints; they occasion Want of Rest, and Sleep, and exhaust the Spirits; therefore if very troublesome, give *Anodynes* with Discretion, and a light *Pectoral* Decoction for their common Drink; guard the Chops with Flannels.

The Eruption Period admits of no *Evacuation*, excepting perhaps *V. S.* in some Cases where the Fever continues to be very high.

Maturation.

After three Days Inflammation the *Pustules* begin to digest; where the Eruption was protracted, in the same manner the Digestion is *protracted*; first in the Face and Neck, afterwards gradually in the Trunk and Extremities, the lower Extremities being last. The Duration of the Period of *Maturation* in bad Kinds is very uncertain (it is reckoned to continue until the Declension begins) especially when accompanied with a Salivation, and Swellings, and may be protracted to ten or twelve Days, the longer always the worse: Where Nature is very low, and no *Succedaneum* happens, the Fever and other bad Symptoms may continue to the eighteenth Day before there is a perfect Maturation.

A round

A *round florid, and turgid Pox* is the Standard of Goodness. A turgid *Pox*, with florid Interstices, from white becoming yellowish, promise well in all Kinds. The frequent small, but distinct Sort called the *Co-hærent*, if they be nearly round, after three, four, or five Days of Maturation, the Patient may do well without Spitting; if they are very close, in the Maturation they enlarge their Bases so much as to flow together; with a protracted Maturation, they continue depressed and watery some Time before they turn yellowish, and are saved by a *Ptyalism*, Swelling of Face and Hands, and sometimes by a *Diabetical Profluvium*. A few, without Spitting or Purging, in a true confluent Sort, did well. After Eruption is compleated, if there appear in the Interstices several *miliary* Blisters or Pustules, some filled with a limpid *Serum*, others of a dark red, it is generally an ill Symptom, but some survive it. In the Maturation and Declension, some small Eruptions sometimes appear in the Interstices, and dry away again the same Day, without any Thing bad to be apprehended.

Frequently the Pustules ripening inflame the whole Habit, and occasion Inquietudes; the Patient becomes hotter, and Pulse higher, which disturb Nature in her Course; this is called the Second, or *Maturation Fever*: Here *Paragoricks* (beginning the sixth Day)

are

are as much a Specifick as the *Cortex Peruv.* in Intermittents. Sometimes *V. S.* is required. Sometimes a Salivation, with Swellings of Face and Hands, or *Diabetical Profluvium*, put off the Return of the Violence of the Fever. Women frequently have a *Profluvium Menſum*, the first or ſecond Day of Maturation, even *tempore non debito*, but it goes off gradually in a Day or two. *A difficult Swallowing*, if only from the *Small Pox* in the Throat, or *Fauces*, is tedious, but not a mortal Symptom; a Vesicatory to the Nape of the Neck is of Use. When any *Subſidence of Pox*, or Swellings of Face, &c. happen too ſoon, give *Alexipharmicks* (I do not mean Spirituous Cordials, which are apt to raiſe *febrile* Effervescences of bad Conſequence) as *Vin. Canarin.* *ad med. coct.* *Theriaca Rad. Serp. Virgin.* *Bezoar. Lap. Contrayer, v. &c.* Vesicatories alſo muſt be uſed to rouze the Spirits.

Salivation does not belong to a good Kind, and is only a *Succedaneum*; I obſerved that in ſome, tho' very full, without any conſiderable Spitting or Swelling, the Diſtemper had its Courſe more kindly and ſafely, than in others, who from a kind of malignant Colliquation, ſpit profuſely, and ſwell very much; where it is Nature's laſt Reſource, it is very uncertain in the Event; *W. W. æt. 25*, dies the eleventh of Eruption, after having ſpit freely, with Face and Hands at his *Exit* well ſwelled.

swelled. It frequently begins with the Eruption, and ought not to decline until about the eleventh of Illness; it is at first thin, but afterwards thick and ropy, and therefore requires Diluents plentifully; if too tough and choky, use Gargles made of *Barley Water*, *decoct. Rad. Alth.* and the like with *Mel. Rosar. Syrup. Violar. Oxymel.* &c. If Suffocation is feared, or if the Phlegm seem to lay low, give gentle *Emeticks*; I have given *Cinabar. Nativ.* and have ventured small Doses of *Calomel* in a slow viscid tough Salivation with some Benefit: I cannot recommend it but to the Discreet, it fuseth too much, the Distemper itself being colliquative, it may occasion a *Tabid Inanition*. If any *febrile* Effervescence divert its Course, we must have Regard to the Fever. Swellings of Face and Hands, sometimes *Scroti & Preputii*, or diabetical *Profluviums*, come on as Subsidiaries to the Salivation in its Declension; at the Time when we are to expect the Swelling of the Hands, *Epispasticks* to the Wrists may sollicit the Humours thither, and the running of these Blisters sometimes supplies the Defect of Spitting. As the Eruptions on the Hands are later than those on the Face, so are their Swellings. In cold Weather Salivation does not go on so kindly as at other Times. *Purg-ing* sometimes must be used to supply a deficient Salivation.

Continued

Continued *Nauseas* a bad Sign. Sudden Chilliness, Shiverings, *Diarrhœa*, *Vigiliæ per-
tinaces*, *Deliria*, and other violent Symp-
toms, not to be laid by *Opiats*, portend a
sudden Dissolution: If with the incipient Ma-
turation the *Pox* begin to dry, excepting in
the most benign small dry distinct Sort, Death
is at the Door; or if in a protracted Matura-
tion, they begin at any Time to dry before
they are filled with *Pus*, so far as the Spe-
cies of the *Pox* will allow, it is a bad Symp-
tom. *Pustules* flaccid, or containing a wa-
tery Lymph, or Purplish Sanies, are bad; of a
lurid, livid, strangled Colour, signify that Na-
ture declines; sessile, dry, depressed, subsiding
in the Center, or turning white, are very ma-
lignant; Interstices livid, or pale, are bad.

Desquamation.

The Absence of Symptoms, with a cra-
ving Appetite, are good Signs; the Return,
or Increase of a Fever are bad. Scarce any
(Purples and Hæmorrhages excepted, who die
in all Stadia, according to the Degree of their
pestiferous Malignity) die but in the Declen-
sion; but this Period does sometimes begin
with the first of Maturation, or at any Time
of the Maturation protracted, but not per-
fected.

In the Turning, the more the *Scab* approaches to a *Bees Wax* yellow Colour, the more benign. In the *Coherent*, which at length arrive to a compleat Maturation, even with Spittings and Swellings, the Declension is equally favourable as in the *Distinct*, only the Patient complains more of being faint. In some Constitutions, altho' the *Pustules* be large, distinct, and not frequent, this Period was longer than usual (especially if *Opiats* are much used) with a cadaverous Stench, and leaving deep Pits, Mrs. F—— *æt.* 30. This last *Stadium*, with a *sanious* Scab returning fresh and fresh, may be protracted to many Days, with a most tedious Expectoration of viscid Phlegm, and remaining Hectick Heat. Generally speaking, after a protracted Maturation, assisted by Salivation and Swellings, the *Pox* do not begin to decline until the thirteenth or fourteenth Day; some are not out of Danger until the twenty first, T. J—— *æt.* 14, in a confluent Kind, a *Diarrhœa* protracted the Course of the Distemper; a few not until the twenty fourth Day. D. L—— *æt.* 19, in the *Apparatus* a violent *Lumbago*, and *Hæmorrhagia narium & uteri*, intensely confluent, Declension attended with Aguish Paroxysms, and Hectical Heats.

When the *Pus* is reabsorbed by the circulating Fluid, or when the dry inseparable
Crufts

Crusts return the Feculency into the Maſs of Blood, there happens a third Fever (the firſt is in the *Apparatus*, called *Eruptive Fever*, the Second is in the *Maturation*, from the Inflammation of the *Phlegmones*) being of a putrid Kind, and kills ſome the eleventh, fourteenth, ſeventeenth, twenty firſt, twenty fourth Day of Illneſs, being critical Days; if Bliſters are thought requiſite, let them be applied the Night preceding the Critical Days, and not delayed until the Fever riſes, becauſe they add to the Heat and Efferveſcence of the Blood. This *putrid Fever* requires immediate *V. S.* then cooling gentle *Catharticks*, eſpecially if the Incruſtation is ſuch that the Matter is too thick to be further abſorb'd; the *Guts*, beſides the Inconveniencies of being ſtuffed with Impurities, ſome Part of their feculent Contents re-enter by the *Lacteals*, and are a *Pabulum* to the Fever. As a late Author well obſerves, upon a Retroceſſion of Swellings, or any unlucky Tranſlation upon the Vitals, it is eaſier directly to ſolicite the *Inteſtines* to a Diſcharge than the Salival Glands, or Urinary Ducts. Sometimes a *Diarrhœa* is a uſeful *Succedaneum* to a Salivation in Children.

Where Nature languiſhes, the *Puſtules* ſubſide. In the Confluent, if ninth of Eruption, the Face ſubſides, but *Pox* does not grow rough, tenth comes a putrid Heat and *Nau-*

sea, and eleventh, being fourteenth of Illness, they die. Sometimes the Patient to Appearance is in a fair Way, but of a sudden grows dull, then hot, then sickish, and soon dies; Mrs. S ——— *æt.* 25. Many in the Confluent Sort die of mere Weakness, without any *Delirium* or considerable Fever; W. H ——— Esq. Where the *Pox* turns to an Ash-colour or white, then it is bad. A *Hæctick* Heat, Eyes suddenly opening from the subsiding of the Face, a bad Omen. Scabs brownish and blackish are Signs of Sphacelation; where full of Splits and Cracks, are Dangerous. A flat brownish Crust on the Face, with *anbelosa Respiratio*, and *Deliriums* at Times, altho' Temper and Pulse seem promising, prognosticate Death; Mr. M ———'s Daughter died the fourteenth of Eruption. Turning too soon, with a dark black Crust, but no rough Scab, next Day came Stools and Urine inscious J. B ——— *æt.* 15. Some dry, burnt like, crusty Scabs on the Chin, Nose, or Lips, too soon, a bad Omen, signifying a *Hæctick* Heat, and Death eleventh or twelfth of Eruption; Mr. C ———, M. B ———. When the *Small Pox* begins to scab reddish, rough and purulent, always a bad Omen, M. T' ———'s Beard, Mrs. E ———'s Maid's Nose. *Sanious* Eruetations instead of *Pus*, are very bad.

A *Diabetical Profluvium*, or *Micturition*, soon after Turning, are bad Symptoms ; Mrs. S—— dies the fourteenth of Illness, with a putrid Heat and *Nausea*, Swellings in good Order, M. T—— a full distinct Kind, in Coughing his Water flows from him involuntary, dies ninth of Eruption, Hands well swelled. Mr. P—— full of a distinct Sort, after six Hours of a *Peripneumoniack* Paroxysm, dies the ninth of Eruption with a *Micturition*. Mrs. E——'s Maid after two Days Obstruction of Urine, had all Evacuations involuntary for two Days, and then dies. The twelfth or thirteenth, a *Micturition*, and *Dysury*, followed by a Quantity of turbid Urine, with a Sediment, is good ; but if thin and limpid, and in small Quantities, with a *Delirium*, *Tremor* and *Subsultus*, Death soon follows.

A *Delirium*, a *Dyspnœa*, or *anhelosa Respiration*, are bad Signs, but are sometimes relieved by V. S. A short and weak Inspiration are Fore-runners of Death ; but a difficult *suppuriosa Respiration* not so always, sometimes proceeding from being stuffed with Phlegm, and is removed by a gentle *Puke*. In the End of the Distemper, when violent, the Patient is sometimes so weak, that for some short Time a *Delirium*, or rather Foolishness, continues from Inanition. A cold Respiration is generally a mortal Sign, signifying some internal Gangrene ; T. N—— *æt.* 21, is an Exception,

ception, after a violent *Delirium* of many Days (at other Times upon the least Disorder subject to febrile Effervescencies) in the Declension had *frigida respiratio*, a Stammering which continued ever after, and a Paralytick Weakness in one Arm, of which he soon recovered. *T. J* — *æt.* 14, had *Convulsions* the seventeenth of Eruption (a Confluent Kind) and next Day began to recover; these might proceed from Breast Milk, and some Milk Punch administered to him unadvisedly, rather than from the Distemper. A Twitching, a trembling Motion of the lower Jaw and Hands, involuntary Urine, Tongue in a continued Motion, picking the Cloaths of the Bed with the Fingers, are reckoned mortal Symptoms. *D. L* — *æt.* 19, is an Exception; she began to recover twenty fourth of Illness, in the worst Sort of Confluents.

A strong Vibration of the *Carotide* Arteries is generally a mortal Symptom. In the End (from Inanition) when the Supply of Spirits to the Muscles and to their Antagonists begin to fail, the Consequence is Tremblings and Twitchings, with a weak and interrupted Pulse, and Difficulty of swallowing from a Palsy of the *Œsophagus*. Many inflammatory Distempers as well as this, towards their fatal End, when the Spirits are quite exhausted by the *Lucta*, much abate in all the violent Symptoms, and the Patient has

has a Sort of *Euthanasia*, and says he is much better, but soon dies.

The Confluent *Small Pox*, with an *Erysipelas* Efflorescence, which begin to dry the Beginning of Maturation, with a dry Tongue, small and quick Pulse, *Subsultus tendinum*, &c. are mortal. As the *yellowish* Colour is almost always salutary, little *black* Specks and Pits are the Reverse, proceeding a *fervore intenso*. Itching of the *Pustules* denotes the *Caustick Acrimony* of the Matter, and is a bad Sign, either leaving deep Pits, or if by Mismanagement it recede, must soon demolish the delicate Texture of the *Vitals*.

Weakness and *Nauseas* in the Declension do not allow of *Opiats*, but a Cordial Regimen, v. g. some cordial acidulated Julep, or for the poorer Sort some weak Punch. When the *Putrid Fever* intermits, or considerably remits, the *Cortex Peruv.* sometimes answers after a suitable cordial Cathartick, as is the *Tinctur. sacra*. When the *Pustules* subside, and the *Interstices* turn pale, the Spitting declines too fast, or Tumours of Face and Hands abate, give *Paragoricks* and moderate *Cordials*, but nothing spirituous to raise Effervescencies; Mrs. P—— had *Vin. Canarin. ad medias coct. Theriaca Venet.* with *pulv. rad. Serp. Virginian.* In the *Apparatus* she was brought to Bed six Weeks before her Time, *Pox* confluent in her Face, began to recover
the

the twelfth of Eruption, had subsequent versatile *Rheumatick* Pains and *œdematous* Legs, but by the Use of the free Air, and Riding, soon was well. *T. 7* — in the confluent Kind, with a *Diarrhœa* in the Declension, had *Vin. rubr. Galic. ad medias coct.* began to recover the eighteenth of Eruption, had subsequent Boils, &c.

Suffocations; if *Hysterical*, which are not uncommon to Women in the Confluent *Small Pox*, use *Anti-hystericks*; if from the Glands of the *Fauces* tumified, use acidulated Gargles and Vesicatories to the Nape of the Neck. In *urinary* Obstructions, use suitable *Diureticks*, and alter their Posture. In troublesome *Infractions of the Nose*, use Tents dipp'd in Butter, *Ol. Oliv. Amygd. d.* or inject some emollient Mixture with *Mel. Rosar.*

A sharp *Sanies*, and corrosive *Ichor*, lodged, and at Times gleeing from under the *Scabs*, occasion Sitzings and Scars, which are not easily prevented. A protracted Maturation, with a subsidiary Salivation, are most apt to pit; fretting putrid feverish Heat is sometimes allayed by the *Cortex Peruv.* covering the Parts with greased Rags retains the *Halitus*, oily Leniments stop the *Pores*, *Acupuncture* admits the external Air too soon: foment with warm *Milk*, which destroys the Acrimony.

Relicts and Consequential Ails.

Most of the Varieties of the *Small Pox*, after the Patient is recovered thereof, require no other Medicine than to be duly purged; and the more violent the Distemper, the greater is the Necessity for *Catharticks*. After the *Stadia* are all over, the Body having been long bound, and no Sign of a Stool, first clear the *primæ viæ* by soliciting with Suppositories, or give *Emollient Glysters* and *Lenitives*, which open the Body without any Disturbance; afterwards use strong *Catharticks*, which may cleanse the whole Habit. Let the Temper and Appetite be restored before we use these strong Catharticks (excepting some Cordial Purges early in the Declension of some of the Coherent and Confluent Kinds) lest you may thereby rouse and enrage some of the *Reliquiæ*, and bring on a *Flux* by determining that Way.

After the *Small Pox*, some have *Physical Coughs*, *Hectick Heats*, *Ophthalmies*, *Edematose Swellings in the Legs*, *Whitloes*, *Furunculi* or *small Boils*, *Glandular Tumors*. Mrs. F—— æt. 20, had an *Anchylosis* in the *Cubitus* Articulation of both Arms; T. N—— remained with a *Stammering*, from the Violence of the Distemper upon these Nerves.

The *Scropulous* Habits run the greatest Risque of Consequential Ails.

A remaining *Cough* (which happens especially in the Winter Season) may bring on a *Pthifis*, and therefore is not to be neglected: Begin with *V. S.* endeavour to thicken and digest the *Catarrh*, and allay its Sharpness, use suitable *Antihæctics*, but especially Change of Air.

If a *Hæctick Disposition* remain after the *Small Pox*, begin by *V. S.* and then a few convenient *Catharticks*; the *Cortex Peruv.* administered with Discretion is of Use, riding in a free Air, and a Milk Diet; *Milk* new drawn from the Cow has a peculiar healing *Balsam*, which it expends every Moment after it is taken from the Cow, as some Mineral Waters do after their being taken from their Fountain.

In *Opthalmies* let Blood, give some Doses of *Cinabar* or *Calomel*, use Medicines as if the Case was *Scropulous*, wash the Eyes with warm Milk, a *Cinabarine Suffitus* is good. Beware of drying astringent *Collyriums* or Eye-waters, for by the imprudent use of these I observed the Humours of the Eye thickened, and the Sight lost in several.

For *Œdematose Swellings* use spirituous *Fotus's* and Riding.

The Spring of the Glands having suffered much

much, the *Small Pox* leaves *scrofulous* and other glandular Swellings. *Boils*, glandular, strumous or any other Swellings, if possible, are to be brought to Suppuration, fearing a Translation upon the Lungs, or any other noble Part; they are therefore upon their Appearance to be encouraged by some simple *Poultis*, or *Fotus*, *Empl. Diachyl. cum g.* and the like.

Mr. P—— who by Way of Amusement applied himself much to *Chymistry* in *England*, told me, that his Wife having suffered much in her Face, from a very bad kind of *Small Pox*; by the Use of a *Mask* made of *Lead* beat thin, the Inside smeared with dissolved *Sperma Ceti*, and a very small Matter of crude *Mercury*, became almost as beautiful as before the *Small Pox*.

Purples and Hæmorrhages.

Vesiculæ miliares, *Petechiæ*, *Maculæ purpureæ*, and *Hæmorrhages*, are Degrees of that colliquative and *Caustick* Infection, which is more fatal than the *Plague* itself. This Article cannot be called Practical, because such Decumbents are not (or scarce) to be saved, the Constitution of the Person being only in Fault, and not any particular Incident; but as it seldom happens in *Europe*, that such Numbers and Varieties of *Purples* and *Hæmor-*
G 2
rhages

rhages are to be seen at the same Time in one Place, I thought it might be acceptable to the Curious. Even in this Place, last *Small Pox* Time, *An.* 1702, only three in these Circumstances were observed, as I was well informed by *John Clark*, Esq; late a noted Practitioner in *Boston*.

Purple Spots appear in the *Apparatus* and Eruption Periods, the *Petechiæ* generally appear late; both discover themselves first on the Breast, Neck, and Arms. *Miliary Blisters* and *Petechiæ*, their Increase in Number or Dimensions portend ill; their Decrease are somewhat promising, being Signs of a more or less Intenseness of the *Caustick* Affection; some few recovered; with *Purple Spots* and *Hæmorrhages* scarce any surviv'd; the three Cases that came to my Knowledge were not properly such in the Nature of the Distemper; Mr. *D's* *Indian* Boy, *æt.* 13, with a confluent Kind, his few and small pale Spots, considering the *Indian* Complexion, are rather to be reckoned *Petechiæ*; *J. C*—— *æt.* 19, confluent *Small Pox*, his few Purples were the Effects of violent Exercise just before Decumbiture; Capt. *T's* *Negro* Man's bloody Urine was from a Blow cross the Loins some short Time before, he had the Confluent Sort. Dr. *Sydenham* gives an Instance of a Patient of Dr. *Goodale's*, *An.* 1691, in a continued (but not *Small Pox*) Fever with

with brownish Spots on his Neck, Breast, and Arms, attended with bloody Urine, cured; which he reckons a Prodigy in Medicine, and the greatest Cure he ever did know. Dr. *Morton* never knew but one recover, a Patient of Dr. *Slare's* in July 1692, a sanguine Woman, *æt.* 20, with a few *Petechiæ* and bloody Urine, by Spitting, and a very unusual Swelling of Face and Hands saved. Dr. *Huxham* says, that in the malignant *Small Pox* at *Plymouth*, *An.* 1724, 1725. he knew but one Person that surviv'd purple Spots; some died the fifth or sixth Day, some dwindled till the tenth or eleventh Day; he heard of none who had bloody Urine.

Some Families Blood is more apt to be fused by the *Small Pox* Infection than others, as I instanced before. Purple and black Spots are *Indices* of a begun Mortification; the cadaverous Stench of the Breath and Stools in many of them, is a plain Sign of an inward gangrenous Disposition: *Hæmorrhages* declare the Consistence of the Blood and Texture of the Solids dissolved. The Degrees of *Spots* are, black the most malignant, purple, blue, red, brown, dusky, with their greater, or smaller Dimensions. Purple Spots, if they increase Numbers or Dimensions, denunciate some impending *Hæmorrhage*, and soon after the Catastrophe. *E. G*—— *æt.* 18, by generous

nerous Alexipharmicks his Purples increased to Millions, soon after bloody Stools, and dies next Day.

Some few have miliary Blisters or Purple Spots, with a large distinct crude Kind *mali Moris*; Mr. F's *Indian*, *æt.* 25; Mr. C——'s *Indian*, *æt.* 15, they died the fourteenth Day.

Purples have generally a strangled Countenance, and an *Erisypelas* like *Small Pox*, especially if Hæmorrhages are to follow, frequently a profuse Salivation. The Symptoms in the most intense Kind of Purples, are only *Suspiria*, and great Dejection of Spirits, without any violent Symptom. Capt. C——'s *Indian* Woman, *æt.* 45, had the first Day *Erisypelas* like Eruptions in Arms and Hands, dies the third Day with Purples, bloody Stools, bloody Spittle, and vomiting Blood, the milder Sort are attended with spasmodick Pains in the Breast, Back, &c.

Alexipharmicks, or Emeticks, or Vesicatories, used in Purples, soon bring a Hæmorrhage and Death by several Days too premature, as I could instance in many. By *V. S.* and a cool Regimen (Milk and Water for their Drink) I protracted the Lives of some to the fourteenth Day.

In the Year 1721, we had in *Boston* 5989 ill of the *Small Pox*, whereof died 844; of these upwards of eighty (that is one in ten) died

died with purple Spots and Hæmorrhages, whereof sixty five came to my Knowledge, (not including J. C——'s Purples, Capt. T——'s *Negroe's* bloody Urine, and Mr. D's *Indian Boy's Petechiæ*) and whose Cases I committed to Writing. The Varieties of their Cases at length cannot be inserted in an Abstract, but for the Contemplation of the Curious I shall reduce them thus: Of white Persons died sixteen Men, twenty four Women, eighteen Children, (all under fourteen *æt.* I call Children) seven *Indians*, no *Negroes*; of the Women seven were *pregnant*, whereof three at their full Time were brought to Bed, three suffered Abortion at five or six Months; 1. Mrs. L—— five or six Months gone with Child, had a confluent Sort with a few Spots, and in the Beginning of Maturation a violent Hæmorrhage at the Nose, dies the seventeenth without *Profluvium* or Abortion.

In these sixty five Cases, twenty had Purples only without Hæmorrhages; one D. J—— *æt.* 15, had no Purples, but Spittle and Urine dilutely tinctur'd with Blood; the forty four following, besides *Purples* had *Hæmorrhages*, viz. bloody Urine six, *Profluvium* (I mean *muliebri*) five, bloody Spittle eleven, Hæmorrhage at the Nose two, bloody Stools one, Urine and Spittle one, Urine Stools and Spittle one, Urine Spittle and *Profluvium* one,
Urine

Urine and at the Nose Spittle and Stools one, *Profluvium* at the Nose one, *Profluvium* and Spittle two, Stools and at the Nose two, Stools and Spittle three, Stools and Vomiting three, Stools, Spittle and Vomiting one, Vomiting and by the Pores of the Skin under the Nose and at the Corners of the Eyes one, at the Gums and Mouth one, Mrs. *W*——'s *Indian* Woman, the sixth of Illness suddenly seized with all Sorts of Hæmorrhages, soon died wallowing in her Blood.

These sixty five died at various Periods, reckoning from the Beginning of their Illness. With *Purples only*, dies the fourth Day of Illness two, the fifth Day five, the sixth Day one, the seventh Day one, the ninth Day four, the eleventh Day two, the fourteenth Day three, the seventeenth Day two. With *Hæmorrhages only*, the eighth Day one. With *Purples and Hæmorrhages*, the third Day dies one, the fourth Day six, the fifth Day six, the sixth Day twelve, the seventh Day six, the ninth Day five, the tenth Day one, the eleventh Day one, the twelfth Day one, the thirteenth Day two, the fourteenth Day two, the seventeenth Day one, being only a Hæmorrhage at the Nose, which did not continue.

Hence we may learn that no *Age* nor *Sex* are exempted from *Purples* and *Hæmorrhages*. Mrs. *C*—— was *æt.* 60. Capt. *C*——'s Child
six

six Months old. 2. Of the various Races or Species of Mankind, if we may so express it, the *American Indians* are the most liable to them, and the *African Negroes* the least; altho' in the Year 1721, our *Negro* Slaves were ten Times the Number of our *Indian*, (the Province having discouraged the Importation of *Spanish Indians*, because of their valetudinary State of Health) there died seven *Indians*, but not one *Negro* with these dismal Symptoms. 3. *Pregnant Women* are in some Danger of Purples and Hæmorrhages.

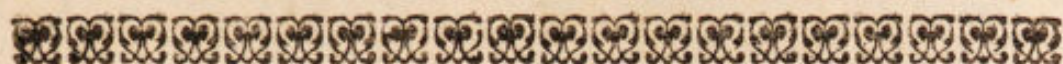
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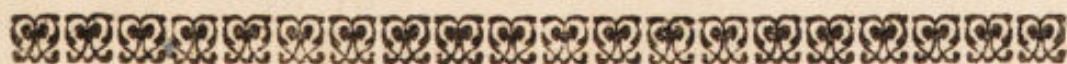
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Symptom. A Pregnant Woman and in some
Danger of Purples and Hemorrhages.

F I N I S





A
DISSERTATION
CONCERNING
INOCULATION
OF THE
SMALL-P O X.



THE UNIVERSITY OF CHICAGO

A

DISSERTATION

IN

INOCULATION

OF THE

2 M. A. L. P. O. X.

THE UNIVERSITY OF CHICAGO



T O

JOHN JEKYLL, *Esq;*

Collector of His Majesty's Customs
in *Boston, New-England.*

S I R,

A Sincere and disinterested Regard for the Good of my Neighbours, is the Motive of this present Publication: without Passion or Prejudice, laying aside all useless Speculations and Subtilties, as out of the Question in Cases of Fact and Experience; I shall impartially relate, The History, Success, and Benefits of the Method of receiving the Small Pox by Incisions or Inoculation, as it is called, so far as it has come to my Knowledge. Altercations in Matters of Fact obvious to the Senses, are trifling and absurd; let Facts be truly related and set in a proper Method or
Light,

Light, the Generality of Mankind are capable to judge for themselves. I shall not be too free with Names of Persons, only where the Vouching of Facts may seem to require it. There have been too early and strong Prejudices, both for and against this Method; People have been partially Credulous or Incredulous of Facts, as they make for and against their respective Opinions, viz. In some it savoured much of Credulity, Levity, and Novelty, to be bigotly zealous for it; in others it shew'd too much of strong Prejudices, Passions or obstinate Humour, to be furiously against it: They seem to have acted the fairest Part, who exclaiming only against rash and irregular Procedure, were willing to wait patiently until Time and a cautious Experience should direct their Judgments.

Many great Discoveries in Physick have been opposed by the Generality of the Faculty at their first Appearance; Antimonial Vomits, Mercurial Preparations, the Peruvian Bark, &c. had this Fate; but are now by Experience proved to be the best of Medicines. It was not by Reasoning we learnt that the Bark cures Agues, that Opium relieves Pain, or Mercury carries off the Venereal Taint; it was by Accident, but afterwards confirmed by Experience. How mean or rash soever the Beginning of the Practice of Inoculating the
Small

Small Pox may have been; if many Years practised by Old Women only, and neglected by the Sons of Art in Turkey; if in another Part of the World a Person of no Literature and of habitual Rashness, from a third Hand Hearsay of an over credulous Person, first attempted it indifferently on all who would pay for it, without Regard to Age, Sex, Constitution, other Circumstances, and Cautions which Tryals of such Consequence may require; as it is one of the Inconveniencies of human Life, that all the World over, Ignorance, Assurance and Rashness pushes on some to attempt without Fear or Discretion what would make the most exquisite Artist tremble to touch; nevertheless if in the Event by repeated Experiments it prove useful, it ought to be embraced.

We find by some Years Experience, that the Small Pox abstractedly considered, received by Inoculation is not so fatal, and the Symptoms frequently more mild, than in the accidental Contagion; yet it is not of that certain Safety, to exempt it from being reckoned precarious, and therefore requires Discretion in applying it to proper Subjects, and Judgment in managing the Distemper so received.

The Reason of my addressing this to You, Sir, Is a Sort of publick Acknowledgment of your Friendship; but more especially because of
your

your noted Probity, Integrity, and Impartiality in all Affairs: In your Office with an unbiassed Duty to the Crown, you are the Darling of all fair Traders; and to speak in Medical Terms, Integrity seems to be in the Constitution of your Family; Witness, the Honourable Sir JOSEPH JEKYLL, Master of the Rolls, your Uncle, who without any biassed Regard to Times, Persons, or Parties, has by every body been acknowledged always a Patriot. Panegyrick has a great Share in most Dedications, but as my Humour and Genius does not lie that Way, and your generous Temper does not allow of it, I forbear. I am

S I R,

Your much Obliged

Humble Servant,

WILLIAM DOUGLASS.



A
DISSERTATION
CONCERNING
INOCULATION
OF THE
SMALL-P O X.



THE *Circassians*, living between the *Euxine* and *Caspian* Seas, Time out of Mind, have carried on a considerable Trade with *Turkey* and *Persia*, in selling their own Children, or young Slaves taken by Incursions from their Neighbours; but more especially their young *Women*, being very Beautiful, are in great Request in the *Seraglios* and *Harams* of the *Turks* and *Persians*. While they are
I Children,

Children, they procure to them the *Small Pox* by *Inoculation* or otherwise; those who retain their Beauties, are *Merchantable*, and bear a good Price: So that the first Intention of *Inoculation* was not the *Saving of Life*, but as a more ready Way of procuring the *Small Pox*, than by accidental Infection; that they might know what *Beauties* were Proof and would answer the Charge of being carried to *Market*.

This *Circassian* Trade conveyed this Practice into *Turky*, where the *Turks* at first from their Principle of *Predestination*, would not come into it; only the *Old Women* of the *Greek Church*, practised it among the meaner Sort of People for some considerable Time, says *Pylarinus*, and that *A. 1701*, it first began to be used amongst the better Sort in *Constantinople*. His first Patients, were the four Sons of a *Noble Greek*. In some Time after this *Bellini* in *Italy*, writes an Account of it to *Dr. Pitcarn* in *Scotland*, desiring his Opinion; *Dr. Pitcarn* was very fond of it, but could not persuade himself to venture it in Practice. *Timonius* from *Constantinople An. 1713*, sends to the *R. S.* in *London* an Account of this Practice, with a very strong Recommendation thereof. *Pylarinus* the *Venetian Consul An. 1714*, sent to the *Royal Society* a more modest Account of the same. The *Small Pox* spread in *Boston, New-England, An. 1721*,
and

and the Reverend Dr. *Cotton Mather*, having had the Use of these Communications from Dr. *William Douglass*, surreptitiously, without the Knowledge of his Informer, that he might have the Honour of a New-fangled Notion, sets an undaunted Operator to work, and in this Countrey about two hundred and ninety were *Inoculated*.

These Communications of *Timonius* and *Py-larinus* in *England* were regarded as *Virtuoso-Amusements*, until *April 1721*, Mr. *Maitland* a Surgeon (who in *March 1717*, at *Pera* near *Constantinople* had seen the *British Ambassador's* Son, *æt. 6*, *Inoculated* by an old *Greek*) from a few scanty Observations but mostly from Hearsay, in Quality of a *Travel-ler* was willing to broach a new Thing: He *inoculated* Miss *Wortley*, *æt. 4*, and Dr. *Keith's* Son, *æt. 6*, in *May*, who all had a very favourable distinct Sort. This encouraged many to think well of it, and in particular the *Royal Family* were induced to cause Tryal to be made of it; accordingly in *August* it was practised on six *Condemned Criminals* in *New-gate*, *æt. 19 ad 36*. No Medicine was used, all was left to *Nature* assisted by a strict and regular Diet: They all received the Infection, and had a favourable *Small Pox*, excepting *Evans* who had no Symptom, neither did his Incisions enflame, having had the *Small Pox* in Goal last *September*. Some Time after this

Mr. *Maitland* inoculates Mr. *Batts* Daughter, *æt.* 2 $\frac{1}{2}$, *Joseph Heath*, *æt.* 7, and *Benj. Heath* *æt.* 3; being in all eleven Persons inoculated from *April* to *December*: Thus gradually and circumspectly did the People in *England* proceed in a Practice, which might be of Consequence good or bad; few of the *English Physicians* favoured it at first, but in some short Time Dr. *Mead* began to countenance it, as did also Sir *Hans Sloan*.

In the Spring following, there were inoculated by Order of the Princess of *Wales*, six *Hospital Children*, *æt.* 6 *ad* 20; four of them had it, and very favourably; one of them received no Infection, having evidently had the *Small Pox* before; the sixth had Accidents from *Inoculation*, which continued in a lesser Degree for eleven Weeks, and then had a favourable *Small Pox*. Soon after these, were inoculated five more *Hospital Children*, *æt.* eight to fourteen Weeks, three of them had no *Small Pox*, these Bodies were *morbid*. *April* 19, 1722, Mr. *Amyand* Serj. Surgeon, ingrafted the *Small Pox* on Princess *Amelia*, *æt.* 11, and Princess *Carolina*, *æt.* 9. They had them favourably; this would have been a very great Encouragement and Countenance to this Practice, if unluckily it had not happened that in the same Month of *April* dy'd the Earl of *Sunderland's* Son, *æt.* 2 $\frac{1}{2}$, and next Month dy'd my Lord *Bathurst's* Servant, *æt.* 19, of
the

the *Small Pox* procured by *Inoculation*. From this Time the Practice continues proceeding, but at a much slower Pace than was expected; so that from the Accounts of the Ingenious Dr. *Jurin*, R. S. Secr. in all *Great Britain* there were *inoculated* in the first three Years of the Practice only 477; the Principal *Inoculators* being Dr. *Nettleton* in *Yorkshire* eighty Patients, Mr. *Amyand* Serj. Surgeon sixty two, Mr. *Maitland* eighty five, &c.

When this *Practice* was first attempted, some Physicians in *England* and *New-England*, particularly Dr. *Freind*, from the Experience of Disorders arising in the *Animal Economy* by some Foreign Liquids being directly admitted into the Current of *Blood*, by Analogy were afraid of the like in Case of *Inoculation*; but repeated Trials soon convinced them of the Safety of this Method. In some of the first Trials the produced *Pustules* were either dry without *Pus*, or like a *Spurious Pox* called the *Chicken* or *Swine Pox*, containing no thick digested *Pus*, but a thin *Sanies*; hence they alledged that *Inoculation* produced only an *Eruptive Fever* but no *genuine Small Pox*: But in after Trials, seeing in many the *Pustules* rise with inflamed Edges, white and afterwards yellow Heads, plump and mellow, and go off about the usual Time in yellow Scabs, as also finding them *infectious*, they quickly gave up the Point,

Point, and *declared* them *genuine*. The *O-dium* of spreading Infection continues a Dis-
 advantage: The ingrafting of *Foreign consti-
 tutional Ails* is a stumbling Block to the nice
 and cautious.

The first *Promoters of Inoculation*, on the
 other Hand, were much more extravagant in
 their *Deviations*; from hearsay and a few
scanty Experiments with much *Credulity* and
Rashness, they positively and without Reserve,
 published as follows; and in some Instances
 contradict one the other and themselves.

Timonius An. 1713 says, these last Years
 some Thousands have been *inoculated* and
 none died, while at the same Time half the
 affected died in the common Way at *Constan-
 tinople*; and what is valued by the *Fair, In-
 oculation* never leaves Scars nor Pits. In-
 fants have no *Convulsions* with it. He knew
 but of one Boy who did not receive the
Small Pox by *Inoculation*, his Incisions did
 not swell. The *Pustules* never contain a lau-
 dable *Pus*, but a thin watery *Sanies*.

Pylarinus the *Venetian* Consul, the most
 modest of all its Promoters, says, I was not
 an *Eye-witness* to all that I now relate, I had
 a great Part of it by *hearsay*. The *Opera-
 trix* required the *Winter Season*. The *E-
 ruption* generally begins the seventh Day;
 there are instances tho' but few, where the
Eruptions have appeared the first Day. *Ino-
 culation*

culation sometimes does not take Place. In some, tho' very seldom, in the *glandulous Parts & Emunctories*, *Abcesses* do arise after some Time.

Dr. *Le Duc* a Native of *Constantinople*, and who was himself inoculated, assured Dr. *Jurin*, that out of many Thousands that in the Space of about forty Years past, had been inoculated in and about *Constantinople* by one *Greek Woman*, not so much as one Person has miscarried.

Mr. *Maitland's Account*. Dying is a Case which never happened in *Ingrafting*. The giving the *Small Pox* by *Inoculation*, never yet failed, nor never can. No Headaches, Thirst, Inquietudes, and other Fever Symptoms, not one in a Thousand. Dr. *Nettleton* who inoculated great Numbers, says from his own Experience: *The Symptoms are as in the natural Way, a quick Pulse, great Heat and Thirst, Pain in the Head and Back, and about the Region of the Stomach, Vomiting, Disedness, Startings, and sometimes Convulsions*. Mr. *Maitland* further says, The *Pustules* never leave any *Pits* behind them: And in his *Vindication*, printed in Autumn, 1722. says, that out of about five hundred *inoculated*, by that Time only three had died: Dr. *Jurin* who made it his Business, as being R. S. Secr. to be well informed, *exeunte Anno* 1722 says, that only one hundred eighty two
were

were *inoculated* by that Time. This Imposition on Mankind is too gross; what follows is still more gross. In a loose Poetical Rapture Mr. *Maitland* says, that supposing two or three hundred Sick in the *natural* Way, and as many in the *inoculated* Way, all under the Cure of unskilful and unexperienc'd People, as few would *survive* in the natural Way, as would *die* by the inoculated Way.

Dr. *Brady* of *Portsmouth*. Not so much as one ever *died* of Inoculation rightly performed; it always is favourable. What wretched Work (says Dr. *Brady*) the Gentleman (Dr. C. M.) who writes the Letter to Mr. *Dummer* from *New-England* makes of his Accounts?

Dr. *Harris* says *Inoculation* is a certain Remedy against the *confluent* Kind.

Mr. *Colman's Observations in New-England*. A Negro Slave in Discourse told him, That *Inoculation* was practised in their Country, but of how long Standing he could not tell; that God told it to poor Negroes to save their Lives, for they had not Knowledge and Skill as we have; when the *Small Pox* gets into a few Families in a Town, the whole Town is inoculated in one Week, and are well the next, none die, no Blains nor Boils follow the Practice.

Mr. *Boylston's first Account*. There is no Truth in the Reports of Peoples dying under
Inocu-

Inoculation. Timonius well known to some in Boston, who also actually knew the Truth of his Matters of Fact; this Sort of Quackery is only fit for a Stage in a Countrey Market Town. In his second Account, published, An. 1726. he complains much that he had heard but of few who have had the Benefit of *Inoculation* in England. N. B. We are to understand, that, Business running low with him here, he went for *London*, and with the Character of an unexperienced Inoculator, expected a profitable Encouragement there; but was entirely disappointed, not having inoculated one Person there, so far as I can learn; *Inoculation* in *London* had not as yet got into the Hands of Quacks. He tells us he had such Faith in the Accounts that Dr. Mather gave him of *Inoculation*, that he could have ventured the first Trial upon himself; in a few Lines following (forgetting himself) he tells us of his great *Fright* (as he calls it) on Account of his Son's Illness, not having any Directions from Timonius and Pylarinus concerning this Practice: These are his own Words, by which he unthinkingly exposes his own Rashness and Inadvertency.

The best of Men have some *Foible*; that of Dr. Mather's was *Credulity*; it was upon his Authority that our *New-England Inoculation* was carried on. I shall mention a few

Instances of this *Weakness* from his own *Letters* concerning Inoculation published in *London*: In one Letter dated *March* 1722, he tells the World, That *An.* 1721, in *Boston*, some *Cats* had a regular *Small Pox* and died of it; that during the *Small Pox*, the *Pidgeons* and *Dunghill Fowls* did not lay nor hatch, *that he never knew Blistering miss of saving Life in the Small Pox, &c.* In his Letter communicated to the *R. S.* by *Mr. Newman* in Favour of Inoculation he says, *The Patient is more healthy after Inoculation, it is useful to Women in Child-bed, it dries up tedious running Ulcers, makes the crazy consumptive People hearty, and rids People of their former Maladies.* Thus he makes a *Panacea* of it. To allow of such gross and bold Assertions without disproving of them, would be leading Mankind into a *Snare*.

Altho' *Levity* and *Credulity* brought People into it at first, without waiting the Effects of a reasonable Number of *Experiments*, most of the *Anti-Inoculators* from repeated Trials do now acknowledge, that *Inoculation* generally Speaking is a more easy Way of undergoing the *Small Pox* Illness, than where the Infection is received by *accidental Contagion*; but its *Salutariness* falls much short of the *extravagant Recommendations* given of it by its *Patrons*; which were very unfair, be-
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cause it appears at that Time they knew but little of the *Practice*.

This *Method*, to speak impartially, is a considerable Improvement in *Physick*; but we cannot say that it *prevents a bad Sort*, as sure as a *Pleurisy* is cured by V. S. an *intermitting Fever* by the *Peruvian Bark*, a *Chlorosis* by *Chalybeats*, *Venereal Ails* by *Mercury*, &c. In short, it is no infallible Method of *alleviating* the Distemper, but in many Instances hath proved *precarious*. Some receive the Distemper not at all, some only *Eruptive Fevers*, others in so small a Degree as to admit of Doubt, others the worst Sort, some have died of it, *Imposthumations* and other subsequent Ails rather more than in the natural Way, &c.

I shall endeavour to vouch all these Particulars chiefly from Histories of the first *Centenary* inoculated in *England*, and in the very Words of the Inoculators (some of them were two credulous in their first Recommendations of it, but they all seem to be very candid in their *Histories of Fact*) which I am ready to produce well vouched. To proceed farther down would be too tedious and nothing to the *Advantage of the Method*, because the Proportion of those who died in the subsequent Years, is greater than it was in the Beginning; and to speak ingenuously,

I kept a Correspondence with Respect to the Benefits of Inoculation in *England* from *unquestionable Facts*, only for the first two or three Years of its Practice there; but have since, by a sort of Indolence, been remiss. I know no more of it for those last Years, than any other Person may from the publick Prints. I can but seldom have Recourse to Mr. *Boylstone's* Accounts, because of their being so jejune, lame, suspected, and only in the Nature of a *Quack Bill*.

1. *Some receive the Distemper not at all.* *Pylarinus* says, Inoculation does not always take Place. In Dr. *Nettleton's* first Parcel it did not take Place in two Instances. Mr. *Maitland's* 20th, 28th, 29th, 30th, 32d, 42d, &c. it did not infect. Mr. *A—d's* 4th, 10th and 11th did not take Effect. In short, from the ingenious Dr. *Jurin's* Account of Inoculation in *Great Britain*, An. 1721, 1722, and 1723, out of 477 by that Time inoculated, *twenty nine had no Small Pox*; which is one in sixteen.

2. *Some have only Eruptive Fevers.* Mr. *Maitland's* 32d, Patient. Dr. *H—n æt.* 26, had only an Eruptive Fever, but no Small Pox; Mr. *A—d's* Child, æt. 17 Months, his 4th Patient, had only an Eruptive Fever, and a pretty sharp one during
36 Hours.

36 Hours. Mr. *A*——*d*'s 11th Patient. My L. *M*—— a Son to the D. of *D*——*t*, aged 11 Years, had a gentle Eruptive Fever, but no Small Pox.

3. *Others to so small a Degree, as to admit of Doubt.* Dr. *Nettleton* in his Letter 16th of December, 1712, says, we are ready to own, that the Operation may sometimes fail: In three of my Patients, though the Wounds did inflame and swell, and discharge considerably, yet the Eruptions were so imperfect, as to leave me a little in Doubt.

4. *Others, the worst Sort.* *Pylarinus* modestly says, they are most frequently (not always) of the distinct Sort; the eldest (*æt.* 18,) of the four Sons of a Noble Greek, his first Patients, after a Course of most violent and dangerous Symptoms narrowly escaped the fourteenth Day. *Timonius*, who has been found in every Thing partial in Recommendation of Inoculation, says, that of about fifty who had the Inoculation about the same Time, four came near the *Confluent* Sort, in whom the Eruptions were too sudden, and Symptoms worse. To make some Estimate of the *Confluent* and *Bad Sorts*, I shall confine my self to the first Centenary in England, and in the Words of the Inoculators. Dr. *Nettleton's*

Nettleton's 8th Patient, *Mr. Sympfon's* Child died the 7th Day from Inoculation with *Purple Spots* (the Brother some Time before dy'd in the natural Way the 4th of Illness, full of purple and livid Spots.) His 28th Patient, *æt. 5.* the elder of two Brothers inoculated about the same Time, the younger got thro' the Distemper with a great deal of Ease ; but the other fared quite otherwise, and there appeared some Signs of *Malignity*, but without Danger, he afterwards had a hard Swelling on his Shoulder, &c. (a former Child of this Family dy'd of a very malignant Sort of Small Pox.) *Mr. Maitland's* 10th Patient, *Joseph Heath, æt. 7,* was very ill before the Eruption, had a great Load of the *continued Kind*, but at last recover'd. His 25th Patient, *Mr. R—ds, æt. 41,* had a great many, some of the *coherent Sort*, with pretty sharp invading Symptoms, in some Time after he had two Boils. His 31st Patient, *Mr. Spencer,* at two and a half, Son to the Earl of *Sunderland*, had a mixed Sort, part *Confluent*, he dy'd the 11th Day *convulsed*, having had a violent *Second Fever*. His 42d Patient, *Mr. R—g's* second Child had a great many, got over the Small Pox under the Care of two *Physicians*, but in some short Time after dies of a *Pthifis*. His 47th Patient, a Child of my *L. T—d's* had a pretty many of the *Coherent*

berent Sort. Mr. A——d's 12th Patient, my Lord Bathurst's Servant, *æt.* 19, the Eruption happened in the usual Time, with a vast Quantity of the *confluent Kind*, dies the 13th Day, having been under the Care of Doctors *Arbuthnot* and *Mead*. In June Mr. *Waller*, Apothecary in *Gosport*, inoculated his three Children, one of them had *very severe Symptoms* preceding the Eruption, had a great many with three or four Patches of the *fluxed Kind*. Thus we find in fair Accounts, *that nine in 100 have had bad Kinds*; some Inoculators except against Mr. *Sympson's* Child, because the Seizure was early.

Dr. *Nettleton* ingenuously writes, That both in the natural and ingrafted Sort there are almost *infinite Degrees of the Small Pox*. In Mr. *Boylston's* Account, with a good Assurance he tells us, we had no Resemblance of bad Symptoms in any, where it was not evident that they were infected in the natural Way before. In all his 247 Patients he met with but five or six, and they had received the Infection before; whereof three were *Confluent*, and three *handsome Sprinkling*, as he Terms it. How *disingenuous* is it to suppress the Histories of those who had the severe Degrees of it. That there were more is certain. The Reverend Mr. *Coleman*, in his

his Book of Observations, p. 4 writes, that some ten or twelve of this Number (the first 100) appeared to have taken the Infection in the common Way, and accordingly had a *confluent Kind, or of a Fulness* of the distinct Sort, not known among the Inoculated in the *Levant*. Considering that the other 147 were all in the severest Season, and many of them not so well provided for in the adjacent Countrey Towns, the Proportion of *bad Kinds* must increase; so in the lowest Estimate, *there must have been 25 or 30 with bad Sorts.*

5. *Some have died of it.* I shall not descend to Particulars, seeing the ingenious Dr. Jurin R. S. Secr. a Favourer of this Practice, in his *Account of the Success of Inoculating the Small Pox in Great Britain*, writes, that in the Years 1721, 1722, 1723, there were inoculated in all *Great Britain* 477, whereof *nine are suspected to have died*, and deducting the twenty-nine who did not receive the Infection, there dy'd nine out of 448, where the Subjects were generally culled, prepared, and all Advantages made use of; not including Dr. Nettleton's 8th Patient, Mr. Sympson's Daughter, and others, in whom the Eruption was early. I know nothing certain these last Years concerning the Small Pox *Mortality* in this Way, at Times we find
some

some mentioned in the *London News-Papers*; as for Instance, in the Year 1725, *March* 16, dy'd Mrs. *Eyles*, Niece of Sir *John Eyles*, Alderman of *London*, of the *Small Pox* contracted by Inoculation; *June* the 17th dy'd of the *Small Pox* contracted by Inoculation, *Arthur Hill*, Esq; eldest Son of *Viscount Hillsborough*; *August* the 12th dy'd of the *Small Pox* by Inoculation — *Hurst*, of *Salisbury*, Esq; &c.

Mr. *Boylston* writes, that there were only six who died of or after Inoculation. The precise Number of those who dy'd by Inoculation in *Boston*, I am afraid will never be known, because of the Croud of the Sick and Dead while Inoculation prevailed most, and the Inoculator and Relations inviolably keep the Secret; when it got into *Countrey Towns*, it could not be concealed, and we find that out of seventy-two or seventy-three Persons inoculated by Mr. *Boylston* in *Roxbury*, and the adjacent *Countrey Towns*, five have dy'd; this is about one in fourteen. N. B. Mr. *White* was brought from *Roxbury* to *Boston*. In all fair Trials no Man of Probity and Candor does stifle Facts. Mrs. G —, an ancient Gentlewoman, who visited much the *Small Pox* Decumbents of all Sorts, whispers, that there were many more. Some *Porters* who at that Time were employ'd to carry the

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Dead to their Graves, say, that it was whispered in sundry Houses where the Dead were carried from, that *the* Person had been Inoculated. I could name some who are suspected, but having only Hearsay and conjectural Evidence, I forbear to affront the surviving Relations: I my self am certain of one more *who dy'd after Inoculation*, as they express it, having with her Inoculator attended her in her Illness, this was ——— Housekeeper to Mr. G — *bs*, Apothecary, inoculated by himself: Soon after the *variolous* Matter was applied to the Incisions, she began to complain; after two Days began the *Small Pox Fever*, and in two Days more began the Eruption very full, and *confluent* in her Face, the Incisions discharged very much, was never delirious; she dy'd the the twelfth Day of Weakness or *Inanition*. Captain *Osborne* in his Account of the Success of the Inoculations in *New England*, signed by himself, and inserted in the *Philosophical Transactions* for November and December 1721, has these Words, “There were
 “ in all at least 280 Persons inoculated that I
 “ *knew of*, and I suppose there might be twenty or thirty more, but of those I can give
 “ no certain Account”: It is to be supposed that he sail'd for *London*, before Mrs. *Serle* in *Roxbury* died of her Inoculation, because he
 does

does not mention her, but after her Death several were inoculated. Thus the Number of the Inoculated must exceed 300, and *twenty or thirty concealed from us*, many of them without doubt in their *silent Graves*. Would it be *candid* in a strenuous Promoter of this Practice, supposing he had *suffer'd much* in his *Small Pox* Illness, and thereafter a *violent Inflammation* in his Leg, when freely ask'd the Question, If he had received the Infection by *Application* of variolous Matter, or by accidental Contagion? *to give no positive Answer?* Would it be fair in another, after his Child had recovered of the *Small Pox* from Inoculation, supposing a Neighbour put the Question seriously, If your *Daughter* had dy'd, what would you have said? his Return should be, If she had, *no Body should have known that she was inoculated?* Mr. *Boylston* in his first Account says, I have made my Experiments on greater Numbers than I judge proper to mention.

6. *Inoculation sometimes leaves Imposthumations and other Ails.* *Timonius* says, two morbid Children, *æt.* 3, died soon after; it was judged that this Means was made use of to send them as useless Shades to *Charon*. *Pylarinus* candidly writes, *Quibusdam, rarissime tamen, ad glandulosas partes & emunctoria*

post aliquod tempus abscessus erumpunt. Dr. Nettleton ingenuously tells us, some few after the *Small Pox* have been subject to other Indispositions. For an Estimate of their Proportion, as before, I confine myself to the first *Centenary* inoculated in *England*. Dr. Nettleton's twenty third Patient Mr. Hanson's Daughter, *æt.* nine Months, about a Fortnight after she was well of the *Small Pox*, had a *painful Swelling* in one of her Thighs and *Inguinal Glands*, but it went off without Suppuration, there only remaining a *Hardness* above the Knee for some Time. His thirty seventh Patient Mr. Haigh's Daughter, *æt.* 6, had a subsequent small *Tumour* on the Muscles of the *Loins* which ripened speedily, *was opened* and healed. His thirty eighth Patient her Sister, *æt.* 18, had such another in her Leg, something *deeper*, it gave her a great Deal of Pain, and discharged a great *Quantity of Matter*. Dr. Brady of *Portsmouth* inoculated his four Children, the eldest Boy in Sickening had a *painful Swelling* in his Neck, afterwards a Swelling in his Lip, and a scratched Pock in his Leg does *imposthumate* and is laid open. His eldest Daughter had a *painful Tumour* in her Arm. Mr. Maitland's twenty fifth Patient Mr. R——ds, *æt.* 21, in some short Time after had two *Boils*. His fortieth Patient Sir D—— O——ne had a sub-

a subsequent *Imposthume Axillæ*. His forty first and forty second Patients, *æt.* thirteen Months, and three Years; in the first one of the inoculated Arms did *imposthumate*, and was laid open; the other soon after dy'd of a *Pthisis*, having had an *Imposthume Axillæ* and two small *Boils* in other Parts. Mr. A——d's fourteenth Patient my Lady Betty Daughter to my Lord B——y as the *Small Pox* were a drying away, appeared a large white *Tumour* under the *Deltoides*, which being opened the *humerus Bone* was found discover'd; it was cured without any sensible Exfoliation. Thus *eleven in the Hundred* had these subsequent Ails. I do with all Candor and Sincerity declare that in many Hundreds of Patients I visited in the last *Small Pox* Time, I had not above half a Dozen with subsequent *Imposthumations* or *Boils*; and having upon this Occasion enquired of most of the other Practitioners, I find the Proportions were very small when compared with these.

7. We may confidently pronounce, *That those who have had a genuine Small Pox by Inoculation, never can have the Small Pox again in a natural Way*, both by Reason and Experience; but there are some who have had the usual Feverish Symptoms, a Discharge by their Incisions, with a few imperfect Eruptions,

ruptions, that may be obnoxious to the *Small Pox*. One of the six Hospital Children inoculated in the Spring 1722, by Order of the *Princess of Wales*, had the Accidents from Inoculation, and after *eleven Weeks* had a *favourable Small Pox*. Mr. *Degrave* Surgeon in *London*, his Daughter was sent to a Nurse with some other Persons to undergo Inoculation; at the usual Time she had Feverish Symptoms, Heats and Flushings, and more Sickness than the other Persons who had a fair distinct *Pock*; the Incisions discharged about three Weeks (*Timonius* assured us that if the Incisions swell and discharge, they never after will have the *Small Pox*;) she was purged once or twice, and discharged from her Confinement; after *eleven Weeks* she had a *favourable Small Pox*. Dr. *Clinch* in his Historical Essay of the *Small Pox*, asserts, that a Son of Mr. *Jones* Surgeon at *Osewestry* in *Shropshire* inoculated by the Father, had the *Small Pox*, as was judged, by Inoculation; but some short Time thereafter *had it severely in the natural Way*. In *May* 1725, the Reverend Mr. *Johnson* (a noted Undertaker of scrophulous Cases) inoculated a Person of Distinction in *Chelsea*, who thereupon had a *Rash-like Eruption* and small Fever, afterwards was physick'd and sent Home as having had the *Small Pox*, but in a short Time after *had the*

the Small Pox favourable in the natural Way. We have had likewise some Instances in the publick News-papers from *England*. Some of the Inoculators say, that this late subsequent *Small Pox* was still the Effect of a latent Infection received by Inoculation.

It is beyond all Dispute, *that some of the Inoculated, may have received the Infection before, and that the Small Pox was from thence*; but if an inoculated Person dies, or has a hard Time of it, to impute it always to a former accidental Contagion, is most partial and unreasonable; more especially they seem to be secure in this *Subterfuge*, if the Eruptions happen sooner than the usual Time. *Timonius* says the Eruption sometimes is too sudden and of the fluxy Kind. *Pylarinus* says the Eruptions generally appear the seventh Day, there are some rare Instances where it appeared the first Day. The learned Dr. *Huxham* of *Plymouth* writes, *Anno* 1724 and 1725, there was in the Town a sort of *Anomalous Small Pox*, that appeared in *less than twenty four Hours* from the Seizure, and were always of the fluxed Kind. Dr. *Jurin* gives a very singular Instance of the *Small Pox* appearing in two or three Days, in the Forehead of a Nurse, squeezed by a Gentleman in his *Delirium* against his naked Breast full of the coherent Kind in the

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State of Maturation; they observed the regular Periods of the distinct Kind, and did inflame so as to close up her Eyes by Swelling, which afterwards did soon subside by a Blister to her Neck: Therefore a *Fortiori*, where the variolous Matter is applied immediately to the Blood and circulating Juices, as by Inoculation, why may not the Eruptions in some Constitutions be *premature*? According to the Inoculators themselves the Eruption may be so *Serotine* as eleven Weeks, and why may it not sometimes be too *precocce* by some Days?

8. *If it is not used with Circumspection in Regard to our Neighbours, it is of pernicious Consequence* to populous and trading Towns by spreading Infection and damping their Trade; besides the *premature* Deaths of those who do not expect it. As in some Constitutions of Years the Infection is not so apt to spread as in others, *to force the Spreading of it* by this Artificial Method no Man (excepting one who has less Regard for the Lives and Good of Mankind, than the ready Money) will justify. I am told that about forty five Years ago the *Small Pox* got into several Families in *Boston*, and soon went off without disseminating itself. The *Plague* which is reckoned more infectious than the *Small Pox* was

was in *London*, from 1602 to 1632, every Year there died a few of it, but it did not spread excepting in 1603, there died of it 30,561, and in 1625 died 35,417. The *Small Pox* in *London* some Years is far more universal and malignant than in other Years; for Instance, from the *Bills of Mortality An.* 1702, died of the *Small Pox* only 311, in the Year 1706 died 1721, in the Year 1719 died 3229. Last *Small Pox* left *New-England* very abruptly, while the Promoters of Inoculation were endeavouring to force it into the Countrey Towns; but the *Roxbury* Deaths baffled their Recommendations. To force the Spreading of Infection by an *unbounded Inoculation* is a Hardship upon Mankind, to oblige them to quit their Business with their Habitations; Means used to save my own Life, ought not to endanger my Neighbours. Perhaps it is *more infecting* than in the common Way, because after the *Small Pox* Confinement is over the inoculated Walk about, and carry with them a Sort of *ambulatory Infection*, their Incisions continuing to run a Sort of variolous Matter. In some Measure to obviate this Clamour, they at first gave out, that the Infection from the Inoculated conveyed a better Sort; but this Point they soon gave up. Mr. *Maitland's* ninth Patient Mrs. *Batt's* Daughter at *Tem-*
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ple near *Hartford*, gave the Infection to six Servants in the House, all of them had them very bad, and one died, says Mr. *Maitland*, contrary to my Expectation. In *Boston* Mrs. *Esther Webb* the thirteenth Patient of Mr. *Boylston's* was inoculated, narrowly escaped in the worst Sort of confluent Kind; the *Salvo* was that she had received it from her inoculated Father and Mother, and if this be allowed, then it makes our Surmise good.

9. *The Communication of Constitutional Distempers, is a Difficulty which will require some Series of Years to obviate.* This some may call a *chimerical* or conjectural Fear; but as all Constitution Distempers have some *Idea* or *Seminium* in every Drop of our Juices, the *acute Distemper* according to its Nature soon shews itself, the *Chronical Ails* act slowly and imperceptibly on our Bodies. A *Scorbutick* Taint may lie latent until some disposing Cause happens, the *Arthritick* from its Nature will not exert itself till old Age, it is very uncertain in what Stage of Life an Hereditary *Venereal Pox* may appear, the *Nephritick*, *Strumous*, *Epileptick*, *Maniack*, &c. sometimes intermit one Generation, and appear again in the next: Thus any subsequent chronical Ail may occasion Inquietude in the Minds of the Inoculated, and render them
uncapable

uncapable of the greatest Happiness in this World, *Mens sana in corpore sano.*

As Fear, Anxiety and Despondency, or Dejection of Spirits, are of bad Consequence in all Diseases, and more especially in the *Small Pox* Illness; I cannot avoid taking Notice of the Inadvertency or *Inhumanity* of some Inoculation Promoters particularly in this Town, who with *false Colourings* expose the Mortality of the *Small Pox* in the natural Way. They harangue thus, *The Small Pox always fatal to New England.* Mr. *Boylstone* in his first Account says, *The Small Pox* was an *awful* Distemper, whereof so many dy'd as gave an awful Prospect. In his *assuming Dedication* to the *Princess of Wales*, he says, the Reason of his undertaking Inoculation was, because the *Small Pox* raged in *New England* with the utmost Violence: Let us recollect and we may find that *July* the 22^d 1721, the *Select Men* declare, that only seventeen by that Time had dy'd of it, the *Small Pox* had then been in Town about three Months, and this was near a Month after Inoculation began, at that Time so far as we could investigate about one in ten dy'd of it; how few Popular Fevers have been so favourable, witness that *Febris mali moris* Epidemical here in the Fall. Dr. *Mather* in

his Letters publish'd in *London*, gives the Reason why they used no Precaution; because in the natural Way it raged with the *utmost Fury*, and to make his Assertion good, says, that of something more than 5000 Decumbents near 900 died, which is 1 in 5. 5 or 18 *per Cent.* by the Fallacy of using the remotest round Numbers in each Estimate, he *misrepresents* the Case very much; the true Numbers, as I had them from Mr. *Salter*, were out of 5989 dy'd 844, (or in the nearest round Numbers *out of 6000 dy'd 850*,) which is something less than 1 in 7, or 14 *per Cent.* Mr. *Boylston*, with his usual Candor, in his Estimates, makes use of round Numbers to a Pitch much exceeding this; in his Account, reckoning up the *dismal Symptoms* which attend the natural *Small Pox*, he endeavours to make the World believe, *That in Boston, An. 1721, near one hundred Persons had lost one Eye*; I have made diligent Enquiry among the Practitioners and others, but cannot muster up near a Score; and some of those not from the Violence of the Distemper, as in two Daughters of Captain R —; Patients to Mr. *Pemberton*, who had a kind distinct Sort, with an accidental *Small Pox Pustule upon the Pupil of the Eye*. How *inhumane* is it in Affairs of Life and Death thus to trifle with Mankind, to indulge

dulge a Humour, or to serve a base End, and how suspected must all Accounts be that come from such Hands?

As *Chearfulness of Mind* is the best *Preparative* for, and *Restorative* in the *Small Pox*; for the Comfort of those who have not had the *Small Pox*, I shall make an Estimate of the *not Small Pox Deaths* in *Boston*, *An. 1721*. There dy'd that Year of all Distempers 1102, whereof 844 were *Small Pox*, so that only 258 of other Diseases; but at a *Medium* of six Years preceding, *An. 1721*, there died *per An.* 359, and at a *Medium* of six Years following, *An. 1722*. (I do not include *An. 1722*, because the *premature Deaths* of 1721 had much lessened the Burials for that Year) there died 411; the Mean is 385, from which deduct the above 258, remains 127 Deaths of *Valetudinarians* who (if we may so express it) must have died that Year of other Ails. Or if we compute thus, *An. 1722* died only 273, therefore the former Year had *anticipated* this 118 of its due Burials; the *Medium* of both Computations is 122, which deducted from 5989 and from 844, leave 722 Deaths in 5867, and is something more than one in eight. To reduce the *Small Pox Mortality* further let us consider, 1. The Disadvantage of its *prevailing in the Autumn* or Fall, the most sickly Time of the Year. 2. The

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Pox had been absent twenty Years, and consequently a great Proportion of *Adults* to have it, in whom *chronical Ails* might be formed; where it frequently comes, *Children* are generally its Subjects, and on that Account not so Mortal. 3. By *Inoculation* the Numbers of the infected were in all Parts of the Town so increased, that they could *not well be attended*; perhaps the Numbers rendered *the Contagion more Intense*, for near ninety died of *Purple Spots and other cruentous Colliquations*. Had not those Disadvantages concurred, I do almost persuade my self, not above *one in ten would have died*; the two former *Small Pox* Times were more favourable, *An. 1690 and 1702*, as Mr. Coleman in his Book observes; and considering that from the Settling of *Boston*, which is now one hundred Years, the *Small Pox* hath afflicted the Town only six Times; *Anno 1649, 1666, 1678, 1690, 1702, and 1721*, I cannot see any Reason to magnify the Chance and Risque which a *Boston* Man has of dying by the *Small Pox*. Dr. Nettleton of *Hallifax*, Dr. Whitaker of *Chichester*, and Dr. Williams of *Haverford-West*, for the Year 1721 make the *Small Pox* Deaths in their Neighbourhood one in five, it certainly must have been with them a *malignant Constitution* that Year. Accidental Years or Times are
not

not to be induced in forming *general Estimates*; as for Instance, *An. 1721*, in *Rhode-Island*, (a Neighbouring Plantation) out of thirty who had the Small Pox and were sent to *Harbour-Island*, only one Person died, without any other Advice than the Care of a Nurse.

The Advantages of Inoculation. 1. The *Small Pox* received by *Incisions* from the Experience of some Years, *abstractedly* considered, is found not so Mortal and the Symptoms generally more favourable than when it is received by accidental Contagion. 2. One may take the Advantage of *benign Small Pox* Constitution, and a *favourable Season* of the Year to receive it. 3. The Body may be *prepared* and so secure our selves from being taken at a Disadvantage and Surprise; it is an Advantage to know that we are to have a Distemper seven or eight Days before it seizes us. 4. It removes that Dread and Anxiety, which is a great Uneasiness to some who have not had the *Small Pox*.

The *Royal Family* by their Example, have obviated the Suspicion, which made the Practitioners here decline it formerly, I mean, of its being Criminal. I find *the Practitioners in Town* do generally resolve to perform the Operation when required, but without persuading or dissuading; so that those who are so inclined

inclined will have a better Chance and Choice without being obliged to expose themselves to a *Rash Operator*; however safe this Method may be, Discretion and Care are necessary; out of Mr. *Boylston's* seventy two or seventy three *Roxbury inoculated Patients*, (Mr. *White* included) died five; out of Mr. *Thompson's* twenty eight *Inoculations in the same Towns and Season* there died not one.

The Operation of Inoculation is always safe even in the rudest Hand: Blood letting is attended with the Risque of pricking an Artery, Tendon or Membrane of the Muscle; in this the Skin being elevated nothing lies in the Way. The Symptoms in the inoculated *Small Pox* are the same as in the Natural, and require the same Management.

Altho' by Inoculation there is a *better Chance* than by accidental Contagion, nevertheless it is not exempted from being *precarious*, as we have at length exemplified; but as there is no *absolute Certainty* in humane Affairs, Mankind govern themselves by the greatest *Probabilities*. If it is found a better Chance for preserving Life in this Illness, it will not be easy for *Enthusiasts* and such like *Divines* to make the World believe it a Sin; thus some *Turks* and many of our Neighbours, altho' rigorous *Predestinarians*, at the Cry of *Small Pox Malignity*, do fly to it as
a Re=

a Refuge. Suppose an Epidemical and mortal *Diarrhæa* or *Dysentery* rage in a Place, if I can carry off its proper *Pabulum* by *Catharticks*, which is an Analogous artificial Distemper of the same Species, may it not be done? An impending periodical *Hæmorrhage*, may it not be diverted by an Artificial *V. S.* The *adequate Analogy* of this, puts me in Mind of the *Fallacy* of an Argument commonly used by the Inoculators, *Artificial V. S. Catharticks, drawing of Teeth, cutting of Corns, &c. have been the Occasions of Deaths, must they be disused?* In these some Accident in the Operation is to blame, not Nature prematurely set at Work to acquire an acute Distemper by a safe Operation; a preventive Vomit, Purge, &c. affects only myself not my Neighbour.

Seeing at present the most zealous Inoculator does not pretend that there is any *absolute Certainty* in this Affair, a *Countrey Retreat* in my Judgment, may be advisable to the following *Conditions* of Persons. 1. To those who are *much advanced in Years*, who in the common Course of Nature may *not survive* the next Return of this Contagion; the *Infirmities* of old Age is a Disadvantage likewise to be considered. 2. *Pregnant Women*; and in general all of the *Fair Sex* whose Business can allow of a Countrey Retirement

for some Months once in twelve or twenty Years, and whose *Faces* are some part of their Care and Concern, some Faces having suffered last Inoculation Time. 3. The Consumptive and *bad Habits*, whose *crazy Fabricks* cannot without a considerable Risque, stand the Shock of an acute Distemper. 4. *Infants*, whose green and tender Age with the Incidents of *Crudities*, *Tormina's*, *Teething*, &c. is of itself precarious, without the Accumulation of a *Small Pox* Illness. 5. *Indians*, few of them are observed to survive the *Small Pox* in the natural Way, and therefore are not without considerable Hazard in the other Way. 6. *Some particular Families of Whites*, who have something peculiar in their Constitution that cannot bear this Infection (Fire is not always as the Flame from whence it is derived, but as the Fuel to which it is applied) we have had Instances of this, Mr. *White* and his Sister both died by Inoculation, the Family of *W——bs* suffered much, &c. By some Singularity of Temperament, some are Proof against the Pocky Contagion, to others it is always mortal. 7. *The exceedingly Timorous* need not to be mentioned, it is to be supposed that Fear will give them Wings.

These who are in *good Health*, and not in any of these Circumstances, are *fit Subjects*
for

for Inoculation, more especially whose Business requires them to be in Foreign Parts where the *Small Pox* always more or less prevails. Since the Practice is not Criminal, they who from a publick Spirit undergo the Experiment, may be reckoned to essay the *Benefit of Mankind* for Generations to come.

The best Preparation for the Small Pox to be received, either by Accident or by Incisions is to keep the Mind as chearful, and the Body as healthful as we can. *The Symptoms of Health* are a good Stomach, easy Digestion, regular Pulse, quiet and undisturbed Sleep.

F I N I S.

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