

Dissertations on a dropsy, a tympany, the jaundice, the stone, and a diabetes ... / [Sir Richard Blackmore].

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DISSERTATIONS

N^o: 729 ON A

DROPSY,

A

TYMPANY,

THE

JAUNDICE,

THE

STONE, and a *DIABETES*.

BY

SIR RICHARD BLACKMORE, Knt. *M. D.*
and Fellow of the College of Physicians in
London.

LONDON,

Printed for JAMES and JOHN KNAPTON, at
the *Crown* in *St. Paul's Church-Yard*. 1727.

DISSERTATIONS

ON A N^o 129

DR O P S Y

T Y M P A N Y

J A U N D I C E

STONES and a DIABETES



Sir Richard P. and Fellow of the Society of Physicians in London

L O N D O N

Printed for James and John Knapp, at the Office in St. Paul's Church-Yard, 1777.



T H E

P R E F A C E.



It is highly probable, if not certain, that had our first Parents persevered in a State of Innocence, and never known moral, they would never have seen natural Corruption; for Death being the Offspring and Wages of Sin, the Sanction annexed to the Divine positive Law to secure *Adam's* Obedience, it is reasonable to believe that Men, like *Enoch* and *Elijah*, had not Sin prevented it, would have been translated from Earth to Heaven, without the Dissolution of the Body. And when after their Defection our Parents became mortal, or obnoxious to Death, the Punishment threatned to Disobedience, yet the Execution of the Sentence was mercifully suspended through a long Succession of Years before *Noah's* Flood; and it is not repugnant to Rea-

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son that Men at that Time did not at their Death suffer a violent Separation of Soul and Body, but seemed not so much to dye, as by a gentle and gradual Decay to cease to live. And this may be owing to their Labour and Abstinence, as well as to the salubrious Nature of the Air, Plants, and Water. And as then it is likely there were no severe Diseases, so it will follow that there were no *Antidiluvian* Physicians; nor even after the Flood, when so great a Change was made in all Things, with great Disadvantage to Man in respect of Health and long Life, yet partly by their Temperance and Ignorance of Luxury, and partly by their Toil and Industry, they protected themselves a long Time from the Insults of great Distempers, and by that made the Physician unnecessary; till by Degrees, following Ages degenerating from the Simplicity and Primitive Manners of their Predecessours, became soft and voluptuous, and threw off the heavy Yoke, as they thought it, of a diligent and laborious Life; whence their Blood unagitated by due Exercise, and burthened with the unconcocted Leavings of Foods and Liquors, or Impurities sucked in from noxious Air, became a Nursery of Distempers; and this at length occasioned a Necessity of applying to the Study of the healing Art, and the Discovery of Remedies in the vegetable and mineral Worlds, for the Cure of Diseases, which began

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gan to grow rife and overspread the unhappy People. It is certain there were Students and Practisers of this Kind before *Chiron*, *Æsculapius* and his Sons; for there is Mention made of Physicians in the 13th Chapter of *Job*, which I look upon as the Eldest Book extant in the World, and have proved it to be so in the *Preface* to my Paraphrase on it; and it is said likewise in sacred History that *Joseph* caused his Servants the Physicians to embalm his Father *Jacob*. Though probably those Physicians were Men, that chiefly if not only applied themselves to learn the Art of preserving dead Bodies, and preparing them for their Funeral, for which the *Egyptians* were much celebrated, and therefore were rather Embalmers or Funeral-Men that dressed the Corps and wrapt it in Ointments and Spices before its Burial, than Physicians. And that in this Place it must be so, is the Opinion of the *Greek* Translators, who have rendered the *Hebrew* Word ἐνταφιαστὰς, that is, *Pollinctores*, not ἰατροὶ, *Medici*; and this is the Opinion of *Vatablus*, *Clarius*, *Mercerus*, and generally of all the learned Criticks, that have commented on that Place, and to this *Henry Stephens* assents. See his *Thesaurus in voce* ἐνταφιαστῆς. And it is plain that an Embalmer, or a Preserver of dead Bodies, and a Physician were different Things from this Line in *Epigr.* l. 2.

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Ἴητρος Κρατέας, καὶ Δαμῶν ἐνταφιαστὴς.

Krateas the Physician, and *Damon* the Funeral-Man.

But if any Man will suppose, as Bishop *Patrick* seems to do, that the same Persons may be both Embalmers and Physicians, and that here they performed only the Office of the first, it is not worthy of Contention. From this Supposition it will follow, that in those early Ages the Physicians were no more than Servants in better Families, as the learned and ingenious Doctor *Middleton*, in his late Dissertation, has shewn they were among the *Romans*, at least till the Reign of *Augustus*. And then *Joseph* being Viceroy of *Egypt*, may be well supposed to have more such Servants than one upon his Establishment ; though perhaps, as before suggested, they were Embalmers, that had likewise some skill in Physick. It is also recorded that King *Asa* is condemned for not seeking to the Lord in his great Disease, but to the Physicians ; and notwithstanding King *Asa* flourished after *Æsculapius*, yet it is very reasonable to believe that such Physicians as he consulted might have had Predecessors in *Judea* long before the Age of that *Grecian*. The Physicians however above cited are the first that by Name are recorded in Story as endowed with any eminent Skill : And they and their Successors, through the following Ages down to this Time, may be divided into six Denominations or Sorts of Men that set up
for

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for curing Diseases: The Empirical, Rational, Magnetick or Sympathetical, Magical, Astrological, and Chymical.

The eldest Professors of Physick in its recent and imperfect State, that have left to Posterity any Monuments of their Knowledge and Skill in curing Diseases, appear to have begun with the Practice of Surgery, and had at first but very slender Abilities in the Art of healing the various Distempers that afflict the Body. Their superiour and predominant Endowments lay in their Capacity of curing outward Sores, Wounds, Inflammations, Ulcers, and broken Bones; so that the Empire of Physick, like that of ancient and modern *Rome*, had its Rise from small Beginnings, having been founded and erected upon Cataplasms and Ointments, and long supported by manual Operations and the Plaster-Box. It is true, their Successors by Degrees enlarged their Province, and with great Industry and Application gained a laudable Knowledge in conquering the several Diseases incident to Humane Bodies, and to their Honour much extended their beneficial Art: And for this End they took a very proper Method, while they diligently set themselves to find out by Experiments what Vegetables and Minerals had any peculiar Vertue in subduing Distempers, without enquiring into the Causes of the Disease, or the Force of the Medicine, or the Manner of its Operation: For being assured

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by many Tryals that certain Plants and Drugs had a great Effect in removing or abating particular Maladies, they went on in this Method of Cure without troubling themselves to enquire how those Events were produced, whence they were called empirical or experimental Physicians, and this was the State of the Healing Art even in the Time of the celebrated *Hippocrates*.

But afterwards when Philosophy erected its Empire in *Greece*, and captivated the Men of Genius and Letters, by offering to unriddle the mysterious Causes of Things, to account for their Energy, and unfold the Manner of the Operations of active Principles upon passive, the enterprizing Wits of *Greece* in those Times, who abounded in that fertile Soil, solved the Phænomena of Nature and Variety of Effects, according to the different Schemes of Science in their different Schools. And now the Physicians having embraced, as their Judgement and Fancies led them, this or that Sect among the Philosophers, grew fond of establishing their Art upon some rational Bottom agreeable to the Principles of the Master they had chosen : And while with great Zeal they laboured in searching after the Causes and hidden Springs of Diseases, and explaining the Manner how salutary Medicines acted upon them, and delivered the Patient from his Sufferings, and imagining they had happily acquired the Secret, they triumphed over
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the plain and simple Race of their Predecessors, as unphilosophical Practisers and Ignorant of the Nature of Distempers, and the Reasons of their Cure: And therefore despising these empirical Physicians as a low and unscholastick Race of Men, they distinguished themselves from them by assuming the Appellation of Rational, and this indeed was a Denomination that all Men must needs be fond of, who aim at acting according to the Dictates of Reason and the Dignity of Humane Nature.

But since none of the first Masters of the *Grecian* Schools or their Successors, were so happy as to hit upon any just or defensible Hypothesis of natural Philosophy, this rational Sect of Physicians, as they called themselves, made little or no Progress in finding out the Causes of Diseases, and the Manner how those Remedies operated, by which they were mitigated or removed. For while their Systems of Philosophy were erroneous, how could they account for natural Causes and Effects? How was it possible for them upon absurd and unreasonable Principles to erect a solid and consistent Scheme of Philosophy? And therefore, for Example, when they had established by false Philosophy the Doctrine of the four Humours, out of which they constituted the Blood, what could be the Consequence, but that their Reasonings and all their Superstructure upon that Foundation, which affected all their Notions and Practice, should lead

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lead them into endless Errours. And therefore though these Professors of the rational Sect might have a generous Design in View, yet they were incapable, for the Reason I have given, of meriting that honourable Title, it being impossible to draw right Conclusions from wrong Premises: And therefore after all the Boast and Ostentation of Reason and Method, which this ancient Sect have made, they have succeeded no better in Physick, than our modern Hereticks, that pretend likewise to a superiour Degree of the same Endowments, have done in Divinity.

And for this Reason I cannot believe they were more happy in their Practice, and recovered more Patients than the empirical Sect, which notwithstanding in their own modest Opinion of themselves they believed they so much excelled. Nor is it consonant to good Sense to think that *Galen* himself, who after *Hippocrates* was allowed to be the Prince of Physicians, a great Compliment to him in that Age, was much esteemed and applauded for his Cures; for had he performed in *Rome* any considerable Exploits during his Residence there for some Years; had he, I say, been eminent for doing good in his Profession in that Imperial Town, especially among Persons of Power, Riches, and Interest, can it be imagined that the People would have risen up against him and expelled their great Benefactor

factor from their City ; (a) as *Volaterranus* says they did. If it were possible for the vulgar Citizens to have treated him so barbarously, who had eased their Pains, and healed their Diseases, could it however be imagined that the great Men, the Ministers of State, and Generals of Armies, some of whom must have owed their Lives to him, had he been a successful Practiser, would not out of Benevolence and Gratitude have used their Interest and Authority to rescue and protect him against the popular Fury? Was it ever known that a celebrated and very useful Physician was insulted and driven away from any great Town by the People, whose Lives were saved and preserved by his superiour Abilities? If *Æsculapius* and *Hippocrates* were not only highly honoured and beloved but even deified, who however were not looked upon by the Moderns as more capable of being beneficial to Mankind in their Profession ; who can conceive that *Galen* should be expelled from *Rome*, had he been as able and prosperous a Practiser as his Predecessors, who instead of being banished from their Cities, were enrolled among the Gods? And this is a strong Argument that the Methodists or rational Sect of Physicians, of whom *Galen* was as much a Supporter as he was of the other Party, did not

(a) cited by *Hoffman* in *Voce Galenus*.

not equal, at least not excel the empirical Practisers in the healing Art, notwithstanding their high Pretences to Reason and Method. And whereas it is alledged that the *Romans* used him so ill, because they believed that the Cures he wrought were the Effects of Sorcery or Magical Art, let it be considered, that the common People are well satisfied if they are cured without enquiring into the Nature of the Remedies, and the Causes of their Recovery; and indeed they were generally more inclined to employ præternatural Means, than to enter upon a regular Course of Physick, which we see is true in all Countries to this Day; for such is the Ignorance and Superstition of the Multitude, that they are more ready to follow the Advice of Quacks, Conjurers, Cunning Men, and Magicians, than that of the ablest and most successful Physician.

Besides, it is incredible that the People should treat so celebrated a Person as *Galen*, in such a rude and rough Manner, upon this Conceit that he used Magical Arts in curing Diseases: For though it was true that he was a great Physician, as Physicians then went, yet he did not ordinarily apply himself to Magical Remedies; and had he been of a contrary Character, it is very probable that the People would never have hated him for that Accomplishment: For as Magical Customs were not in Disgrace, but in great Credit, not only in *Asia*, and *Egypt*, but in other Countries sub-

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ject to *Rome*; so it is not credible that this City should escape the Infection of Sorcery, which in a Manner had overspread the whole World. It is much more likely, if not certain, that these diabolical Practices were introduced among the *Romans* by the *Greeks*, and that they received from them, together with all other Arts and Sciences, their Skill in Magick and Incantations. I acknowledge that such wicked and abominable Rites were forbidden by the Laws, and discouraged by the Magistrate; what then? Were they not as expressly provided against by the Law of *Moses*, and guarded by as severe Sanctions? Was any Nation however under the Sun ever plunged deeper in these detestable and impious Arts than the *Jews*, if the Testimony of all Christian Writers upon the Scriptures deserve Credit? And what shall we say of the Christians themselves? Their Religion surely prohibited the impious Arts of Magick under the highest Penalties; yet many Christians themselves, even of the Clergy as well as Laity, if their own Historians and Councils may be believed, were guilty of these execrable Practices; and therefore the *Romans*, as to a considerable Part of private Persons, might favour Magick notwithstanding their Laws condemned it; as the Atheistical Epicurean Doctrines much prevailed in *Rome* in the Times of *Lucretius*, though all the Laws about Religion were directly against them.

Besides,

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Besides, it is not likely that *Galen*, while he lived among the *Romans*, should be condemned for practising curious Arts; for what were their *Haruspices*, *Augurs*, *Diviners*, and *Soothsayers*, but a Race of Men that addicted themselves to the Study and Use of impious Rites and detestable Customs? For they, who assume to themselves a Power of Præscience or Prediction of future contingent Events depending upon Arbitrary Causes, from the Flights and Voices of Birds, as the *Augurs*, or Inspection of the Entrails of slain Animals, as the *Aruspices*, which Subjects are utterly incapable of suggesting such Fore-knowledge, pretend to produce as great supernatural Effects, as those of Sorcerers or Magicians; for a Wonder or Miracle of Knowledge is not inferiour to one of might. The Testimony of *Jesus* is the Spirit of Prophecy, therefore must at least equal supernatural Works of Power; and hence those *Diviners* and *Soothsayers*, that predict future Events from unnatural and incompetent Causes, must be supposed to have the concurrent Assistance of invisible Evil Spirits, as far as their Knowledge extends, as much as Sorcerers are aided by those Agents, in producing extraordinary and wonderful Effects of Power: And since the Definition of Magick consists in this, that its Operations depend upon unseen supernatural Agents, the Art of *Augurs* and *Aruspices* may be ranked at least in the same generical Class with Ma-

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gick Delusions. And this Assertion is confirmed by *Deut. Chap. xviii. v. 10, 11.* where among the various Kinds of Witchcraft, Divination, and Magick there prohibited, one of them is translated by the Septuagint οἰωνοζόμενοι (*i. e.*) *Augurs*; and all the *Critici Sacri*, that comment upon those Texts, declare their Judgment, that all Sorts of *Diviners*, whether *Arioli*, *Soothsayers*, *Augurs*, *Aruspices*, or of whatsoever other Denominations, are there condemned, together with all Magical Arts, as leading to Idolatry. And therefore we may rightly from hence conclude that the Magical Arts, at least of Præscience and Prediction, were in *Galen's* Time in great Credit in *Rome*, and that supernatural Acts of Power by Sorcery were esteemed and practised by many private Persons, though not established or countenanced by the Laws : But if *Augurs*, *Aruspices*, and *Diviners* performed their Predictions and Prognostications by the Aid of invisible Spirits, and how could they foretel Events otherwise? they were equally Magicians with those of the other Denomination ; and then it will appear that some Magical Arts were authorized by the Legislature it self. Upon these Considerations it is most probable that this learned Man was driven from *Rome* by an Insurrection of the Multitude, not because he cured their Diseases by Magical Arts, but because he either did not cure them at all, or at least that he

he was seldom successful, and more often failed, than he performed his Promise; and so most commonly disappointed the Expectation of those, that relied on his Skill. And that this may appear the more likely, let any Physician make the Experiment, and try if he is able usually to conquer any considerable Disease by *Galen's* Method and Medicines only.

I acknowledge I can give little Credit to any Thing that relies on *Galen's* Authority, when I consider his extravagant Rant and detestable Instance of Vain-glory, that equals at least the Ostentation and Enthusiasm of the most audacious Chymist or hot-headed Visionary, which is cited by *Cælius Rhodiginus*, that is, (a) “ I have professed Physick to old
“ Age, and no Man did ever say, that I once
“ failed either in prognosticating or in curing
“ Diseases. ”

Besides the two Sects of empirical and rational Physicians or Methodists, there was a third Sect of Practisers, that pretended to heal Diseases by preternatural Means, for the Operations they ascribed to them were very extraordinary and unaccountable to Reason. These Persons directed such odd and irrational Methods of Cure by their Acquaintance, as they affirmed, with the Magical Powers of Nature, that is, recondite or hidden Antipathies,

(a) *Cal. Rhodiginus Lect. Antiq. lib. 30. c. 12.*

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thies, Sympathies, and other Vertues with which, as they themselves found out, or were informed by others, certain Plants and Minerals were endowed, and it used with certain Rites and Ceremonies in the way they prescribed, would effectually remove several Diseases: Such as the Parings of the Patient's Nails buried in the Bark of an *Oak* opened for that Purpose; which the Director affirms will subdue the Tooth-ach, while they lie rotting in that Repository. Many such whimsical and superstitious Medicines hung about the Neck, or applied to the Wrists, or other Parts of the Body, will, as they assert, remove an obstinate *Ague*; and several Remedies of this mysterious and inexplicable Vertue have been directed and recommended, or at least allowed by great Physicians. But of this more hereafter.

As it is affirmed that many such magnetick Cures are effected in several Diseases by a secret sympathetick Energy, that surpasses the Reach of Reason, so particularly for subduing the *Jaundice*, one of the Subjects of the following Dissertations, a great Variety is prescribed by Writers with very confident Airs, many of which I have enumerated in that Discourse, whither I refer the Reader. I am inclined to think that most of these odd and fanciful Medicines are fallacious, like the Weapon-Salve and the Sympathetick Powder; and it is evident, that Sir *Kenelm Digby's* Account of the surprizing Effects of that Medi-

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cine and other Causes, that operate, as is pretended, by natural Sympathy, particularly his Instance of thrusting a hot Iron in the Ordure of any Person to create burning Pains in the Anus or Intestines, is fabulous and romantick. But however, I will not deny but that some of these Medicines called Magnetick or Sympathetick may be attended with salutary Effects, though the acutest Reason, and the utmost Sagacity and Penetration cannot unriddle the mysterious Way of their Operation, and shew how and why the Effect is produced: And I am induced to give in to this Opinion, not only because several grave and credible Authors have asserted the Truth of it in some Instances, but likewise by my Reflection upon some known and certain Matters of Fact, that is, that Linnen stained with Red-Wine will be washed clear of it, when the Grape, that yields that specifical Juice, is ripe, which could not be done, at least not so easily and perfectly before. And secondly, when I consider the astonishing Event, which happens to Children, that in the Womb are marked by the powerful Imagination of the Mother. It is wonderful how they are marked at all by cutaneous Strawberries, Plumbs, Rasberries, or other Fruits on any Parts of the Body; but it is more admirable that those Fruits shall acquire a more lively and florid Appearance and more resembling that Species of Fruit in the Season of the Year, when it grows mature.

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In these Cases it must be acknowledged there is a secret sympathetick Commerce and Correspondence between the one and the other, which may in a sober and warrantable Sense be called natural Magick, that is, the secret and occult Operations of Nature, which to Humane Wit are impenetrable.

To return to the *Faundice*, one would have thought that the Magazines of Physicians had been replenished with Provision of lawful and regular Medicines able to demolish the most confirmed and inveterate *Faundice* in the World, since there is not perhaps such an immense Plenty of Arms and Ammunition, such Stores of efficacious Remedies, as they are esteemed, to be found in all the Arsenals of *Æsculapius* prepared against any other the most destructive Diseases whatsoever. One would have imagined, that after this there should be no need to have recourse to magnetick and præternatural Remedies, which transcend the Reach of Reason, and are often much to be suspected, while they bear so great a Resemblance to those, that are plainly supernatural, and perform their Cures not from any innate Energy, but by the secret Operation of Evil Spirits; and this leads me to the next Class.

There is a fourth Sect of Pretenders to the Healing Art, that employ the execrable Powers of Magick and Sorcery to accomplish their Design. These in Distrust of Divine Providence,

dence, which ought to be relied on in the Use of proper and natural Means, attempt to move Infernal Powers, invoke *Dæmons*, and fly for Aid to *Beelzebub* the God of *Eckron*: For where such unnatural Means and Methods, opposite even to common Sense, shall prevail, we cannot but think they owe their Effect to the Operation of the great Enemy of Mankind, who by Divine Permission endeavours by this Means to delude the People, and draw them off from a due Dependance on the Author of their Being: which abominable Practice however was too much encouraged and favoured by several eminent Physicians of Antiquity, as shall be afterwards shewn. The Means they employed to effect their Cures, are called Spells and Charms; and they are of two Sorts, such as consist in magical Words, Characters, or Figures, disposed in a certain Order, and are, as it is believed, admirably good for repelling *Dæmons* and Diseases, and such as are formed of Herbs, Bones, and various other Ingredients of celebrated Vertue for the same Purpose, whose Success, as I have said, evidently relies upon the Operation of some invisible supernatural Agent; since it is not only præternatural and unaccountable how the muttering some uncouth Sounds, or barbarous, signifying-nothing Words, or Wearing some mystical Figures, or Performing some odd Ceremonies, should produce such salutary Effects; but on the contrary, they plainly appear to
transcend

transcend the Power of all natural Causes ; such as Sympathies, Antipathies, and all imaginable occult Efficiency and inexplicable Vertues, called natural Magick ; of which more hereafter.

In ancient Times the learned Men, Priests, and Teachers of Religious Doctrines and Rituals, were distinguished by various Appellations in various Countries ; In *India* they are called *Gymnosophists*, a Sect of whom were the *Brachmans*, now *Banians* : In *Babylon*, *Chaldæans* ; in *Egypt*, they were the *Priests* ; in these Parts of the World they were called *Druids*, and in *Persia*, *Magi*, whose Institution and Maxims were invented by the *Chaldæans*, and Propagated by the *Babylonian* or *Persian Zoroaster* (a) : And though it is probable that the Appellation *Magi*, whether derived from a single Person or a People, is of *Persian* Original ; it is not however appropriated to that Nation, *Q. Curtius* mentions the *Magi* of *Babylon* : *Herodotus* says, they were a People of *Media* (b) : And *Xenophon* asserts that they were constituted by *Cyrus* ; and if so, they must be before the *Magus*, the false *Smerdis* (c). *Hesychius* interprets *Chaldæans* a Kind of *Magi* ; and the same Name is given by the *Jews* to the Magicians of *Babylon*, that

(b 3) were

(a) See *Plutarch* in *Isis* and *Osiris* ; and *Agathias*, cited by *Stanley* in his *Chaldaic* and *Persian* Philosophy.

(b) See *Herodotus*, lib. 1. p. 48. Edit. Hen. Steph.

(c) See *Xenophon* p. 204. Edit. Hen. Steph.

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were consulted about *Nebuchadnezzar's* Dream (a). There were likewise *Magi* among the *Indians, Syrians, and Arabians* (b). It was *Justin Martyr's* Opinion that the *Magi* that came from the *East* to worship the Infant *Messiah* were *Arabians*; and *Origin* agrees with him, and *Dr. Lightfoot* has given convincing Reasons that those Fathers judged right, though others disagreed with them. And his Conjecture also is highly probable, that the great Light that appeared to the Shepherds at the Birth of our Saviour, was the same with the Star, which the Wise Men, *Magi*, saw in the *East*, not the Star that was in the *East*, but the Star seen by them while they were in the *East*, and by the great Distance interposed, the glorious Light, that dazzled the Shepherds, might well be so far contracted as to seem no bigger than a Star to the Inhabitants of *Arabia*, the Country directly *East* to *Palestine*. There is good Authority likewise, that there were learned Men in *Capadocia* distinguished by this Appellation, *Magi*, so far was it from being confined to the *Persians*.

It is true that *Magi* derived from *Magus*, which is thought by some to be found only among the *Persians*, was at first taken not only in a harmless and innocent, but likewise in a good Sense; for originally it signified consummate

(a) See *Stanly* in his *Chaldaick Philosophy*.

(b) See *Dr. Gregorie's Scholia* on *Matt. ch. ii. v. 1.*

mate Attainments in the Sciences, especially natural Philosophy; and therefore the *Magi* in the *Eastern Kingdoms*, were looked upon as Men endowed with superiour Wildom and Learning; but afterwards when they degenerated and fell to the impious Notions and execrable Practices of Sorcery, they still retained the Name, though the Signification was changed, and then the *Magi* or Wise Men were *Conjurers*; *Diviners*, *Enchanters*, and *Soothsayers*; and thence those abominable Arts had the Name of Magick, and those who dealt in them, were called *Magicians*.

The first of those Arts that I shall take notice of are *Phylacteries*, that among the *Jews* were Pieces or Rolls of Parchment, in which were written in a small Letter the Ten Commandments, or other Portions of Scripture, which were bound about the Forehead or left Arm. That the Decalogue or Ten Commandments were written in their *Phylacteries* is asserted expressly by *St. Jerome* on *Matth.* xxiii. and *Theophylact* affirms the same (a): Of this Opinion is *Zegerus* among the *Critici Sacri*, who quotes *St. Jerome's* Comment at large: This is likewise acknowledged by *Ainsworth*, and *Sir H. Spelman*, who says they carried about the Decalogue inscribed in their *Phylacteries* (b): And *Petit* likewise declares

(b 4) clares

(a) See *Dr. Gregories Scholia* on *Matt.* xxix.¶

(b) See *Sir H. Spelman* his *Glossar.* in *Voce Phylacterium.*

clares the same thing (a), and so does *Erasmus*, whose Words are cited at large by *Calepin* (b): And therefore I am surprized that so many celebrated modern Commentators should pass over the Authorities of those Fathers in silence, and tell us that only four Sections of Scripture, two out of *Exodus*, and two out of *Deuteronomy*, were inscribed in those Scrolls of Parchment, which they wore on their Foreheads and left Arms, that are mentioned by *Dr. Hammond* after several other learned Men. To reconcile this Difference, it may with probability be said, that some used the Decalogue, some the Portions out of *Exodus* and *Deuteronomy*, and some both. For the *Pharisees*, a Sort of Men of unpenetrating Thought and gross Conceptions, had taken it into their Heads, that the Command in *Deuteronomy*, chap. vi. ver. 8. *Thou shalt bind them as a Sign upon thy Hand, and they shall be as, &c.* was to be obeyed in a literal Sense; and therefore they brought into Use these *Phylacteries*, which they employed at first as a Piece of great Sanctity, to put them in Mind of the Divine Precepts; and therefore the *Pharisees* wore them broader than the rest, from an Ostentation of superiour and unvulgar Piety; but afterwards they were used as Preservatives against Diseases, Fascinations, and the Evil Genius, in Imitation

(a) See *Petit's var. Lect. c. xx.*

(b) See *Calepin's Dict. in Voce Phylacterium.*

Imitation of the Heathens. And the Name *Phylacterium* was given to the Skins or Membranes, in which were written the Decalogue or some Portions of Scripture, because they resembled those on which certain Words or Marks were inscribed, that the *Greeks* believed had a prevalent Vertue against Diseases, as *Grotius* affirms on *Matth. chap. xxv. ver. 6.*

Maimonides de Idololatria (a) says, they used the Words of the Law as an Enchantment, and made it a corporeal Medicine, when it was intended only to heal the Mind; and from this of *Maimonides*, says the Commentatour, we may observe the Beginning of the Application of these *Phylacteries* to procure Things for the Body, as some use the Beginning of the Gospel of *St. John* to avert and drive away Diseases: And it is no Wonder they should employ their *Phylacteries* against Fascinations and Distempers of Body, when *Maimonides* says, they put them on the Faces of little Children to keep them quiet.

Those little Pieces, says *St. Jerome*, that contained the Decalogue, the *Pharisees* called *Phylacteries*, because whosoever used them, used them as a Defence or Protection of himself, (that is, of his Body against Misfortunes, Diseases, Wounds, and Dangers,) as appears by the next Words, the *Pharisees* not understanding

(a) *Maimonid. c. x. Sect. 14.*

standing that these were to be carried in the Heart, and not in the Body, *i. e.* as Amulets and Charms against outward Harms and inward Distempers (*a*). A *Phylactery* is a magical Defence or Bulwark against Diseases, Misfortunes, and Evil Spirits, derived from the Superstition of the *Jews*, who carried about their *Phylacteries*, wherein the Decalogue was inscribed, as so many *Tutelary Numina*, Divine Protectors or Guardian Angels (*b*).

A *Phylactery* in general is that by which any Thing is defended, and in this Sense it is used by *Chrysostome*. Prayer, says he, is an invincible Armour and a safe *Phylactery*; and so (*c*) *Diascorides* says, that the *Jasper-Stone* was believed to be a *Phylactery* or *Amulet*, that procured an easy Labour to Women in Child-bearing, being bound about the Thigh. And thus *Phylacteries* were taken in a harmless, though childish and superstitious Sense, when they were used by the *Pharisees* only to keep in their Minds the Memory of the Law, and as Marks of extraordinary Piety. But it is certain they were used first by the *Greeks*, and afterwards by the *Jews*, as before remarked, as Preservatives and Magical Amulets; and so *Phylacteria* by *Isidore* are rendered *Carmina*, that is, Enchantments. In the
forming

(*a*) See St. *Jerome* on *Matth. ch. xxiii.*

(*b*) See *Spellman's Glossar. in voce Phylacterium.*

(*c*) *Diascor. lib. v. ch. clx,*

forming of these *Pylacteries* there was a great Number of puerile and trifling Rites used by the *Pharisees*, a People that fondly embraced and hugged all outward corporeal Worship, shewy Formalities and superstitious Pageantry, unaccompanied however with genuine Piety, and the inward Devotion of the Heart.

There was likewise a surprizing Variety of other magical Characters, Marks and Words of satanical Institution used with great Diversity of Ceremonies, and inscribed on Rolls of Parchment affixed to different Parts of the Body, or hung about the Neck, such as the celebrated Charm called *Abracadabra* in *Serenus Sammonicus*, who published his Medical Prescripts in Heroick Verse.

Inscribis Chartæ quod dicitur Abracadabra (a).

This hard Word reduced into a Cone by Writing it, as *Sammonicus* directs, eleven times, leaving out each time one Letter at the End, the Result will be the Figure I have mentioned, and *Baronius* has given the Form of it, This Character hung about the Neck, as *Sammonicus* affirms, drives away Diseases to Admiration.

*Talia languenti conducent vincula collo,
Lethales abigent (miranda potentia) Morbos.*

Such

(a) *Serenus Sammonicus*, near the End.

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Such Neckbands to the Sick will Health assure,
And (wondrous Power!) the worst Diseases cure.]

This Character is generally ascribed to the Invention of the Heretick *Basilides*, that lived in the Second Century under *Hadrian*, who called his Supreme God by an invented mysterious Name *Abrasax*, or *Abraxas*, as others write it, which was often found inscribed on Gems, some of which are still in the Possession of curious Antiquaries, and were employed by his deluded Followers as *Amulets* or *Phylacteries*, that is, guardian Remedies against Diseases and Evil Spirits. (a)

Magical Amulets or rather Amulets, as eminent Criticks write it, *ab amoliendo mala*, may be rightly ranked in this Class, when they consist of mystick Characters; but they are sometimes formed into Pastils or little Balls of certain Materials, and these hung about the Neck are supposed to have the same Preservative and salutary Vertue for curing Diseases, and of which the trembling Devils are no less afraid than of Holy Water, and therefore bear them the like immortal Hatred.

Magical Characters are likewise called *Brevia* or *Briefves*, from the Smallness of the Letters;

(a) On this Subject see *Baronius, An. 120. N^o. 10. Edit. Plant. Antwerp*, who speaks of it at large, and *Du Fresne's Glossary* upon that Word.

ters: And (c) the famous *Ephesian* Words or Letters were magical Inscriptions bound about several Parts of their Goddess *Diana*, and worn by the People as Amulets and Preservatives against Dangers and Distempers. And though the *Egyptians* and *Jews* were greatly addicted to Sorcery, Divinations, Enchantments, and Conjurations, yet the *Asiatics* and particularly the *Ephesians* seem to surpass all Nations in these infamous and diabolical Practices.

And this will appear highly probable if we reflect on that Part of the Sacred History of the *Acts* of the *Apostles*, where it is recorded that of the *Ephesians*, who were converted by the Preaching of *St. Paul*, the Number of Sorcerers was so great, that those of them who had embraced the *Christian Religion*, fearing that others might be seduced and infected by their execrable Books, brought them forth and burnt them in Publick, and their Value amounted to a very great Sum. How many then that practised magical Arts may be supposed to be in all the Towns and Cities of *Asia*, when *Ephesus* alone could furnish so many among the Converts, and among the Unconverted we may justly conclude the Number was yet greater?

There are other Forms of such magical Characters, whereof some are prescribed in *Marcellus*

(a) See the Words in *Calius Rhodigin*.

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cellus Empiricus, and other ancient Physicians. They must be great Strangers to the elder Writers, who know not that several of the most eminent among them employed these impious Arts for the Cure of Diseases, not only magnetick and sympathetick, but supernatural, Magical, and downright Sorcery, such as not only exceed the whole Compass of natural Causes, but evidently proceed from the Agency of invisible demoniacal Powers, such as the Signatures, Letters, and Characters I am speaking of : For what sympathetical Energy can be imagined between a Fever and *Abracadabra* hung in a Scroll about the Neck ? And the Case is the same with other Amulets of like Nature.

But there are Amulets likewise against Diseases not consisting of mystick Letters and Characters, but of certain Materials in the Form of round Balls or Pastils, as said before, made of various Vegetables and Minerals, &c. which are mingled and compounded with many odd and childish Ceremonies : And these Materials were chiefly Herbs looked upon to be endowed with an irresistible Vertue, that operated on the Mind or Body, and were called *Venena*, so *Horace*. (a)

Quantum Carminibus quæ versant atq; Vene-
Humanos Animos, — [nis,
As,

(a) *Horace Sermonum Satyr. 2.*

As, they who with their Magick Songs and
Disturb the Minds of Men. [Herbs

(a) *Addit venenis verba non istis minus metu-*
[enda

Words to her Herbs she adds as terrible.

Hence it appears, that besides Words and Characters, magical Songs and Plants, as *Tibullus* calls (b) *Malas Medæe Herbas*, *Medæa's* Evil Herbs were employed for the same Purposes.

Nor do several Physicians of Antiquity make any Scruple to recommend the Use of such Charms ; for besides *Sammonicus* and *Marcellus* named before, *Diascorides* is culpable upon the same Account ; and I will here set down an Amulet of his as foolish and unjustifiable as any of those mentioned before (c), an Amulet for strumous Swellings and Ulcers. Take of the Root of *Plantin* drawn up with the left Hand, and bound in a Skin, and in the same Manner the *wild Dock-root*, the *Daffodil*, and the *Sea-Holly* ; but first you must pronounce the Name of the Person for whose sake it is sought. It must be taken up in the Evening, and at such Seasons of the Moon as he
[names,

(a) *Seneca* in *Medæa*.

(b) *Tibul.* lib. Eleg. 2.

(c) *Diascorid.* lib. Parabil. c. clv.

names, and then let it be bound over. *Alexand. Trallianus* and *Nic. Myrepsus* are likewise justly reckoned in this Number; and it must be remarked that four of these were of so high Credit that they are ranked in the Class of the most celebrated Physicians, and placed among the *Principes Medicorum* collected and published by *Hen. Stephens*; and the fifth, *Diascorides* was a Person of great Reputation: And this would tempt one to believe that they did not much rely on their own Skill, nor on the Vertue of what Medicines they were acquainted with; for otherwise who can suppose they would have had Recourse to ridiculous Spells and Enchantments? And it is very strange that some modern Physicians should, with so much Zeal and Passion, cry up the Learning and Abilities of those Writers, even to that Degree, that if you believe them, no Man can become an able and eminent Practiser, that has not derived his Knowledge from such polluted, as well as shallow Fountains. And though it cannot be supposed that any of these Gentlemen, that so much applaud and idolize the Ancients, do really aim themselves at being enroll'd among Conjurers and Cunning Men, it is however surprizing that they never should take notice of this great Blot in the Writings of the old Professours of the Faculty, never condemn them for their Magical and infamous Prescriptions, nor ever caution their Readers against them, which, as far as I know, they have

have not done. What I have said will evidently prove that some of the principal Physicians of *Greece* had imbibed a strong Infusion of the Customs of their Country, that abounded with Sorcery, and particularly with Charms, Spells, Phylacteries, and Amulets against Diseases, since not only *Xenocrates*, *Pamphilus*, and many others made it their common Practice, but likewise that several of the greatest Esteem and Reputation were involved in the same Guilt, as I have shewn. Whence it will appear that the Healing Art was in a very low and languishing State, when so many of the most renowned and accomplished Professors of it thought themselves obliged to make up their Deficiencies by calling in the Assistance of diabolical Powers, while they employed Magical Amulets and Enchantments in curing Diseases; and though they believed those invisible Powers were Gods, we are assured by the *Christian Revelation* they were *Dæmons* or Devils.

And here it is to be observed, that magical Operations and Customs were not Acts of Worship or Devotion paid to the Gods; for those Deities, as it was pretended by the Sorcerer, were constrained and compelled by his irresistible Enchantments to perform those supernatural Exploits, which the Magician enjoined him, whose Power, like that of Fate or Destiny in the Pagan Scheme of Divinity, was superiour to that of their highest Gods

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and obliged them by Force to rise from Hell or descend from Heaven to go upon their Errands and execute the Enchanter's Orders, as shall appear afterwards.

And as this detestable Custom prevailed among the *Pagans*, and afterwards infected the *Jews*, so at length it was spread likewise among the *Christians*, and therefore was condemned as diabolical, by Fathers and Councils, particularly those of *Laodicea*, *Trullium*, and *Ratisbone*, under *Charles* the Great there present; and *St. Augustine* in his *M S.* Sermons of *Martyrs* and *Phylacteries* cited by *Martinius* (a), has these Expressions, *Solet fieri Fratres*——If any Persecutor on the Part of the Devil comes to a sick Person and says, *Had you had Recourse to such an Enchanter, you had been made well : If you had hung upon your Body those Characters, you had recovered your Health.* They were condemned likewise by many particular Churches, as Effects of execrable Magick, and the abominable Relicks of *Paganism*.

And as these satanical Institutions were censured by *Christian* Councils, so they were condemned as impious by the Laws of several Emperours, as might be easily shewn. It was made a capital Crime under *Caracalla*, as *Spartianus* affirms, to wear magical Remedies

(a) *Vide Martinius in Voce Phylacterium.*

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medies affixed to their Necks for the Cure of *Quartan*, and *Tertian Agues*; and it was the same under *Constantius* (a).

In this Class are to be ranged Magical Ligatures or Bands, that contained Enchantments, Spells, or Charms, and were tyed or affixed to some Part of the Body: These Ligatures or Bands were also called *Obligamenta*; and those that furnished such Remedies to subdue Diseases were named *Obligatores*.

Besides the Means before mentioned, by which the magical Physicians used to cure Diseases, another properly belonging to the same Class, and frequently mentioned and practised by the Ancients, was Dreams of the Night in the Temples of their Idols (b), where such as were diseased, after some proper Preparations and Ceremonies, were to lie down. And we are told of strange Cures effected by Means of such Dreams and Revelations as were there sent them; and as worthy and wise a Man as *Marcus Antoninus* assures us from his own and the Experience of others of Cures so wrought (c): And if they were really so effected, as it is probable they sometimes were, one cannot help giving into *Merric Casaubon's* Opinion in his Treatise concerning *Enthusiasm*, that it was by the Agency of those Evil Spirits,

(c 2) rits,

(a) *Ammianus* in lib. 19. sub finem.

(b) See *Gataker* on *Marcus Antoninus* lib. 1. sub finem.

(c) See *Marcus Antoninus* lib. 1. and 9.

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rits, who there inhabited, to support the Credit of their own Worship in those Places, and to encourage Men and Women to lie frequently there at the same Time, by which Means the most detestable Impurities were committed.

I come now to speak in the last place of *Talismans*, that are called in *Chaldee* and *Persian*, *Pfilmenia*, from the *Hebrew Pselem*, an Image, in *Arabick Talitsman* or *Tsalmam*. As some of these Images were used for Prediction, so others were employed against Dangers and Diseases. They were the Invention of the *Chaldaeans*, and in Credit through the *Eastern World*: As it was their Opinion that every Plant was subject to the Influences of its proper Star, whence the magical Herbs received their Vertue, so they asserted that the Images and Figures here below are correspondent to the Figurations above, that predominate over them. Thus the Celestial Scorpion and Serpent govern the Terrestrial, and when a Planet enters into any of the Celestial Figures, then placing it in the *Horoscope* they engraved their Character in Stone or Metal, and adding many Rites and Ceremonies by way of Preparation, fitted it either for Preservation against Death and Dangers, or for Destruction, as they pleased; for they supposed that the Power or Energy of the Stars entered into, and resided in these Images or Characters
thus

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thus prepared either for Mischiefs and Diseases, or for a Defence against them. (a)

Gaffarel in his Book entituled *Curiositez inouïes sur la Sculpture Talismanique des Persans, Horoscope des Patriarchs et Lecture des Etoiles*, which was censured by the Doctors of the *Sorbonne*, pretends to shew that *Talismans* or Figures of the Constellations had Power to make one Rich, Fortunate, to preserve a House from certain Insects and venomous Beasts, and from all Injuries of the Air (b) : And of this Sort of *Talismans* it is likely were the Figures or little Images called *Teraphims*, which *Rachel* stole from her Father *Laban*, fearing lest by their help he might divine which Way *Jacob* fled, and so pursue him; these Figures being equally made Use of for Prediction and Preservation against Mischiefs and Diseases from infected or unwholesome Air.

Though my Subject confines me to the detestable Means and Methods of curing Diseases by Magick and Sorcery, yet since such infamous Spells and Incantations have a much more extensive Use, I will therefore crave leave to digress so far as to mention some of them. First then, *Magicians* were believed to be Masters of Enchantments of such prevalent

(c 3)

(a) See *Stanly's Chaldaick Philosophy*, p. 22. c. 3.

(b) See *Mr. Bayle's Dict. in Voce Gaffarel*.

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lent Vertue over Serpents, as to make them swell and break. So *Virgil*.

Frigidus in Pratis cantando rumpitur Anguis.

Cold Snakes enchanted in the Meadow burst.

So *Servius* on the Place, *dum incantatur*. And perhaps *Horace* alludes to this, where he says (a).

Rumpatur, Siquis rumpitur Invidiâ.

Let him burst, who with Envy bursts.

The ancient *Marsians*, a People that inhabited *Abruzzo* in *Italy*, were much celebrated for such Incantations, by which they affected and disturbed Serpents by Night. And that it was a prevailing Opinion among the *Israelites*, that Serpents were generally subject to the Power of such *Magicians*, we are encouraged to believe from that Text in the fifty-eight *Psalms*, *They are like the deaf Adder, that stops her Ear, and will not hearken to the Voice of Charmers, charming never so wisely*. For the Power of Enchantments was allowed to make Serpents tame and gentle, as well as to make them burst.

And

(a) See *Du Fresnes Glossar. in Voce Talismanus.*

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And besides, these *Magicians* pretended not only to raise the Dead, and to have Power over Infernal Regions, but likewise to call down the Gods from their heavenly Seats. So *Virgil* (a).

Carmina de Cælo possunt deducere Lunam.

Enchantments bring down *Luna* from above; that is, *Diana*.

Nor was their Supream God *Jupiter* himself priviledged against the mighty Vertue of Incantations, of which I shall give an Example afterwards: And the *Magicians* were supposed to perform such miraculous and astonishing Things by Songs of a certain Composition, or by being sung in a peculiar Manner, which not only sollicited, but, as they affirmed, compelled their Gods to produce supernatural Effects, as observed before.

The Efficacy of magical Songs extended likewise to the Minds of Men, while the Enchanter undertook to govern the Passions, and to excite and allay them at Pleasure, particularly to raise Joy, or inject Sorrow, according to that of *Virgil* (b).

(c 4)

Hæc

(a) *Virgil. Eclogue, 8.*

(b) *Virgil Æneid. lib. 4.*

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*Hæc se carminibus promittit solvere mentes
Quas velit, ast alijs duras immittere curas.*

She undertakes to ease what Minds she will
By Charms, but others with sad Cares to fill.

So *Tibullus* (a).

— *Eadem se dixit amores
Cantibus aut Herbis solvere posse meos.*

She, the same Person, said my Love
By Herbs or Songs she could remove.

See more to this Purpose in the same Po-
et (b).

And this leads me to speak of their *Phil-
trums*, that is, amatory magical Draughts pre-
pared to inflame one Person with Love to a-
nother, which were frequent among the *Pa-
gan Greeks*, and sometimes used in *Christian*
Countries. Nor did they only employ *Phil-
trums* to produce Love, but they pretended
that other Charms would extinguish it, and
create Indifference or Hatred, according to that
of *Virgil* (c).

Quæ

(a) *Tibullus* lib. 1. *Eclog.* 2.

(b) *Tibull* *ibidem*.

(c) *Virgil* *Aeneid*, lib. 4.

*Quæ mihi reddet eum, vel eo me solvet Aman-
tem.*

Who'll bring him back, or free me from my
Love.

But if a Composition of Herbs or tuneful Numbers ever performed such Operations, they must certainly be accompanied with fantastical Assistance; for no Love-Potions of themselves can so act upon the Mind as to excite or determine either Affection or Hatred to this or that Individual.

But to return from what has been said: It must be supposed that upon the Use of Charms and Conjurations *Satan* did often exert his Power within the Circumscriptive Limits, which the Divine Being has set about him, for the Production of wonderful and supernatural Effects, though not to that Extent as Sorcerers and Poets endeavoured to make the People believe.

It is evident that the great Enemy of Mankind has as God's Executioner a Power of doing Mischief, subverting States and Empires, bringing Ruin on Families, and Diseases and Death on particular Persons. As he is the Prince of the Power of the Air, he is often permitted to raise Storms of Lightning and Thunder; to embroil with Tempests the Land and Sea, and is acknowledged to preside in

a great Measure over the Region of Meteors : And as God of this World he is suffered to distress or destroy great Towns or Cities, and to lay waste and desolate large Countries. It is granted he may afflict the Body by introducing various Torments and Diseases : And this is evident from sacred History, where he is said to possess Mens Bodies, and bring upon them Madness and Epileptick Fits. For *Demoniacks* sometimes were distracted maniacal Persons are sometimes affected with violent Contractions and Agitations of the Body. It is well consistent, that *Satan's* entering into a Person may disturb the Animal Government, occasion convulsive and painful Motions of the Spirits, Cramps and Contortions of the Limbs, and that he may continue during the Tragedy in the Sufferer's Body, and preside over and direct the violent Tempest he has raised, and manage its Fury to his mischievous Purposes ; so that in these Instances it is very proper to say, that the *Demoniack* has a natural Disease, and is at the same Time possess'd with an Evil Spirit ; for *Satan* may abide in him together with his Fever or Distraction, that he himself caused ; and that Fever or other Distemper introduced by him is no less a natural Disease, than those of which he is not the Author. And it may be well supposed, that he often, if not always, employs natural Causes, such as noxious Effluvia, and pestilential Vapours or Exhalations to procure

procure Disorders in the Spirits, and Diseases in the Blood.

It must likewise be allowed that he has Power over the Fancy, to excite certain Ideas, and represent Objects to the Imagination, and to call forth from the Memory such Images laid up in that Treasury, as may best suit his Purpose in tempting them to Sin, and promoting their Destruction. Thus it will I conceive be readily allowed that *Satan* and his Angels or Dæmoniacal Ministers are very ready to bring Mischiefs and Sufferings upon Mankind, as I have asserted : But it will not so easily be believed that such wicked Beings should be zealous to confer upon Men great Benefits in removing their Pains, and relieving their Diseases. But let it be considered that the principal End, that the great Enemy of Mankind has in View is their utter Ruin and Perdition ; and if he can advance and accomplish this by shewing some inferiour Kindness ; if by doing some good Offices to the Bodies he can ensnare their Souls, if by assisting their Spells, Amulets, and Incantations he can engage their Adherence to and Dependance on himself, and thereby promote false Worship, Superstition, and Idolatry, there is no doubt but he will readily do them such good Offices. To affirm that this Evil Spirit procures any Benefits to Men out of Benevolence and Benignity, and for the sake of doing them Good, is most absurd and impious ;

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picus; but to say that he is sometimes servicable to them in order to bring upon them Mischief and Destruction, is very true : And this is the Case when by Divine Permission he at any Time removes Torments and Distempers, as well as when he advances Men to Power, Riches and Honour, that he may draw them into various fatal Snares by the powerful Temptations to which Men in high Stations are exposed.

It is revealed in Scripture, that after *Satan* and his Angels had by their Rebellion raised in the Celestial Regions, probably from Discontent and Envy against some higher Officers or Leaders in the Armies of Heaven, or some superiour Order in the sacred *Hierarchy*, whom by Divine Command they were bound to obey; and that after he was condemned to eternal Punishment, he had however Permission to leave the Habitations of Pain and Darkness, and roam about the Kingdoms of the Earth, and that after our blessed Redeemer came down from Heaven to deliver lost Man, *Satan* with unparalleled Impudence tempts him to fall down and worship him, and to prevail with him to do it, shews him all the Kingdoms of the World, at least as many as could be discerned from a very high Mountain, or perhaps *Rome* and the *Roman* Empire, and tells him that he would confer all these upon him as the Reward of his Compliance : I infer from hence, that the great Deceiver

Deceiver was able in a good Measure to perform his Promise, and that the Kingdoms of the Earth were much at his Disposal; otherwise his Proffer had been absurd and ridiculous, and the Temptation, as he must know, could carry with it not the least Force; no more than if an indigent Neighbour, to prevail with me to do him some good Office, should assure me that he would make me Emperor of *China*, or King of *France*: Should I not look on such a Person as a Lunatick or Madman? And to confirm this, it is remarkable our Saviour does not reply to the Tempter, that it was not in his Power to accomplish what he proffered, and that he had no Kingdom to dispose of to his Worshippers, and therefore that it was foolish and impertinent to pretend to bestow what he had not to give: Whence we may probably conclude, that *Satan* the God of this World has a greater Power of distributing earthly Possessions, Dignities, and Empires, than commonly is imagined. And this Observation will be more confirmed, if we reflect that the far greatest Part of Kings and Potentates are his zealous Subjects and Servants, who either establish and protect Idolatry, that is, the Worship of *Dæmons*, or otherwise support his Power and Honour, and promote with ardour the Amplitude and Interest of his Kingdoms.

From

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From what has been said, it is evident that the Prince of Darkness, that possesses such an extensive Dominion on Earth, and reigns over so many Kings and Potentates, does advance some of his Favorites and zealous Subjects to Thrones, Principalities, and Places of Power, and heaps upon others Riches and Possessions, that they may the better be enabled to defend and enlarge his Empire and Interest, and do him the more eminent Service, in Opposition to the Kingdom of Christ, to which he is an irreconcilable Enemy; and if he may rationally be allowed thus to enrich, exalt, and dignify Men for carrying on of his Design of bringing them at last to Ruin and Perdition, as likewise to obstruct the Progress of the Redeemer's Power, is it not equally agreeable to Reason, if we believe he is ready to do much Good to Men's Bodies by Healing certain Diseases, when by that Means he can bring upon them far greater Evils? He may therefore well be supposed to assist with his secret concurrent Operation, the Use of magical Amulets and Phylacteries, though they should consist of the Decalogue, the Beginning of St. *John's* Gospel, or any other Portions of sacred Scripture, to encourage and confirm Men in the unlawful and superstitious Application of the Scriptures to such Purposes, for which they were never appointed, and in employing them as *Phylacteries*, Spells, and Incantations, that produce their Effect by
diabolical

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diabolical Assistance; by which Means he seduces them from a dutiful Reliance on the Author of their Being in the Use of warrantable Means, and makes them fly for Refuge to himself, by practising his impious Institutions. And it is in vain to say that they do not know that the good Effect comes from demoniacal and invisible Powers, for that was the unjustifiable Case of the Heathens, who worshipped *Dæmons* and impure Spirits, and invoked them against Dangers and Diseases, who in their Opinion were all Gods.

Whatever extraordinary Power the great Apostate exercises in this inferiour World, either in doing Good or Hurt to Mankind in order to destroy them, as it is bounded and confined by the Supream Moderator of all Things, so it is ever governed and over-ruled by him for his own Glory and the Good of his Servants.

From the Things discoursed on before, it will be no unnatural Transition to enter upon the Consideration of the Use of Reliques and other Religious Trinkets of great Value in *Popish* Countries for repelling Evil Spirits, and healing Diseases. These Things have such an Air of Fable and Superstition, and such a suspicious Aspect of *Pagan* Rites and Practices, that one would be ready to conclude they were derived from those impure Fountains. As the *Papists* have egregiously adulterated the primitive Purity, and corrupted the
the

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the Divine Simplicity of the *Christian* Religion by introducing into their Creed a long Train of heretical and detestable Doctrines and invented Articles of Faith ; so they have not less defaced and polluted its Discipline, while by an abominable Mixture of *Pagan* Rites, and an immense Addition of superstitious Ceremonies, they have turned their Church into one large religious Toy-Shop, not only to promote Devotion, as it is pretended, but likewise to exorcise and confound evil Spirits, and to cure various Diseases ; for they equal, if not prefer the Vertue of their Reliques to that of Medicine and regular Remedies. When Strangers passing through their Country come into the publick Places of Entertainment, if any are sick in the House, the Mistress and Servants are very inquisitive to know whether they have any Relique about them good for that Disease, that the Patient is afflicted with, (*viz.*) a *Dropsy*, *Consumption*, *Fever*, &c. and a Tooth, or a Bone, or a Hair of a Saint's Beard, a Piece of the Cross, and a Hundred other such Trifles and Nicknacks will be venerated and hugged with great Dependance on their powerful Operation : And hence the Neighbours lend to one another their Reliques, as our Protestants communicate their Receipts for several Maladies ; and more than this they sometimes use their Prayers as mere Spells or Charms, to heal Distempers. I have my self seen a Pe-
tition

tion addressed to the *Virgin Mary*, to crave her Assistance for Women in Labour, and in a Postscript to it, it was affirmed, that the same Prayer was likewise good for Fevers and tempestuous Weather, Things not in the least mentioned in it. And indeed their Prayers, which the Sick use in an unknown Tongue, seem to be used in the same unwarrantable Manner; for what Difference is there in depending on *Abracadabra* or the *Ephesian* Letters, and relying on the Vertue of mystick Rites and Words not more understood by the People than those Spells or Incantations?

To compromise Differences and come to an Accommodation with the *Pagans*, it is evident, that the *Papists* have incorporated much of their Superstition with their own Worship, and that the antient and modern *Roman Pontifex Maximus* have abundance of Religious Rites and Ceremonies common to both, while the Church of *Rome*, like some of her Sons the *Jesuites* in *China*, have made such Steps towards *Paganism*, granted such Concessions, and shewn such Compliances, that, their Differences thus amicably adjusted, they seem to have consolidated the *Heathen* and *Christian* Institutions; and this probably they have done either to win over the *Heathen* to embrace the *Roman* adulterated Creed, and thereby to enlarge their Power and Dominion, or to adorn and enrich primitive Christianity, which they looked

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on as too poor and naked, with the meretricious Pomp and Embellishments of idolatrous Worship: Many of these are enumerated by the Reformed Writers, and particularly by the celebrated Critick Mr. *Joseph Mede*, in his Apostacy of the latter Times, and the learned Bishop of *Worcester* in his Discourse of the Idolatry of the Church of *Rome*; but the most audacious and astonishing is their Imitation of the old *Pagans* in the Eucharist.

I have related before how the *Heathens* believed that their *Magicians* and *Sorcerers* were able by their Enchantments to bring down their Gods from Heaven: Now that the *Papist* may not be inferiour to the *Pagans* in this miraculous Operation, they have endowed their Priests with the like Wonder-working Power: For by pronouncing a few Words, they call away at Pleasure and draw down the Son of God, who is truly God, from his Celestial Seat: And for that Reason the Remark of Archbishop *Tillotson*, that from the Priest mumbling over these Words *Hoc est Corpus*, to fetch down Christ in the Eucharist, the Name *Hocus Pocus* derives its Original, that is, the Form of Words, which a Juggler or one that by Legerdemain or delusive Tricks imposes upon the Senses of the People commonly makes use of, or the Juggler himself.

What

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What *Celius Rhodiginus* says upon this Subject is very remarkable (a). That learned Son of the Church of *Rome* having mentioned this Question, whether there is any Force or Energy in mere Words or Letters, answers in the Affirmative, by crying out with Vehemency, *What good Christian can believe that there is no Vertue or Efficacy in Words, who daily sees the Son of God brought down from Heaven by the Priest after having uttered a short Preface?* And then he compares this Operation, as I have done, with the magical Songs and Ceremonies, with which the *Pagan* Sorcerers drew, or pretended they drew, their Gods from Heaven; for he says, “The
“ vain Superstition of the Ancients practised
“ or believed something like this, seeing it is
“ delivered down to us in the Monuments of
“ *Piso*, that *Tullus Hostilius* performing a
“ sacred Operation out of the Books of *Numa*,
“ fetched *Jupiter* from Heaven, whence he
“ was called *Jupiter Elicius*, from *Elicio*,
“ to draw or fetch down; according to the
Opinion of the *Cabbalistical Jews*, that there was a secret Vertue in the mere Order and Letters of the Words. And afterwards to confirm this Opinion, that a secret or mystick Vertue was lodged in Words and Syllables, he says, that the *Popish* Saint *Thomas*
(d 2) *Aquinas*

(a) *Celius Rhodigin.* lib. 16. c. 14.

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Aquinas had writ his Sentiments to the same Purpose against the *Gentiles*. Now when the *Papists* were sunk down and plunged in the Dregs of *Paganism*, so far as to believe that by the Force of a short Incantation they could draw down Christ from above, and to all Places of the World at the same Time, it is no Wonder they should place such Confidence in Reliques, as to believe them capable of curing Diseases, and that consecrated Water, Swords, little Images, Linnen, and several other such hallowed Trifles worn like Amulets and Charms, about the Body, would be Preservatives against Dangers and Diseases, and have an availing Vertue against Musket-shot, Daggers, and Fauchions. These are the superstitious Inventions of the *Papists*, or the abominable Remains of ancient *Heathenism*. And it is wonderful to observe, how the Church of *Rome* has accommodated the Rites and Customs of the *Pagans* to the *Christian Religion*, as the *Jesuites* in *China*, as said before, have of late done in respect of those *Pagans*; and as some moderate Protestants seem willing by their large Concessions to come to an Agreement with the *Papists*, and so remove the Opposition between Light and Darkness, and amicably make up irreconcilable Differences. And as the *Papists* have returned in so great a Measure, and betrayed *Christianity* to *Paganism*, so the others seem ready to Sacrifice the Reformed Religion, to
the

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the corrupt and unchristian Sentiments of the Church of *Rome*.

The foregoing Reflections may probably help us to some reasonable Account of the Prevalency of Sorcery and magical Arts, in the dark Ages of the Church, and particularly how it came to pass that so many Popes addicted themselves to those damnable Practices (a). *Benedict* the eight and ninth, and (b) *Gregory* the seventh, who had always magical Books about him, and *John* the twenty third, who was accused of Magick in the Council of *Constance*. *Pius* the second, is indeed acquitted of these Practices by *Platina*, who tells us he always slighted them. I suppose he thought it a wonderful good Character of a Pope in those Times; that he was no *Magician*.

The pretended, and perhaps real Cure of the scrophulous Evil, by the Touch of certain Potentates, it is very manifest, must depend upon the Operation of some invisible and powerful Agent, that acts above the Sphere of natural Causes; and how far the Observations I have made in the precedent Discourse, and the Reasoning upon them may be extended to that way of Healing, I shall not

(d 3)

deter-

(a) *Platina* in *Vita*.

(b) *Card. Benno* in *Vitâ Ejus*.

determine, but leave it to the Decision of Men of Sense and Reflection.

This Preface having grown under my Hands to a disproportionate Size, I shall say the less of the astrological and chymical Pretenders to the Healing Art. As to *Astrologers* or *Chaldeans*, they were Persons that searched after Knowledge from the Contemplation of Celestial Bodies, the Stars, Planets, and Comets ; and this was called Judiciary Astrology. From the Aspects, Conjunctions and Oppositions of the Planets, they acquired, as they imagined, the Prescience of future Events, and were able to foretel what would be prosperous or unfortunate Days, for undertaking any important Business : And therefore many Princes, Statesmen, and great Generals deluded by them, have much relied on this Art : And as they pretended to predict Events, and calculate Nativities, so they set up to presage Diseases, and direct Remedies for their Cure ; and judged that nothing could be happily undertaken for that End without consulting the Stars, and enquiring what Hand the Planets had in producing the Distemper. But this precarious Art being built upon airy Foundations, without the least Appearance of solid Reason to support it, is now so much sunk in its Credit and Reputation, that I believe there are few Men of Letters or good Sense, that have it not in contempt : For should it be granted that the
Planets,

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Planets, especially the Moon, as well as Comets, in their near Approach to the Earth, should have a considerable Influence upon Humane Bodies; yet since it is impossible to understand by the Rules of Astrology, what these Influences are, and how and in what Degree they act upon the vital Faculties, there can no Knowledge be acquired how to obviate or remove the Distempers occasioned by them; and therefore it is evident, that it is the Wisdom and Interest of all that practise Physick, to proceed in a judicious and rational Choice of proper Remedies, without troubling the Stars, or puzzling their Heads about the occult and unsearchable Influences of the Planets. Those that would see more of the Vanity of these Pretenders, may read *Picus Mirandula's* Books upon Astrology, and many others on the same Subject.

As to the last Sect, the Chymists, such as the *Rosicrucians*, *Helmontians*, &c. they are Men of a disturbed Imagination; whose Heads seem little cooler than their Furnaces: These are far gone in a visionary Way of thinking and forming extravagant Dreams by the Assistance of an over-heated Fancy. Hence they entertained wild Conceits, that they had found out the Way of making an universal *Menstruum* or Dissolvent, of transmuting other Metals into Gold, and discovering the Philosopher's Stone. And it is wonderful, how by assuming impudent Airs, and by a voluble

senseless Cant, they made great Impressions not only upon avaritious Men of a superstitious Turn of Mind, but likewise upon several worthy, but credulous Persons, who hearkned to their Incantations, and became their Admirers. And as they made Pretensions to these high Discoveries, so they undertook with no less Confidence to conquer all Kinds of Diseases by the Arms and Ammunition of the Elaboratory, though, as I have elsewhere shewn, in most Cases, even the sober and skilful chymical Operators, have rather diminished than improved the Efficacy of Metals and Minerals for curing Diseases, which in vain they vex and torture in the Fire, to make them confess their secret and hidden Vertues. But these Enthusiasts in Philosophy and Fanaticks in Physick, I mean the *Rosicrucians* and *Helmontians* before mentioned, are now, as I imagine, in such a low and ebbing Reputation, that I think I have no need of warning the younger Practisers against a Sect of such crack-brained and empty Impostors.

Of the six Undertakers to cure Diseases, which I have enumerated, only the Empirical and Rational, called likewise *Galenical*, or *Methodists*, deserve to be encouraged or imitated in their Way of prescribing Medicines as beneficial to Mankind. And as to magnetick and sympathetical Practisers, they rely on the occult and unaccountable Vertues of
 Things;

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Things ; and though we cannot positively pronounce they transcend the utmost Bounds of Nature's Efficacy, yet many of them come so near to it, that out of a just Distrust and Diffidence, those Remedies, at least as to the greatest Part, should be rejected ; for if they produce any good Effects, they must frequently owe them to the concurrent Operation of Invisible Spirits ; and especially since there are so many at Hand, that as they lye under no Suspicion, so they are likewise effectual to gain their End. As to magical Spells, and Enchantments, such as I have above mentioned, they are justly condemned as diabolical Arts introduced by *Pagan* Idolaters, and afterwards too much imitated by the *Jews* and some *Christians*.

If it be said in their Defence, that some sober and worthy Persons may employ such Charms with an Innocent meaning, Men that having no Commerce or Intercourse with *Dæmons*, or evil Spirits, do not invoke or depend upon their Assistance : I reply, that the greatest Apostate may, and often does by his Agency and Influence, concurr with odd and mysterious Rites and Ceremonies of magical Words and Characters of his own Institution, though the Persons, that use them make no Contract with him, nor know that the Effect follows from his Aid and Operation, to encourage them to fly to irregular and unjustifiable Ways of removing Diseases, and

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to grow distrustful of the Divine Godness in the Use of lawful and natural Remedies : And likewise it is probable that he may accompany with his Efficacy many other Medicines of a doubtful Nature, such as magnetick or sympathetick Remedies, as well as *Philtrums* to draw Men farther on, and prevail with them to use magical Spells, Amulets, and Incantations, for curing their Diseases : Not that any of these Spells have Power in themselves to produce this Event, but when they are used, Evil Spirits strike in with them, and exert their Power to remove the Distemper ; and the Cure is not owing to the Vertue of the Charms, but to the Operation of those Invisible Spirits : And so if a Love-Draught be drunk, and the intended Effect follow, it is by no Means to be ascribed to the Force or Efficacy of the Ingredients, but to *satanical* Agency (a). I shall conclude this long Preface, when I have recited the following Story : A learned and worthy Clergyman of *Oxford*, said thus to me one Day in Conversation :

“ While I was at Dinner with a Country
“ Gentleman and his Lady, she complained
“ to me, that her young Son was afflicted
“ with such an obstinate *Ague*, that no Me-
“ dicine that the Doctors had perscribed could
“ remove. I replied, though I was not in
“ earnest,

(a) See *Vossius Etymolog.* in voce *Philtrum*.

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“ earnest, Madam, there are many celebrated
“ Charms for curing that Disease, why will
“ you not make use of one for the Child's Re-
“ lief? Her Answer was, Sir, I should not be
“ unwilling to employ any which you should
“ recommend; and with that I turned the
“ Conversation to another Subject, hoping
“ to hear no more of the Spell. When I had
“ taken my Leave and was come to my Inn,
“ she sent to me for my Charm, when cal-
“ ling for Pen and Ink I writ in a Character
“ these Words, *He is a Fool that will be*
“ *cured by this*; and I sent the Paper rolled
“ up to her with this Direction, that she should
“ tye it with a blue Silk-String about her
“ Son's left Elbow, an Hour before the Fit;
“ and about a Month after I was surprized to
“ see her Servant sent on Purpose some Miles
“ to give me Thanks for the Cure of her Son,
“ who was then, as she assured me by the
“ Messenger, perfectly well, having had no
“ Return of his *Ague* after the first Application
“ of the Charm.”

As the Solution of this extraordinary Effect can be fetched only from the Operation of Supernatural Agents, it will evidently demonstrate, that *Satan* is ready to assist any such irregular and mystick Ceremonies and Applications for the Cure of Diseases, though his Power is not invoked nor depended on, to promote his Delusions, and invite Men to imitate the magical Arts of his own Institution.

And

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And this will lead us into the Reason, why he often concurs with his Power in curing Diseases, when the Effect cannot be ascribed to the Means made use of, which have no Manner of Efficacy in themselves to procure such Recoveries, and, that is, that he may bring the People back to practise, or at least to imitate the impious and detestable Customs of *Paganism*, and in which Design in some Countries, it is a Melancholy Remark, he has been too successful. But in the whole precedent Discourse I would be understood so as not to ascribe any Power to *Satan* and his Angels, derived from any Authority or Commission from Heaven, but he acts wholly from his own Impulse, and by God's bare Permission, who for wise Ends is not pleased to restrain him in many such Instances.



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A

DISCOURSE

ON THE

DROPSY.



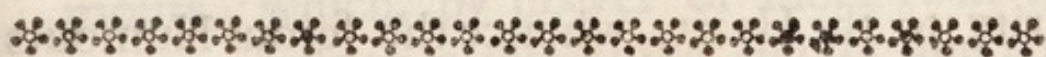
S when the active Principles of the Blood, the refined Sulphur, Spirit, and volatile Salts, not only exceed their due Proportion, but are likewise too much exalted, while, on the other hand, the watry and earthy Parts are depressed and diminished, by unsettling the just and orderly Temperament of the Blood, and breaking in upon the original Constitution and established Harmony of the Animal Government, they produce various acute Diseases, particularly Inflammatory and Malignant Fevers; so the Quantity of the

B passive

passive Principles, by destroying the due Mixture and regular Subordination of the Parts, introduce a sad Train of Chronical Distempers, distinguished from those before mentioned by their longer Duration. For as acute Maladies violently assault and storm with fury Nature's strongest Fences, so these by making gradual Approaches undermine and sap the Foundations of Life, and tho' slow in advancing, not less destructive in the Event. One of this last Denomination is the Dropsy, the Subject which I have chosen for this Dissertation; which may be defined, a Redundance or Superfluity of ferous Humours, contained in the narrower Pores or larger Cavities of Human Bodies, by which their just and healthful Disposition is perverted and depraved.

As, when Winter is past, and the Brooks and Rivers convey their refreshing Streams in a moderate and peaceful Course, filling but not overflowing their Channels, the Meadows, enlivened with their genial Influence, and cloathed with an amiable Variety of Herbs and Flowers, look sweet and beautiful; but if excessive Rains, or melted Snows rushing in Torrents from the Mountains, overspread the Vallies with an Inundation, the Lands lye oppressed by immoderate Waters, and languish in want of necessary Heat, and the prolific Powers of Vegetation, while Nature, as if her fruitful Energy were extinguished, loses her Beauty, and puts on a Face of Deformity and Desolation :

tion: In like manner, when the living Streams of ferous Humors, in a just and regular Proportion, flow free and easy thro' the Veins and Lymphæducts, that is, the System of Water Pipes laid every where thro' the Humane Body with wonderful Art, they cherish and revive all the Fields of Nature, where they flow, and imparting new Vigour and Activity preserve a healthful and florid Constitution, if Distempers arising from other Causes are not introduced. But if the Lympha or the watry Principles acquire too great a Proportion, and, by their exorbitant Power, break the Ballance of the Animal Regimen, Nature soon droops under this Oppression; the Spirits are benumbed and fettered with cold and phlegmatick Juices, and the Blood enfeebled and over diluted with exuberant Moisture, grows poor and sluggish; the nervous and muscular Fibres, soaked and macerated in superfluous Liquor, lose much of their Tension and springy Force, and the whole Body encumbred with an unequal Load of Serum, grows torpid and unapt for Motion.

*Of the Symptoms of the Dropsy.*

THE Complexion of these Patients, by the diminution of Natural Heat and Spirit, proceeding from this, that their Blood is

not sufficiently animated with exalted Sulphur and volatiliz'd Salts, becomes fallow, sickly, and unsanguine : And as the first Beginning or Approach of a Dropsy, is attended with this pale and unflorid Countenance, so it is also accompanied with œdematous and colourless Swellings and Inequalities in the Limbs, and a blotched Augmentation of the Face : The pale Swellings appear first in the Legs, Hands or Cheeks, which disappear in the Morning, when the Waters ebb and retreat from the swoln Limbs, and are alike communicated to all the Parts by the quiet and horizontal Position of the Body ; so that all the Blood-Vessels and Lymphæducts have an equal and just degree of their proper Contents : But the Tumour of the Legs, that subsided and sunk while the Patient lay in Bed, rises again gradually in the Day, till in the Evening it is augmented to its highest State : For as the Blood, being encumbered with an unequal Burden of watry Humours grows sluggish, and unapt for Circulation, and therefore hangs and lags in the depending Parts, being incapable of ascending from the inferiour Members with a due Celerity to the Heart, whence the ferous Humours are in too great a Measure left behind ; so the Fibres of the Muscles and the Veins, being macerated and relaxed by the Superfluity of watry Humours, and therefore having lost in a great degree their elastick and propulsive Force, cannot contribute their usual Assistance to the
Blood,

Blood, by impelling its Current, and accelerating its Motion. And for these two Reasons, namely, the great Abatement of the native Heat and Vigour of the Blood, and the Loss and Diminution of the muscular and nervous Strings, that are ministerial in promoting its Circulation; the watry Parts being not carry'd off by the slow and lazy Current, stagnate in the inferiour Parts, and so produce the Swellings we are discoursing of.

These Symptoms discover a Dropsy begun, which consists in a depraved Constitution of the Blood, oppressed and diluted with an unequal and exuberant Portion of Serum; but the Flood of Humours by degrees encreasing, the hydroptick Swellings, that used to vanish in the Morning, still continue, tho' not so high as in the Evening: For the Blood growing poorer and more defrauded of Life and Spirit, and so more indisposed for Circulation and carrying on its excessive Weight of Waters, and at the same time their Confederate Assistants, the protrusive Fibres of the solid Parts becoming feeble and flaccid, Nature cannot avoid the Encrease of these watry Tumours, which, by slower or more swift Advances, arise to a threatening Height and Amplitude. And now the Flood, having in a great measure broken down the native Fences, encroaches upon the neighbouring Region, invades the Thighs, and climbs over the Hips, the Surface of Back and Belly, infecting in its

way the secret Parts, and forming there a Phymosis, or Paraphymosis: Sometimes it ascends yet higher, and carries its Deluge even to the Chest and Forehead, laying all the Body under Water; and now the Inundation becoming thus universal, shews the Disease is arrived at a confirmed and dangerous State.

At this Season the Urine is much diminished; for either the serous Humour, detained in the Habit of the Body, cannot flow thro' the Strainers of the Kidneys in a due and regular Proportion, or those Strainers, I mean the Tubes and papillary Glands, the secretory Organs of that Bowel, are either grown flaccid and paralytick or other Inlets are obstructed, and in a great Part contracted and closed up, by which means the watry Humours are shut out in a good Measure, and denied a Passage thro' the Ureters to the Bladder, and hence arises that small Proportion of Urine, which such Patients use to render,

It is observable too, that as their Urine is defective in Quantity, so it is irregular in respect of Colour and Contents, which in this middle State grow red and high, imitating that which is caused there by an Inflammatory Fever, and is derived from the flamelike Tincture, imparted to the serous Humours, by the exorbitant and too much exalted sulphurous Principles of the Blood. And the Reason of such a high Colour is this, that as the Urine is little in Quantity, and not sufficiently diluted,

luted, so by lying long in the Bladder before its Exclusion, it contracts from the Heat there a deeper Tincture. It is called Lixivial or Laceritious or bricky-Urine, because the Sediment or Contents of it in this confirmed State, bear a great resemblance to the Powder of Brick cast into Water, tho' at the same time, if it be shaken or stirred it appears raggy, or a little ropy.

As when the glandulous Sluices and Conveyances of the Kidneys are too much enlarged and extended to an Amplitude beyond their native Tension, the serous Parts of the Blood rush thro' them in an excessive Quantity to the Bladder, and by a great Profusion of Urine exhaust the Blood, and leave it undiluted, and not sufficiently attempered by a due Proportion of Moisture, the Disease arises called a Diabetes, that defrauds Nature of necessary Supplies of watry Humours; so on the other hand, when the Pores and Meshes of those Strainers are too much contracted, and almost closed either by a Paralytick Distemper relaxing the Fibres, or by impure and incongruous Matter, obstructing the Inlets, and hindring the admission and secretion of the Serum from the Blood, the unavoidable Consequence is a total or partial Suppression of Urine, while the serous Parts continue entangled and unseparated from the Mass, by the constant Accession of more such fluid Humours, swell to such a height as soon overflow the chief Fences

of Nature, and drown all the Bowels, and at last the Brain, in a general Flood, till in the Space of a few Days it finishes its Tragedy. But in case the suppression of Urine, either by the flaccidity and resolution or obstruction of the Glands is but partial, while some Passages continue free and in a healthful State, by which the Serum may be in part divided and conveyed off, then a Dropsy will be formed, while the Body is overwhelmed with supervacaneous Waters, that should according to the due Oeconomy of Nature have been drained off by the Water-pipes of the Kidneys, and discharged by the Bladder: And when only a small Proportion of Urine is conveyed to that Receptacle, it stays a great while there, the Quantity not being sufficient to stimulate and urge that Organ to do the Office of Expulsion sooner; during which Time, the Urine lying, as in *Balneo Mariæ*, is by the Heat of that Receiver, and the neighbouring Parts advanced to a higher degree of Digestion, by which it is saturated and tinctured with exalted Sulphur, and this Symptom attends an Hydropick Distemper in its confirmed State.

When the Blood is reduced to a low and impoverished Condition, while oppressed and enfeebled by a Flood of cold and crude Humours, there appears on the Superficies of the Body, as well as on the Face, a disagreeable, unwholesome and deadish Paleness, as observed before.

The Limbs grow feeble and unapt in a great measure for local Motion, while they labour under an oppressive Collection of Humours, and waddle with an unequal Load of Waters, as others do with an unweildy Burden of Flesh, and are as much weakened and impaired by their Augmentation, as others are by being lean and emaciated; the last seem tottering Skeletons, the first feeble Infants of Gygantick Bulk.

Another Symptom, that accompanies this Distemper, is hard and laborious Breathing: Nor is it a wonder that while the Organs of Respiration, the Diaphragm, and the Pectoral Muscles, employed in reciprocal dilatation and contraction of the Chest, for the admission of Air into the Lungs, and the exclusion of it thence, are so soaked and clog'd with watry Humours, they should become defective in performing their native Office of enlarging and restoring the Cavity of the Breast in a constant and regular Vicissitude.

Another Symptom, that sometimes, tho' not always, attends a Dropsy, is an immoderate Thirst, or desire of Drinking; and the more the Patients fill their Veins and swell their Bodies, the more cooling Liquors they crave, which instead of quenching, like Water sprinkled on a Smith's Forge, encrease their Heat and promote, not extinguish, their Drought. For as the hydropick Waters, while the Urinary Inlets and Canals are obstructed,
swell

swell to a greater height, so by their stagnation they contract a putrefactive Heat, by promoting the Dissolution and Disunion of the Parts that constitute the Blood, whence a constant feverish and insatiable Drought proceeds, and few Patients are capable of bearing the Mortification and Self-denial of abstaining from the Gratification of their thirsty Appetite, which Self-indulgence however, feeds the Flame, encreases the Symptoms, and hastens their Fall.



Of the various Species of a
D R O P S Y.

AN Anasarca, a Hydrocephalus, an Ascites, a Dropsy of the Breast, an *Hernia Scroti*, and a *Hydrops Cerebri*, either in Infants or adult Persons, are the different Sorts of this Disease.

A Dropsy either consists in a Collection of extravasate Serum in the Pores, and minute Interstices of the Muscles, Membranes and Glands, or in the larger Cavities and Receptacles. Of the first Kind, is an Anasarca and that called an Hydrocephalus, which affect the Surface, or external Parts of the Body. An Anasarca is generally defined a superfluous Water, lying beneath the Skin, and is described

scribed as above, by the Enumeration of its Symptoms.

An Anasarca is either initial or confirmed, partial or total. It appears first in a pale, soft Swelling in one or both Legs, as before suggested, and after some time by a gradual ascent it climbs higher to the Knees, which is its first Stage; then by degrees it swells higher and loads the Thighs and Hips, which is its second and confirmed Stage. Afterwards it enlarges its Conquests, and brings the superiour Parts of the Body under its Power. This is the Beginning and Progress of that Dropsy called Anasarca, that possesses the Surface or external Parts of the Body.

A Hydrocephalus, is a Dropsy, or a Collection of watry Humours between the outward Skin, and that which encompasses the Head or Cranium, as ancient Physicians describe it. Tho' I do not remember that I have seen any of this sort distinct from an Anasarca described before; for when any such Waters are gathered together between the Skins in any Place, the Distemper must be denominated a partial Anasarca, that affects the outward Parts of the Body. It is true, there are Swellings of the Legs and other external Parts that are called watry or oedematous, that are distinguished from a genuine Dropsy and proceed from a different Cause, and which seldom rise higher than the Knees, tho' sometimes they may degenerate into a true Anasarca: These Tu-
mours

mours are usually termed œdematous, or serous, or scorbutick; the first generally arise from gouty Pains, Bruises, Wrenches, broken Bones, long languishing Sickness, or Child-bearing. And there is nothing more common than for what is vulgarly called the *Cold Gout*, to cause and leave behind it after the Paroxysm ceases, great Feebleness of the Legs and Ancles, the Wrists and Hands, as well as soft and pale Swellings, which like those occasioned by the Dropsy, receive small Pits or Dents from the Impression of the Fingers. Those œdematous Swellings proceed from the Weakness of the Muscles, occasioned by the grievous Tortures of the Gout, whose Fibres after the Fit is past, gradually recovering their Spring and Tension, protrude the standing Waters, and drive them into the Roads of Circulation.

Those that are called Scorbutick, are Swellings caused by excessive Serum mixt with a low degree of Choler, whence they are often liable to Inflammation and Pain, and sometimes to Ulceration. These Tumours arise from degenerate Fluids deposited among the Muscles, and for want of a more intelligible and expressive Word are called *Scorbutick*, which signifies, as I have elsewhere explained, the Principles of Chronical Distempers, that are recent, and have not yet acquired sufficient Marks of Distinction, much less a confirmed State.

Of those Dropsies, that consist in an exorbitant and unnatural Collection of serous Liquors in any of the Cavities of the Body, an Ascites is most considerable, as well for its Frequency, as dangerous Nature; and this Disease discovers it self to the sight by a manifest Protuberance or Swelling of the Belly, distended or thrust forth by an excessive Measure of Humours gathered together in the hollow of the Abdomen, and by degrees rising to an unweildy Proportion. This is termed a Dropsy of the Belly, and as I have said, proceeds from immoderate Fluids collected there, tho' sometimes the Hydropick Store is contained not in the Cavity of the Belly, but in the Omentum or in the duplicature of the Peritoneum, that is, the Membrane or Skin that immediately invests and sustains in its proper Place the voluminous System of the Intestines.

There is likewise a Dropsy of the Belly, that is called *Hydrops Ovarij*, which is the distension of that Organ, or some single Part of it, by included Fluids, till it acquires a great amplitude and becomes capable of holding many Gallons of Water. This Distemper then is confined to the Female Sex, and most commonly seizes the Patient after that Revolution of Nature, when the Catamenia are much interrupted, or become uncertain or quite disappear; for then some Impurities, viscous Coagulations, or harder Concretions obstructing one or more of the Ova in that Organ, and clo-

sing

sing up the Passages of the Glands, the watry Parts being denied their Current and Circulation, are imprison'd there, and by the fresh and daily Admission of more, which cannot be excluded, the Part swells to an inordinate Dimension; and as Nature at first works with strong membranaceous Threads a Bag or Cystis capacious enough to entertain the first stagnating Serum, so it continues constantly to enlarge, extend and thicken the Coats of this growing Receiver as the rising and encreasing Waters shall require. And this Workmanship of Nature is carried on to such an Amplitude that it sometimes fills the whole Cavity of the Abdomen; and while these serous Liquors swell together with their Receptacle, and begin to take up a disproportionate Space in the Belly, they cannot but push out and stretch the Muscular and membranaceous Fences, that enclose, cherish, and uphold the Bowels and Intestines; and from this excessive Extension of the Ovaria it comes to pass, that the hydropick Patient frequently complains of great Pains in the Belly.

When a Dropsy of this Nature begins and proceeds, it is distinguished from an Ascites by its Inequality; for at first the Swelling of the Belly is more on one side than the other, nor does the Abdomen keep its even and equal Surface, but loses its uniform Rotundity, till its Hollow is entirely filled up by the Cystis of Waters; and this produces another Symptom

tom, namely, painful and difficult Breathing; for while the superfluous Waters possess the whole Cavity of the Abdomen, the Diaphragm, a principal Instrument of Respiration is hindered from descending, its vibrating Motion being opposed and frustrated in a great measure by the Deluge of Humours in the Belly: And while thus the Diaphragm wants room to dilate the Thorax for the reception of the Air when inspired, it must necessarily follow that this important Function of the Chest and Lungs must be greatly disturbed, and performed with much labour and interruption: And this Symptom is, for the Reason assigned, common to each sort of Dropsy, that takes up the whole Region of the Belly, and so prevents the alternate Dilatation and Contraction of the Thorax absolutely necessary to Respiration.

Another Species of the Dropsy, is a *Hydrops Pectoris*, that consists in too great a Plenty of Waters contained in the Hollow of it; and the Symptoms, that discover it, are an oppression of the Breast, frequent Sighs, difficult Breathing, heart Sickness, and a sensible Fluctuation of Water inclosed in the Cavity of the Chest upon the Patient's turning from one Side to the other: And thus it differs from an Empyema, which is a Quantity of putred Matter and corrupt Humours, discharged into the Hollow of the Thorax, after the disruption of an Ulcer in either Lobe of the Lungs, or in the Pleura or Intercostal Muscles.

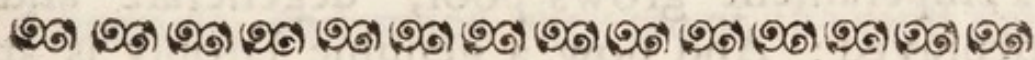
Among

Among the various Dropsies arising from extravasated Fluids collected in any of the larger Receptacles of the Body that is to be numbred, which is vulgarly, but erroneously, called an *Hernia Aquosa*, or a watry Rupture occasioned, as for a long time it has been supposed, like an *Hernia Inguinalis*, by the Relaxation of the Peritoneum, and the consequent falling down of the Intestines into the Scrotum: But this is not the Cause of an *Hernia Aquosa*, or rather *Hydrops Scroti*; for here is no Prolapsus or Descent of an Intestine into that Bag, but it is distended by inclosed Water, which will clearly be discovered to the Eye of the Surgeon, if he darkens the Room, and holds a lighted Candle on the adverse Side of the tumified Organ, which is then sufficiently transparent to shew the Contents are thin and watry, and in this distinguished from a *Hernia Carnosa* as well as *Inguinalis*, and therefore it is not to be ranked in either Class of those Distempers, since 'tis plain it is comprehended in the Definition of a Dropsy, that affects the Hollow of any Organ or any large void Space of the Body. I am of Opinion likewise, that an excessive Collection of stagnating watry Humours in the Cortical or Medullary Substance, or contained in the Ventricles of the Brain, where they produce many dangerous Symptoms, may be justly denominated Dropsies of the Head; those in the substance of the Brain rendering it soft and flabby

by, and to imitate an Anasarca, and those collected in the Ventricles, an Ascites. Hence it is very probable, that several Sufferings of the Head that go by the Names of distinct Diseases, are no more than so many Symptoms arising from the hydropick Disposition of the Brain. For Example, the Affections of the Head in Children, Dofiness, Pain, Convulsions, &c. may be justly attributed to the superfluous overflowing Serum, soaking and drenching the Parts, and by its long Continuance in the Ventricles, contracting a depraved acrimonious State; whence they vellicate the Mouths of the Nerves, and by stimulating and urging the Spirits, often drive them into irregular and spasmodick Agitations, always dangerous, and often fatal. And from this hydropick Disposition of the Brain in Infants it frequently comes to pass that so many of them are obnoxious to Convulsions. As from the immoderate Proportion of Lympha in the Substance of the Brain proceed Sleepiness, Stupor, Heaviness and Inactivity, while the refined and exalted Principles of Motion and Sensation are clogged and overburdened with an unequal Proportion of serous Humours; so it is not improbable that the Diseases of the Head called *Somnolentia*, *Coma*, *Lethargus* and *Carus*, may owe their Original to the excessive Quantity of Water or Serum lodged in the Pores or Cavities of the Brain; and though they are reckoned up as distinct Distempers, are no

more than different Symptoms or Effects of the Dropsy of the Brain: For while its Cavities and Interstices are filled with Water, its Lobes grow wet and marshy, and all their Fields lye soaked and drowned in depraved Juices; by which means the Animal Spirits are oppressed and incapable of performing their native Functions with due Swiftnes and Vivacity; but while the redundant Serum, not carried off by the circulating Current stagnates in the Pores as well as the wider void Places of the Brain, it contracts an acid and acrimonious Quality, by which it is productive of many noxious Symptoms: For as when the watry Humours together with the Blood wash all the Parts of the Body, imparting Life and Vigour in their regular Course, Nature, refreshed with constant Supplies, flourishes, rejoices, and triumphs in a healthful State and Constitution; so when the serous Streams are much obstructed and pent up in the Head, her Oeconomy is so perverted, that it cannot but occasion great Disorders and Distempers: The Brain, like morrassy Fields, being thus overwhelm'd and choak'd with redundant Water, if those Waters neither evaporate, nor are drain'd off, they must, like the Ouze left on the Ground and exposed to the Heat of the Sun, when the River *Nile* subsides and withdraws his Deluge, engender a noxious Brood of poisonous Diseases, and communicate to the Body a great Variety of Sufferings, after the manner
before

before mentioned. And as Soporiferous, Indolent, and Lethargick Symptoms may easily be accounted for by this Hypothesis, so it is probable that a Sincope or sudden Death may often arise from a Flood of Water, suddenly rushing in upon the Seats of Life, and extinguishing the Principles of Sense and Motion; and likewise that an Apoplectick Fit may sometimes take its Rise from this Spring, tho' it has been frequently found by Dissection that the Head and Brain of such Patients have been free as well from any Appearance of immoderate Water, as any other sensible disorder in that Organ.



Of the Antecedent Causes of a
D R O P S Y.

TH E remote or general Causes of this Disease, are either a degenerate Constitution of the Blood and Animal Juices, by an exorbitant Mixture of watry Parts, together with the Relaxation and Flaccidity of the Fibres of the Blood-Vessels, or a Disruption of a Lymphæduct, or the Distension or Depravity of the Glands, whence the Water issues in an excessive Quantity into the Receptacles proper to contain it. The first, that is, a disproportionate Measure of Serum in the Blood-Vessels and Nerves, prepares the Way to an Anasarca, an Hydrocephalus, and all hydropick Affections appearing

in the Surface of the Body. Sometimes this Distemper is hereditary, when the watry Parts in the Stamina of Life bear too great a Proportion and over-ballance the Rest; and hence proceeds a heavy and phlegmatick Complexion, while the volatile Salt and balsamick or oily Principles are over-matched and too much diluted, by which their Vivacity and motive Force are abated and depressed, and the Animal becomes sluggish, torpid, and indolent, and by this Means the due Richness and generous balsamick Nature of the Blood and nervous Juices is much reduced; whence their Temperament grows poor, degenerate and depraved: And now a genuine Dropsy is at hand, and will be soon introduced between the Skins on the Superficies of the Limbs, which begin to swell and pit first about the Ankle and the Instep, till by degrees the Waters encrease, and rising higher to the Knees distend and amplify the Legs, but without Pain, as above described. It is a controverted Question, whether these stagnating Waters in the Limbs are extravasated, that is, thrown out of the Blood-Vessels, and then contained and included in the Pores and Interstices of the Muscles; or whether they still continue in the Veins, and by swelling them swell all the neighbouring Region, without issuing out of their Channels? The first Opinion is in my Judgment the right, as it is the most common, as well as the most ancient; whence, by the eldest Physicians, a

Dropsy

Dropſy is defined *Aqua Intercus*, that is, Water beneath or between the Skins: And this ſeems to be true, not only from a viſible Appearance of the Swelling, but likewise from this, that if you divide the Skin by the Puncture of a Lancet, or the Point of a Needle, the Water riſes and flows through thoſe ſmall Wounds or Apertures, without dividing or wounding any Blood-Veſſel; and ſo it happens upon the Application of a Blifter. On the other Side it is urged, that the System of the Veins have no Chinks or Openings thro' which the ſuperfluous Serum can iſſue from them upon the neighbouring Parts. That the Veins are continued Channels, and when they are of the moſt narrow and ſmalleſt Dimenſions, and are called Capillary, they do not however end, but the venal Tube, ſmall and contracted as it is, goes on till it acquires tougher vibrating Coats and a larger Channel, and then it changes its Name and is called an Artery; for a Vein and the Artery that receives its Streams, are, ſay they, but one Duct, and never broken off or diſcontinued; and therefore theſe ſtanding Waters in the Muſcles muſt remain in their Channels; which being greatly diſtended, muſt likewise diſtend the Parts about them. But it is probable that theſe different Opinions may be thus reconciled.

It may be well enough ſuppoſed that in a recent and initial Dropſy, I mean that called an Anafarca, the ſuperfluous Serum may con-

tinue in the Veins unseparated from the Blood, while those Veins are relaxed, and yield, as far as they can, to the encroaching Waters; for as yet they may be restrained within their Channels, and there is no Necessity of breaking thro' its Fences and overflowing its Banks to find greater Space where to diffuse their Inundation; and at this time, I say, that the venal Channels may stretch themselves, and give way by degrees to the growing Flood, that it may be confined to the Limits and Roads appointed by Nature: And when the Veins are distended to their utmost Capacity, then it is highly probable, that the still augmenting Waters push and urge their Vessels, till they find some way through the Blood-Vessels, and then swell the neighbouring Region: And this is effected by dilating the Pores and Passages of the Glands, where the Veins complicated with the Arteries and Nerves, form a Strainer to separate the superfluous Serosities of the Blood, and convey them off by the Channels of Secretion. Now let it be supposed, that the Pores and Passages of these percolating Organs are enlarged and widened to a disproportionate Measure, and it must certainly follow that they will let thro' an immoderate Degree of Serum into the Habit of the Body and the Receptacles there, in the same manner as when the loose and flaccid Glands of the Kidneys, have lost in a good measure their Tension, they suffer an exorbitant Portion of serous Humours

mours to pass thro', which before were denied Admittance; as for instance, in the Disease we call a *Diabetes*: And as in the Lungs, when the numerous small Instruments of Filtration planted there become degenerate, and their Mouths, Canals and Outlets, are grown flabby and lax, an immense Quantity of serous and phlegmatick Juices pour out upon the Bronchial Receptacles, and oppress and choak the Lobes with their Deluge: So if the Glands in the Limbs, through which the Veins are obliged to make their intricate Passage, shall in like manner be depraved, their Fibres grow slack and feeble, and their Meshes and Channels become wide and yawning, the swelling Waters will strive and croud thro' to find larger Room for their Reception: And to confirm this, I will set down this Observation. I was called one Day to a very corpulent and fat Gentleman, overspread with a confirmed *Anasarca*, who said to me as I was coming to his Bed-side, Doctor, I have broke my Belly; and to convince me of the Truth of it, desired me to look into a large wooden Vessel, which stood near, where I observed a great number of Napkins soaked in Water; all those Napkins, said the Patient, are wet with the Water, that this Morning issued from my Belly, and which still continues to flow out; and upon removing the Bed-cloaths, that I might inspect the Parts whence it was discharged, I saw not any Rupture or Chasm, as he imagined, and which

I believed impracticable: But I discovered that the Outlets, from which this Water issued, were the wide and gaping Pores of the Skin, which were so very large that I could plainly perceive them with my Eye without the assistance of a Glass, and when they were afterwards by degrees drained, and the marshy Surface of the Abdomen contracted, its extended Orifices, and the serous Humours were so much emptied and reduced that they ceased to flow, being confined within the little Lakes and interspersed Repositories in the external Parts of the Belly.

And as this is an ocular Demonstration that these *Hydropick* Humours are extravasate and slipt out of the Veins into the Cells and Interstices of the Limbs; so the Application of Blisters or Vesicatories, and the Operation by Punctures in the Skin mentioned above, followed by an Eruption of Water, sufficiently evince the Truth of what I have asserted. It must be acknowledged, that the Veins and Arteries wound up and complicated with Nerves to form the Glands, must have Chinks and Perforations in their Coats to let thro' the watry Parts of their Contents; otherwise it would be impossible for those Organs to do the Office of Filtration, or to receive any Humours to be conveyed thence by the Ducts or Channels of Secretion. Supposing then, that those small Orifices or Outlets are stretched to an immoderate and unnatural degree of Wide-ness, it must necessarily follow that an exces-
five

five Quantity of Serum must be separated by these Strainers, and by this means contribute to the Rise and Encrease of *Hydropick* Symptoms.

Another concurrent Cause of a Dropsy in the Limbs and Surface of the Body, may be the too great Enlargement of those Pores and Meshes of the Arteries, thro' which the nutritious Juices pass, and are then distributed thro' the Body, to repair or augment the Muscles, Membranes, Cartilages, and the other Parts, together with the degenerate Constitution of the Arterial Contents, which in an *Hydropick* State, are too much diluted and mixt with serous Humours; for in such a Case an exorbitant Portion of watry Juices must be conveyed thro' the Sluices and Outlets before mentioned, and being depraved and unfit to nourish the Limbs, stagnate in the little Vacuities and Pores of the Muscles, and by a continual Accession of more such irregular Humours the *Hydropick* Bulk is at length produced.

It is true, the chief, general, and remote Causes of a Dropsy, are the Relaxation or Loss of Tension in the Coats of the Blood-Vessels, and an exuberant Quantity of moist and watry Particles mingled with the Blood. To the first, is owing the too much yielding and giving way of the Vessels to the Current of the Blood, while their flabby and unelastick Disposition makes them incapable of vibration, and exerting

erting sufficient Force to push on the circulating Streams through their Channels : And by Reason of the second, it happens that the Blood becomes a weak, poor, and unbalsamick Composition ; and while its active Principles are thus depressed by disproportionate and predominant Flegm and Scrofities, it grows sluggish and unapt for Motion ; nor is it able to maintain its constant Course and Circulation, with that Equality and Celerity which is required to a healthful State.

These are the principal Sources of an *Anasarca*, that consists in an inordinate Collection of Waters continuing in the Veins with the Blood, or separated from it by the Ministration of the Glands, and lodged in the outward Parts of the Body, where it is included in the narrow Cisterns and interspersed Vacuities about the Muscular and Membranaceous Organs, which being daily fed by more such Juices issuing from the Vessels, they swell and distend their numerous Repositories, and filling those void Spaces, give to the Limbs, that contain them, a pappy or fen-like Constitution.

It is true, that frequent profuse Sweats are often Fore-runners, that assure us that this Distemper is not far off : For when in the Commencement of this Kind of Dropsy, the redundant intercutaneous Waters that slipped thro' the depraved Organs of Secretion, and overflowed the Limbs, Nature is excited and roused to cast off the oppressive Burden, and
the

the Spirits residing in the nervous Fibres, employ their springy Vigour to exclude the superfluous Humours, as well thro' the Pores of the Skin, by large Sweats, as thro' the Glands subservient to insensible Transpiration; by which means the Waters are drained, and the Habit of the Body is a while preserved from *Hydropick* Swellings; till at length, the active Principles being weakened and much exhausted by their constant Labour, are unable by plying the Pump longer, to empty the Cells and Cisterns, and so draw away the serous Juices that continually strain thro' the leaky Vessels, and feed the Distemper with new Supplies. And now the Waters, intervening between the Fibres, being no longer carried off by copious Sweats and Perspiration; the Body is soon overspread, and swells with the enclosed Deluge, which encreases daily by the Accession of more Humours filtered thro' the Glands, till the Body is amplified by Degrees to an unweildy, plashy, œdematous Bulk, of a wan and pale Appearance, and then the Dropsy arrives at a confirmed State. Thus far of the Causes of a Partial or Total *Anasarca*, in which Disease the *Hydropick* Humours are lodged among the external Muscles, Membranes, and fatty Parts of the Body.

The

*The Causes of an ASCITES,
and DROPSIES of other
Denominations, where the ex-
travasated Waters are con-
tained in larger Cavities of
the Body.*

AN Ascites, as before said, is a Portubérance, or Turgency of the Abdomen, from a great Collection of Water in its Cavity. These extravasated Waters may arise from the Depravity of the Glands, whose Orifices and secretory Ducts growing too slack and capacious, permit an excessive Measure of Serum to pass thro' and fall into the Hollow of the Belly : As the papillary Glands, when lax and too much dilated, as suggested before, let an immoderate Quantity of serous Liquor rush thro' their Channels to the Ureters and the Bladder, as in the Case of a Diabetes, or in a great Passion of Fear, and Apprehension of imminent Danger ; and likewise as the Kernels, or separating Knots in the Lungs, admit an inordinate Flood of watry and phlegmatick Humours into the Bronchial Pipes, during the Dominion of violent Coughs and Catarrhs, and also as the too loose and gaping Glands of the Stomach often discharge into the Cavity of
that

that Bowel, a vast Quantity of noxious Juices, not only in *Hypochondriacal* and *Hysterick*, but in many other Cases; so it is as easy to conceive that the Glands in the surrounding Parts, as well as in the Bowels contained in the Abdomen, may, when perverted and injured in their Structure in the manner mentioned, spue out superfluous Serosities into the empty Space of the Belly; which Concourse of Humours expelled from all Communication with the Blood, gradually augmented to a great Plenitude, must certainly tumify and distend the Fences and Enclosures of the Abdomen.

Besides, if we contemplate the Structure and Office of the curious System of the Lymphæducts or Water-Pipes, contrived and laid with admirable Skill, not only to attenuate and dilute the grosser Humours, and particularly to thin and attemper the nutritious Juices, that they may more easily climb up their steep Roads in the Thorax, and afterwards mingle aptly with the Blood; but likewise to soften and lubricate the Parts, where they pass with as much Moisture as the Service of Nature requires. If, I say, we consider this, and likewise reflect on the Thinness and Weakness of these Tubes or Aquæducts, that supply all the Apartments of the Body, and upon that Account how easily they may be lacerated and ruined, and how soon the Cavities or Receptacles, into which they empty themselves must be replenished with Water from the weeping

weeping Rupture, we shall be ready to conclude, that the Breach of one or more of these Water-courses must be a frequent Cause of those Dropsies, that are contained in void Spaces, and larger Receptacles, particularly those of the Belly and Breast. It is evident, that the System of the Veins, that are formed with stronger Coats than the Lymphæducts, and the Arteries, that have more and stronger Coats than the Veins, are often torn, rent, or broke asunder, whence Streams of Blood rush plentifully into the neighbouring Cavities; then how much more easy is it to conceive, that the weak and tender Pipes and Conveyances, contrived for watering and refreshing the Walks of Nature, should sometimes break or be divided? And if so, it is not difficult to see, that after such a Disruption of a Water-Pipe, the Stream contained in it will strive thro' the Breach from time to time, till it fills the Cavity adjoining with extravasated Water, and so produce a downright Dropsy. And this Cause of an Ascites may happen oftner perhaps than we imagine: For while the Contents of these natural Aquæducts are limpid or colourless, and the numerous minute Tubes or Branches creep so secretly and undiscerned thro' the Interiour Parts, it is impossible we should be so well acquainted and familiar with these curious Water-works, as we are with the Veins and Arteries, which by their Colour and Situation, are the ready Objects of our Senses.

This

This then may reasonably be allowed to be another Cause of such Dropsies as fill the larger Cavities of the Body.

But the Origin or Rise of a *Hydrops Ovarij* above mentioned, must rather be derived from the Obstruction of the Glands of that peculiar Organ: For when any incongruous Humours from their disproportionate Dimension and Figure, are unable to make their Way thro' the straight Passages of those secretory Kernels, but are entangled and inclosed there, they stop the Part, and by Degrees swell and distend it beyond its natural Size, till by the daily acceding of new similar Fluids, they fill all the Hollow of the Belly, like an *Ascites*, and extend the small Receptacle, where they are at first lodged, to a vast Protuberance. This immense Assemblage of Water, does not flow loose in the Hollow of the Abdomen, but as the serous extravasated Humours encrease, so the Bag or Cystis, that contains them, by the wonderful Contrivance and Workmanship of Nature, is in proportion amplified, till it becomes capacious enough to enclose many Gallons of Liquor, as said above.

Though this Kind of Dropsy, is occasioned chiefly by the Obstruction of the Glands of the Ovarium, at the great Revolution of the Animal Government, when the Catamenia cease to flow, yet it sometimes happens that the glandulous Organs in that Part, may, before this great Change, be depraved and obstructed,
and

and so cause a Dropsy in the Manner described: For in every Conjunction, when the vitiated Blood contracts an irregular State, and abounds with inordinate and impure Humours, that have such a particular Size and Figurati-
 on, as make them incapable of passing thro' the narrow and minute Roads of the Ovarium, being stopt and imprisoned in the Pores of it, are a sufficient Preparation to introduce a Dropsy in that Part; not such a one, where the extravasated Water floats loose in any Re-
 ceptacle, but that which is enclosed in a Bag or Cystis, that has no Outlets, as was before suggested, in the same manner as an *Hernia Aquosa* is produced in the Scrotum, either by the Disruption of a Lymphæduct, or the Re-
 laxation of the Glands in that Organ.

The Dropsy of the Head, consisting of an immoderate Convention of Waters in the Ventricles, or other Cavities of the Brain, is accounted for on the same Hypothesis: For if we suppose that the Inlets and Passes by which the more refined and generous Juices enter into the Brain, and are there farther exalted to a State that fits them for the Functions of Imagination, Sense, and Motion, becomes so extended and yawning, that an excessive Quantity of ferous Humours may, together with the purer Parts, rush promiscuously into the Brain, which by a due Tone and Contraction of that Strainer, would have been kept back, and continued unseparated from the Blood, that
 inor-

inordinate Quantity of Serum admitted into the Pores and Traces of that noble Bowel must overflow its Lobes, and fill its Cisterns; which produces an *Hydropick* Constitution.

It must be observed, that sometimes a great Collection of serous Humours happens in the Cells and Pores of the Omentum, which enlarge it so far, as to make it resemble a Dropsy of the Belly: And in like manner, there is often a Lake of Waters gathered together in the Duplication of the Peritoneum, that is, between the Foldings of the large and strong Membrane, that defends and upholds the Contents of the Abdomen, which so much imitates an *Ascites*, that it is difficult to distinguish them.

The Physician should be careful that he does not mistake a prominent Belly, in a pregnant State, for a Dropsy, as it sometimes has unfortunately happened. He must therefore observe, that the Face in a Dropsy is fallow, pale and bloated, but not so in Pregnancy. *Hydropick* Persons sometimes perceive a Fluctuation in the Abdomen, but Women with Child not so. Their *Catamenia* sometimes flow, though pale and watry, which does not happen to those who are only big with an *Ascites*. In a Dropsy, the Appetite decays and languishes, which is not often known in pregnant Persons.

As to a *Hydrops Pectoris*, or Dropsy of the Chest, it consists in a great Collection of

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ferous Humours in its Cavity ; and in this, as above observed, it differs from an *Empyema*, that whereas that Disease is produced by the Eruption of purulent Matter, from an Ulcer in the Lungs, and intercostal Muscles, and its falling down upon the Diaphragm thro' the Hollow of the Breast ; this arises from a Stagnation of the extravasated Serum, contained in the same ample Receptacle, which may proceed from a contingent Rupture in one of the various Branches or Ramifications of the Lymphæducts, especially of those that climb up the Ascent on the Back, and empty their Stores into the *Subclavian* Vein ; and these Vessels are so thin and so tenderly wrought, that they are very obnoxious to such Lacerations.

Or this Distemper may arise from the continual Exudation and Weeping of some extended and gaping Glands in the internal Parts of the Thorax, or the Superficies of the Lungs, whence extravasated Serum, strained from the Blood, is always striving and dripping into the Hollow of the Chest, and while it constantly distils from the wide Mouths of those Strainers, it must at length in a great measure fill the Cavity, that has no Outlet to convey away the redundant Waters.

I have explained the Nature, enumerated the Symptoms, mentioned the different Species, and accounted for the Rise and Origin of a Dropsy : And now I proceed to the Method of Cure.

Of the Method of CURE.

SINCE the remote and immediate Causes of a Dropsy are either an immoderate Portion of serous Humours, contained in the Veins, or excluded thence and lodged in the Pores and interspersed Vacuities between the Skin and the Flesh, or received into more capacious Cisterns, as above declared; and since the Health of the Patient is restored, by removing the Cause of his Disease, it is very evident, that *Hydropick* Persons can only be relieved by draining off the superfluous Humours; and secondly, by drying up the Springs and stopping the relaxed Mouths of the Glands, through which the Waters are emptied on the neighbouring Parts. In the first Case, the Pump is to be vigorously plied, and in the other, the Chinks and wide Outlets of the leaky Strainers must be contracted and drawn into their natural Dimensions, that they may not discharge a greater Proportion of serous Juices, than the healthful State of the Body requires. I shall set down the Remedies that are most effectual for each of these Ends.

*Of the Hydropical Swelling of
the external Parts of the Bo-
dy, called an ANASARCA.*

THE proper Remedies for draining the Limbs and Surface of the Body, overflowed and drowned in a Flood of serous Humours, are either Internal given by the Mouth, or External Topical Applications. The principal Medicines of the first Sort are either purgative or diuretick; such as carry off the superfluous Waters, and exclude them by the Road of the Intestines, or convey them by the Passage of the Kidneys and Ureters into the Bladder. As to purgative Medicines, it is consonant to Reason, and warranted by Experience, that they are very efficacious for this Purpose, while they stimulate the Fibres of the Stomach, and by irritating the Spirits milk the Glands, and draw from them their thinner Juices, which to supply other similar Liquors, flow to those Strainers from the distant Parts of the Body, and rush forward through their Roads to reach the Outlets, by which they are separated and excluded into the Hollow of the Intestines, in the same manner, as when Drains and Trenches are cut in a marshy Soil, the Waters, that flow into those Receptacles, and are carried off by such Apertures, are still fol-
lowed

lowed by more from the wet and spongy Glebe, till the fenny Land is relieved and sufficiently freed from its superfluous Moisture. The Human Body, an animated *Hydraulick* Engine, consisting of an infinite Number of Vessels, Tubes, and Pipes, all filled with their proper Liquor, and communicating one with another, so that if One is pierced, the Humours rushing out are presently recruited by others, that hasten from the nearest Vessels, and those again are supplied by the next, and so on, till those in the most distant Places contribute to make good the Loss sustained in any Part; which is the Reason that by opening a Vein in *Plethorick* Patients, when extravasated Humours oppress any principal Organ, those Humours to repair the Damage and supply the Want, return into the Veins to relieve the defrauded Parts.

Besides, it should be considered, that no Remedy, properly speaking, is endowed with any purgative Virtue, or any active and expulsive Energy, for that is Nature's own Work, and the purgative Remedy is merely passive in all this Affair. To illustrate this Notion, let it be considered, how Nature unassisted by Physick, operates for her own Preservation, when it is either oppressed with the acrimonious and burdensome Leavings of a Surfeit, by immoderate Eating or Drinking, or by a redundant Load of Cholera, as in a *Cholera Morbus*, or with the Seeds and noxious Principles of a

malignant Fever; or when vehemently urged by a great Paroxysm of Fear: In these and many such Cases, and mostly in a habitual Diarrhæa, when Nature is almost overwhelmed and sinking under the unequal Weight and Quantity of the irregular Humours, or infligated and insulted by their incongruous and opposite Qualities, in these Conjunctions; I say, the Spirits and all active Parts of the Blood and Nerves, roused and awakened, unite all their Forces, and exert their utmost Vigour to push in their Turn the invading Enemy, to drive the encroaching Humours from their Posts; and expel them thro' the opening Glands, into the Cavity of the Intestines, thence to be discharged from the Body: And thus it happens when the fluid Materials, by the sudden shutting up and closing of the Pores of the Glands, that serve for the Exclusion of Sweat, and likewise for insensible Transpiration, by taking Cold, recoil and return into the Blood, whence Nature is excited and engaged for its Preservation to find them another Conveyance thro' the Strainers of the Intestines; by which she often disburdens her self of the superfluous watry Vapours, while the ordinary Passes are stop'd, thro' which usually they were evaporated. Upon this Contemplation of Nature's Method of Working to free herself from noxious Humours by a Looseness, we shall better understand how purgative Medicines produce their Effects. It is evident, that

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in the Instances before mentioned, the incongruous Humours admitted into the Blood, have not in themselves a direct and necessary Virtue of expelling the Recrementitious Parts, but only *per accidens*; nor are they active but passive in that Operation; not Causes, but only the Occasions of producing that Effect. For Instance, if the degenerate and impure Materials that constitute a malignant Fever, a *Cholera Morbus*, &c. mix with the Blood, and arise to a sufficient Plenitude, by their contrary Qualities, they grieve and oppress Nature, till she is ready to sink and lye down in Despair; when the nobler and more exalted Principles of the Blood and nervous Juices, to prevent the incumbent Danger, spring forward and exert their most powerful Efforts to relieve themselves from the adhering Plague, and expel the hurtful and destructive Juices thro' the Sluices of the Intestines. In these Cases it is plain, that the Animal Spirits, and the operative and commanding Principles of the Blood, are the Agents that drive out the noxious and peccant Humours by the Strainers in the Abdomen, which are purely passive in this purgative Operation.

And when the Spirits, by inordinate Fear or a surprizing Fright or Consternation are vehemently hurried and disordered, Nature is only active in the *Diarrhæa* or frequent Dejections that accompany such violent Passions. Let it be supposed then, that the Particles of

purgative Medicines resembling in Size and Figure the impure and peccant Materials of the Diseases before mentioned, were mingled with the Blood, would they not be attended with the like Evacuations in proportion to the Quantity and Quality of the purgative Ingredients, not properly such by their own Operation, but by the Spring and Effort of the Spirits to purge the Blood, and free themselves from the oppressive Mixture? A purging Medicine then occasions the Discharges of Nature, that follow it, in the same manner as the Matter of less noxious Diseases, or malignant and destructive Distempers, and even as the different Degrees of Poison it self occasion Dejections; while to expell them, the active Parts of the Blood are instigated and employed to push them on with their utmost Vigour.

Now when the superiour and most refined Particles of the Blood, loaded and grieved with the Matter of some Disease, or oppressed and provoked by the opposite offensive Particles, contained in a purgative Remedy, they act uniformly and alike in each Case, while they rise up and put forth all their Energy and Activity to subdue and dislodge the contrary and offensive Particles, either of the Disease or the Remedy, till at length they are separated and ejected by the Outlets of the Intestines. And here it is to be observed, that the first and direct Intention of Nature, is to conquer and expel the Medicine admitted to the Blood, that

is opposite to it, immisceible with it, and unconvertible into Nourishment; and it is, as I said, *per Accidens*, and in the second Place, that the Matter of the Disease is carried away together with the Medicine.

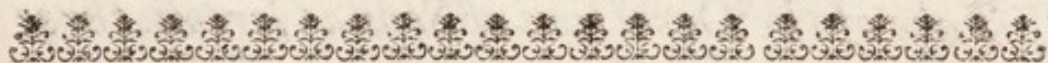
For while the superiour governing Parts of the Blood have pushed and put to Flight the Particles of the purging Remedy, that were grievous and oppressive to them, and have widened the Glands of the Intestines to let them pass thro', at the same time a Quantity of other Humours, and often the *Morbifick* Matter with them, rush thro' the Sluices together with the Medicine: And hence will appear the unreasonable and inapt Division of purging Medicines into various Species, as such as only or chiefly carry off superfluous Water, or Choler, Melancholy Humour, Phlegm, or such as purge the Head, the Liver, the Reins, &c. for this is to endow the Medicine with a discerning Sagacity, to distinguish and find the Humour it is employed to seize upon, ferret it out, and carry it off as its proper Prey, neglecting all other Game; which is to complement the Pill or Potion, with the Faculties of Reason and free Choice: But in their Operations and Effects, there is really no more than this, that by their Oppression of Nature, from their opposite and repugnant Qualities, the active Principles of the Blood strive with all their Force to free themselves from such troublesome Guests, and by subduing and expelling

ling these, which is their first and direct Intention, they exclude together with them the Matter of the Distemper that affects them, which, as before observed, happens only as a Consequent of their first Intention, in their Operation to free themselves from the offensive Medicine. And thus it is with *Diuretick* and *Sudorifick* Remedies, which by excluding in general through the Pores of the Skin, or the Strainers of the Kidneys, a great Quantity of fluid Juices, occasion likewise the Expulsion of depraved and hurtful Humours mingled with them.

Purgative Medicines then do not act by any specifick Virtue, and the Difference between them consists only in the greater or weaker Contrariety to the operative Principles of the Blood, by which those Principles are obliged to exert a stronger or a weaker Degree of Force to expel them: And as the Collection of Humours in any Part is greater or less, and the Spirits have more or less Activity, the evacuating Remedies ought to have a different Measure of Strength for producing their End; which I will more explain, when I come to speak of a Dropsy in the Belly.

The purging Medicines in an *Anasarca*, are ineffectual to empty the Limbs, and reduce them to their native Dimension; unless they are powerful enough to occasion a strong and vehement Effort of Nature to throw them off, that by a violent Motion it may remove the
grievous

grievous and afflicting Burden, and by a vigorous Push to exterminate the Medicine, it may likewise produce a plentiful Discharge of superfluous Serum, and then while the Meshes of the Glands are enlarged to give Passage to the purgative Remedy, Abundance of watry Humours rush on with the Current, and disembogue into the Cavity of the Intestines, by whose propulsive Fibres they are at length excluded.



*Forms of Purgative Medicines
useful in an ANASARCA.*

IN the lowest Kind of this Disease, when the oedematous Swellings have not yet climbed above the Knees, purging Medicines of a milder Nature, and more moderate Force, will properly be employed: For Example,

*Take of Leaves of Senna three Drachms,
Rhubarb two Drachms, Syrup of Buck-
thorn an Ounce, Manna half an Ounce,
make a Draught to be taken in the Morn-
ing fasting.*

In this Case, the purging Salts, *Sal Mirabile Glauberi*, and those extracted by Evaporation from the Waters of *Epsom*, *Shutter's-Hill*,

Hill, Northal, Acton, and others of the like Virtue, have often emptied the superfluous Waters, and reduced the Swelling of the Legs; but this will become more effectual if followed with an invigorating and restorative Course of Medicines.

But if purging Drugs of a moderate Virtue, are unequal to this Province, and have not Force enough to drain the Legs, stronger should be attempted, such as follow :

Take of the Decoction of Senna Gereon. three Ounces, Electuary of Juice of Roses, a Drachm, Syrup of Buckthorn ten Drachms, of Manna, half an Ounce.

Or, Take of Extract. Rud. Pil. ex. Duobus, each half a Scruple, of Pil. Coch. Maj. a Scruple, Tartar vitriolated, four Grains, Elixir Proprietatis, as much as will make them into Pills, to be taken in a Morning with Government, and repeated twice or thrice, interposing three Days.

But if upon sufficient Tryal it appears that either of these Medicines are unable to rouse and quicken the Animal Spirits to such a Degree, as will oblige them to exert their Force in driving the Humours to the Glands of the Intestines, and opening and dilating the Pores of Filtration to a sufficient Wideness, to let the serous Parts pass easily thro'; or if the serous Humours in the hydropick Legs are so compli-

complicated, and cohere by such strict Embraces that they become tough, slimy and unapt to flow and mingle with the watry Current, that hastens to be discharged through the Guts, then the purgative Method must no longer be insisted on; but in this Case diuretick and strengthening Remedies will be required, as shall in the next Paragraph be more fully explained.

If the œdematous Swellings encrease, so as to affect the Thighs and Hips, and the Muscles of the Back and Abdomen, and even the superiour Parts of the Body, and so become a confirmed and universal *Anasarca*, then purging Medicines of the most active Vertue must be prescribed.

For when the Disease has extended it self so far, and is come to so great a Height, the relaxed, sodden and macerated Fibres having in a great Measure lost their springy and reactive Force, grow sluggish and feeble, and to oblige and enable them to exert their Vibration, the Animal Spirits must be stimulated and provoked by stronger Purgatives, and put into such a vehement Motion, as may for the Time restore to the Membranes and Muscles their due Renitence and elastick Tension, by which Means they may stir and move the stagnating Waters, and force them back into the Vessels they had deserted, where mingling again with the Blood, they may be carried on with it to be expelled through the Intestines.

The Forms of stronger Purgatives to be employed in an *Anasarca*, where weak Medicines, or those of middle Force are insignificant, are such as follow :

Take three Drachms and half of Leaves of Senna, boil them in a sufficient Quantity of Spring Water to four Ounces; strain it and add of Electuary of Roses, two Drachms, of Syrup of Buckthorn an Ounce and half, of Aqua-Mirabilis two Drachms.

Or, Take Pil. ex Duobus a Scruple, Resin of Jalap, Grains Six, Calomel fifteen Grains; make all into four Pills, to be taken early in the Morning.

Or, Powder of Root of Jalap half a Drachm, Electuary of Roses a Drachm, Ginger a Scruple, Salt of Tartar a Scruple, of Syrup of Buckthorn a Quantity sufficient to make a Bolus.

These stronger and quicker Purgatives, ought not to be pursued and repeated after the Patient has found by several Tryals, that this Method is unsuccessful for draining the serous Humours; for while the Spirits are often urged, and vehemently exercised in repelling and excluding those more repugnant and opposite Particles, that act upon the vital Principles, Nature is laid waste, and the Animal Spirits, the Springs of Motion, are enfeebled and exhausted,

hausted, so that afterwards the Repetition of every strong Purge, that proves not efficacious in carrying off the Waters, is made at Nature's Cost and irreparable Damage: For this Medicine often renewed without effect, will every Time not only dissipate the Spirits, but waste the Strength of the Patient, by weakening and dissolving the Tone of the Nerves, and the Compages and Structure of the Membranes and Muscles, till languishing Nature grows every Day more sensible of her Losses, and laments the Decays of her Vigour, and the Growth of the Disease, which is now ready to overturn her whole Oeconomy. In such Cases then this Method must not longer be insisted on, but corrective and corroborating Alteratives, and then Diureticks must be prescribed, as shall be more fully explained when I come to speak of an *Ascites*.

This leads me to recite a remarkable History, that may be useful to the attentive Reader. I was sent for above Twenty Years ago to a Person of Honour, between Twenty and Thirty Years of Age, who was overspread with an universal *Anasarca* from the Top of the Head to the Soal of the Foot; for not only the Inferiour Limbs, the Abdomen, and the Trunk of the Body, were swoln with stagnating intercutaneous Water, but the Sternum of the Thorax and the Forehead it self were so oedematous and pappy, that considerable Pits and Cavities were made on the Flesh, by pressing it

it with the Finger. He had been afflicted with this prevailing Disease many Months, and for the Removal of it had made Use of a great Variety of Physicians and Physick, especially of Purgatives, but without Success; for the more he was purged the weaker he grew, till he was reduced to a very languishing and seeming deplorable State. I prescribed to him many Medicines to invigorate his Blood, strengthen his Stomach, and support his sinking Spirits; but finding after about a Month's Time, that I gained no Ground, but rather that Things were growing to Extremity, one Morning I said to him, his Honourable Relations being present, that having attentively considered his Case, I was fully perswaded, that since it was absolutely necessary to carry off the *Hydropick* Deluge, and since all weaker Purgatives were ineffectual, and all strong and vigorous ones sunk his Spirits, and that every Tryal made him weaker and weaker, no Remedy could be of any Service to him but such a One, as would at once both evacuate and strengthen, discharge the superfluous watry Humours, and invigorate Nature, and that I had thought on a Remedy that would answer both those Ends, and that was the Spaw-Water, which in his Case might be safely taken, and with Success too, if he took but a small Quantity in a Day at first, and forbore Drinking as much of other Liquors as he Drank of Spaw-Water, and if the smaller Portion agreed with him, then to rise by degrees

grees every Day, till it might be discerned by his Urine growing paler and thinner, that the Passages of the Kidneys began to be opened, and then a greater Quantity might be safely given, which then would probably pass through, and carry with it much of the *Hydropick* Humours, which if it should accomplish and make a copious discharge, it would be so far from enfeebling Nature, and diminishing his Strength, that by means of the Chalybeate Vertue of the Mineral Water, it would enliven his Spirits, and invigorate his Blood, as well as quicken his Appetite, and assist his digestive Faculties. Having discoursed some Time in this manner, the Patient and his Friends were well satisfied that the Tryal should be made, though it appeared at first an odd and surprizing Thing, that the taking of Water should be proposed for the Cure of a confirmed and inveterate Dropsy, not considering that the Chalybeate Parts with which those Springs are impregnated, make it an admirable Medicine if judiciously employed. The next Morning he began and Drank near half a Pint, which sitting easy on his Stomach, he repeated the next Day, and so on, encreasing gradually the Proportion, till after six Days he drank a Pint; which after four or five Days wrought a Change in his Urine, that began to grow thinner and paler, and encrease a little in Quantity; and by this, being convinced that the Urinary Conveyances began to be opened: I prescribed it

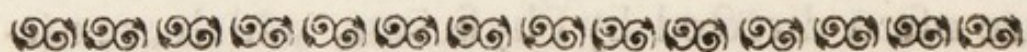
to be taken the next Day at several Times, to the Quantity of a whole Flask, which operated so well, that not only the Mineral Waters themselves passed off freely, but likewise carried with them an equal Quantity of the serous Humours in the Body. This Method was continued with wonderful Success; for from this Time in about sixteen Days the Patient was so entirely deliver'd from the *Hydropick* Fluids, which overflowed all the exterior Parts in so high a Degree, that he appeared exceeding lean and emaciated: I backed this Method with a Steel Course, and other corroborating Medicines, for about a Month, by which means the Patient was recovered. He went into the Country, and after some stay there, felt some Returns of the Symptoms of his Disease; but upon the Use of such Medicines as before named he was soon restored to an entire established Health, and continues to enjoy it in a very Honourable Station to this Day.

It must be observed, that before I put this Honourable Person on the Use of the Spaw-Water, I endeavoured to empty the Flood of Waters in his Body, by Punctures in the Legs, made by the Point of the Lancet, which sometimes is done by a fine Needle. The Operation was performed by the celebrated Surgeon Mr. *Barnard*, who advised it should be done by the first rather than the last: The Skin being pierced in several Places, a considerable Quantity of Water was discharged from every Aperture,

erture, but when the little Wounds began to dry up and heal, the Orifices were so inflamed that they were hardly cured by the Surgeon's Art, and the Patient narrowly escaped a Mortification, by Reason his vital Heat was greatly diminished, and the Fibres, by lying so long soaked in the stagnating extravasate Water, had lost their vibrating Force, and were grown flabby and feeble; and therefore this Operation in a confirmed Dropsy is very dangerous, and not to be attempted in such inveterate Distempers. It is true, I have several Times applied Blisters to the Legs and Thighs of *Hydropick* Patients, and as they dried, raised them in other Places, and have by their Means so far drawn off the serous Humours, that the Patient has for many Months been preserved from growing worse: But I cannot attest that they ever effected a thorough Cure.

In initial, or unconfirmed Dropsies of this Kind, laced Stockings drawn close together are often directed by Physicians, which are useful, and only useful, when by a moderate Compression they assist the Tension of the Skin, and supply its want of Renitence; and by that Means preserve it from being too much enlarged, and so becoming susceptible of a greater Quantity of Water, which as the Skin yields and gives way, crowds and enlarges its Apartments. But if the Stocking be so strait-laced, that it hinders the descent of the Serum into the Legs, it will only, like a Ligature, stop the

Humours from flowing down, but then it will unavoidably cause the Parts next above the Damm to swell more, so that the Remedy will be more hurtful than beneficial : For while the Legs are contracted and diminished, the intercutaneous Waters pent out will abide in the Thighs and Hips, and are not the more discharged or abated for not appearing in the Legs, but they remain in equal Quantity in their new Lodgings and more dangerous Settlements in the superiour Parts ; and therefore instead of laced Stockings, if the Patient wears those of Worsted close knit, and a little too strait, these will contract and bind the Skin sufficiently to prevent the Relaxation of it, that it may not admit more Humours, as far as can be done safely, and at the same Time leave the extravasate Fluids Liberty enough to descend into the Legs, which cannot be denied without greater Inconvenience,



Of œdematous unpainful Swellings distinguished from those of an ANASARCA.

THES E are either Scorbutick, Gouty, or the Effects of Weakness and Decay, or the Symptoms of approaching Death. The Tumours of the Legs termed Scorbutick, proceeds

ceed from a Cachectick or ill Habit of Body, and a depraved Constitution of Blood, 'ere yet any growing Disease is come to Maturity. These are Sometimes only pale, and not attended with uneasy Sensations, yet accompanied sometimes with smooth livid or reddish Spots, or Suffusions on the Skin, sometimes with various Pustules or Eruptions, elevated above the Surface, and sometimes with a dry, morpew-like Roughness. These Swellings when consisting in Part of an ill conditioned Cholerick Humour, are attended with Inflammation and Pain, and by breaking the Skin, they often occasion a milder or more obstinate Ulcer, and by all these Symptoms are distinguished from *Hydropick* Tumours; and sometime these Swellings by Degrees grow hard and brawny, and continue so many Years.

The gouty Swellings in the Feet, Legs and Hands, that often follow, as above observed, a finished Paroxysm, and continue a great while after it ceases, and the noxious Matter is withdrawn from the Joints, proceeds from the Feebleness and Relaxation of the Fibres of the Skin and Muscles, occasioned by the antecedent Tortures of the gouty Fit, by which they were so excessively vellicated and overstretch'd, that they became incapable of springing back and recovering themselves by a Motion of Restitution: These pale, œdematous Swellings are however by Degrees, as Nature revives and grows stronger, by the only help

of Nourishment restored, and are not a Dropsy nor any Disease at all, but the mere feeble State of the Fibres, that have suffered so much in their late sharp Conflict, and which soon new-braced reacquire their former Tension.

Sometimes white and soft Swellings, like those of a Dropsy, are the Effects of meer Weakness and Decay of native Heat and Vigour; and these are often introduced when the Spirits are enfeebled, the Veins exhausted, and the Blood impoverished by great and long Discharges of impure Matter from putrid Ulcers, either in the Lungs, or other internal, as well as external Parts of the Body; or when by any *Atrophy* or *Marasmus*, the Limbs are extremely emaciated and reduced to the Figure of a Skeleton; and sometimes the Belly and the Legs swell by the Vapours caused by putrefactive Ferments, in a short Time before the Patient expires; in none of these Cases are purgative or diuretick Medicines serviceable, but on the contrary very hurtful, since such Evacuations will sink the Spirits, and debilitate the Tone of the Fibres more, and by that Means instead of reducing, encrease the Distemper by augmenting and confirming the Cause of it.

King *William* the Third, of Glorious Memory, had by a copious Expectoration, not only of superfluous, but likewise nutritious and wholesome Juices for many Years, so exhausted and impoverished his Body, that upon Dissection it appeared dry and unsucculent to
that

that Degree, that all the Blood remaining in his Vessels would scarce amount to a Pound Weight; and therefore the Swellings of his Legs, sometime before his Death, was neither *Hydropick* nor *Scorbutick*, but the evident Effect of the Poverty and spiritless State of his Blood, and the Diminution and Decay of native Heat and Strength; in which Cases not evacuating but corroborating, and a restorative Method of Diet can be availing.

In all these Cases, excepting when a *Scorbutick* Inflammation forbids it, or the Swellings are a Preface and Introduction to Death, the Use of Chalybeate Mineral Waters are of great Service, by invigorating the Blood, and conveying away by the Urinary Passages, the immoderate stagnating Humours. I have known that when purgative and other diuretick Medicines have been tryed in vain to reduce swollen œdematous Legs, that is, beneath the Knee, *Tunbridge* and *Spaw*-Waters have effectually cured them by their invigorating as well as diuretick Vertue; and even a Dropsy of the Belly not yet confirmed, as I am very credibly informed, has by the same Chalybeate Waters been removed.

There are various Kinds of Diureticks, that is, Medicines that provoke Urine, recommended in this Case; but it must be acknowledged that the best and most powerful of them are of uncertain Operation; and it is to be observed, that of all Medicines of this Sort pre-

pared of Minerals, Metals, Animals, or Vegetables, those that are endowed with fixed or volatile Salts, are generally the most prevalent and efficacious; not that they directly and immediately precipitate the Mass of Blood, or cause Coagulations, by which Means the ferrous Humours divide, separate and unclasp themselves from the Embraces of the rest, but by their opposite alkalizate Nature they subdue, and in a good Measure destroy the predominant opposite Parts, and restore a regular and healthful Temperament of Blood, whence it is enabled to expel by the Ureters its superfluous Serosities, not yet extravasate nor introduced into the Habit of the Body.

But it is remarkable, that fixed and lixivial Salts are more celebrated than any of the other Kind for Expulsion of Urine in an *Anasarca*.

Take of the Ashes of Broom four or five Ounces, finely sifted, put them into a Glass Vessel, with a Quart of Renish Wine, and let them stand in Digestion close and hot, three or four Hours; then strain it, and take between a Quarter and half a Pint, every Morning and Afternoon.

Or, Take of Salt of Tartar, or Wormwood two Drachms; Seeds of Burdock, Seeds of wild Carrot, Juniper-Berries, each a Drachm; of Roots of Asparagus, of Burdock, each an Ounce; Tops of the lesser

Of the D R O P S Y. 57

lesser Centaury a Pugil; boil all in three Pints of Water to a Quart; strain it, and add of compound Horse-radish Water, Syrup of Candied Nutmegs, each two Ounces; take a Quarter of a Pint every Morning and Afternoon.

Besides in this Sort of Dropsy, that is, in the Introduction or Declination, Diaphoreticks, or Remedies, that powerfully move Sweat, are very beneficial, in as much as they agitate the Blood, and rouse up and animate the active Principles, before grown sluggish and oppressed. Besides these Remedies put all the Humours in Motion, and by unharbouring them from their Cells, and lurking Holes where they lay asleep, make them fit to be expelled by the Intestines or the Ureters; such as follow may be the Form of a Diaphoretick Medicine.

Take of Lignum-Vitæ three Ounces; of Sarsaparilla an Ounce; infuse and boil them in four Quarts of Water to two; add at the latter End of the boiling, of Sassafras an Ounce; of Root of Burdock and Butter-Burr, each half an Ounce; of the sharp-leaved Sage half a handful; strain it, and take half a Pint twice a Day warm, and add to each Dose of Sal Volatile Oleosum, Twenty five Drops.

*Of the Cure of an ASCITES,
or Dropsy of the Belly.*

IT is difficult to conceive how extravasated Waters, that fill the Cavity of the Abdomen, should ever be discharg'd by returning into the Blood-Vessels, and be excluded thence by the Intestines, or the Kidneys and Bladder, since there are no secretory Ducts, Channels, or Outlets provided by Nature; as far as Anatomists have discovered; by which Passages they may be reconveyed to the Veins; and therefore one would be apt to think that those serous Humours enclosed in the Belly, like those contained in the Breast or Scrotum, could not be removed from their Receptacles, and carried off without manual Operation, that is, by Incision or Tapping: It is however certain, that the hydropick Stores collected in great Quantity in the Abdomen, have sometimes been compleatly discharged, and the Patient perfectly cured, without any Opening or Penetration of the Abdomen; sometimes by the sole Means of evacuating Remedies, and sometimes by sudden surprizing Events. And since the Matter of Fact is certain and notorious, it must be as certain that there are secret Ways of return and resumption, by some Orifices and Outlets in the Fences or Enclosures of the Abdomen; by which
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the stagnating Waters in its Cavity, may be re-admitted into the Blood-Vessels, and mingle again and circulate with their Steams; and I shall here attempt to shew by what secret Conveyances this is done.

And that the Hypothesis I am about to lay down, may appear reasonable and well founded, let us contemplate how Nature makes Use of the Passion of Fear, as a Purgative or Diuretick; for that she does so is very evident by Experience. Fear, a Fright, or Consternation excited by the Apprehension of some great surprising Danger, that seems unavoidably falling on our selves, or near Relations, powerfully provoke either the Exclusion of the Fæces or the Urine; and the Manner how it is effected, can be no other than this. The frightful Object represented strongly to the Imagination, makes a violent Impression on the Spirits in the Brain, which being vehemently agitated, rush through the System of the Nerves with great Velocity, as well as Disorder, not only to the Heart, whose regular Labour it interrupts, but likewise to all other Parts, and particularly to the Glands of the Intestines, or those of the Kidneys. These Spirits driven and disturbed by the Passion of Fear, not only relax and widen the Pores and Orifices of the Strainers before mentioned, but they likewise so precipitate, dispose and modify the Blood, that the serous Parts are more apt to lose their Cohesion, separate from it, and
strive

strive through the gaping Mouths or Outlets of the Organs of Filtration, placed by Nature in the Intestines and Kidneys.

Since then it is very evident, that the naked Passion of Fear, without the Aid of degenerate and incongruous Humours or stimulating Medicines, can produce a great Discharge of watry Humours, as well by the Intestines, as the Bladder, merely agitating the whole Frame of the Nerves, and particularly by suspending the Tension of the Glands, and dilating and relaxing their Passages and Channels, since, I say, the Passion of Fear, by the Manner described, produces such free and large Evacuations by the violent and disorderly Motions of the Spirits only, it is highly reasonable to conclude, that purgative and diuretick Medicines operate in the same Manner, and that internal Humours as well as Medicines, when they occasion such Discharges, act upon the Nerves and Spirits in the same Way, as when frightful Objects act vehemently upon the Brain, scatter the Spirits by an imperuous Motion, and force them into various Errors, and ungovernable Confusion; for that by such irregular and disorderly Incursions, they change the Disposition and Tone of the Glands, dissolve the Firmness of their Fibres, and introduce a flaccid, unbraced and paralytick Constitution of those Strainers; whence their Orifices and Outlets lying wide and open, the serous Parts of the Blood rush through with Ease.

And

And it will hence follow, that the Remedies used to expel and draw off an hydropick Deluge must consist of the most active, irritating and impulsive Particles; as we see that when Nature is disturb'd by external Objects only, the Fear or Affright must be raised to a high Degree before it produces the fore-said Discharges; so must evacuating Remedies be strong and powerful, such as will push and instigate the Spirits with such Force, as to impell them into vehement Motions, by which the Pores and Mouths of the Glands may be widened, and their Channels and Passages enlarged, as before described; especially considering, that in such Cases the nervous and membranaceous Fibres, the chief expulsive and protrusive Instruments, have been long soaked and sodden in stagnating Humours, and therefore are become torpid, sluggish, and unable to exert any considerable motive Force, till provoked and quickened by the awakening Stimulation of such Medicines as bear an eminent, and almost poisonous Contrariety to the Spirits, the first Movers in the Animal Administration.

This Preparation being made, I proceed to explain how the *Hydropick* Humours included in the Cavity of the Abdomen, are sometimes resumed into the Blood, and discharged by the Intestines or the Urinary Conveyances. Let it be supposed, that in the manner before laid down, the Pores or Mouths of the Glands,

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in the Sides of the Fences and Enclosures of the Abdomen, or in any Bowel contained there, become large and open, and at the same Time let it be considered, that the Membranes and muscular Parts of the Belly being extended beyond their native Dimension, are by the collected Waters, brought to a State of elastick Renitence, or Counterpressure, the enclosed Waters must in this Case of Necessity be compelled to re-enter the gaping Orifices of the Glands, and return into the Blood-Vessels by those Inlets; and thus the Manner of draining or excluding the superfluous Waters from the Hollow of the Abdomen, may be sufficiently accounted for.

I have been very credibly informed, that a Patient vastly distended with *Hydropick* Humours, and looked upon as One in a deplorable State, being put into a terrible Fright, by falling accidentally down a Pair of Stairs, immediately began to render so great a Quantity of Water by the Urinary Conveyances, that the whole Cavity of the Belly was soon emptied, and the Abdomen reduced to its regular Dimension: Nor could this Effect have been produced, but upon the Hypothesis I have laid down, that is, the great Enlargement or Extension of the Pores and Channels of the Glands, by the violent and irregular Agitation of the Spirits, during the Fright and Consternation, as before described. And in like manner, violent purging Medicines are often accompa-
nied

nied with the same happy Effect, and by the same way of Operation as before explained; and therefore easy and gentle Purgatives, as *Manna, Senna, Rhubarb, Aloes, &c.* given alone, or only mixed with one another, are in this Case insignificant and unavailing, while they waste the Strength of the Patient, and drain him of his vital Spirits, but not of his superfluous Humours. The purging Medicines that do any service, are those of the most active and stimulating Vertue, such as *Syrup of Buckthorn, Root of Jalap, Gutta Gamba, Elixterium,* and those of a similar Force, and here I will set down the Forms of purging Medicines proper in an *Ascites*.

A purging Draught.

Take of Leaves of Senna three Drachms, boil them in a sufficient Quantity of Spring-Water, to three Ounces and a half, strain it, and add of Electuary of Juice of Roses two Drachms; of Syrup of Buckthorn ten Drachms; of Compound Piony-Water two Drachms; make it a Draught to be taken Fasting in the Morning.

Or, Take of the Juice of Orrice an Ounce; two Ounces of Decoction of Senna Gereon, make a Draught.

Or,

Or, Take these Pills.

Of Pilulae ex Duobus Grains sixteen, of Powder of Jalap Grains Twenty five or Thirty; with the Balsamick Syrup make it into Pills for one Dose.

Or, Take two Scruples of Powder of the Root of Jalap, fifteen Grains of Ginger, and make it a Bolus, with Syrup of Buckthorn.

Or, Take of Electuary of Juice of Roses two Scruples, of Elaterium five Grains, of Oil of Cloves three Drops, of Cinnamon Grains five, Syrup of Buckthorn as much as suffices to make it a Bolus; to be taken in the Morning, and let the Quantity of the Elaterium be encreased or diminished in Proportion to the Patient's Strength, that either can bear more or not so much Evacuation: And at the Interval of three or four Days, let it be repeated for three or four Times; and at Night let him take after each Purging two Scruples of Venice-Treacle.

But it is here to be observed, as before, in an *Anasarca*, if any of these powerful Purgatives have been tryed two or three Times without Success, that then the Physician should desist from prescribing them; for should he continue that Course, instead of emptying the Belly, he will only consume the Strength of the Patient, and reduce him to Extremity. It is most

most adviseable then in this Case, that the Physician forbearing evacuating, should direct only corroborating and alterative Medicines. For Example :

Take of the Tops of Roman Wormwood, Leaves of Germander, each a handful; of the outward Peel of the Orange a Drachm, of the Root of Gentian and Snakeweed, each a Drachm; of Cardamoms and Coriander Seed each a Drachm; infuse all in a Quart of hot Water to the Quantity of a Pint and half, strain it, and add half a Pint of Steel Wine, and half an Ounce of Myrsicht's Chalybeate Tincture. Take five or six Spoonfuls of this Tincture every Morning fasting, and in the Afternoon about five a Clock; repeat it for a Month; and then after a Week, take the Quantity of a large Nutmeg every Morning and Afternoon, of the following Electuary, drinking after each Dose a Draught of the Tincture prescribed, or a small Glass of Viper Wine.

Take of the Pulp of candied Citron, of the Conserve of the outward Peel of Orange, each an Ounce and half; of Powder of Arum Compound three Drachms, of candied Nutmeg two Drachms, of Salt of Wormwood two Drachms, of the Syrup

of

of candied Nutmegs as much as will make it an Electuary.

Or, *Take of Myrrh and Asa fœtida, each a Drachm and half; of Extract. of Gentian, Salt of Amber, Tartar vitriolated and Root of Snakeweed, each a Drachm; Steel prepared with Sulphur a Drachm and half, Ammoniac dissolved in Tincture of Castor as much as will make it into a Mass; form it into Pills of a moderate Size, and take four every Morning and Afternoon, instead of the Electuary, and drink after every Dose a Draught, (viz.) four Ounces of the bitter Decoction without the purgative Part.*

Thirty Drops of Spirit of *Hartshorn*, of *Sal Volatile Oleosum*, of Compound Spirit of *Lavender*, taken twice a Day in any proper Liquor, as likewise frequent Friction of the Limbs to agitate, move, and mingle the Mass of Blood, and assist its Circulation, will be beneficial during this Course, which will prepare the Way for the more successful Operation of evacuating Remedies, chiefly of the diuretick Kind.

And after the Patient has for a Month's Time taken such invigorating Remedies, and his Blood is enlivened, and his Spirits in some measure raised and restored, then let him take sometimes the most powerful Diureticks, and some-

Sometimes the most active Purgatives, which after the strengthening Course before set down sometimes meet with great Success.

Of all purgative Remedies, I have found *Elaterium* the most prevalent and efficacious, for I have seen extraordinary Effects of it in several Instances, where the Abdomen has been entirely drained of its great Lake, particularly in this that follows.

I was sent for about Twenty Years ago to an *Hydropick* Patient that lay in extream Danger, with his Belly swollen and extended to a prodigious Dimension, attended with such Weakness and difficult Breathing, that I looked on him as expiring : However, in this seeming deplorable Condition, having prescribed for him three Grains of *Elaterium*, and ordered him to repeat it twice more, interposing a Day between each Dose, I took my leave of him, fully believing I should see him no more : Bnt about six Months after, to my great Surprize, I met him walking in *Cheapside* ; and having saluted him, I told him I was much startled at his Sight, for I concluded he had been dead and buried long ago : He answered me, that the Medicine I had directed him to take, had entirely carried off his Dropsy, and that now he was very well : And he possessed perfect Health many Years, and does so I beleive to this Day. It is true, that a strengthening Steel Course, ought generally to follow so great an Evacuation, that the

leaky Vessels through which the hydropick Inundation broke into the Hollow of the Abdomen, might be so far contracted and repaired, as to be able to keep back the Flood, and prevent its Irruption into that large Receptacle another Time: Nor is it sufficient to restore the Patient only by draining off the stagnant Pond of Waters, though even that is very difficult to effect, but the relaxed Tone and Disposition of the Glands must be recovered, and those Strainers must again acquire such a just and regular Dimension of their Pores and Entrances, that no greater Proportion of Moisture or Serum may be suffered to pass through, than the Exigencies of Nature shall demand: For unless these Openings, Leaks, or Meshes in the Glands are stopped and repaired, the same Symptoms must return, and another Deluge will rush into the Belly, through the old neglected Breaches, and introduce the same specifick Dropsy, and perhaps more dangerous, while Nature is more enfeebled and worn, and therefore less able to expel a powerful Enemy, that a second Time has stormed and taken Possession of her Works.

I have shewn, that one Cause of an *Ascites*, is a wide and lax Contexture of the Glands, by whose Mediation an inordinate Quantity of Serum, is strained into the Body.

Another Cause of an *Ascites*, as well as an *Anasarca*; is the Diffusion or Precipitation of the Mass of Blood; that is, when there happens
a great

a great Solution and Difunion of the ferous Parts from the rest, and when those are become more thin and fluid, and these more close, and as it were coagulated: For while the watry Parts of the Blood are dissolved, unconnected, and broken off from the close Embraces of the other Parts of the Mass, and at the same Time, the Outlets of the Glands are wide and open, the watry Humours with great Ease will find their way to glide through those Glands, and fill up the ample Cistern of the Abdomen: And only to discharge them with strong Purgatives is ineffectual; for this is no more then to drain the Waters, and empty the sinking Vessel by plying the Pump, while the gaping Chinks by which they entered are left unstopped, and may soon admit more to supply the Place of the former.

When therefore strong purgative or diuretick Remedies have emptied the Cavity of the Abdomen by the Way before explained, strengthening and invigorating Remedies must be diligently employed to prevent a Return of the Distemper, which they will do by performing two Things: First, by restoring a closer Cohesion of the Serum with the rest of the Blood, a Dissolution and Relaxation of the harder combined Parts, as well as a regular and equal Mixture and Constitution of the whole Mass, by which the watry Parts may be so well united to, and retained in a strict Connexion with the rest, that they may not get loose, and

separate from them by the Mediation of the Glands, in a greater Degree than a healthful State requires. And the second Thing demanded to prevent a Relapse is, to straiten, or draw closer together the Pores and Channels of the Glands, that they may not suffer so large a Proportion of Serum to slide through, as will by continual Dripping or Distillation swell the Abdomen, by filling up its Cavity with extravasate Fluids; and this cannot be better effected, than by the use of Chalybeates united with other alterative strengthening Medicines: Such as are set down in the Forms following.

Take of Tops of Roman Wormwood, the less Centaury, the Root of Gentian, Virginian Snakeweed, each a Drachm; of Seeds of Coriander three Drachms; infuse all hot in a sufficient Quantity of Spring-Water to a Pint and half; strain it, and add half a Pint of Steel Wine, and three Drachms of Tinctura Martis Mynsichti, make it a Tincture; and let the Patient take six Spoonfuls every Morning, and drink after it half a Pint of Spaw or Tunbridge, or other well-esteemed Chalybeate Waters, and repeat twice or thrice, interposing about half an Hour between each Glass; and take the same Draught of the Tincture in the Afternoon, with only half a Pint of the Water for the Space of a Month.

Or

Or use the Electuary following.

Take of Pulp of Candied Citron-Peel an Ounce; Conserve of Roman Wormwood and the outward Peel of Orange, each half an Ounce; of Candied Nutmeg a Drachm and half, of Salt of Wormwood four Scruples, of compound Powder of Arum or Wake-Robin, two Drachms; of Salt of Steel, and of Steel prepared with Tartar, each a Drachm; of the Syrup of Candied Nutmegs as much as will make the Ingredients into an Electuary, of which take the Quantity of a large Nutmeg, drinking after it half a Pint of Spaw-Water, or a small Glass of Viper-Wine, or four or five Spoonfuls of the Julep following.

Take of Milk-Water ten Ounces, of Compound Horse-radish Water, and Compound Wormwood Water, each two Ounces; of Compound Spirit of Lavender two Drachms, and Tincture of Saffron in Canary an Ounce; mingle them and make them a Julep.

Clear, dry and well ventilated Air, as it inspires the Blood with a more active Flame of Life, exalts and refines the Animal Spirits, promotes the Appetite or Desire of Eating, and quickens the digestive Faculties, ought to be prescribed for attaining a perfect Recovery; nor is moderate Exercise by riding in a Coach or

on Horseback to be forgotten ; in as much as this Remedy, not only by agitating and pushing on the Streams of Blood through all their branching Channels, to make them circulate with a due and regular Velocity, but likewise by stirring and mingling the Fluids, till they acquire a more just and salutary Temperament. Of these Advantages of Air and Exercise I have discoursed at large in my Treatise of Consumptions.

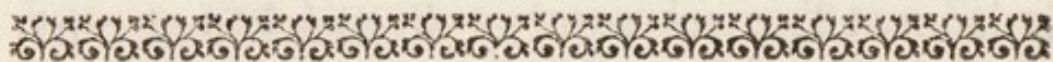
It ought here to be remarked that a Dropsy, either an *Ascites* or *Anasarca*, is often complicated with a Jaundice, when either the one or the other arise from an obstructed Liver. For as the Jaundice proceeds from the Stoppage of the Pores and Passages of that eminent Strainer, which conveys the bilious Recrements to the Gall-Bladder, its common Recipient, whence the Choler regurgitates and returns to the Blood, and carried round with it, infects and stains the Arms, the Eyes, and the Surface of the Body ; so a Dropsy sometimes arises from the same Obstructions in that Bowel, that is, hard Tubercles or Schirrous Swellings formed of steatomatous or other anomalous Matter, by which the Glands and Lymphæducts are easily depraved, or quite ruined, from whose Breaches the serous Parts may issue into the Abdomen, and by Degrees distend it to a great Dimension : And when an *Ascites* and a *Jaundice* are thus complicated, the Cure is very difficult, and not to be accomplished, if that

that Distemper be confirmed and inveterate ; though either Enemy single, especially the Jaundice, will often yield to proper Methods of Cure : But more of this in my following Treatise of the Jaundice. When a Dropsy of the Abdomen depends upon Tumours, Ulcers, or a depraved Constitution of the Glands of the Mesentery, or of the Bowels in the Abdomen, it is exceeding hard to be mastered, but never harder than when associated with a stubborn Jaundice. But since it is sometimes cured when the icterical Malady is moderate and not of long standing, it is not wholly to be neglected as utterly deplorable : Therefore it is necessary to employ hepatick and anti-icterick Remedies together with those that more directly respect the Cure of the Dropsy, as in the manner following.

Take of the Conserve of the outward Peel of the Orange an Ounce and half, Conserve of the Leaves of Wood-Sorrel six Drachms, of Salt of Amber and vitriolated Tartar, each two Scruples, of the Species of Turmeric two Drachms, of Anima Hepatis or Salt of Steel, a Drachm and half, Syrup of the five Opening Roots, as much as will make it an Electuary : Take of it the Quantity of a Chestnut every Morning and Afternoon about five a Clock, and drink after it

it a Quarter of a Pint of the following Apozeme.

Take the Root of the greater Celandine, Asparagus, Dyer's Madder, Sorrel, sweet Fennel, each half an Ounce; of the less Centaury a Pugil, of Seeds of Coriander, sweet Fennel, each a Drachm; boil all in three Pints of Spring-Water to a Quart; strain it, and add of Tincture of Saffron in Canary-Wine an Ounce and half, of compound Spirit of Lavender two Drachms, and make it an Apozeme, to be taken as directed for three Weeks.



Of the Method of treating an Hydrops Ovarij.

THIS Species of a Dropsy consists, as above described, in a large Collection of serous Humours contained in a Cystis or Bag, formed from one of the depraved Ova or vitiated Glands of the Ovarium, and gradually extended to a Dimension sometimes capacious enough to hold many Gallons of Water, and filling up the whole Cavity of the Abdomen, and thereby imitating an *Ascites*, that proceeds from Waters discharged into the Receptacles of the Belly, from the Glands, or the Rupture of a Lymphæduct, as before described.

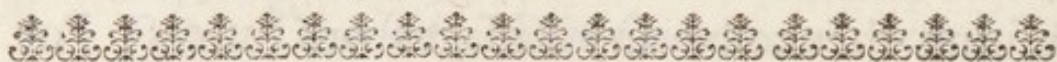
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And this Dropsy of the Ovarium is therefore incurable, because the Serum enclosed in tough Membranes, that Nature from Time to Time thickens and enlarges, is incapable of issuing thence by any Passages or Outlets: For such is the strict and close Contexture of these Skins that encompass the Water, like that of the Bladder, that no minute Pores or interspersed Vacuities are formed in them, by which the imprisoned Humour may be excluded.

In this Case then all that remains to be done, is, when this Distemper is first discerned by a painful and unequal Portuberance or Swelling in one Side of the Belly as above explained, Purgatives of middle Force should be administered and repeated as oft as the Strength of the Patient will conveniently bear it, that so the watry Humours may in Part be drawn away from the Receptacles, where they begin to be collected, and others may be prevented from issuing into them: And for the same Reason diuretick Remedies, such as above mentioned, will be beneficial, by solliciting and carrying the Serum another Way, and hindering it from supplying and feeding the Cystis or Receiver formed in the Ovarium, and stopping in a Measure the Progress of the Swelling,

The Patient ought not to administer Materials to her Disease, by inordinate drinking of any Liquors; but on the contrary, to retrench
even

even such a Quantity, as would be no more than moderate, and warrantable in a healthful Person.



Of the Method of Treating a Dropfy in the Breast.

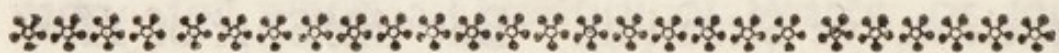
THIS Disease, discovered by laborious Breathing, great Oppression of the Chest, and a sensible Fluctuation in the Cavity of it upon the moving the Body in Bed from Side to Side, is almost as hard to cure as the former; for when a Quantity of Water or serous Humours are emptied into the Hollow of the Thorax, either from a broken Lymphæduct in the Lobes of the Lungs, or by Means of depraved Glands, whose Channels and Inlets excessively distended, as in the Case of an *Ascites*, permit the serous Parts of the Blood to pass through and distill into the Receptacle of the Chest, as an Empyema is produced by the putrid or ichorous Matter, discharged from the Disruption of an Ulcer in the Pleura, or the Intercostal Muscles: Nor can it be cured but by Opening of the Side by the Surgeon's Operation, and letting out the collected Waters: For the Medicines mentioned above, in Case of a *Hydrops Ovarij*, and which only are useful in this Case, can do no
more

more than stop in some Measure the Growth of the Distemper, and the filling up of the Cavity of the Thorax.

As to the Cure of a *Hernia Aquosa*, which is a Collection of Water in the Scrotum, that distilled into that Receptacle from the Pores or Orifices of depraved Glands, too much amplified and extended. This Disease differs from a *Hernia Carnosa*, and *Inguinalis* in this Respect, that the first is produced by a fleshy Swelling, and the other, by a Collapsus or Descent of the Gut into that Cavity, by Reason of the flaccid State of the Peritonæum, the Membrane that encompasses the Intestines, which is no longer able to uphold and keep them in their native Situation. But this Sort of *Hernia*, of which we are discoursing, consists in a redundant Quantity of limpid Serum, weeping from the depraved Glands of the Scrotum.

Nor is the Method of Cure difficult, when the Distemper is discovered; and that is done, as said before, if the Surgeon darkens the Room and holds a lighted Candle on the Side of the Scrotum opposite to him; for then if the Swelling arises from enclosed Water, the Cavity of the Bag will be in some Measure transparent, by Means of the Light penetrating and passing through the Medium, so that he may discern it to be watry; and when, I say, the Nature of the Disease is discovered, the Surgeon has only to pass the Point of his Lancet through the Side of the Scrotum, and he will immedi-

immediately let out the fluid Contents, and reduce it to its former Constitution, by which the Patient is presently relieved. And if after a Year or more the same Symptoms return, the same Operation must be repeated, and so *toties quoties*; and by this easy Remedy the stagnating extravasate Serum will be happily discharged, which otherwise by a long Imprisonment there, and being left out of the Animal Regimen, might not only grow acrimonious and putrefy, but also macerate and corrupt the Fibres of the enclosing Bag, so as to produce an Ulcer, and at length a Mortification.



Of the Cure of an Hydrocephalus.

THIS Disease is an œdematous and pappy Constitution of the Integuments or Surface of the Head, occasioned by inordinate Serum issuing from the Glands, and not reformed or admitted again to mingle and circulate with the Blood; and therefore this is no other than a partial *Anasarca*, or a Dropsy of that Part, by Reason of an immoderate Quantity of Serum excluded from the Blood, and lodged in the Pores and Interstices of the Muscles, but not collected and contained in any ample Receptacle.

ceptacle. And for the Method of Cure, I must refer the Reader to the Chapter, where I have discoursed of the Cure of an *Anasarca*, where he will find what Purgatives and Diureticks, and likewise what corroborating and alterative Medicines and Methods are most proper for the Removal of this Distemper, which seems but a Branch of the other, as before observed.

As to the *Hydrocephalus*, that I named Internal, because it consists in extravasate Water between the Membranes that encompass the Brain, or in any of its Cavities or Receptacles, this is of the same Kind with an *Afcites* and *Hydrops Pectoris*, as I said above, in as much as this Species chiefly belonging to young Children, is a Collection of Serum issuing from the wet and flabby cortical Substance of the Brain, and received into the forenamed Repositories, where if they remain long out of the Road of Circulation, they contract, for want of Animal Inspiration and Motion, an acid, acrimonious, or austere Temper, by which the Membranes, that enclose them, are pricked and vellicated, and while the Spirits, their Inhabitants, are greatly provoked and stimulated; whence Infants, who are far more liable to this Distemper than adult Persons, are often afflicted with dangerous, and very often fatal Convulsions; and I look on excessive Humours lodged in the Brain as the principal Infanticides or Destroyers of Children.

The Method of CURE.

IN this Case, where the superfluous Serum not only fills the Cisterns of the Brain, but gives its Substance a morassy Constitution, even to that Degree, that it often swells the Head, and by intervening prevents the Closure and Coalition of the Sutures of the Skull : To relieve the Infant, easy Purgatives, whose Force is proportioned to the Age and Strength of the Patient, as *Manna, Rhubarb, Syrup of Peach-Flowers, &c.* ought frequently to be administred, and gentle puking Remedies are sometimes profitable, as well as volatile Spirits, such as those of *Hartshorn, Sal Volatile Oleosum, Tincture of Castor, Spirit of Lavender* in a small Quantity, given often in distilled Water of *Rhue* or *Pennyroyal* ; and sometimes a Child's Spoonful of compound *Bryony* or *Piony-Water*, diluted with either of the two Waters before named.

But in the Case of adult Persons, where from the Symptoms in the Head, as a drowsy, sleepy, lethargick Disposition, there is just Reason to suspect that an inordinate Quantity of serous Humours are admitted into the Brain, where they clog and oppress the Spirits, and render the Patient, torpid, heavy and unactive, the Method of Cure must be like that in an *Ascites*.

Quick and vigorous purging Remedies, such as Powder of the *Root of Jalap*, *Gutta Gambæ*, *Syrup of Buckthorn*, *Elaterium*, &c. administered at proper Intervals, and in such a Quantity, as the Patient's Strength will bear. The Head may be shaved, and a Plaister of three Parts of *Emplastrum Cephalicum*, and one of *Epispastick* may be applied to it. Blisters between the Shoulders and on the Sides of the Neck will be profitable, and a perpetual Blister on the Back-part of the Neck, or Interscapulary will be serviceable; so likewise will be active sneezing Powders, or Liquors of the same Virtue; such as the Juice of *Primrose Root*, and others of the like Force: And in short, all evacuating and stimulating Remedies, that either awaken and rouse the Spirits, or in a plentiful Manner empty the Body of watry Humours, must be of great Advantage in this Case.

When an *Ascites* or Dropsy of the Belly has filled all the Abdomen, and becoming stubborn and inveterate, has eluded all the Force of Medicine, and Nature is ready to sink under the oppressive Burden, Physicians are obliged to call the Surgeon in Aid, and direct him to peirce or tap the Abdomen, by passing through its Side a proper Instrument: And by that Aperture to empty the Belly through the Orifice of the Wound. And this Operation has sometimes prevailed, and would more often be successful, if performed with good
 G Judgment,

Judgment, and at a proper Season. It will therefore be fit to mention some Rules concerning this manual Remedy; and in the first place in respect of the Distemper, it must be simple and uncomplicated with the Jaundice, as well as with Tumours, Obstructions, and internal Ulcers: For it often happens that some of the numerous Glands of the Mesentery, Intestines, Kidneys, Liver, &c. are obstructed, inflamed, or ulcerated; and in such Cases, if an *Ascites* follows, as an Effect, or accompanies them by Accident, being produced by other Causes, such as are before enumerated, it is certain this manual Operation is not to be encouraged: For it will be in vain to let out the superfluous Serum collected in the Abdomen, when, though that should be happily performed, the Diseases of the Bowels, or other Contents remain incurable; nor can this Operation of Tapping be approved and prescribed in the Yellow Jaundice, united with a Dropsy that arises from the obstructed Strainers and depraved Constitution of the Liver; for though the collected serous Humours stagnating in the Hollow of the Belly, should be compleatly discharged through the Orifice or Wound made in the Side, yet the hard scirrous Tumours, and anomalous Concretions or Ulcers in the Liver, that produce the Jaundice, and accompany the Dropsy, will by no means be cured by excluding the hydropick Collection from the Abdomen, and letting out the standing
Lake:

Lake : For this may be done while the before-mentioned Diseases shall continue in their full Vigour, and defy the Force of Medicine and the Skill of the Physician. In this Case, where the Dropsy proceeds from depraved, corrupt, and unsound Bowels, or at least is combined and coincident with them, the unhappy Patient being generally, though not always irrecoverable, the Cure is to be attempted by the Method before set down, where proper Remedies against the Jaundice are mingled with others that respect the Dropsy.

The Physician, as said above, must exercise his Care and Judgement, in distinguishing between a great Belly in the Female Sex, from Pregnancy and a Dropsy, lest the Instrument that penetrates the Mother's Side, should at the same Time pierce the unborn Infant's Head or Body ; as once had happened through the Doctor's Mistake that appointed the Operation, had not the Patient's sudden Labour and bringing forth a Son, prevented the tragical Execution.

The most sure and safe Operation of this Nature, is, when the *Hydropick* Humours are not contained in the Cavity of the Abdomen, but in the Duplicature of the Peritonæum, which must be left chiefly to the Judgement of the skillful Surgeon, that is versed in such Distempers, and in this Method of Cure.

If the Patient's Bowels are found in a simple or unmixed *Ascites*, and the Physician ad-

vifes the Patient to be tapped, it will be worth the Enquiry, whether the enclosed Waters fhould be emptied, or let to run off all at once, or at feveral Times, after certain proper Intervals. The laft Opinion and Practice have long prevailed, having been judged moft fafe and fucceffful, while Phyficians and Surgeons apprehended that the Patient would faint and fink away by difcharging many Gallons at once, though of unneceffary and recrementitious Humours, which however contributed fo much Heat, Strength, and Comfort to the Abdomen, that the immediate Emission of it all, and the quick Reception of the Air and Vapours to fill the Cavity of the Belly, would, as they believed, not only chill and cool the Bowels, but likewise caft a fatal Damp upon the Spirits, by leaving them defrauded at once of the Warmth and Refreshment which they constantly received from the ferous Humours contained in the Belly, though depraved and fuperfluous. And it is true, notwithstanding this Precaution of emptying the Belly by Degrees and at feveral Times, many Patients have miscarried under this Conduft.

On the other hand, an ingenious and fkilful Surgeon has affured me, that he has more effectually faved *Hydropick* Patients, by piercing the Abdomen, and letting all the included Waters run off at once, while, as thofe Waters iffued out, and the fwollen Belly fubfided by Degrees, he by the Ufe of proper Bandage
or

or Swathing, compressed the Abdomen, and continued to draw it closer and closer, as the Waters were drawn off, so that the Contiguity or near Neighbourhood of the Parts, was preserved during the gradual Discharge of the ferrous Contents; whence no unnatural Vacuities were left to admit any great Quantity of Air, or hinder the near Approach of the Contents of the Abdomen one to another; whence the vital Heat of the Parts, and due Vigour of the Spirits being maintained, no Mortification in the Abdomen, and no fatal Deficiency, or Loss of Strength followed upon the Operation. This seems indeed a rational Procedure, and it is to be hoped that more such Tryals have been since made with Success, that may recommend this Method to general Practice.

This manual Operation then is to be attempted when the Belly is much distended, and not affected with any of the Diseases before-named, and before the Vigour of the Patient is too much spent, and the Fibres of the enclosing Membranes, and the Bowels and other Contents of the Belly, are not too much sodden, macerated and relaxed, and their Animal Heat so much diminished as to be disabled from performing their native Duty, and to be near to a State of Mortification; and the Reason so many miscarry in this Operation, as I believe, is their delaying and putting it off so long, even to the last Extremity, when Nature is exhausted, and her Stock of

86 *Of the* D R O P S Y.

Strength and Spirit so far spent, that she can contribute little to her own Recovery, or even support herself under the Means of her Cure.

When the Belly is emptied, the Waters discharged, and the Patient survives all the Difficulties and Consequences of Tapping, Care must be taken to restore his Strength, and stop the Leaks of the lax Glands or lacerated Lymphæducts, that the *Hydropick* Deluge may not return, as otherwise it is very apt to do, as said before, the Pump is not sufficient to save the Vessel, if the Leaks and gaping Chinks are not closed, to prevent the rushing in of new Waters, that supply the Place of those that are pumped out; and for these Ends those Remedies are to be employed, that are set down above, to be used after an *Ascites* is removed by Purgatives or Diureticks.





O F A

TYMPANY.



HIS Distemper, by the Prominence and Elevation of the Abdomen, much resembles an *Ascites*, from which however it is essentially diversified by this, that in the first Case, the Protuberance and Distention of the Belly does not arise from a great Quantity of Water collected in the Hollow of the Abdomen: Now where no Superfluity of extravasated Serum or Water is found, no Disease can be denominated a Dropsy. However, since this Distemper has so great a Similitude to an *Ascites*, and has vulgarly been reputed a Dropsy of that sort, I will in this Place Discourse briefly on this Subject.

A Tympany is a Turgency, or a hard Inflation of the Abdomen, braced in some Measure like a Drum, and while it continues hollow,

or filled up only with Air or Vapours, and gives when beaten or struck upon a Noise, like the Sound of that Instrument, from which it receives its Denomination. Distention or other Intumescence, is incident to various Parts of the Body, to the Region of the Ventricle, the Sides or Hypochondria, the Spleen, Colon, and other Intestines, sometimes of shorter and sometimes of longer Duration, but rarely fixed in so obstinate a Manner, as in a Tympany.

All these Kinds of Turgency and unnatural Amplitude of the Parts of the Body, have been judged to be the Effect of Wind and Steams collected there, that striving and urging, like subterranean Vapours, to enlarge their Room, extend and swell the Parts that enclose them, particularly the Cholick, as well as *Hypocondriacal* and *Hysterical* Intumescences of the Abdomen, have this Effect; and as nothing is more common than to ascribe the Distemper called the Spleen, or Hypochondriacal Evil to Flatulency, so the vulgar Opinion of Hysterick Passions or Disorders in the Female Sex, is attributed generally to Wind imprisoned in the Bowels, or Storms of Vapours rising from the Inferiour Region to the Breast, Throat and Head, whence all the violent Perturbation, and convulsive Disturbances, that accompany this Distemper, are propagated through the whole Body. But this Account of those Phenomena, however it may be relished by low and vulgar Capacities, will by no Means satisfy

satisfy Men of Judgement and a Philosophical Taste. It seems far more probable, that Winds and Fumes included in the Cavities of any Bowels, should be the Effect and not the Cause of their Enlargement and Distention.

But these Symptoms, as I have at large explained in my Treatise of the Spleen or Hypochondriacal Distempers, proceed from a different Original; and as to Flatulencies and Vapours generated in the Abdomen, that affect the Bowels and Intestines contained in it, they are produced by the Enlargement of those Bowels and Intestines from another Cause: For when any considerable Vacuities are made by widening or preternaturally amplifying any Part, Winds and Steams will of Course run in to fill up those Vacuities. For Example: When a Bellows is extended, the Air instantly rushes in to fill the Hollow, but is by no Means the Cause, but the Effect of stretching the Bellows: And when the Bellows subsides or is close contracted, the Air is presently excluded and the windy Distention disappears. Thus when a Tympanical Distemper swells the Belly, and raises up its Concave to a vast Circumference, the Winds and Waters rarified into Vapours, by Nature's established Law, will soon fill the empty Space: And when the Tumour either sinks of it self, or by the Assistance of proper Remedies, the imprisoned Steams and Reeks collected in the Abdomen are expelled, and the Belly recovers its natural

ral Dimension. And thus it is with other In-
 flations and Intumescences, when the Stomach,
 Spleen, Colon, or other Intestines, are from
 another Cause stretched to a painful Degree,
 as shall presently be explained, and at length
 the Paroxysm ceasing by Nature or Art, the
 affected Parts subside, and are contracted to
 their usual Size, and then the Fibres regaining
 their wonted elastick Vigour, explode the
 Winds and Vapours, that ran in to supply the
 Vacancies during the Fit, either by the Road
 of the Intestines, or by that of the Mouth ;
 whence the Patient attributes wrongfully the
 Cause of his Sufferings to those Winds, be-
 cause after their Expulsion, they find them-
 selves at Ease ; for the true Reason of their
 being at Ease is, that the Fibres of the distend-
 ed Muscles and Membranes after the Paroxysm
 is past, returning by their Motion of Restitu-
 tion to their native Posture, compress and
 exclude those Winds and Vapours, that upon
 the Swelling and Dilating of the Part passed
 in to fill the Vacuities occasioned by it ; so
 that the Expulsion of Wind is the Effect of
 the subsiding of the Part before over-stretcht,
 and a Mark or Sign that the Paroxysm is de-
 clining or quite ceased.

And that enclosed Wind is not the Cause
 but the Effect of a Tympany, may farther be
 concluded from this Reason ; that were it in-
 deed so, as it appears to vulgar Apprehension,
 that Disease, which so much defeats the Force
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of Medicine, instead of being difficult to be cured, as it is hard at first to be discerned, would most easily be removed : For if imprisoned Vapours or Effluvia were the Cause of the Inflation or Tympanitical Protuberance, the Physician would have nothing more to do for the Relief of the Patient, than to direct a Paracentesis, and by Piercing or Tapping the Abdomen give Vent to the windy Prisoners, that would soon make their Way through the Outlet, and rush *agmine facto*, like a released Tempest, into the open Air. It is therefore manifest, that the efficient Cause of a Tympany is of a more hidden Nature, which I now proceed to explain, or as far as I am able to attempt it.

This Disease then is, as I said before, a Prominence or Swelling of the Abdomen imitating that of an *Ascites*, proceeding from the unnatural Distention of the Fibres of the Muscles and Membranes that encompass the Belly, and not from serous Humours enclosed in the Cavity of the Abdomen; and the Cause of it may be thus accounted for. Suppose the Animal Spirits that perform duly in those Parts, should from an inordinate Temperament and Constitution, rush with too much Force and Velocity into those Places, and by that Means stretch their Fibres beyond their staple or native Tension, whence they become unable to spring back and recover their due Length and Situation, it must necessarily follow

low that the Portuberance of the Abdomen must continue ; nor must it not only remain without subsiding, but by the continual Access of the Spirits arriving there with too great Violence and Celerity, the Fibres, that were too much before extended and had lost in some Measure their elastick Energy, are yet more stretched, and vault the Cavity of the Abdomen with a wider Arch.

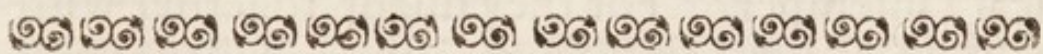
Since the Distention of the Muscles and Membranes of the Parts affected in hypocondriacal, hysterical and cholical Paroxysms owe their Production to the inordinate and convulsive Motions of the Animal Spirits, that enter their Fibres with too great Force and Celerity, as above suggested, This will illustrate the present Case, and lead us into the Way how to unriddle the mysterious Cause of a tympanitical Elevation of the Abdomen, and shew whence it comes to pass, that the Convex of the Belly, is sometimes stretched out to such a wide Circumference. The Swelling of the Spleen and Colon, the Intumescence of the Belly in the hysterick Passions, and the Inflation of the Stomach are evidently, as I have said just now, and proved elsewhere, the Effect of the impetuous and disorderly IncurSION of the Spirits into the Pores and Passages of the nervous Fibres, by which they are excessively extended and made incapable of leaping back again and regaining their former healthful Position ; which is illustrated
by

by a Sprain, when the tendinous Threads, or Strings are so immoderately over-stretched, that losing their Spring, they are unable to restore themselves, and reassume their native Tension : In like manner, in those convulsive nervous Diseases, where the Limbs become stiff and motionless, and the Back so rigid, as to be incapable of being bent forward for the Space of several Hours, particularly in Hysterick and Epileptick Paroxysms ; which Symptom is occasioned by the vehement breaking in of the Spirits, that so far extend the nervous Strings beyond their due Tone, that they continue in a State of Violence, till reduced by Nature's Power, or the Physician's Assistance.

Let it then be considered that in like manner, the Fibres of the Muscles and Membranes of the Abdomen, by the impetuous and irregular flights of the Spirits entering into them, are extended so much that they cannot start back and return to their natural Posture, they must of necessity, while thus obstructed, become rigid and braced like a Drum, which cannot be the Effect of imprisoned Wind and Vapours bred within the Cavity of the Belly : Nor does the Hypothesis of the Learned Doctor *Willis* sufficiently account for this Phenomenon, who attributes the Tympanitical Protruberance of the Abdomen to the IncurSION of the Spirits into the muscular and membranaceous Fibres with too great Vehemence and Celerity,

Celerity, and to the subsequent Stoppage and Obstruction of the nervous Juices in the Passages of those Threads that hinder or bar the Return of the Spirits, which being constantly augmented by new ones rushing in, and few or none returning by Reason of those Impediments and Obstructions, swell the Belly to so great a Dimension. The Flaw in this Supposition is this, that it cannot be imagined how the Obstructions mentioned should admit the Ingress of the Spirits into those Passages, and at the same Time stop their Regress, for the same Degree of Openness and free Passage will equally serve both for the one and the other; so that if the Obstruction be not so great as to hinder the Entrance of the Spirits, neither is it too great to stop and interrupt their Return; for by the same Quantity of free Space, by which they made their Entrance into the Fibres, they may evidently come back. This Hypothesis therefore was spun with too fine a Thread, and I rather chuse, in this nice and difficult Subject, to abide by the Scheme I have laid down; that is, that the inordinate Tension of the Fibres, from the violent Entrance of the Spirits into them, and by which they are overstrained, and lose their vibrative Faculty and self-restituent Motion, is the genuine Cause of a Tympanitical Intumescence of the Abdomen. After all it must be acknowledged, that as the Causes of all Diseases arising from the Indisposition and depraved Constitution

tion of the System of the Nerves and Animal Spirits, are the most difficult to be accounted for; so those of a Tympany, one Species of nervous Distempers are very abstruse and hard to be explained by any Hypothesis. That however which I have laid down seems to me the most rational, and the least obscure. But it is more material to know how to cure this Disease than to explain it; and since the Cause is so dark and intricate, the Method of Cure must be likewise very difficult and uncertain: For how can the Physician accomodate Remedies for the Extirpation of a Disease, whose Constitution and Nature he does not understand?



Of the Method of CURE.

IT is no Wonder that the ancient, and for the generality the modern Physicians, who believed that in a Tympany the Abdomen was in a bladdered State, or like a Canvass-Sail swollen and bellying forward before the Wind, should summon together all the carminative Powers, all the Seeds, Leaves, Roots, Flowers, and warm aromattick Druggs, endowed with any superiour Vertue and peculiar Energy, to break open this Æolian Den, and release the imprisoned Exhalations; but all these Provisions and immense Collection of powerful Medicines

Medicines to explode the struggling Vapours supposed to be inclosed in the Belly, and stretch the Muscles and Membranes to gain more Room, are insignificant and unavailing, as not at all concerned with the genuine Cause of a Tympany. Thus in the same manner, but in vain, they sometimes administered potent Drugs, for the Expulsion of *Hypocondriacal* Flatus's; and happy had it been if those Drugs had proved effectual; for then they had not only removed the severe Symptoms in the lower Region, but by the Explosion of the Wind and Vapours, they might have saved the Brain it self from many hurtful Effects, that are often produced in the Head by that whimsical Distemper. For they might together with the Flatulencies and Vapours, exploded through the Tubes of the Intestines, have intercepted and carried down the *Hypocondriacal* Winds, before they had reached the Head; whence that noble Organ might have been preserved from being disturbed by odd Appearances, Enthusiastick Phantasms, and visionary Scenes, as well as the Body might have been relieved from many hysterical Perturbations and cholical Sufferings: This, I say, had been the happy Event, had either of these Diseases taken its Rise from Exhalations and gathering Tempests in the Cavity of the Abdomen. But the Case is quite otherwise; for in Tympanitical, Hypocondriacal, and Cholical Storms, the Wind is only the Effect of the Distemper, while it rushes in
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to fill up the amplified Space, occasioned by the Protension and Elevation of the Belly, arising from the Incurſion of the Animal Spirits in a ſpaſmodick or tetanical State or Diſpoſition, and is by no Means the Cauſe as before explained. And when the rigid and tenſe Conſtitution of the Abdomen relaxes and ſinks down, the Wind of Courſe is expelled, as it is after a Fit of either of the forenamed Diſtempers.

It is therefore reaſonable to inſiſt on ſuch a Method of Cure, as bears a Conformity to that which is moſt ſucceſſful in the Diſtempers of the Nerves, that produce Diſtention, Rigidity and a tentiginous State of the Fibres, ſtretched beyond their Power, to rerurn and regain their native Poſture. The Remedies then muſt be ſuch as are moſt efficacious to compoſe the irregular Motions, and to calm and reduce the immoderate Activity of the Spirits, which introduce theſe Tympanitical Symptoms.

Only gentle Purgatives ſhould be preſcribed in this Caſe.

*Take ten Drachms of Lenitive Electuary,
in a Draught of Chicken Broth.*

*Or, Take an Ounce and half of Manna, in
the ſame Vehicle: If theſe are too weak,
uſe the following:*

*Take of purging Mineral Waters two Quarts,
boiled to a Quart with a Drachm of
the Leaves of Sena, and two Scruples*

of Salt of Tartar. Take it in the Morning and repeat it three Times, interposing a Day or two between.

Or, Take of Leaves of Sena two Drachms, of Rhubarb a Drachm and half; boil them in Spring-Water to three Ounces, strain it, and add of Manna six Drachms; make it a Draught to be taken in the Morning fasting: And the same Rule is to be used with the other Purgatives prescribed, and after their Operation at Night take the following pacifick Draught.

Take of Milk-Water two Ounces, of Hysterick-Water half an Ounce, of Diacodium half an Ounce, and six Drops of liquid Laudanum; and let this composing Draught be repeated after every purging Medicine.

Clysters in this Disease often injected are beneficial, as they sooth and calm the impetuous Motion of the Spirits.

Take of the emollient Decoction twelve Ounces, Mell Mercurial an Ounce and half, Sal Ammoniac two Scruples; mix it for a Clyster to be administred Blood warm.

Or, Take of wholesome Humane Urine a Pint, Venice Turpentine dissolved with the Yolk of an Egg an Ounce, Syrup of Violets an Ounce and half, Sal Prunellæ two Scruples.

Diuretick

Diuretick Medicines are proper likewise in this Distemper.

Take fifty living Millepedes or Wood-lice well cleansed, bruise them in a marble Mortar with two Ounces of Rhenish Wine, make a strong Expression, and add to it of compound Horse-radish-Water two Drachms; make it a Draught, and take it twice a Day.

Or, Take of purified Nitre two Drachms and half, of Volatile Salt of Amber a Drachm, of Seeds of wild Carrot, Cresses, and Anise, each two Scruples; Millepedes prepared a Drachm, Venice Turpentine as much as will make a Mass to be formed into moderate Pills, take three in the Morning and three in the Afternoon, drinking after each Dose a Glass of White-wine, or rather four Ounces of the following Apozeme.

Take of the Root of Fennel, Asparagus, Chærevil, Dandelion, and Candied Erin-go Root, each an Ounce; of the Seeds of Burdock and sweet Fennel, each a Drachm and half; boil all in three Pints of Spring-Water to a Quart; strain it, and add of compound Horse-radish-Water an Ounce, and three Ounces of the Syrup of the five Opening Roots.

But it must be acknowledged that Chalybeate Preparations are the most prevalent and

successful Remedies in this Disease, being endowed as well with the most powerful Vertue to change and correct the inordinate and noxious Qualities of the various Juices, and to restore a healthful Constitution to the System of the Nerves and the Animal Spirits, as to create Hunger, assist the digestive Faculty of the Stomach, sending Streams of generous and well laboured Chyle to the Veins and Arteries, to promote the Conversion of it into laudable Blood, contribute to its just mixture, and accelerate its Circulation to such a Degree of swiftness as the Service of Nature demands.

And it must be granted, that Chalybeate Medicines are the most efficacious in all Chronical Diseases, excepting erratick and hec tick Fevers, that arise from ulcerated Tubercles, or Glands in the Lungs, Liver or Kidneys, or in the Mesentery and Intestines; however, in a Chlorosis or *Febris Alba*, from the Obstruction of the Catamenia in the Female Sex, it is an admirable Remedy, as it opens Obstructions, dissolves Coagulations and Concretions in the Blood, and frees the Vessels and Passages of the Glands from impacted Impurities, and animates and rouses the Animal Spirits to perform their Duty.

The chief Dependance therefore of the Physician, after requisite previous Purgatives, is on the use of Steel Remedies for the Removal of a Tympanitical Inflation. But as it is in other Distempers, so it is in this, a due Choice must

must be made of the Preparations, that are proper in this Case : As when Patients are of a hotter Constitution, and a feverish Disposition, excepting a *Pica Virginis*, the most active and invigorating Medicines of Steel are forbidden, and the milder Preparations, such as are most freed from the sulphurous Parts of that Metal, are only to be prescribed ; such is *Mynsicht's Tincture, Steel Wine, the Syrup and Salt of Steel, or Anima Hepatis, and Vitriol of Mars* : In like manner, the same Preparations are to be chosen for Tympanitical Patients, lest more violent ones should agitate and urge the Spirits too much, which were to volatile and impetuous before ; and therefore the Mass of Blood, and the Nervous Juices should be gradually altered and corrected by gentler Chalybeates, that the Animal Spirits may not by more powerful Means be over-hurried and driven into the Muscles and Membranes of the Abdomen too hastily, lest they encrease their Tension and Rigidity.

Take of Mynsicht's Tincture of Mars half an Ounce, and drink Twenty Drops every Morning, and at five in the Afternoon, in a Glass of White-wine and Water, or rather in half a Pint of Bath Water ; and half an Hour or an Hour after, drink half a Pint more, and take as much more in the Afternoon ;

a Week add to each Dose a Spoonful of Steel Wine.

Or, Take of Powder of Millepedes and Seeds of Burdock each a Drachm and half, of Volatile Salt of Amber a Drachm, of Salt of Steel or Anima Hepatis a Drachm and half, of Mucilage of Gumm Tragacanth as much as will make a Mass for Pills; make them of a moderate Size and take four in the Morning, and as many in the Afternoon about five a Clock, and drink after the Morning Dose two half Pints of Bath Water, and half a Pint after the second Dose; or after each a Draught of White-wine and Water, or a Dish of Pennyroyal Tea.

Or, Take of Conserve of Roman Wormwood two Ounces, of purified Nitre two Drachms, of volatile Salt of Amber and Tartar vitriolated, each a Drachm, of Vitriol of Mars two Drachms, of compound Powder of Arum two Drachms, Syrup of the five opening Roots, enough to make all into an Electuary; Take the Quantity of a large Nutmeg every Morning and Afternoon, drinking after it a Draught of either of the Liquors above named.

I will here relate the Case of a young Woman upwards of Twenty, that had laboured under a Tympany near eighteen Months, and
was

was extended by it to a very great Size : When she was first put under my Care, I directed a Course of Physick chiefly consisting of such Remedies as before set down ; and after she had pursued it without Success for a Month and upward, I advised her to go into the Country, to take the fresh Air, and for Exercise to ride on Horseback for some Hours in the Afternoon, as oft as good Weather favoured it. She followed my Advice, and one Day being on Horseback, upon a sudden she perceived her Belly sink, and found herself reduced to her former Shape and Dimension, which remained several Years, and as far as I know, continues so to this Time. And this Return of the Abdomen to its native Circumference, was accompanied with no Evacuation of Water, nor any greater Discharges of Wind, than what usually attends the subsiding of the Colon, Intestines, or Stomach, after their painful Inflation or Distention, either by Nature's Power, or the Assistance of Medicine ; when the disorderly Motions of the Spirits are composed, and the overstretched Fibres spring back into their Places. And this is the Case of the Tympany before mentioned, in which the nervous Strings too much extended by their innate, reactive Principle, being aided by Remedies, in imitation of those of a musical Instrument, leaped back again into their natural Posture, and the Animal Organ, before in great Disorder was again put in Tune. And hence it ap-

pears, that this Disease is best accounted for, by supposing that the inordinate Flights of the Spirits into the Pores, and more minute Channels of the Nerves, so overstrain them, that they lose their reciprocal Vibration, and cannot be attributed to inbred Vapours and Exhalations, nor to a Collection or Pond of Water, enclosed in the Cavity of the Abdomen; though it must be acknowledged that an obstinate Tympany, at length produces the Dropsy of the Belly, called an *Ascites*; when perhaps the Glands of the Bowels contained in the Abdomen, are depraved and suffer too much Serum to pass through their Pores, or Tumours and Obstructions may affect the Mesentery, and the Bowels in the Belly; or a Disruption of one or more Lymphæducts may fill the Cavity, or Vapours from rarified Serum meeting and embracing there, may be condensed into Drops, and by Degrees produce a Lake of Water.

It may be said, that a little before or presently after Death the Belly, as well as the Legs, are much swelled: And this is the Effect of Wind or Vapours only. But to this Observation I reply, That immediately before and after Death, the Elevation of the Belly is caused by a putrefactive Disunion and Dissolution of the Humours in the Contents of the Belly, when all the constituent Particles lose their Connexion, fly asunder, and withdraw from one another during the putrid Fermentation in their mortified State. And in this Strife and Conflict,

Conflict, the rarified and contending Vapours imprisoned in the Hollow of the Abdomen striving for vent, as those enclosed in a subterranean Cavern, heave up and extend the Abdomen: But no such Vapours from a general putrefactive Fermentation are found in Living Bodies, which occasion an Intumescence and Inflation as soon appears after Death, the last of which is taken notice of by Dr. *Willis*, and accounted for in the same manner.

But as to the Swelling of the Belly, that sometimes in married Women so much imitates Pregnancy, that it imposes on themselves as well as Standers-by, making them believe they are far gone with Child, which however after a Time, vanishes and disappoints their Expectations; This is evidently a Species of a Tympany of a recent and less obstinate Nature, that will yield to the Efforts of Nature or Assistance of Art, and does not arise from Vapours or collected Waters, but merely from the over-stretching of the nervous Fibres, whence they derive their tense and rigid State. Thus far of a Tympany, which is no Species of a Dropsy, though in external Appearance it so nearly resembles an *Ascites*.



A

TREATISE

OF THE

JAUNDICE.

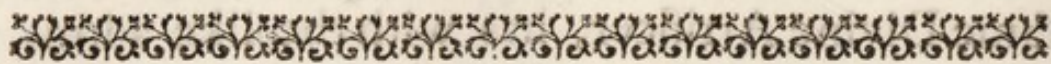


THAT the Blood may be preserved from incongruous Humours and noxious Impurities, not convertible by its sanguifying or assimilating Power into wholesome Nourishment, and that by this Means a regular and healthful Constitution may be prolonged, the Divine Author of Nature has framed the Lungs to serve as a Strainer, in carrying off the phlegmatick and serous Burden, that otherwise would encumber the Blood, and depress the Spirits. The All-Wise Designer has likewise prepared and formed the Kidneys to derive and convey from the Veins
by

by their numerous small Tubes and papillary Glands, all the Flood of thin and watry Parts, excepting those that are necessary to dilute and attemper the Blood, and prevent Coagulations, as well as inordinate Heat. And then to refine and depurate the vital Mass from immoderate Bile or Choler, too apt to inflame it with bitter and acrimonious Qualities; The same Divine Artificer, has with the like admirable and astonishing Skill contrived the Organ of the Liver, which is so framed, that while the living Streams pass through the innumerable Meanders and Ambages of its Structure, their inordinate Celerity may be moderated and restrained, lest they rush into the Cavity of the Heart with too great violence, and oppress, instead of assisting, its propulsive Power, necessary to their Circulation; and that the bilious Mixture may the mean Time be divided from it by that eminent Strainer, and conveyed to the Gall-Bladder, the common Receptacle of superfluous Choler, from whence by the Duct or Canal formed for this Purpose, the yellow Rills of Bile flow into the Duodenum, and through its Cavity descend into the inferiour Intestines, partly to mix with and exalt the Chyle, before it enters the lacteal Inlets, and partly to be excluded with the Fæces from the Body.

If the Function of this important Strainer by Reason of its Dryness or Obstruction, is defective and interrupted, the inevitable Consequence

quence is, that the Choler must remain in the Mass of Blood, or regurgitate thither; and while more is bred every Day, and too little a Portion is strained from it, and conveyed through the Liver into the Gall-Bladder, the Bile over-charges the Current, and lays the Foundation of the Jaundice.



Of the Properties and Symptoms of the JAUNDICE.

WHILE the Blood is replenished with bilious Humours, which, to preserve its healthful Temperament, should have been separated from it by the Liver, the Patient, 'ere yet the Disease appears outwardly, is often sick, faint and dispirited, while the redundant Choler oppresses the active Principles of the Blood, that are incapable of digesting or excluding it: And when by Degrees the Distemper grows to a greater Head, and adulterates the whole Mass with its recrementitious and unsalutary Mixtures, the Blood in circulating through the Veins and Arteries, infects all the solid Parts where it passes with its polluting Streams. It first discovers it self to the Sight, by discolouring the Urine, and staining the Eyes; and as its Power encreases, it overspreads the whole Surface of the Body, and deforms the Face
with

with a coarser and more loathsome colouring than thick-laid meretricious Paint. When it is newly introduced, it gives a yellowish Cast to the Urine; but when it has gotten greater Ground, and becomes stubborn and inveterate, it tinctures it with a darkish Red, or a bright Colour, blended with livid or Black.

This Distemper is often attended with Heart-Burning, Pains in the Region of the Liver, Gripes and Convulsive Tortures of the Abdomen, scarcely inferiour to those of the Colick, which sometimes are accompanied with a Diarrhoea or Flux of the Belly, and sometimes with the contrary Complaint; Loss of Strength, unaccountable Weariness and Lassitude of the Limbs, without Labour and great Unwillingness, or Inapacity to undertake any Motion or Exercise of the Body. Sometimes the Patient cries out of great Sufferings in his Loins, imitating those of a Lumbago, or a Nephritick Paroxysm, and sometimes he is seized not only with Fainting and Dejection of Spirit, but with an Eclipse or Suspension of vital Sensations, and with actual Swoonings.

And often it produces violent Disorders and Oppression of the Stomach, and grievously afflicts the Membranes about the Heart, the Midriff, the Spleen and Sides of the Belly beneath the Ribs. It often creates a Suppression of Appetite, and Loathing of ordinary wholesome Foods, as likewise violent Aches, Giddiness and Swimming of the Head, with sudden

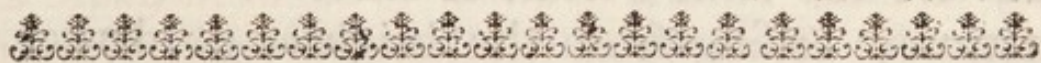
den Dimness or Defect of Sight, insomuch that the Patient is ready to sink and faint away.

Another Symptome, that accompanies this Disease, are ash-coloured Fæces, or Dejections like recent Chyle, when it is fully laboured and thrust out from the Stomach into the Road of the Intestines. And this Phænomenon is easily accounted for in the following manner. When the Liver does not perform its Duty of Filtration, in dividing the Bile from the Blood, nor conveys it, or at least imperfectly, to the Gall-Bladder, while it leaves a great Part mixed and complicated with that Mass; whence it is evident, that very little if any of that yellow Humour descends through the Duodenum, either to dilute and exalt the Chyle before it enters the lacteal Veins, or to mingle with the unadmitted Fæces, whence the native Colour of the Chyle, that is pale and cineritious, might be changed to Yellow; and this is a Symptome always attending confirmed Icteric Cases.

Obstinate Bleeding at the Nose, *per Anum*, by Urine, at the Gums, &c. is likewise a frequent Effect of an habitual and rooted Jaundice, which proceeds from the loose Texture and ruined Temperament and Coherence of the Blood. For when the Choler in it is not only highly exalted and volatilized, but likewise is so far redundant, that it greatly exceeds its regular and salutary Proportion, it becomes licentious, breaks the Harmony of
Nature's

Nature's Oeconomy, and by its penetrating and active Force destroys the Ties, that connect the Blood, dissolves the just Union of the Parts, and disjoins and ruins the Animal Constructure. Now when by Attrition, Rarefaction and Comminution of the Parts, their Continuity and Coherence, is in a great Measure dissolved, as in the Case of malignant Fevers, the Blood in this shattered and broken State is ready to issue through all the Sluices of Nature, that most easily yield to it during its Circulation, while that Figure and Dimension of its Parts are now lost, which before its Dissolution by the Jaundice, made them incapable of passing through those Emunctories.

Stones likewise bred in the Gall-Bladder, are another Effect of this Disease. These which I have enumerated make up the sad Train of Symptoms, which accompany the Jaundice in its prevailing State, when it has taken Possession of the strong Holds of Life, and displayed its yellow Flag to signify the Victory.



Of the different Kinds of JAUNDICE.

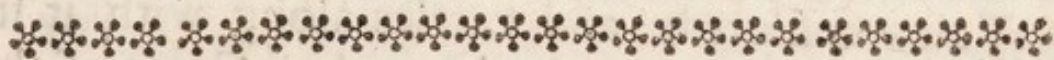
THE first Division is in Respect of its Colour into Yellow and Black, though some

some likewise reckon White and Livid. During its recent State, and before it has infected the whole Mass of Blood, it drops its Materials from the circulating Current, and leaves a yellow Tincture behind it, on the Internal or External Parts of the Body, over which it flows, as mineral Chalybeate Waters by their Streams, stain or dye the Bottom or the Sides of the Channel, where they pass, with an Okar or Orange Colour : But when after a long Continuance the bilious Humours become more noxious and perverted, they grow livid, obscure and darkish, but blended with a bright Yellow, that shines through the blacker Parts, in which last Respect they imitate the Colour of the Urine in malignant Fevers, as observed before, or an ill Sort of confluent small Pox, especially if accompanied with Purple or black Spots, which shews the Blood to be in a State of Mortification or very near it.

But when the Jaundice is divided into these two Kinds, the Yellow and the Black, they are not to be understood as different Species, but are the same Disease of different Denominations, arising from the brighter or darker Colour it imparts to the Urine or the Skin : The first, as I have said, proceeds from the Choler, when it is newly perverted ; but when it is farther advanced and comes nearer to the last State of the Distemper, it becomes adust and dark-coloured, whence it is called the black Jaundice, that was called before the Yellow ;

low; so these two are discriminated only by their Colour, and differ not in Kind, but only in Degree.

A Jaundice is likewise divided into Critical and Symptomatical. The last is truly a Disease, when the Choler is crude and indigested, and so unprepared for Separation and Expulsion. But the Critical is rather a Cure, than a Distemper, by which a Fever or some other Disease is determined and carried off, while the bilious Humours, that in Part were their Cause, are well concocted, separated from the Blood, and thrown off upon the Skin, and therefore this Critical Jaundice belongs not to the Subject of this Discourse.



Of the Causes of the JAUNDICE.

THE immediate Causes of the Jaundice are either the Obstruction of the little Tubes and Glands of the Liver, whence it comes to pass that the bilious Humours contained in the Blood are not separated from it by that secretory Organ, which therefore remaining in the undepurated Mass, and by Degrees arising to a great Plenitude, produce the Symptoms before described, while they are carried round in the circulating Streams through all Parts of the Body.

114 *Of the* JAUNDICE.

And sometimes the immoderate Quantity of Bile bred in the Blood, is more than the Liver is capable of straining off, and conveying away with the Blood returning to the Heart, and this may often happen.

Sometimes I have known a sudden Fright, by putting the Spirits into an inordinate, vehement and confused Motion, occasion this Distemper: While those Animal Spirits driven into Convulsive Flights and Incurfions, contract, grasp fast, and fo strictly constrain the Fibres of the organical Parts of the Liver, employed in separating the Gall, that the Foramina or Passages are closed and stopped up, by which means the Blood advances through the Veins unfilterd, and carries along with it its bilious Humours. And another Cause of the Obstruction of the Pores and Passages of the Liver, appointed for Percolation of the Choler, and fining of the Blood from the Superfluity of that Humour, may reasonably be supposed a paralytick Flaccidity and Impotence of the Fibres before named, introduced either by the like sudden Consternation and Amazement, or other vehement Passions or Perturbations of the Mind, or else by the Translation of the Matter or Seeds of other Diseases to the Liver, as particularly that of the Gout and Stone, which being deposited there, give the Tubes and Glands of the Strainers so great Relaxation, that their secretory Fibres grow feeble and flabby, while their Sides fall down and flap together,

together, and their Tension being thus destroyed, and their Passages shut, they can no longer perform their Office of Filtration.

And sometimes the Quantity of Choler generated in the Stomach, *Primæ Viæ*, and the Mass of Blood, is so excessive, that the Liver with all its Drains is unable to percolate and carry it off, and then that Part which continues unstrained from the Blood must infect it with fæculent Impurities, and by Degrees encreasing its Forces, get an exorbitant Power, and over-turn the Constitution of the Animal Government; and to the Generation of such a predominant Proportion of Choler, Inactivity and Neglect of due Exercise, Intemperate, Luxurious Eating, and excessive Drinking of Wine, and more generous Liquors, by depraving the digestive Powers of the Stomach and the Blood, and supplying the Veins with daily Recruits of new Crudities and Icteric Materials, do much contribute, in the same Manner, as they lay the Foundation of the Gout and Stone, and other Chronical Distempers.

And as this exorbitant Quantity of bilious Humours, that being unequal to the Power and Capacity of the filtering Organ, for want of due Secretion continues mixed with the Blood, and then must be allowed to be the Parent of this Disease; so it is reasonable to conclude, that sometimes the Nature and Constitution of the Bile it self is depraved and vitiated, and its Parts so far disfigured and changed

in their Size, that they become unfuitable and disproportioned to the Pores and Channels of the Strainers, and are therefore disabled from entering their Mouths, or at least of making their Passage through, to be conveyed into the large Receiver of the Gall.

Another Original of this Distemper, are Knots and Schirrous Tumours or Ulcers dispersed in this eminent Organ of Separation, the Liver: By those Obstructions the Channels and Traces, by which the Cholerick Juices are disengaged from the Blood, being in Part closed up, or totally effaced, it is disabled in a considerable Measure from discharging the Duty of a Strainer, and a great Part of the Choler remains behind mixed and complicated with the Blood, and sometimes the Passage of the *porus Biliarius*, the Canal, that leads to the Cistern of the Gall, is full of slimy, cretaceous Matter, or of sandy, gritty and stony Concretions, by which Means the Bile is hindered from flowing into its ample Receptacle; and sometime the like Contents, and especially Stones, take up so much of the Capacity of that Cistern, that the free Passage of this yellow Juice into the Intestines is obstructed: For it appears sometimes on the dissecting the dead Body of the Icteric Patient, that the Gall-Bladder is filled with light, porous and slightly-cohering Stones; sometimes however so large that they are hardly excluded thence into the Cavity of the Intestines, by which the flowing
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of the Bile through either of those Ducts must be intercepted, and that Humour be obliged to regurgitate and retreat into the Blood; which by this Return of the excluded Choler must be over saturated and oppressed with it, and so produce the Disease we are discoursing of.

Sometimes the Jaundice in the Female Sex owes its Rise to the Obstruction of the Catamenia, by which Means the bilious Humours, that used periodically to be carried off by the uterine Passages, continue in the Blood, and uniting with new Stores of Choler, generated and communicated to the Veins from Time to Time, arise to an excessive Quantity, which occasions this Disease.

The Jaundice is likewise often introduced by an obstinate intermitting Fever, as Experience testifies; for while by frequently repeated Paroxysms of violent Heat the Choler is much exalted, and becomes more adust, and by copious reiterated Sweats the Serum of the Blood is much drained and exhausted, it grows thicker and less diluted, and therefore fuller of tough, dry, viscid and harder Coagulations, that obstruct and swell the Bowels and Contents of the Abdomen, especially the Liver, as is well known. These Considerations will easily account for this Symptom; that is, the Stoppage of the secretory Glands in the Liver, and the depraved Quality as well as the extraordinary Quantity of bilious Humours ge-

nerated in the Blood or in the Stomach, or *prima Viæ*.

It is likewise to be observed that the Jaundice is often occasioned by a sharp Fit of the Cholick, that it accompanies or follows; which yellow Suffusion on the Skin proceeds from the too close Grasp or Constriction of the Organs of Separation in the Liver, by the Convulsive Constriction of the Spirits during a violent Fit of that Disease; by which means they are disabled from doing their Duty, while its Secretion being suspended, the Bile is detained in the Blood, and leaves the Icteric Colour on the Surface of the Body in its Circulation.

This Distemper is likewise sometimes occasioned by the biting of venomous Animals, while the poisonous Juice transmitted through the perforated Fangs or Arms of the Animal in his Jaws, by the Pressure of the Bag, that contains it, and squeezed out, or syringed into the Wound made by his Teeth in the Flesh, whence being communicated to the Blood by perverting and depraving its Crasis and Temperament it introduces an Icteric Quantity of bilious Humours, besides the malignant and often destructive Impression that it makes on the Animal Spirits.

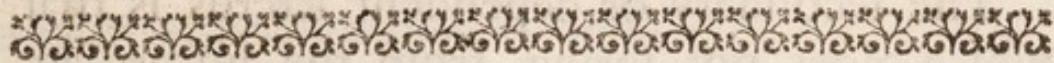
By what I have said it appears, that I look on the Jaundice to arise from this, that the Cholick is either not at all, or at least but imperfectly separated from the Mass of Blood, or,
if

if separated, is not conveyed to the Gall-Bladder, and thence into the Intestines, by Reason of the Obstructions that make those Roads impracticable; whence the Choler is constrained to inflect its Course, and with a refluent Stream to mingle again with the Blood, where it produces the various Symptoms above enumerated. Thus I have followed the usual Doctrine of Physicians on this Subject, as judging it the most rational.

I am not unapprized that several learned Physicians have accounted for the Origin of the Jaundice upon another new Hypothesis. These Gentlemen have discharged the Liver from the Guilt of being the Author of the Jaundice, denying that it has its Rise from Obstructions in that noble Strainer, and laying it wholly on the Receptacle of the Gall, where they assert the Bile is generated, and not in the Liver; and when it happens by some irregular Ferment or Stimulus to be highly exalted, it rushes towards the Blood with more Vehemence and Velocity, and being over refined and volatilized, it will not but very imperfectly mingle with the Blood; and while its Coherence with it is so slight and loose, there drops from its Bosom, an Oaker-like Matter, during its Circulation, and stains the Places, which its Current washes, with an Orange Colour. This is their Hypothesis, that the Bile in Icteric Cases is too much rarified and sublimed, and by that Means is made incapable of Incorporating

with the Blood, and adhering to it with strict Embraces, I am willing to grant, and it is what I have above asserted; but that this Mutation, by which it is thus depraved and unfitted for Nature's Oeconomy, happened to it in the Receptacle of the Gall, and not in the organical Structure of the Liver, is an Hypothesis I cannot give into. No Man will believe that the Bladder is any more than a Receiver, that entertains the Urine flowing from the Kidneys through the Ureters into its Cavity, and that the Urine received its Nature and Properties as such, from the superiour Strainer, and not from the Operation or Vertue of the Bladder. Nor is the Case otherwise with the Lungs. Who will believe that the serous, flegmatick, or pituitous Humours separated from the Blood by the ministry of that Bowel, and excluded into the Bronchial Pipes, thence to be expectorated, was really formed and made in those Tubes that receive them, and did not owe their Production to the Lungs? And it is the same Thing with the Gall-Bladder, that being no more than a Repository to contain Bile when produced by the Liver. The Case therefore of these three principal Organs of Secretion is the same, that is, the Blood is alike depurated by each of them from particular recrementitious Impurities, and superfluous Humours, while it passes through the fine Channels and filtering Glands dispersed in the Bodies of those Bowels, the chief Instruments

ments of clarifying and refining the vital Liquors, by carrying off the Urine, Bile and Flegm.



Of the various Kinds of the
JAUNDICE.

THE common Division of this Distemper is into Yellow and Black, but these Denominations, as before observed, are not founded on any Disagreement in Species, but in a Difference of Colour; for it is the same Disease undiversified by any essential distinguishing Properties; and therefore this is but a vulgar improper Discrimination, that divides a Subject into two Kinds by Reason of different Colour, which proceeds only from the recent State of one, and the Maturity of the other; as the Berry of the Brier is Green, Red and Black in the different Stages of its Growth and Ripeness: For the Jaundice, that is Yellow in its first Rise, as it advances and gets greater Dominion, it acquires from more adust and degenerate Bile, a deeper and darkish Yellow, as the Painter's lighter Colours are embruned by Time and Age.

The Jaundice may be divided into original or primary, and secondary or dependent; the first is that which proceeds immediately
from

from the general Fountain of this Distemper, namely, the excessive Quantity or depraved Quality of the Bile, that hinders it from being sufficiently discharged from the Blood.

The secondary or dependent Icterus is that which does not spring from the immediate Causes of that Disease, but is derived from and dependent on some other either acute or chronical Disorder, that introduces it. And as this frequently happens after a Paroxysm of the Cholick, as mentioned before, so it often proceeds from several slow Distempers: Nor is it a Wonder that after a long and languishing Disease has consumed the Patient's Flesh, laid waste his Strength, and exhausted his Spirits, enervated his Muscles, ruined the Tone of his Sinews, and weakened and impoverished the Blood, by defrauding it from Time to Time of its rich Materials, and filling it with gross and fœculent Crudities, it is not, I say, surprizing that the Blood in this low, degenerate State should be oppressed with a Redundance of impure and vitiated Choler, too much to be carried off; or that the Pores and Channels of the Liver in such a Case grown dry and hard should be obstructed, and so far closed up as to be incapable of performing the Office of Filtration, whence Icteric Symptoms take their Rise, as before explained: For we see that almost all inveterate and prolonged Distempers, if they do not introduce the Jaundice, as they often do, yet at the latter End they

they generally change the Complexion, dry the Skin like Parchment, and give it a Jaundice-like Cast, which most Persons are obnoxious to a little before their Death, that languish long in any Chronical Disease.

The Jaundice may be considered also as simple or complicated ; if simple, and depending only upon the Retention of the Choler in the Blood, it is less dangerous, as more easily subdued by proper Remedies : If complicated with other Distempers, particularly the Dropsy, which it often introduces, and is sometimes introduced by it, it is then more obstinate, and cured with far greater Difficulty : For those two Diseases when separate and independent, often yield to the Physician's Skill, but united and assisting each other, they generally elude the Force of the most celebrated Methods and efficacious Medicines. For in this Case the Bowels of the Abdomen are impaired and unsound, or the Obstruction of the glandulous Strainers in the Liver, in great Part or totally prevents its Secretion and Conveyance to the Repository of the Bile.

It is to be observed that the Yellow Colour given to the Urine, Eyes and Skin, arises from this, that the Choler in Patients of this Kind is so far depraved and vitiated as to become incapable of mingling intimately with the Blood, but has lost its Hold and sinks from the Embraces of that Mass, and the Particles of it being broken, and too minutely divided
and

and therefore grown immiscible, float in the Current of the Serum only as contiguous to it, without Connexion or Continuity, whence it comes to pass that they easily drop from the circulating Streams on the Places where they flow and impart to them their own Colour, as above observed. And this is agreeable to the following Remark, that the more the Structure and Compages of the Blood is shattered and broken, and the more the bilious Humours having lost their Union and Coherence, are disengaged and set at Liberty, the more dangerous is the Disease, and the worse Colours and Tokens appear upon the Skin.

And as any Distemper is more or less malignant, that is, as the Impurities, that cause it are more rarified, and more minutely divided and broken off from their Connexion with the Blood, and with one another, the Stains and Spots it leaves on the Surface of the Body are of worse præfaging Colours. For Instance, in malignant Fevers of the lowest Kind, where the Construction and Texture of the Blood is more or less destroyed, the Spots formed in the Skin, called *Maculæ Petechiales*, are reddish or of a Scarlet Cast, but in Cases where the Malignity prevails in a higher Degree they are livid, darkish, or purple, as in the highest State they appear black, or of a deep Blue. These are Marks of Putrefaction in the Blood, and are nothing else than the
corrupt

corrupt Leavings, and the mortified or putrid Ruins of it, which in its fullest State of Putrefactive Dissolution, loses all its Ties and Bonds of Continuity, and then it rushes unbridled through the Nostrils, the Urinary Passages, or the Glands of the Eyes, Lungs, and all the Emunctories and Sluices of Nature: And therefore these Spots and Tokens on the Skin in malignant and pestilential Diseases are very different from the Efflorescences and Eruptions appearing on the Superficies of the Body in inflammatory Cases, such as the Measles, Scarlet-Fevers, Small-Pox, or an Erysipelas; for in such Distempers, except they are accompanied with some Degree of Malignity or Putrefaction, though by the predominancy of fiery or sulphurous Principles, the Union of the Parts is weakened and shaken, yet it is not dissolved or broken, but they still cohere and keep their Continuity, though not so strictly as before. And therefore the active Principles of the Blood, have still a Power to digest in some Measure, and cast out the morbifick Matter upon the Surface of the Body in various Kinds of Eruptions, peculiar to each Inflammatory Fever before mentioned, which is often attended with Success. But in malignant and pestilential Diseases the Connexion and Crasis of the Blood, as to some Parts, is entirely destroyed, while its Ingredients or Principles are severed and parted from one another, and no longer remain in the Animal Mixture,
but

but swim in the Blood without any Coherence with it, which so far is in a State of Mortification.

In the Case of the Jaundice, when the bilious Humours, by excessive Attrition and Comminution of their Parts are too much attenuated and exalted, and being made incongruous to, and immiscible with the Blood, they approach the Nature of Putrefaction, by which Means during the Circulation of the Blood, being loose and unconnected, they easily drop from that Mass, and adhering to the Places where they flow, gives them a yellow Tincture as said before, yet the active and governing Principles of the Blood retaining their Construction, Order and Harmony, while the Bile only or chiefly is affected, the Disease is not accompanied with Putrefaction or Mortification; though it must be confessed, that when it is advanced to its highest State by the livid or dark Colour of the Urine, whence it is called the black Jaundice, it imitates the Symptoms of Malignity, though still there is this Difference, that the dark Urine in malignant Distempers, which resembles the Decoction of Coffee, is not accompanied with any other Colour, whereas the Colour of the Urine in an inveterate Jaundice is compounded of Black and a shining Yellow, which shews that it is still only a vitiated and degenerated Bile. This Hypothesis by which the Yellow Tincture in the Urine and the Skin may be
accounted

accounted for, seems to me very probable, though I do not dogmatically impose it on others.

As to the Variety of Colours, Yellow, Green, Leaden, Lived and Black, appearing at different Times and in the different Stages of this Disease, they owe their Production, as all others do, according to the accurate Doctrine of Colours, formed by the Honourable Mr. *Boyle*, on convincing Experiments, to the multiplied Refractions, Repercussions and Glancings of the Rays of Light in the Superficies of the Body on which they fall; and therefore one Mixture effects one Colour, and another destroys it, and the third restores the first, and effaces the second: For while new Liquors admitted by their Conflicts, and consequent Precipitations, unsettle and break the Contexture of the old, and introduce a new Order and Position of the Parts, the Light must pass through minute Roads and intricate Ambages that greatly deviate from the former, and where by different Refractions and Reverberations it must be represented to the Eye in a new Appearance or different Colour: But it is not of any Service to my present Purpose to enter upon a more particular Discourse on this Subject.

[Of the Prognostick Part.]

WHEN the Liver filled with hard Knots, Kernels, scateomatous Tumours or Ulcers, gives Birth to the Jaundice, and is not only much obstructed, but in a ruinous State, it is easy to see that such a depraved and wasted Strainer must be highly defective in its Function, and by not separating the Gall, must produce the Jaundice: Nor can it be expected that Diseases arising from such damaged and wasted Bowels, should be conquered by Medicine. No Ulcers in any of the eminent Instruments of Filtration, the Lungs, Kidneys, Liver, or in the Neck of the Bladder, are within the Reach of the Physician's Art, which however is often successful in other Diseases, when the Bowels are sound, by curing depraved and vitiated Humours, restoring a due Crasis and Temperament to the Blood, giving Strength and Consistence to the Spirits, and recovering their lost Tone to the System of the Nerves. But it is here limited, and cannot extend its Power to Internal ruined Bowels. The Physician in this Case, is like the Doctor of the Cellar, who by administering to degenerate and sick Wines his sweetening Compositions, can often restore their salutary Constitution and just Temperament; but if the Hoops or Staves of
the

the Cask are destroyed or flown, he is utterly unable by all his Medicaments to supply that Loss, by bringing back the old, or setting on new ones.

If a Jaundice be complicated with the Dropsy, while both depend upon the depraved Constitution of the Liver, that is either full of scirrous Tumours, or otherwise grown hard, dry, and greatly obstructed, the Case is generally deplorable, there being no Means known that are prevalent and efficacious enough to restore that Bowel in such a distempered and ruined State. The Case is the same if the Jaundice arises from the Spleen or the Glands of the Mesentery highly vitiated or stopped by a confirmed Swelling: That Jaundice likewise is very dangerous, and frequently fatal, that supervenes other Chronical Distempers, under which the Patient has long languished; for then his Vigour is far spent, his Spirits exhausted, and his motive Fibres so much enfeebled and relaxed, that he is unable to contend with the prevailing Enemy; and even the mildest Jaundice if not relieved by timely Application, being long protracted, acquires much greater Force; and while the Blood is more depraved, and the bilious Humours become more exalted and adust, and the Yellow changing to an obscure or dark Colour, it approaches near to a State of Malignity or entire Dissolution, and then it eludes the Physician's Skill.

That Jaundice, that proceeds from the Impurities and crude Leavings of Meats and Drinks imperfectly digested, which often communicates a great Redundance of Yellow Choler to the Blood, is not of difficult Cure: A Vomit or two, or a proper purging Medicine will usually succeed, and that Yellow Jaundice, which sometimes in Fevers is Critical, when the Symptoms abate, and Nature is relieved, is not so much to be reckoned a Disease, as a Mark of Recovery. But that which is symptomatical, that is, which discovers itself before the Matter of the Fever is digested, and continues complicated in the Blood, with the impure and unconcocted Seeds of it, is more or less dangerous according as the Fever, with which it is combined, is accompanied with milder or more pernicious Qualities.

This Disease, when introduced by the Biting of a venomous Animal, is attended with great Danger, not from its own Nature, but because the Poison by affecting the active and governing Principles of the Blood, Nature's chief Instruments and Ministers of Life, and destroying the Union, and cohesive Temperament of the Blood produces Putrefaction, and many malignant and destructive Symptoms. That Jaundice that arises from the Straitness of the Gall-Vessels obstructed by Stones and hard Concretions is with more Difficulty removed, than that where the Obstruction is
caused

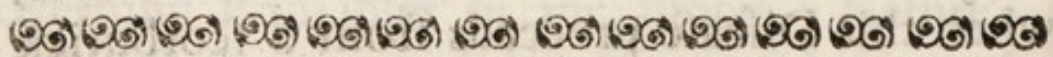
caused by any slimy but more moveable Humour: And indeed if the Current of the Bile is interrupted, and its Communication with the Intestines cut off by one Stone, or many, in the Gall-Vessels, there remains no Hopes of Recovery; for such Stones lying out of the Road of Circulation, and without the Verge of the Animal Regimen, they are inaccessible to all Medicines whatsoever. The most probable Way of carrying them off is, first the Use of vomitive Remedies: That by the Shock and Concussion they give to the Duodenum and the Gall-Bladder, may press and force out the Stones into the Intestines, which then a moderate Purgative will expel; but it must be confessed, that when this is done, new ones are apt to be generated, that supply their Room till Death at last is the Consequence.

That Jaundice which depends on the Catamenia, will yield to no Remedies, till Nature is enabled to do her Duty by removing that Obstruction, the Source and Spring, whence the Jaundice arises; and in the same Manner, when this Disease proceeds from a scorbutick and ill Habit of Body, that is, when the Crasis or Contexture of the Blood is much perverted and disordered, and the Humours depraved and vitiated by the Seeds of some Chronical Malady; though no Distemper is brought to Maturity, and distinguished by its peculiar Appellation, the Jaundice supervening on this cachectick State will admit no Cure, but de-

fies the Force of Medicine, and the Skill of the Physician, till the faulty and distempered Constitution of the Blood and Humours is rectified, and their former regular and salutary Temperament restored; and then little Medicine will be required to cure the Jaundice; for when its Causes and Supports are removed, it will fall and disappear of it self.

If the Jaundice has its Rise from a slighter Disorder or Defect of the Spleen, Liver, or any other solid Contents of the Abdomen, the Cure is not difficult; but if it has its Origin from Steatomatous, hard and schirrous Tumours collected in any of those Bowels, it is then invincible; or seldom cured.

When it is only a secondary Disease superinduced upon another, the Remedies must be applied to that, which is the Primary and Original; and thus the Ax will be laid to the Root, and the symptomatical Branches will decay and fall of Course, or at least will easily be cut off.



Of the Method of CURE.

IN order to cure the Jaundice, the first Care is about restoring the deficient digestive Powers of the Stomach and the Blood: For the Want of a due Concoction of the Foods ingested into the first, instead of its Conversion
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into just and wholesome Chyle, a great Part is perverted and degenerates into depraved Choler, or is vitiated in the Intestines, into which it is excluded, by mingling with the obnoxious Bile, from the Receptacle of the Gall, or the too acid Juices of the *Pancreas*, before it passes through the lacteal Strainers. And as to the Second, if the concoctive Faculty of the Blood be weakened and impaired, so that it cannot assimilate or convert into its own Nature the nutritious Juices transmitted to it from the Stomach, it will be oppressed with redundant Choler, which will lay the Foundation of this Disease we are discoursing of; and therefore these original Faults and Errors must be corrected to prevent Crudities and bilious Fæculences from infecting the Blood.

The second Thing to be regarded is, the expelling and conveying away the broken and discontinued Parts of the Bile, separated and precipitated from the Blood, and deposited in the Cells and minute Interstices of the Muscles and Membranes, where the circulating Current passes along: This Method is to cleanse and free the Parts of the Body already stained and polluted with the Jaundice, as the former is to prevent the Generation of exorbitant and incongruous Bile in the Stomach, Intestines, Veins, and Gall-Vessels, whence the Disease takes its Rise.

In the first place, vomitive Medicines are necessary, not only for emptying the Bile ge-

nerated and lodged in the Stomach, but by their violent Concussion of the neighbouring Intestines and Compression of their Glands, as well as the Gall-Vessels, they exclude the Bile collected there, as we see at the last Strainings and Efforts in the Operation of an active Vomit.

And as by the great Shock and Agitation the vomitive Medicines give to the Spleen, the Pancreas, the Liver, and the Mesentery, it forces out the bilious Humours stagnating there; so it likewise opens their Obstructions, and removes other Kinds of Impurities, and promotes the free Circulation of the Blood. It is likewise very beneficial by working and shaking the whole Frame of the Nerves, accelerating the Motion of their Juices, and freeing them from Stoppages occasioned by incongruous and impure Matter sticking in their minute Channels: And hence it comes, that vomitive Remedies are in an eminent Degree useful in so many obstinate and inveterate Diseases of the Chronical Kind.

Take of Vinum Benedictum or the Infusion of Crocus Metallorum an Ounce, of Carduus-Water two Ounces and half, an Ounce of Oxymel Scilliticum and compound Peony-Water, two Drachms; make it a Vomit, and promote its Operation by drinking plentifully in the Intervals from straining, of the Infusion
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of *Carduus Leaves*, *Posset-Drink*; or thin *Chicken-Broth*, called *Chicken-Water*; and at Night going to Bed take the following Draught.

Take of *Milk-Water* three Ounces, of compound *Horse-radish-Water* three Drachms, of *Diascordium* two Scruples, of liquid *Laudanum* Twenty to Twenty five Drops.

Or, Take of *Asarum* nine Leaves, cut and bruised, pour on them three or four Ounces of *White-wine*; press out the Juice for a *Vomit*.

Or, Take of *Oxymel Scilliticum* an Ounce, of the vomitive *Indian Root* half a Drachm, *Tartarum Emeticum* three Grains, and three Ounces of *Milk-Water*; make it a Draught to be taken Morning or Evening. And at Night going to Bed take the composing Draught before set down.

Or, Take of *Mercurius Vitæ* four or five Grains in the *Pap* of an *Apple* with *Regimen*.

Or, Take in the same Vehicle of *Turbith Mineral* six or seven Grains with *Regimen*; and at Night after the Operation of either Medicine take the pacifick Draught before mentioned.

The gentler Sorts of vomitive Remedies are of little Effect in this Disease, when it is in a confirmed State, and the bilious Humours

being more vitiated and degenerate, are more broken and divided from one another, and put on a livid or dark Colour that appears most evident in the Urine, which in this State in both the respects mentioned, resembles that in some high malignant or pestilential Fevers, or in the Confluent Small-Pox, as before observed, or that which in the Stone of the Kidneys or the Bladder, assumes an obscure or blackish Colour like that imparted by Coffee-Berries ground to Powder, and infused in boiling Water, and differs only in this, that in the Urine of Icteric Patients, there is mingled a golden or bright Orange-Colour, that glitters through the Black, like the Light of the Sun darting through a Cloud, or the shining Red glancing through the dark Velvet of a Peach. For now the Bile is so much vitiated, and so much obstructs the Pores and Passages of the Glands, Veins, and Nerves, on which it is deposited, that it requires the Energy of the most operative Remedies to open the inveterate Obstructions, dissolve the complicated Impurities, and drive them out of their narrow Cells and minute lurking Holes dispersed through the whole Body, that they may again be taken up in the Streams of the Blood, to be separated and carried off by the proper Emunctories of Nature; for the Particles of a powerful antimonial or mercurial Vomit, do not only act upon the Fibres of the Stomach and the neighbouring Parts, and
occasion

occasion such a convulsive Motion upwards, as Forces them to eject their Contents by the Mouth, but they also mingle with, and insinuate themselves into the nervous Juices, whence copious Sweats, and a profuse Emission of Urine often follow, while the governing and predominant Principles of the Blood exert all their Power in striving to dislodge and expel these opposite and noxious Strangers, that are incapable of mixing and incorporating with them; and by these Conflicts the Particles of the vomitive Remedy, proving likewise diaphoretick and diuretick, carry off, besides the Medicine, no small Quantity of peccant Humours, as well bilious as others of a different Nature.

As to Purgatives, those only that are lenient and of gentle Operation should be prescribed in Icteric Cases; for the strong and active will agitate and divide the Blood yet more, which was too incoherent and disunited before, and particularly will more attenuate, rarify, and separate the Choler which must encrease the Disease and not diminish it.

Take of Leaves of Sena two Drachms and half, of Rhubarb two Drachms, of Salt of Tartar a Scruple; boil them in a sufficient Quantity of Spring-Water to three Ounces; strain the Liquor, and add to it of Manna and solutive Syrup of Roses each half an Ounce.

Or,

Or, Take of Rhubarb three Drachms, Salt of Tartar a Scruple; infuse it close in a sufficient Quantity of hot Spring-Water to four Ounces, strain it, and add to it of purging Syrup of Apples an Ounce.

Or, Take of Leaves of Sena two Drachms, Cassia Fistula, Tamarinds, of each three Drachms, Seeds of Coriander a Drachm; boil them in seven Ounces of Spring-Water to the consumption of a third Part; clarify it with the White of an Egg, and add to it of the solutive Syrup of Roses half an Ounce, Syrup of Cichory with Rhubarb two Drachms, make it a Draught.

Or, Take of Decoction Senæ Gereon. four Ounces, Cremor Tartari two Scruples, solutive Syrup of Roses half an Ounce, of Syrup of Buckthorn three Drachms, and of strong Cinnamon-Water two Drachms; make a Draught.

Or, Take of Electuary of the Juice of Roses two Drachms and half, of Rhubarb powdered four Scruples, of Salt of Wormwood a Scruple, of Syrup of Rhubarb, as much as will make all into a Bolus.

If the Patient be weak by Constitution, or Distemper, or both, the following Purgatives
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of less Force may be proper, and after a few Days should be repeated.

Take of Rhubarb two Drachms, Salt of Tartar a Scruple; infuse them in Spring-Water hot and close for two Hours, strain it, and add of Syrup of Cichory with Rhubarb half an Ounce.

As to alterative and correcting Remedies, the most eminent are the Filings of Steel powdered with White Sugar-Candy, as likewise various Preparations of that Metal, as Steel Wine, *Mynsicht's Drops, Salt of Mars, or Vitriol of Mars*, Steel prepared with Sulphur or Tartar, and Springs of Water impregnated with the Seeds and Rudiments of Steel, or the Vitriol of it: For the same Reason *Lapis Hematites*, being it self Steel or nearly related to it, will be beneficial. And as these Chalybeate Remedies are useful in all Kinds of this Disease, so they are chiefly to be relied on in the most confirmed and inveterate Sort, called the Black Jaundice.

Take of the Roots of the greater Celandine, Dyer's Madder, and Dandelion, of each an Ounce, of the inner Rind of the Barbary Tree three Drachms, of the Tops of the lesser Centaury a Pugil, Salt of Tartar half a Drachm; boil all in a Quart of Spring-Water to a Pint and half,

half, strain it, and add to it half a Pint of Steel Wine. Take six or seven Spoonfuls every Morning fasting, and every Afternoon about five a Clock; repeat the same for a Fortnight.

Or, Take Twenty of Mynsicht's Steel Drops and a Spoonful of Steel Wine in a Draught of White wine in the same manner.

Or, Take of Conserve of Roman Worm-wood, of the outward Rind of the Orange, each an Ounce, of Species Diacurcumæ two Drachms, Tartar vitriolated a Drachm, Cremor Tartari a Drachm and half, Saffron half a Drachm, Salt of Steel, and Steel prepared with Tartar, each a Drachm, and of the Syrup of Cichory with Rhubarb, or the Syrup of the five opening Roots, as much as will make it an Electuary. Take the Quantity of a Chestnut and drink after it a Draught of Rhenish Wine, in which the Root of Dyer's Madder has been infused, or a Draught of Chalybeate Mineral Waters, or those of the Bath, every Morning and Afternoon for five Weeks.

Or, Take Twenty Drops of Mynsicht's Tincture of Steel, or two Spoonfuls of Steel Wine in a half Pint Glass of Spaw Water, or any other approved Spring of a Chalybeate Nature, and interposing an Hour or three Quarters, drink five or six

six Glassess more, and in the Afternoon about five a Clock take the same Drops or Wine, in half a Pint of the same Water for the Space of a Month. And if the Patient is bound, let him take over Night of Pilula Ruffi a Scruple, or as much of Pilula Coch. Major, and forbear the Waters and Steel Tincture the next Day: And if he falls into a Looseness let him cease drinking the Waters and the Steel Tincture till that Symptom disappears; and in order to stop it let him take Twenty Drops of liquid Laudanum, in any convenient Liquor going to Bed till his Diarrhœa ceases.

But the unopened Body of Steel, reduced to a fine Powder by pounding it in a Mortar with white Sugar Candy, by which Attrition and Comminution the Angles and Points of the Filings are worn off, is, in obstinate Obstructions of the Liver or elsewhere, that hinder the Separation of the Gall, as well as those that prevent the Discharge of the Catamenia, (which Suspension dispirits the Patient, and deforms the Skin as it were a White or Green Jaundice,) more efficacious and prevalent than any Preparations of Steel whatsoever; and therefore in a confirmed, livid, dusky or black Jaundice that is chiefly to be insisted on; for the Ferment or Menstruum of the Stomach, will open and prepare the Body of Steel, and
fit

fit it for the Service of Nature more effectually, than the Chymist can do ; as is likewise evident in a *Chlorosis* or *Pica Virginis*. I acknowledge it is my Opinion, that the Generality of Physicians employ prepared Steel too much, and the unprepared too little, by which Means they are often unsuccessful ; for Herculean Chronical Diseases, rooted and fed by a great Plenty of corrupt and vitiated Humours, will often yield, where the Bowels are sound, to the Filings of Steel finely powdered as before mentioned, which disappoint the Expectations of the Physician, by eluding the Vertue and feebler Efforts of all Preparations, where its constituent Parts are severed and disunited by the Fire or artful Menstruums and Dissolvents.

Take of Extract of Gentian or Wormwood ten Grains, of Steel ground in a Mortar with white Sugar-Candy from five Grains to seven, Saffron two Grains, as much Elixir Proprietatis as will suffice ; make them into Pills of moderate size ; take four every Morning and Afternoon, drinking after them a Glass of Wine and Water, or of any Chalybeate, or the Bath-Water, for the Space of a Month.

Or, Take of Gum Ammoniac, Myrrh Elect, Filings of Steel powdered with Sugar-Candy, each five Grains, with liquid Extract

tract of Gentian, make the Ingredients into two or three Pills for one Dose, to be taken and repeated as those directed before.

Or, *Take of Conserve of Roman Worm-wood two Ounces, of Species Diacurcuma a Drachm and half, of Choice Rhubarb two Drachms and half, of Saffron two Scruples, of the Filings of Steel powdered two Drachms, of Cinnamon a Drachm, Syrup of Juice of Citron or Rasp-berries, or the five Opening Roots, as much as will make an Electuary. Take the Quantity of a Chestnut twice a Day, drinking after it as above directed.*

The *Bath Waters* have sometimes an admirable Effect in conquering the most obstinate and seemingly deplorable Black Jaundice. I was once consulted for a Gentlewoman seized with the Yellow Jaundice, which proved so stubborn, that it eluded the Force of all the Medicines that were esteemed the most prevalent and efficacious for removing that Distemper; and finding after many Months the Patient grow worse; for She, that was before a fleshy and fat Woman, was so emaciated, that she was almost reduced to a Skeleton, while her Skin was dry and stained with as bad Colours as are at any Time seen in that Disease. I sent her to the *Bath* as her last Refuge, and in so weak and languishing a Condition, that

it was doubtful whether her Strength would hold out during the Journey : When she arrived there, she began to drink the Waters by little and little, till by Degrees she took six half Pint Glasses in a Morning, and in the first Glass the Chalybeate Tincture mentioned before. The Effect was most surprising ; for the Symptoms every Day abated, she gained her Appetite and her Strength, and in less than two Months, to the Admiration of all that knew her, she was entirely restored to her Corpulency and florid Countenance, which she had before she fell ill of this Distemper.

Besides Chalybeate and Mineral Waters, there are many other Medicines of the vegetable Kind, that are very beneficial in this Distemper : For in its recent State, the Infusion of the Root of *Dyer's Madder* in White-wine to be taken a Quarter of a Pint twice a Day, or the following Decoction, are often effectual.

Take of the Root of the greater Celandine, Couchgrass, Asparagus, and Fennel, each an Ounce ; of the inner Bark of the Barbary Tree three Drachms, of the Tops of the lesser Centaury and the Leaves of Hoar-bound, each a Pugil ; boil all in three Pints of Spring-Water to a Quart ; add to it when strained, an Ounce and half of the Tincture of Saffron in Canary Wine, Syrup of Citron Peel, or of the
five

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five Opening Roots three Ounces, take a Quarter of a Pint twice a Day.

Or, Take of Grass Roots, of the Roots of the greater Celandine, Turmerick and Strawberry, each an Ounce; of the Leaves of Hore-bound and the Tops of the lesser Centaury, each a Pugil; of Salt of Tartar half a Drachm, Seeds of Coriander three Drachms; boil all in three Pints of Spring-Water to a Quart, add to it when strained, of compound Water of Horse-radish two Ounces, of the Syrup of candied Nutmeg and the five Opening Roots, each half an Ounce; take it as that before.

Or, Take of the Juice of Garden Scurvy-Grass, Water-Cresses, Hore-bound, and Brook-lime, each three Ounces, Juice of Orange four Ounces; let them stand bottled up in a cool Place, and pour off two or three Spoonfuls of the clear, to be taken in a Glass of White-wine twice a Day.

Take of select Rhubarb half a Drachm, Tartar vitriolated five Grains, Cremor Tartari half a Drachm; make it a Powder to be taken in a Draught of Broath or the Pap of an Apple in the Morning fasting, and repeat it often.

Take of select Rhubarb two Scruples; to be taken the same way with the former.

Take of the Pulp of the lesser dried Grape or Currants half a Pound, of choice Rhubarb three Drachms, of Tartar vitriolated a Drachm, of Cremor Tartari two Drachms, Syrup of Cichory with Rhubarb, as much as will make an Electuary. Take the Quantity of a large Nutmeg every Morning for a Week.

Take of the Root of Dyer's Madder, of the Roots of the greater Celandine, Turmeric, Scorzonera, and Cichory, each half an Ounce; of the Leaves of Hore-bound, Tops of Centaury and Roman Wormwood, each half a handful; of Tartar vitriolated two Drachms; enclose all in a close Bag or Knot, and infuse them in three Pints of White-wine: Take a Quarter of a Pint twice a Day.

Though Rhubarb is a proper purging Medicine, yet in this Disease it is no less valuable as an Alterative taken by it self or with other anti-icterick Remedies.

Take of the Root of Dyer's Madder an Ounce, of the Roots of Nettle, Turmeric, the greater Celandine, Strawberry, each half an Ounce; of Tops of Centaury, Leaves of Hore-bound, and Dodder, each half a handful; Flowers of Broom half a handful, Seeds of Hemp three Drachms, of Seeds of Larkspur, Coriander, Stone-Parsley, each two Drachms, Cremor Tartari half an Ounce; boil all
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in a sufficient Quantity of White-wine and Spring-Water; add to a Quart of it when strained, Syrup of Cichory with Rhubarb three Ounces; of compound Water of Gentian two Ounces; take six Ounces every Morning.

Insects likewise are profitable in this Distemper, particularly Earth-worms and Millepedes, which dryed and powdered may be taken to half a Drachm in any convenient Vehicle, or made into a Bolus with any proper Syrup.

Or, Bruise in a Mortar fifty Millepedes with a Glass of Rhenish-Wine, and strain it for a Draught to be taken twice a Day for a Fortnight.

Five or nine Lice are esteemed efficacious in this Distemper, and are likewise recommended by eminent Authors in Physick, which I imagine is founded on a superstitious Notion, of which hereafter. The Powder of Coral, Crabs Claws, and Crabs Eyes, Pearl and the rest of the testaceous and absorbing Kind, as also the Stercus or Dung of various Fowls and Quadrupedes: For Example, that of Pidgeons, Poultry, and young Geese, which dryed and powdered and mixed with an equal Quantity of the Powder of Earth-worms; some have recommended it as a notable Specifick against the Jaundice. Add to these the white Dung of Chickens dryed and

powdered. The Dung likewise of Quadrupedes is much applauded : For Instance, that of Horses, and Dogs fed with Bones, and the Juice of that of the She-Goat, pressed with Cow's Milk, is by some cryed up as a sovereign Remedy in this Distemper. The Stones likewise found in the Gall-Bladders of several Animals, as that in the Gall of an Ox, is wonderfully magnified for the Cure of the Jaundice. So is that in the Gall of a Swine, or instead of these the oriental Bezoar-Stone found in the Stomach of a certain wild Goat, or that generated in Humane Bodies. These are all to be given from half a Drachm to two Scruples in a Dose : And if all this formidable Apparatus should be disappointed and prove ineffectual to subdue the Disease, some valuable Authors in Physick, to make sure Work, draw down their heavy Artillery, and attack it with the prevailing Force of the Thunder-Stone given to half a Drachm ; and it must be an inveterate and stubborn Jaundice indeed that can endure such a Storm and dreadful Shock. But to be plain, in my Opinion the Writers that multiply Medicines, and collect the numberless Remedies found in other Authors against this Distemper, many of whom cannot be relied on, either for their want of Judgement or Faithfulness, rather oppress and confound than aid and assist the young Practiser.

Thus

Thus much of Internal Remedies profitable in the Jaundice.

It must be here observed, that when this Distemper is confirmed, and its Colour begins to change Black, it will require Time to remove it; for being a Chronical and stubborn Disease, it will hold out against repeated Attacks, and long beat off the Doctor before it will surrender and draw off its Forces; and therefore the Patience and Perseverance of the Sufferer is demanded towards a perfect Recovery. He should therefore upon the aforesaid Consideration be prevailed with to continue the Use of the Physicians Remedies, while his Urine appears thin and bright, for that is an Argument that the morbifick Humour is yet undigested, or not so mastered by the active Principles of the Blood, as to be thrown off and separated from it: But when the Patient's Urine appears thick, turbid, and full of Contents, these Signs of Concoction declare the Danger is almost over, and a sudden Recovery may be expected.

Besides Internal Medicines, which are prescribed by Physicians in vast plenty, there are likewise several External much recommended. Some for the Cure of the Jaundice prescribe the *lesser Centaury*, the Root of the greater *Celandine*, &c. to be applied to the Soles of the Feet; and to take off the Yellow or obscure Colour from the Skin, which however will disappear of it self when the Distemper is

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conquered,

conquered, direct Baths in which are incocted a great Variety of anti-icterick Remedies: The Patient is to sit in these Baths and to receive new Liquor still poured upon him for an Hour.

The Application of the Tench to the Soles of the Feet of the Icteric Patient, or to the Navel or right Side beneath the Ribs, which, as some affirm, will contract a higher Yellow, by which means, that is, by drawing out the morbidick Humour, the Patient will recover, and so he will, as others say, if he drinks out of a Cup formed of Yellow Wax. Such Medicaments for the mastering of this Disease have such an Air of Fable, and shew such a superstitious and Quack-like Turn of Mind, that the Practice ought to be exposed, rather than encouraged. It is highly probable that these Methods of Cure were introduced by the weak and fanciful Opinion embraced by several Physicians, that Nature had by the Colour, Figure, or Signature of Plants and Drugs, declared what Vertues they are endowed with for removing certain Diseases incident to Humane Bodies, which in those Respects they in some Measure resembled. Thus because they found by Experience, that some Yellow Roots and Drugs were useful in curing the Yellow-Jaundice, as *Madder*, *Turmerick*, *Rhubarb* and *Saffron*, they imagined that Nature had signified that Things of that Colour were specifically good in that Distemper. Poor Reasoners,

Reasoners, and weak Philosophers ! They might with as great Assurance have collected that *Indigo*, *Ultramarine*, and Violets were admirable Medicines to heal those scorbutick or malignant Distempers, that discolour the Skin with livid or blue Spots and Stains : And if indeed yellow Roots and Drugs are so highly beneficial in the Yellow, why did they not conclude that Things of a dark and dusky Colour, would be successful in the Black Jaundice. They might have as well argued, from their Weakness and bending to every Blast of Wind, that Reeds and Oziers were good Remedies against a Palsy, or that Nature notified by the Trembling and Agitation of the Branches of the Aspin-Tree, that the Leaves were proper to cure an Ague. But from this Fancy, that natural Signatures denoted the Medicinal Vertues of Things, and particularly for the Cure of the Jaundice, it is highly probable, that hence the idle Stories of the Tench and Cup of Yellow Wax had their Rise.

And from the Similitude and Signature of Plants or Drugs these Gentlemen have discovered to what Part of the Body Nature intended it should be useful ; and from the same Source of Wisdom, was derived the Doctrine that the Lungs of several Animals are of great Service in a Phthisis or Consumption, as being of great Vertue in restoring and healing of Humane Lungs when weakened and impaired.

It must surely have been in an Age of great Darknes and Ignorance, when the Colleges of Physick, as well as those of Divinity, lay under a great Eclipse, that such puerile and unreasonable Notions as these should be broached and imbibed : And it is no less strange that the Æsculapian Schools should still be contented with so imperfect a Reformation as to this Article, as well as that which follows.

And this leads me to another Sort of Practisers, that is, those that employ for the Cure of the Jaundice, præternatural, mystick, or magnetick Remedies : For Instance, they mingle the Urine of the Patient with Barley-Meal, which they form into Cakes, and cast them to be devoured by Dogs or Cats, or Fish in the Waters, upon which the Jaundice, as they say, disappears. It is affirmed likewise, that if the Icteric Patient, makes Water every Day on living Nettles, that those Plants will grow dry, and that the Jaundice will gradually draw off, and its Symptoms cease. I have indeed often heard it proverbially said to a Person out of Humour, *You are as froward and peevish as if you had pissed upon a Nettle* : But I never was apprized that the Yellow-Jaundice was cured by the natural Effusion of Urine on that stinging Plant, till I read it in some grave Authors of Physick. In like manner, if the Urine of the Patient be poured upon a Heap of Pismires, or upon hot Stone-

Stone-Horse Dung, the Disease will be effectually removed, or let the Urine be mingled with the Ashes of the Wood of the Ash-Tree, and made into Balls, which must be dryed near a Stove or Oven, and the same Event will follow: Or empty from a Hole made in an Egg-shell both the Yolk and the White, then fill it with the Urine of the Patient, and place it in a warm Stove, till with a gentle Heat it gradually evaporates, and as that exhales and flies away, the Jaundice flies with it: You may indeed for greater Expedition place it on hot Ashes or Embers, but then you must take infinite Care that the Egg-shell be not burnt, for if that terrible Misfortune happens, what then? Why, the Yellow turns presently into a deplorable Black-Jaundice, beyond the Help of Drugs and Doctors. The dark Colour of the adust Egg-shell shews that the Urine with which it was filled sympathetically affecteth the Urine in the Bladder, and gives it a Black Colour, like that of the most inveterate Jaundice. I should scarce have recited these odd and improbable Stories, had not Gentlemen of Learning, Gravity, and Reputation, mentioned them in their Writings, and some of them not only enumerate these, but several others, and cite the Authors, who recommend them.



A
TREATISE
OF THE
STONE.



THE Disease of the Stone either in the Kidneys or the Bladder, and that of the Gout, which are nearly related, are two of the most cruel and inexorable Tyrants, that persecute the Race of Mankind. So great is their Violence, and so unextinguished their Fury, that they afflict the unhappy Patients with such frequent and unsufferable Tortures, as make Life an undesirable Possession, and rather a Burden too hard to bear, than a State of Satisfaction and Enjoyment. And had not the All-wise Divine Author planted in our Nature so strong an Aversion to Death and Dissolution, it is highly probable, that many grown utterly impatient

impatient of undergoing such a Weight of Misery, would lay Hands upon themselves, and soon put an End to their Calamities and their Lives together, the Grievance of the first, so much over-balancing the Pleasure of the last. Some, it is true, of these forlorn Creatures have endeavoured to ease themselves by adventuring on these tragical Expedients, and no doubt Multitudes more would follow their Example, did not a Principle of Religion among Christians, and a powerful Instinct of Self-Preservation among all Men, controul their Impatience, and prevent Self-execution : Nor is it Wonder they should prefer the Shades and Tranquillity of the Grave, to the Heats and Inquietudes of such acute Diseases.

But it must be allowed, that of this Pair so nearly allied, the Stone and the Gout, the first is the most terrible, and distinguished for its Fierceness and Cruelty. This Licitor and Minister of Death, inflicts above all others the sharpest and most unsufferable Tortures. What a melancholy Scene? what a moving Spectacle of mortal Nature is it, to see the unhappy Patient extended on the Rack, groaning and crying out in Agonies of Distress and unspeakable Torment : 'Ere Night is half spent, he wishes for Day ; when Day appears, he longs for Night ; Distracted with his Sufferings, he lyes wakeful counting the Hours, any one of which when protracted and multiplied by raging Misery, seems a numerous Train, so flug-

gish

gish and unprogressive does Time grow under grievous Sufferings. He changes his Pillow, but not his Pain, new-makes his Bed, but keeps his old Inquietudes, and though he often turns from Side to Side, he never leaves his Agonies behind. They, hapless State! know no Cessation or Interruption. If they sometimes remit and abate their Violence, they soon recover their Strength, rekindle their Rage, and insult the Patient with as great Fury as before. It must therefore be a commendable Action, and becoming an *Æsculapian* worthy to endeavour with all his Might to repel or disable this Plague that so much infests Mankind. And therefore accordingly I have undertaken to assist those, who have already attacked this Pest with Skill and Vigour. For this is not the Work of a single Aggressor, but as in Hunting down a Forest Beast, or that enormous Bird the *Ostrich*, many Champions unite their Power, armed with various Instruments of Death, Cutlasses, Lances, Hooks, and Javelins, that with different Weapons and mutual Assistance they may subdue the Enemy, or at least oblige him to retreat; so as a ready Auxiliary I bring my Forces, such as they are, to join those of abler Combatants, in order to quell this formidable Enemy, at least to diminish his Strength and restrain his Fury.

*Of the Nature and essential
Properties and Symptoms of
the S T O N E.*

TH E R E are scarce any Parts of the Body privileged from breeding Stones in their larger Cavities or more minute Interstices, which are in some Measure diversified according to the Nature of the Bowels or Organs where they are produced. They are found sometimes in the external Muscles of the Body, as well as in the Lungs, the Stomach, the Liver, the Gall-Bladder, the Bowels or Contents of the Abdomen, as well as in the Tongue, the Brain and even the Blood it self: For several credible Authors have affirmed, that upon opening a Vein small Stones together with the spouting Blood have rushed into the Receiver. In all which Nest the petrifying Principles meeting and embracing each other, produce a single Stone or a Quarry of them. But this Discourse is confined to the Stone in the Kidneys, and that in the Bladder, which in this Dissertation I shall consider as the same, and not as a Disease of a distinct Species. When it is formed and settled in either Kidney, it is accompanied with various Symptoms according as it is large or small, smooth or rugged, fixed or loose, closely or slightly coherent,

herent, *i. e.* hard and solid, or friable and porous.

Of the minute Stones, that is, the Grit and Gravel formed of sandy Rudiments in the Kidneys or Bladder, which however are perfect Stones, there are three Sorts distinguished by their Colour, that is, White, Yellow and Red. White is the native Complexion of these little Bodies, Atoms indeed in respect of those of the largest Dimension, as are the Sands on the Shore, when compared with the Rock at whose Feet they lye. These primitive Stones are however so close and unporous, that the Cohesion of their Parts is not to be unclasped and dissolved, but with great Difficulty, inso-much that they imitate the Hardness of the Diamond, and will polish Glass, like the Dust of that Jewel, as celebrated Authors assert; and it facilitates our Belief of the indissoluble Structure of this Grit, when we reflect on the like Quality in that called Hour-Glass Sand, which is found by Experience to be less porous or more solid than Flint; and therefore the Operatours in Glass have laid aside the first, and now employ the last, as Materials for their finest Works. But these minute white Stones cannot, as I conceive, give nephritick Pains, or a Fit of the Stone, unless a Collection or Congeries of them are involved or united by some adventitious, mucous, slimy or other anomalous Matter, so as to form a Moles or Bulk large enough to obstruct the Mouths or Channels

nels of the Urinary Passages; and that, it's true, may sometimes happen; but generally speaking, since the minute pale Stones are so smooth and small that they may enter with Ease the Orifices of the Urinary Aquæducts, and passing through those Conveyances, may without creating Pain or Trouble be excluded with the common Stream; and though there should be a great Quantity of that small incoherent Sand, it may however without Difficulty flow through the Ureters into the Bladder with the serous Current, and together with it be discharged.

As to the Yellow Gravel it is evident that the minute Particles, that compose it, are stained with that Colour by the alkalizate or lixivial Salts of the Urine, which abounds with such Contents: And this Mixture in the small Yellow Stones is the Reason why they are less solid and more dissoluble than the White of a purer Composition; which is likewise observed, and from the same Reason, in the Stones generated in the Receptacle of the Gall, whose Parts have not that strict Connexion and close Structure, as the White.

The Red Gravel receives that Complexion from being infected with a little Drop of Blood issuing from some lacerated Vein where the Gravel lay.

All these if they are ragged and uneven may by pricking, vellicating, or wounding the tender Membranes, that include them, cause either

ther duller and heavier, or more acute Pains, according as they are armed with more or less pointed Angles whilst they lye in the Pelvis or Basin of the Kidneys, and there roused and disturbed by the Motion of the Body on Foot or Horseback, rub upon and fret the neighbouring Membranes; and so nephritick Sufferings may arise from Gravel, which consists in real and perfect Stones, as before observed, though called Sand, or a friable, gritty Matter by Reason of their small Dimension. This is the first nephritick Symptom before a larger Stone is formed, which however is vexatious, and often attended not only with Pain, but much Inquietude, Sicknes of the Stomach, and a general Disorder of the whole Oeconomy, while the sandy Atoms, that lye heaped up in the Kidneys, are worked and agitated by the Motion of the Back or Loins, irritate and gaul their Membranes of exquisite Sense during their Confinement in those Lodgings.

It ought to be observed, that there are often found in the Urine of Persons in good Health, or at least not much distempered, a Red Gravel or Sand, that sticks to the Sides of the Urinal or Chamber-pot, that recieves it; but this is not the genuine Gravel, that causes nephritick Sufferings, but the Production of the Blood in Persons of a scorbutick Disposition, or a warm Temperament, and is distinguished from the true Gravel in this, that the last falls down, immediately after the Urine is rendered, to the
Bottom

Bottom of the Receiver; whereas the spurious Kind does not break off from its Mixture and Union with the Urine, till after some Hours standing in that Vessel, when it is at length loosed from its Embraces, præcipitated and thrust down by the Cold of the Air, and afterwards if the Urine be gradually heated again, it will recover its former Connexion with it, which is not the Case of the genuine nephritick Gravel. Besides, there is often observed in Persons of such a Constitution, a thin Substance floating on the Surface of their Urine, imitating melted Fat or Grease; but when it is skimmed off and dryed upon a Paper placed in the Sun, it discovers it self to consist of gritty saline Concretions united together by some viscous or slimy Bonds.

If the Stones are of a larger Size than those called Sand or Gravel, they affect Humane Bodies with yet more painful and afflictive Symptoms, and supposing that their Figure is unequal and varied with many Angles, then their Points, especially upon bodily Motion, vex and vellicate the Repositories where they are nested, and as so many sharp Thorns in the Sides of the Pelvis continually grieve, prick, or wound their Membranes; whence arises the frequent Discharge of bloody Urine, a common Symptom of this cruel Disease, which if fresh and newly let out of the Veins, gives the Urine a red Colour, and the Blood is discernable to the Sight; but if it has lain for sometime ex-

travafate in the Bladder, or if but a few Drops stay in that manner in the Kidneys, by turning to grumous and coagulated Clots, they impart a dark and blackish Tincture to the Urine not unlike to that of Coffee, this is a Symptom likewise that often accompanies this Distemper. It is true also that pale limpid Water sometimes attends the Paroxysms of the Stone, like that observed in convulsive, hypocondriacal, and hysteric Passions, and from the same Cause, that is, the spasmodick Disorder or Contraction of the System of the Nerves during the Fit.

Another Symptom, that accompanies the Stones last described, is great Sickness of the Stomach, Nausea, and frequent Vomitings, or Strainings to Vomit; for while the Fibres in the Kidneys are grieved and lacerated by the rough Stone or Stones bred and confined there, the Suffering is propagated to the Stomach by a Consent of Parts or Communication of Nerves, from one of those Bowels to the other; and this is so distinguishing a Symptom of this Disease in the Kidneys, that other Symptoms without this are not sufficient to induce the Physician to pronounce the Distemper the Stone.

If the Stone in the Kidneys be some Degree larger and likewise jagged, it creates unsufferable Pains, while it remains in the Pelvis or Basin of the Kidneys, grating and lacerating the enclosing Membrane, or while it strives
through

through the Ureters, and wounds their Fibres as they make their Way.

When the Stone formed in the Kidneys is grown yet larger and so disproportioned to the Mouth of the Ureter that it cannot enter, even though its Superficies is smooth and equal, it will obstruct the Orifice of that Tube, while it attempts to pass into it, or will stick in the Channel of it; and while it continues fixed there, as it stops the Current of the Water through the Pipe, so it creates exquisite and enormous Misery, by distending the sensible Membranes, and if it be unequal and ragged, it will produce the most afflictive Tortures, till it is protruded by Art or Nature through the Ureter, and excluded into the Bladder. This happens as often as the Stone grows to a greater Size than is suitable to the Inlet and Passage of that Tube: And the Effect is the same if the Stone, though not of a disproportionate Bulk to pass the Ureter, should however lye a cross the Orifice, for then it will obstruct the Descent of the Urine, and create great Disorder, till it find a proper Position, and its Figure is adapted to the Inlet, and then it enters and is at last discharged.

After the Stone has made its Passage through the Ureters for some Years, by stretching and enlarging the Road so often, it becomes capacious enough to receive much larger Stones than the first, and to let them through into the Bladder; so that the Cavity of the Ure-

ter, through which they have passed so long, is by Degrees sometimes extended to a Finger's Breadth, as unquestionable Authors assure us. The Stone of the Kidneys is likewise considered as loose or fixed; if as loose and floating, or not adherent to any Part of that Bowel, but is always attempting to pass the Ureters to the Bladder; it produces the painful Symptoms before described; but if it is fixed, it then nests it self and settles in the Substance of the Kidneys, where it grows by Accretion of Parts, and spreads like branching Coral through the Body of the Kidney; and while it lodges there in this quiet and inactive State, the Patient may sometimes feel Heaviness or a Weight in the Back, which however is but an inconsiderable Suffering; and some in this Condition have felt no Symptom at all, and dyed of other Distempers; and when they were after Death dissected by the Surgeon, a considerable Stone has been discovered propagated through the Kidney, of which however the Patient never complained.

And this was the Case as I have been informed of the late Lord *Mohun's* Father, who being opened after he dyed of a Wound received in a Duel, a large Stone was discovered spreading through the Kidney, of which notwithstanding in his Life Time he was entirely unconscious. I likewise knew an eminent Divine of a very lean and unmuscular Constitution, who told me in Conversation, that
suspecting

suspecting he had a Stone in the Kidneys, tryed one Night in Bed, if he could not feel it, and by pressing his Loins much emaciated with his long Fingers, he assured me he felt the Stone, and then, said he, I reflected that it must be a large one propagated through that Bowel, and therefore that no Medicinal Methods should be attempted to break it, lest the Fragments falling into the Pelvis should stop the Passage of the Ureters, and create great Fits of the Stone; upon this, said he, I fell asleep, and during many Years thought of it no more, till of late some Incident, which he named, and I have forgotten, brought again to his Mind this Observation, and when he some Years afterwards dyed and was dissected, a large Stone was found in his Kidney, which though he felt, as said before, yet lying undisturbed and quiet in its Nest, it gave him little Uneasiness.

The Stone we are discoursing of is either lighter or heavier, or which is the same thing, more porous and friable, or more close and solid. The Particles that compose the first, hang together by a slight Connexion, which is easily broken and dissolved, like Flocks of frozen Snow, the Sides of a Sponge, or the unsolid and porous Substance of the Pumice-Stone, and these by any internal or external Violence or milder Motion are often separated and crumbled into Parts, that drop into the Ureters and pass into the Bladder to be discharged; and these Fragments, like the small sandy and gritty

Stones spoken of before, produce the same troublesome Effects.

I have accounted for the Stones, that owe their Production to the Kidneys, and shall now pursue their Progress and follow their Course to the Bladder. When the Stone generated in the Urinary Strainer is discharged by the Ureter into the common Receiver, it too often happens, that it acquires so large a Dimension, that the Outlet of the Bladder is not wide enough to let it through, and therefore of Necessity it must remain imprisoned there, where by the Accession of new petrifying Particles and gritty Matter continually descending from the Kidneys and adhering to it, its Size is gradually augmented, till it is yet more incapable of being excluded, where if it is loose and floating it produces many grievous Symptoms; for though it be only smooth and equal and so does not lacerate the Bladder, yet it will often, as it plays against the Neck of it, and attempts to pass through, stop the Mouth of the Aquæduct, that conveys away the Urine, and by so doing produces very great Torment, while the Bladder is excessively distended and unable to discharge the enclosed Deluge; and if the Stone be uneven and rugged, it will by goading and wounding the encompassing Membranes, create exquisite Pain and bloody Urine, and by long repeated Cruelties of this Kind it frequently forms an Ulcer in the lacerated Part, which is discovered by the Secretion
of

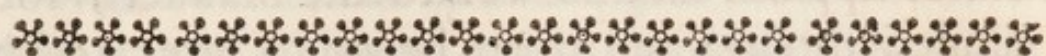
of putrid Matter mingled with the Urine; for when it has stood some Hours, a pale slimy Sediment is precipitated to the Bottom of the Receiver, like the Excrement of the Nose, or the Whites of Eggs, and is distinguished, from the like Matter that descends to the Bladder from an Ulcer in the Kidneys, by the Odour, which is strong and fatid, if the purulent Matter comes from an Ulcer in the Bladder, but that derived from one in the Kidneys has no such offensive Smell, as said above. And the Case is the same when an Ulcer arises in the Kidneys or the Neck of the Bladder, not from the Stone but from other Causes, such as produce Ulcers in the Lungs, in the Intestines, or other internal Parts, that is, the Impurities and incongruous Particles, which by Reason of their disproportionate Size and Figure cannot slide through the strait Passages of the Glands, but stick in them till more of the like Nature entangled there encrease the Obstruction and swell the Parts, whence by Degrees they are inflamed, putrify, and by their Disruption form an Ulcer; and when this Disease is produced in the Kidneys or the Bladder, the putrid Contents issuing from them, and together with the Urine excluded into the Receiver, shew themselves, as I have said, by their viscous and ropy Quality, and are diversified by their fatid or in offensive Smell: And it should be observed that their mucous and slimy Nature distinguishes these Contents from others, that proceed

ceed from a scorbutick or unhealthful Habit of Body, when much white, mealy, and light Matter appears in the Sediment, and which being without Connexion, upon shaking the Glass will rise and float incoherent in the Urine, but unslimy, as well as without Fætor: This therefore, as I have said, does not proceed from any internal Ulcer, but is a Defect arising from some irregular and depraved State of the Blood, that communicates with its Serum such Matter to the Kidneys.

The Suppression of Urine, occasioned by a Stone too large to pass the *Urethra*, is not attended with Sickness and Vomiting, as when a Stone sticks in its Passage through the *Ureters*, there being no Communication of Nerves between the Bladder and the Stomach, to convey the Sensations from one to the other. But exquisite and grievous Pains however attend it from the Distention of the Bladder, as I have said, and sometimes a smaller Stone, that has entered the Mouth of the *Urethra*, yet being too great to slide through, stops near the Entrance or in the Middle, and creates a total Suppression as well as great Torment.

I have now accounted for the Nature, Properties, and Symptoms of this Disease, and have likewise in carrying on my Discourse intermixed an Ennumeration of its various Kinds, discriminated by the Receptacles, where the Stone is contained, or by its different Colour
or

or various Shape and Figure; and now I shall proceed to search into the Causes of it.



Of the Causes of the STONE.

THE remote, antecedent Cause of the Stone, is a Defect in the digestive Faculty of the Stomach, or that of the Blood, or nervous Juices, whence such Impurities and feculent Portions remain—as produce the Coagulations and Concrescencies, that become the Foundation of the Stone, whose Rudiments and primitive Materials consist in a close Combination of a volatile in a superiour, and acid Salt in an inferiour Proportion. That these two are the petrifying Principles is known by Experience, that shews us that this is the Effect of Acids and Alkalies meeting together; as for Example, *Juice of Lemon, and Salt of Tartar.* Let it be supposed then, that from the inordinate and depraved Concoctions before named, such hard Coalitions, slimy Coagulations, or cretaceous Confederacies should be left behind, and it is easy to conceive how, when yet more hardened and prepared in the Blood, they may by the Power of the urinous Salts in the Kidneys be soon converted into gritty, sandy Atoms, which, clustring together and cohering, form at length a Stone of the lowest Size, that by the daily Accession of new
similar

similar Particles acquires a far greater Dimension in the Kidneys, and yet a greater after its Descent from that Bowel to the Bladder ; for while it is detained, from being so large to be excluded, it has more Room to receive Augmentation, whilst constantly fed by the sandy Rivulets, that empty themselves through the Outlets of the Ureters into that Cistern, where it grows by such Accretion, till sometimes it becomes exceeding large : Thus petrified Fossils and Flints in the Earth, as well as rotten Sticks and Pieces of Wood turned to Stone, owe their Growth, as well as Production, to lapidescent or stony Particles, that continually accede to and strictly embrace the former collected Materials : But as to the intrinsic Nature of the Stone bred in living Creatures, and those last named, that is, Minerals and Vegetables, there is a vast Difference ; for the greatest Part of the first are formed of volatile Salts or Animal Alkalies, but the other are not composed of any such Ingredients. It is truly remarked, that those who are obnoxious to the Stone, are generally of a hot Constitution, as it is likewise observed of gouty Patients, by which means their Blood is more inclined to breed cretaceous, hard, and gritty Combinations, which by a certain Degree of Heat are soon advanced into proper Materials for the Gout and Stone, Diseases so nearly related, that they are easily convertible into each other. But of these Subjects I have discoursed

at large in my Treatise of the Gout, to which I refer the Reader.

When the Seeds or Principles of the Stone, that is, the viscous, tough or sandy Concretions not to be dissolved and separated from the Blood, bearing however a Figure and Dimension proper to enter the papillary Glands, the Strainers in the Kidneys, they are there yet more indurated and acquire a gritty and fabulous Constitution; though even in the Blood it felt, before the Serum is separated from it by the secretory Glands, small Stones are often formed, as they are in all the Parts of the Body, as before observed.

It is remarkable that those Countries, that lye upon the River *Rhine* and the Northern Parts of *France*, who drink a thin, sharp, pale Wine, which is more replenished with *Tartar* than other Fruits of the Vine concocted by a hotter Sun, are most obnoxious to the Stone in the Kidneys: For such Wines convey to the Blood in great Plenty a Sort of petrifying Fluid, whose redundant acid Particles, before their Nature is changed to an *Alkali* by the active Principles of the Blood, meeting and combining with the volatile Salts there, the Result is a hard and tartarous Production easily formed into a Stone.

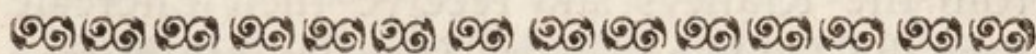
The voluptuous Life of those, that eat and drink deliciously every Day, cannot but administer to the Blood the Seeds and Principles of the Stone in Constitutions disposed and prepared

pared for that Distemper : For these costly and luxurious Meats and Drinks excessively and constantly ingested, being unequal to the digestive Power of the Stomach, fill it with a Load of Crudities and unconcocted Foods ; which transmitted by the Ministry of the lacteal Passages to the Veins, communicate to the Blood not only great Plenty of noxious Impurities, but likewise a rich Chyle abundant in volatile Salts, with such a Proportion of Acids as are apt to create this Distemper.

A sedentary and inactive Life, especially when the Persons are of a vigorous and hot Complexion, much promotes the Production of the Stone ; for while the Blood runs lazy and unagitated in its Channels, for want of due Labour and Exercise of the Limbs to push on its Streams with due Celerity, it is easy to conceive how the crude and impure Parts run into various Concrescencies and Coagulations. On the contrary, when due Activity, either by the Labour of the Hands, or by riding or other Exercises of the Body, the Motion of the Blood is accelerated, it is obvious to apprehend that by the Rencounters and mutual Collisions of the Parts dashing and rubbing upon each other, they are broken, divided and attenuated, till they become so minute and so well mixed, that the tough, slimy, and yet harder Combinations are unlocked and dissolved, by which means the Seeds and Rudiments of the Stone are prevented, and the Cause removed :

[And

And therefore in this Case, as in the Gout, the sedentary Lawyer, the hard Student, and the inactive, indolent, and voluptuous Gentleman are obnoxious to this grievous Distemper, while the laborious Husbandman, and Mechanick, the daily Traveller, and indefatigable Sportsman are seldom attacked and tortured by it : For these keep the Body in a healthful State, while their repeated Exercise helps their digestive Faculties to do their Duty, and refine the Blood by a constant Expulsion of inordinate and incongruous Humours.



Of the Method of CURE.

FIRST, of the lowest Degree of this Disease, that is, the small Sand-like Gritt, either White, Red, or Yellow, which though very minute, yet are true Stones, and distinct from the scorbutick Red Matter, that does not separate and fall down from the Urine, till after some Hours standing, and then is precipitated by the Impression of the Cold from the ambient Air, as above described. The Cure of this Distemper consists in the carrying off the fabulous and sandy Atoms, and preventing the Generation of more, and so cutting off the Supplies, that use to fill the Room of the former, that are discharged with the Urine : And it is highly necessary to attempt this, lest otherwise the small Sones continu-
ing

to a Stone of larger Size : And 'tis the same in respect of the Bladder ; for the same Flood that rushes down through the Ureters, carries off the Gritt from that Receiver and expels it with the Urine.

Diureticks to be employed in the Intervals of purging for the same Purpose, are such as follow.

Take of Roots of Chervil, Stone Parsley, Eringo, Fennel, Sorrel, each half an Ounce ; of Seeds of Burdock, Anise and sweet Fennel, each a Drachm ; of Juniper Berries three Drachms ; boil these Ingredients in three Pints of Spring-Water to a Quart, add to it a Drachm of purified Nitre, strain it, and add a Pint of Rhenish Wine : Drink a Quarter of a Pint Morning and Evening.

Or, Take Millipedes alive and washed, fifty ; bruise them in a Mortar with a Quarter of a Pint of Rhenish Wine and four Ounces of compound Horse-radish Water ; make a strong Expression for a Draught to be taken twice a Day.

But the most effectual Diuretick for carrying off Gravel and clearing the Parts afflicted with it, are mineral unpurging Waters, such as those of the *Bath, Tunbridge, the Spaw,* and other Chalybeate Springs : For these rushing with a plentiful Tide through the urinary Organs, where the Gravel is lodged, as well as generated, disturbs its several Nests, and
rolls

rolls along in its Stream the Sand-beds it meets in its Way, till at length they are discharged in the Urine. But this is not the only Advantage, that attends the drinking copiously Chalybeate Waters, for besides this, it very much contributes to the laying the Axe to the Root of the Disease, and preventing the Generation of such petrifying Seeds as shall be shewn afterwards. There are other diuretick Remedies useful in this Distemper; as a Mixture of Water, *French Brandy*, and Juice of Lemon called Punch, if made small, and not intoxicating, though taken in a considerable Quantity. *Juice or Syrup of Lemons, Syrup of Marshmallows, and fresh Oil of Sweet-Almonds*, each an equal Portion mixed and beat together with as much Sugar as is sufficient to give them a Consistency, taken to a Spoonful or two often in a Day is very beneficial; so is a Spoonful or two of *compound Juniper-Water of Cologne or Holland, drunk now and then in a Glass of White-wine*; add to these Remedies the Exercise of the Body, by riding sometimes on a hard trotting Horse, sometimes by hurrying in a Coach over paved Streets, or other rugged and uneven Ground, if the Patient can bear it, which by the repeated working and Concussion of the Back, move and dislodge the Gravel in the Kidneys, and force it thence into the Bladder whence it is excluded with the Water.

Now to prevent the Production of little Stones or Gravel, all those Remedies are required as most effectual that have an operative Vertue to loose and disengage all viscous and tough Coagulations, and dissolve the Cohesion and Structure of cretaceous and gritty Coalitions, whence small Stones and Gravel are created, some in the Blood, and others in the urinary Strainers. This is indeed a Matter of the greatest Importance in this Case; for if this is effected, the formidable and pernicious Disease will be crushed in Embrio, and not suffered to arrive at a mature State. I shall therefore set down the Medicines endowed with the greatest Force for procuring this End.

It is easy to see that those Remedies, that restore the Blood when depraved, to its native Temperament, and keep it in that just and salutary Constitution, which specifically belongs to this Animal Fluid, are in general to be chosen; and in this Case in particular those are to be insisted on, that are most capable of disjoining and separating the associated, viscous and sandy Particles, that conspire to the Formation of a Stone, and so to attenuate and refine them, that they may easily incorporate with the Blood, and produce an uniform and equal Mixture.

And for this Purpose Chalybeate Medicines prepared by Art or Nature are the most preferable: And since Patients afflicted with this Disease are commonly of a hotter Constitution than

than others, those Preparations that have the least Sulphur left in their Composition are most beneficial to them ; such as the *Salt of Steel*, or the Tincture of it in Wine : But above all, mineral Waters impregnated with Steel in Embrio are in this Case most celebrated, which not only dilute and attemper the Blood and carry off in their Current the sandy and petri-fying Materials, as before explained, but likewise by their active Vertue animate, ferment, and exalt the Blood, break the Cohesion of the knotty and cretaceous Seeds of the Stone, and by wresting the Particles from each others Embraces, prevent the engendering of this Disease by the Confederacy of such Impurities. So that these salutary Springs are not only highly useful in freeing the Veins from immiscible and hurtful Matter, cleansing the Urinary Channels, and rolling away in their Flood the Gravel lodged in the Cavities, through which their Waters make their Way, but they likewise very much contribute to the Recovery of a just Crasis or Constitution of Blood, by destroying the Principles and Rudiments of this Disease 'ere yet they combine in a Stone of larger Size and reach a mature State, which they effect in the manner described.

But if hard and gravelly Materials associate and unite in the Kidneys by a slight Structure, and are rather entangled one with another and hang together like a piece of Sponge, Hoar-Frost, or a Flake of Snow, than strictly co-

here, whence they become very porous and friable; or if when more closely complicated and connected they grow to a greater Bulk, and create great Pain either in the Kidneys or the Ureters, by grating the Membranes with their unequal and ragged Figure in their Passage, or by their too large and disproportionate Size stop at the Entrance or in their Way through these Tubes, in such Cases the proper Remedies to remove them from the Kidneys, and oblige them to pass the Ureters into the Bladder, are such as these.

How to remove a Fit of the S T O N E.

Take three or four Spoonfuls of Elixir Salutis, or of the Tincture or Infusion of Sena and Rhubarb and Anniseeds over Night, and a Quart of purging Mineral Water the next Morning, and the Night following take this Draught.

Of Milk-Water two Ounces, of compound Horse-radish-Water three Drachms, of crude Opium colated a Grain and half, Syrup of Marsh-mallows half an Ounce, make it a Draught: And if the Stone be not removed, but the Fit continues, take the next Morning two Quarts of the same purging Waters, either Epsom, Dulledge,

Dulledge, Acton, &c. and the Night following the same composing Draught, and so the next Morning and Night for three Times during the Fit; and if notwithstanding the Paroxysm is still prolonged, then let the Patient take the following Draught going to Bed every Night, if the Pains are violent, or otherwise every other Night.

Take of Oil of Sweet-Almonds an Ounce, of the pectoral Decoction a Quarter of a Pint, of Syrup of Meconium ten Drachms; make a Draught.

Take also such oily and diuretick Medicines as follow.

Take of Oil of Sweet-Almonds and Linseed drawn without Fire each an Ounce, of Syrup of Lemons and Marsh-mallows each ten Drachms, of Saffron a Scruple, of fine Sugar as much as is sufficient; let all be well mixed in a marble Mortar and made a Linctus. Let the Patient take a Spoonful or two often in a Day and Night.

Small Punch likewise, especially if made with Spaw-Water, is useful to push on the Stone, when it sticks in the Ureters, and to clear the Kidneys of the Beds of Sand collected there.

Juniper-Water especially that of Cologne, or Holland, and the diuretick Apozeme above set down are beneficial.

To be more particular, let the Patient in the Paroxysm, that eludes the Force of the forementioned Remedies, take the following.

Take of Flowers of Camomile two Handfuls, Root of Marsh-mallows six Drachms, of wild Carrot-Seed half an Ounce, of Venice Turpentine dissolved with the White of an Egg three Drachms, of the Electuary of Hiera cum Agarick six Drachms; make it a Clyster.

Or, Take of the common emollient Decoction twelve Ounces, adding to the Ingredients Juniper-Berries six Drachms, Seeds of the wild Carrot three Drachms; dissolve in it of Lenitive Electuary ten Drachms; use it for a Clyster.

Let one of the Clysters be given every Day for three or four Times.

For easing the Paroxysm, it will likewise be very Advantagious for the Patient to sit up to the Waste in a *Bath* of Lukewarm Water, and repeat it two or three Times, or in a medicated *Bath*, which may be made thus.

Take

Take of the Leaves of Mallows, Marsh-mallows, Pellitory of the Wall, each three Handfuls; Flowers of Camomile, Melilot and Elder, each two Handfuls; Tops of Camomile two Handfuls, Juniper-Berries six Ounces, of Linseed and Fenugreek each two Ounces; boil all in a sufficient Quantity of Spring-Water, and let the Patient sit in it Lukewarm up to the Waste.

In this Case also there are vast Varieties of Remedies prescribed by celebrated Authors, as Fomentations, Liniments, Plaisters, &c. to be externally applied, which notwithstanding are little availing for removing a Fit of the Stone: The most effectual are certainly the Use of purging Mineral Waters, three or four Times, and taking at Night after their Operation a Grain and half of *Opium*, as before mentioned, or an equivalent Quantity of *liquid Laudanum*, that is, about thirty Drops.

But in Case that Method should not succeed, the next most valuable Medicines are Pills made of *Venice-Turpentine*, or rather *Chios* taken to the Quantity of a Scruple alone, or mixed with an equal Part of *Rhubarb*.

Or Thus,—*Take of Venice or Chios Turpentine four Scruples, of Rhubarb a Drachm, of Salt of Tartar half a*
N 4
Drachm,

Drachm, Cinnamon half a Scruple, of Balsamick Syrup as much as will make a Mass, to be formed into Pills of ordinary Size; take four every other Day.

For the same End Emulsions are conducive such as these.

Of Sweet-Almonds blanched number fifteen, of Seeds of Melons, Pumpions, Violets, each two Drachms, bruise them together in a marble Mortar, pouring on them gradually a Quart of Barley-Water; strain it for use; drink often of it a Quarter of a Pint or six Ounces Day or Night.

Or, Take of Seeds of Violets three Drachms, of Seeds of Pumpions, Melons, white Poppies, each two Drachms, eight blanched Sweet-Almonds; bruise them together in a Mortar, and pour upon them Milk-Water, and Corn Poppy-Water, each a Pint, strain it, and make it an Emulsion to be drank as the other.

Oily Medicines are likewise very useful, as they envelop and soften the acid and acrimonious Juices, and promote the Expulsion of the Stone.

Take two Spoonfuls of Linseed Oil newly drawn without Fire twice a Day.

Or,

Or, Take new Oil of Sweet-Almonds and Linseed Oil drawn without Fire, each an Ounce; of Syrup of Marsh-mallows, Violets, each six Drachms; of Syrup of Lemons half an Ounce, of Saffron half a Scruple; mix them well to make a Linctus: Take a Spoonful often.

Or, Take an Ounce of fresh Oil of Sweet-Almonds in a Quarter of a Pint of the Decoction for the Syrup of Marsh-mallows, and repeat it frequently.

Riding in a Coach or on Horseback in rough unequal Ground, or over paved Streets, conduces much to the Discharge of the Stone when it sticks in the Ureter or Pelvis, if the Patient can endure it.

And while these Remedies are made Use of, opiate Medicines must be given mingled with them or alone, to abate the spasmodick Contraction of the tender Membranes, and give Ease to the disordered and afflicted Spirits, that they being lulled to Rest and Quiet may cease their convulsive Grasps, and the mean Time the Stone sollicitated by oily smooth Remedies, slippery and gentle Diureticks, may slide through the Ureters and drop into the Bladder without Resistance.

Take of crude Opium dissolved and strained
a Grain and half or two Grains, of the
pectoral Decoction a Quarter of a Pint,
Syrup

Syrup of Lemons three Drachms, make it a Draught to be taken at Night, or at any Time when the Pain is violent, and repeat it as the Symptoms shall require.

Or, Take of Cinnabar of Antimony half a Scruple, Crabbs-Eyes and Coral, each six Grains, Laudanum Opiatum a Grain and half, make it a Powder to be taken as the Draught now prescribed.

If the Patient is disposed to Vomiting or straining to Vomit, let him take two Spoonfuls of the following Mixture, and repeat it four or five Times once in four Hours.

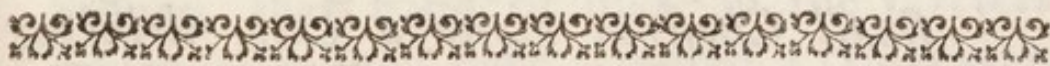
Take of Mint-Water or Barley Cinnamon Water two Ounces, of Juice of Lemons two Ounces, of Salt of Wormwood a Drachm and half, of Laudanum a Grain and half; make a Mixture.

For easing the Pain and facilitating the Passage of the Stone, various diuretick Remedies are recommended by eminent Physicians, the Decoction of *Forrestus* is for this Purpose much cried up.

*Take of Seeds of Mallows, Marsh-mallows, each two Drachms and half; of fat lenten Figgs cut and sliced number nine, Sebestens in number seven; boil these Ingredients in three Quarts of Water to
three*

three Pints : This soft and slippery Decoction, like that for making Syrup of Marsh-mallows, or that pectoral Decoction in the London Dispensatory, may be improved by other diuretick Ingredients, (viz.) Seeds of Burdock, Root of Fennel, Violet, Eringo, wild Carrots, Juniper Berries, &c.

In a Fit of the Stone likewise the Decoction of the Flowers of Camomile is much applauded by some worthy Physicians, and that of the Water-Lily, and if some Drops of sweet Spirit of Salt or Vitriol were added to each Draught of such diuretick Apozems, their Force would be improved.



Of the Preservatory Method
in the STONE, when the
Paroxysms cease to prevent
there Return.

GENTLE Purgatives of Sena, Rhubarb, Elixir Salutis, &c. taken once in a Month or six Weeks are beneficial, as they cleanse the Stomach, and their appending Roads from their Impurities, and the crude
and

and unconcocted Remains of the Foods ingested; but the best Way is frequently to use purging Mineral Waters, and in the Intervals, diuretick and alterative Remedies should be taken, such as these that follow.

Take of the Pulp of candied Citron-Peel and of the Root of Marsh-mallows, each an Ounce; of Species Dialthææ and Diatragacanth frigid, each a Drachm and half; of Crabbs Eyes two Drachms, of the Seeds of Purslain and white Poppies each a Drachm, of the Fruit of Alkakengi two Scruples, of Gumm Arabick two Drachms, Syrup of Marsh-mallows, as much as will make an Electuary; take the Quantity of a large Nutmeg, or small Chestnut twice a Day, drinking after it a Quarter of a Pint of the Decoction for the Syrup of Marsh-mallows.

But for cleansing the Kidneys and carrying off the Sand and gritty Concrescences, left by daily Augmentation they should at last form a larger Stone, slippery and oily Remedies and Turpentine, such as mentioned above, Whey, and above all unpurging Mineral Waters of all Kinds, but chiefly the Chalybeate, must be relied upon. *Millepedes* are also a good Diuretick in this Case: But I have above treated on this Subject, where I have discoursed on the Gravel, and small sandy Concretions,

ons, which are the minutest real Stones and the Seeds and Rudiments, that by their Confluence and Coherence produce those of a greater Dimension, and to that Discourse I refer the Reader; for the true Method of preserving the Patient from the Return of his Paroxysms is to prevent the Generation of such fabulous Materials out of which the Stone is made, or to carry them off before they have formed such large Bodies.

It is very useful in a Paroxysm of the Stone, to go into a *Bath* of Spring-Water moderately warm, which by stopping Sweat and Perspiration, and soothing the Spirits, relaxing and dilating the Fibres, promotes Urine, and therefore the Protrusion and Expulsion of the Stones, that hang or stick in the Ureters; which after they have acquired a considerable Magnitude, will notwithstanding strive and make their Way for a while through those Tubes, which are much stretched and enlarged by being the beaten Road for Stones to pass from the Kidneys to the Bladder; yet at length they encrease to such a Size, that when they have entered the Orifice of the Ureter, and are incapable of proceeding farther, they plug up the Passage, and stop the Current of the Urine; and if afterwards another Stone of such a disproportionate Size should fall from the Kidney into the Mouth of the other Tube, a total Suppression of Urine and Death in a short Time, that is, in ten or eleven Days, are the

the Consequence ; for a total and destructive Stoppage of the Urine, cannot arise from the Obstruction of one Ureter ; for Nature that has framed so many double Organs for other Functions, two Eyes, two Ears, two Jugular Veins, two Lobes of the Lungs, &c. that if one of these Instruments should be lost or become defective, the other, at least in a great Measure, might perform the Office of both ; so it has evidently for the more certain and effectual Secretion of the Urine, provided a pair of Conveyances, one in each Kidney, that if this be entirely disabled and stopped up, that may do double Duty, and discharge the Portion of Serum, that used to run through the other Aquæduct. It is therefore evident to a Demonstration, that no total Suppression of the Urine can happen, where both the Ureters are not entirely stopped ; and it is hard to conceive how at any Time two Stones should at once fall down, one from each Kidney, and stop in the same Instant, each of those Organs of Separation : If therefore a full Stoppage of Water happens, and neither of the Ureters was before that Time obstructed, it is most agreeable to Reason that we should assign another Cause of that Event, that is, a paralytick Impotence of the secretory small Tubes and papillary Glands, which strain the Serum from the Blood through the Kidneys and Ureters into the Bladder ; for if these secretory Tubes by a Paralysis affecting the Spirits residing in them,

quite

quite lose their Tension, and falling flat together close up their *Foramina* or Passages, no Serum can be longer separated from the Blood, or conveyed into the Receptacle of the Urine; and this will prove as effectual and adæquate a Cause of a total Obstruction of Urine, as if both the Ureters were compleatly stopped by the falling of two Stones of disproportionate Size into their Mouths. And this was the Case of an illustrious Person, one of the first Rank of the *English* Nobility, who having for several Years been afflicted with the Gout, one Day felt a severe Pain in one of his Shoulders, which after some Time ceased to afflict him; but he had not been long at Ease, when the Flow of his Urine was entirely interrupted, and continued so to the eleventh Day, when the noble Patient expired, notwithstanding all the Means and Methods that his Physicians, of whom I had the Honour to be one, could direct for his Recovery. Upon opening the dead Body there appeared, when the Kidneys were divided, some small Stones in the *Pelvis*, and others entangled in the Fibres or Strings of the Kidneys, but no Stone in the Mouth or Channel of either Ureter; so nothing can be more certain, nor more obvious to the meanest Capacity than this, that the Stone could not be the Cause of hindring the Water from descending into the Bladder, no Stone being found in the Ureters, nor in the Kidneys of a Size capable of stopping the Tubes
before

before named, and had there been bred in the Kidneys any Stones of a sufficient Bigness to have compleatly stopped the Ureters, yet it must be supposed, as before suggested, that two Stones of such a Magnitude fell at the same Instant, one into the Orifice of each Ureter, else a total Suppression of Urine could not have followed; and this must be supposed scarce ever to have happened, and is but barely possible. But *de facto*, there were no such Stoppage found in either Ureter. Yet notwithstanding one of the Physicians declared his Opinion, and obstinately persevered in it, that the Suppression of Urine, of which the Patient dyed, proceeded from the Stone in the Kidneys.

These are the best preservatory Means against the Return of this formidable Disease, since the true and effectual Way, as mentioned above, is either to enable the active Principles of the Blood to keep the Mass in such an equal, regular, and just Mixture, and to refine and exalt it to such an healthful State, as may prevent the Generation of hard and gritty Concrescences, that, as they are the Foundation of the Stone, so they administer Materials for the Superstructure; and for procuring this End, the Remedies already enumerated are most availing, in as much as they animate and enliven the Spirits, refine and elevate the Mass of Blood, and dissolve and sever cretaceous or sandy Coalitions, by maintaining its Circulation

tion with a due Celerity. To these may be added such Medicines as subdue the acid and acrimonious Quality of the Juices, by blunting and smoothing their sharp Points and Angles, such as *Coral*, *Crabbs-Eyes*, *Crabbs-Claws*, *Oyster-shells*, and other testaceous, absorbing and correcting Powders given with *Asses-Milk*, or mixed with other Ingredients in Pills or Electuary; and likewise those, that are proper to assist the digestive Faculty of the Stomach, to concoct the Foods and Liquors it receives, into a wholesome well-laboured and duly mixed Mass of Chyle, that the unconcocted and fæculent Parts, the first Seeds and Principles which by their Union and Coacervation produce the Stone, may be prevented.

The Forms of such Medicines that promote Digestion in the Stomach, are such as these.

Take of Conserve of Roman Wormwood, of candied Citron Peel, or the outward yellow Rind of the Orange, each an Ounce; of Coral, Crabbs-Eyes, and Pearl, each a Drachm; of candied Nutmegs a Drachm and half, of Salt of Wormwood and Tartar, each two Scruples; of compound Powder of Wake-Robin, and the Leaves of Chamæpitys, each a Drachm
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and

and half; of the Syrup from candied Nutmeg, as much as will make an Electuary. Take the Quantity of a large Nutmeg every Morning and Evening, drinking after it a Glass of Wormwood-wine, or the Infusion of the Root of Gentian, or Twenty Drops of the Tincture of Gentian in a Glass of White-wine.

Or, Take of the Tops of Roman Wormwood and the less Centaury, each half a Pugil; of the Root of Gentian and Virginian Snake-root, each a Drachm; of Cardomom Seed two Scruples, of Coriander Seed two Drachms and half, of Salt of Tartar a Drachm; infuse all in a sufficient Quantity of Spring-Water to a Quart; strain it, and add to it of compound Wormwood, and compound Gentian Water, each an Ounce and half; take a Quarter of a Pint each Morning fasting, and Afternoon about three Hours after Dinner.

Sometimes Take of Elixir Proprietatis tartarised five and twenty or thirty Drops in a Glass of Mountain White-wine twice a Day.

Besides these Remedies, moderate Exercise, pure and well ventilated Air, Regularity and Temperance in Eating and Drinking must be carefully observed, without which the best Methods of Physick may be unavailing.

As to those Medicines called by the *Greek* Physicians *Lithon triptica*, that is, such as break and dissolve the Stone, either in the Kidneys or Bladder, and to which many Empiricks have pretended, assuring us that they gradually wear and crumble it away, and reduce it to such minute Fragments, that they easily pass the Ureters into the Bladder, and with the same ease slide through and are excluded thence together with the Urine: I acknowledge I am incapable of conceiving how a Medicine ingested by the Mouth can produce this Effect. It is true, that the celebrated *Carthaginian* General *Annibal*, as Historians report, found means by Vinegar, or some invented sharp and acid Liquor, to dissolve the *Alpine* Rocks, and so to eat his Way through those Mountains into *Italy*. But if any Patient afflicted with the Stone, should swallow a proper Quantity of this powerful Fluid, were it to be had, or any other of like Vertue, since it must first undergo a great Alteration by the Ferment and digestive Faculty of the Stomach, and then a farther by mixing with the bilious Humours descending from the Gall-Bladder, and afterwards with the acid Juices issuing from the *Pancreas*, and then another by passing the lacteal Strainers, and mingling its Stores with the Lympha brought by numerous Water-Pipes into the common Receptacle; then another by its Admission into the Veins, where during repeated Circulations with great

Celerity, the Parts by innumerable Attritions, Reverberations, and Glances from their violent rushing and beating upon another, receive great Comminution, and are attenuated, exalted, and smoothed, till they acquire a refined volatile State; and last of all, since they must receive another Alteration by entering and passing the urinary Strainers in the Kidneys: Let, I say, all these Changes be contemplated and will not, do you think, the Medicine ingested be unedged and disarmed of its sharp Points and Angles, and lose all its dissolving or Stone-cutting Quality? For no acid Juices, not Vinegar it self, continue acid after they have mingled and circulated with the Blood, and have felt for some Time the digestive Power of its active Principles.

Those bold Persons therefore that pretend to be Masters of Remedies, which given by the Mouth, will break or dissolve the Stone in the Kidneys or the Bladder, impose upon Mankind, not only because the Medicine loses its peculiar Qualities by undergoing such a Variety of Changes and Alterations, as have been enumerated, but likewise by mingling and being diluted with above Twenty Pound of Blood, (for few Men have less) and frequently running its Circuit with it, by which means it becomes quite another Thing, before it reaches the Stone it was designed to dissolve or crumble to pieces.

It must be observed, that as above mentioned, there are some porous, light, and friable Stones, whose Constructure is so slight, that they will by a little Shock or Collision crumble and be divided into small Fragments, while the Parts of others so strictly cohere, that they are scarcely capable of Separation; and it is of these harder and more solid Stones that I speak, when I say they cannot be broken or cut in pieces by Remedies given at the Mouth, but they defy the Edge of the keenest Lithontriptick Weapon in all the Arsenals of *Greece*.

When therefore Stones or Gravel are at any Time removed from the Kidneys and excluded with the Urine, it is not by Vertue of any Stone-breaking Medicine acting upon them, but by the Operation of its diuretick Quality, exciting a great Separation of Serum, which rushing in a swift Current through the Kidneys, washes away in its Streams the Gravel and Stones lodged there, that by their proportionate Magnitude are capable of passing the Ureters, as a sudden Storm or sharp Shower of Rain rolls down the Streets in its Torrent, the Sand and loose Stones, as well as other promiscuous Impurities to be carried off by the common Drain: Though it is very probable that sometimes this Flood of Serum transmitted from the Veins by is immoderate Quantity, as well as the Strength of its Tide, in its Passage through the Kidneys, may likewise disunite and shatter to pieces some smaller friable

Stones, whose Parts hang together by a very slight Connexion.

But if Nature or Art can afford any Medicines, that are capable of breaking a hard large Stone in the Bladder, the most probable Way of making them effectual, would be to inject them directly into the Bladder; for then having undergone none of those various Alterations above enumerated, which those Remedies must do that are taken by the Mouth, they would exert their Stone-dissolving Vertue, if they have any, entire and undiminished, and would have the great Advantage of acting upon it by immediate Contact, by which means the Stone in the Bladder, if it could be effected by Medicines, would be wasted and moulder away. But Experience shews that this is not found practicable; for were such a Medicine discovered, it would prevent the Tortures and Misery of many unhappy Patients, and make the useful Art of Cutting for the Stone unnecessary, of which I shall speak afterwards.

When large Stones are bred in the Kidneys, or such as cannot pass, but with great Pain and Difficulty, all forcing diuretick Medicines must be forborn, and only such as are smooth, oily, and slippery should be employed; lest such as powerfully provoke Urine should disturb and push forward the bigger, that lay quiet in the Kidneys into the Ureters, where they will either stop at the Entrance or stick
in

in the Passage, and by that Means either shut up the Mouth, or create a violent Fit of Pain together with bloody Urine, if their Surface be rough and ragged ; and therefore in such Cases slimy, soft, and mucilaginous Remedies are chiefly to be depended on, to promote the slipping of the Stone into the Bladder : And if active Diureticks have been employed in vain to push on the Stone, which often happens in a violent Paroxysm, opiate Medicines of good Force should be given, that the Fibres of the enclosing Membranes, whilst stimulated by the Torture of the Stone, and urged by the Medicine designed to expel it, being eased and lulled by their narcotick Virtue, may cease to contract themselves and clasp the Stone so closely, and by dilating and relaxing themselves while at Ease, may make Way for it to slide through into the Bladder. But if the Stone in the Kidneys is large, solid, and branches through their Substance, no Means at all should be used for its Cure ; for if there are any Remedies that have Power to break and dislodge its Fragments, which I believe, as I have said, there are not, what would that be, but to send them down to stop the Ureters, or to give unsufferable Torments by sticking in their Channels.

As to the Stone in the Bladder, which, as said above, is no more than a Stone first bred in the Kidney, and thence conveyed through the Ureters, where it receives its oblong Figure,

gure, into the Bladder, and gains there such a Magnitude, that it becomes incapable of being expelled with the Urine, being fed and augmented continually with new Gritt and sandy Materials washed from the Kidneys and falling down into the Bladder; when it first descends into that Receptacle, and its Size does not exceed a due Proportion, while it floats in the Urine, it often plays, aims, and offers at the Orifice of the Urethra, but its Figure or Position not being accommodated to it, cannot pass through that urinary Channel; and then it not only creates great Uneasiness by lying cross its Mouth, but likewise often by interrupting the Streams of Urine, and sometimes by totally obstructing the Passage. When the Stone or Stones are yet small enough to enter and pass the Urethra, to facilitate their Discharge, the Veins should be filled with such diuretick Liquors, as I have before set down, that they may communicate a constant Flow of Urine to the Bladder, which being commonly kept full, will be the more apt to eject the Stone together with the Flood that distends it. But if it grows so great that it becomes unable to make its Way by Reason of its disproportionate Size, it will be daily augmented by the Accretion or Addition of new Gritt or Gravel carried from the Kidneys through the Ureters by the Streams of Urine, as Sands and small Stones are rolled along from a rising Ground by Rills of Water, that
 flow

flow down its Sides. Now these Sands or minute Concretions, as I have explained above, are the Seeds or Mother of the Stone, that is, the Principles or first Materials, that combine for the Formation of it in the Kidneys, and afterwards to its Augmentation in the Bladder; and to hinder its encreasing there to a great Magnitude, those Remedies are to be used which were enumerated before for cutting off the Generation of Gravel, and such sandy and fabulous Combinations; to which I refer the Reader.

But if through Neglect or the Inability of Methods and Medicines to prevent the breeding of Sand and Gravel in the Kidneys, which washed away by the Urine into the Bladder constantly feed and amplify the Stones confined there, which grow not like Animals and Vegetables by Nourishment admitted by the Mouth or the Root, and conveyed and distributed to the outward Parts from the inward, but by the daily Access, Accumulation, and Adhesion, of hard, sandy Particles to the Surface of the Stone; if, I say, the Stone by the Arrival and Complication of new petrifying Principles becomes large and ponderous, and being attended with a terrible Train of Symptoms, that render the Patient a great Object of Compassion, while Death is more eligible than Life, and no effectual Means can be suggested, how it may be cut, dissolved, or crumbled to pieces, as I have before demonstrated,

all

all that can be done by Medicine is to quiet or reduce the enormous Pains and Torments inflicted by this cruel Disease ; and for the effecting of this, only *crude Opium* or its Preparations, the Gift of Divine Benignity to mitigate the Tortures and alleviate the extream Miseries of Mankind, can be depended on. This is the Patient's Refuge, and the only Consolation to allay his Agonies, and restrain the Rage of his Sufferings. In this Case let him take the following Pills.

Take of Saffron three Grains, of Extract of Gentian six Grains, of crude Opium dissolved and strained a Grain and half, Balsamick Syrup, enough to make it into Pills for one Dose, to be taken in violent Pains, and repeated when the Force of the first is worn off, if the Torments continue.

But if the Quantity of *Opium* prescribed is not sufficient to remove the Pain, it may gradually be encreased by adding a Quarter of a Grain; and if that likewise should be ineffectual, add half a Grain, and so on till the Patient has found what is the just Quantity, that will relieve him, and when he has taken his Measure and settled the Proportion, he will be obliged to take it as often as his Agonies shall make it absolutely necessary. All smooth, soft, and slippery Meats and Drinks, as well as Medicines

cines must be chosen; for those of an opposite Nature will irritate and enrage the Paroxysm, especially if an Ulcer attends the Stone, which is an incurable Disease: And as Ulcers produced either in the Kidneys or the Neck of the Bladder from other Causes besides the Stone, elude the Force of all Remedies, which is likewise the Case of all other internal Ulcers in the Lungs, Liver, &c. so those, that arise from the Fretting and Laceration of the Membranes in the Kidneys or the Bladder, by Stones of a rough and ragged Superficies, can never be healed, at least while the Stone continuing there is always wearing and wounding the Part where it lodges: And therefore all that can be done, is to drink plentifully smooth, and soft Liquors, besides taking slippery and oily Remedies, that may constantly dilute and wash away the ulcerous Matter, lest gathering together in too great a Quantity, it should stop the Passage of the Urine; which Obstruction is sometimes so great that the Surgeon's Hand is necessarily required to pass his Catheter into the Bladder for the Relief of the Patient, through which the imprisoned Urine may flow freely out; and the Patient is obliged to fly to this Refuge for Ease, as often as Clysters and other Medicines ingested by the Mouth are ineffectual. The soft and smooth Liquors that may assist the Patient by diluting the corrupt Matter, and make it fit to flow, are *Mead* or other Liquors made of *Honey*, Decoctions
of

of *Barley, Liquorish, Marsh-mallows, dried Figgs, and Rasions of the Sun stoned*; or the following Apozeme.

Take of Flowers of Mallows an handful, of Root of Marsh-mallows half an Ounce, of sweet Fennel-Root an Ounce; of Leaves of Violet, Parietaria, each a Pugil; of Anise and Carraway Seeds, each a Drachm and half; boil all in three Pints of Spring-Water to a Quart, strain it, and add of Syrup of Marsh-mallows three Ounces, and six Drachms of the Tincture of Saffron in Treacle-Water; drink half a Pint or six Ounces three Times a Day.

The smoothest and softest Spring-Water should be chosen for common Drink, such as that of *Bristol* or any other, that rises from Chalk-Hills: A good Draught likewise of White-wine and new Ale now and then repeated is useful to dislodge and carry off the noxious and impure Matter issuing from an Ulcer in the Kidneys or Bladder; and the Sediment of each of them is distinguished by their slimy, glutinous and ropy Quality from the white, mealy and light Contents found often in the Urine from scorbutick Causes, as above suggested, that by shaking the Glass will presently rise and float in the Bosom of it, which however has no weight, nor viscous, nor grit-

ty Quality, but swims in pale, discontinued and incoherent Matter, communicated to the Urine from the Blood abounding with such Impurities. And they are discriminated from one another by a fætid and offensive Smell proper to the Matter discharged from an Ulcer in the Bladder, and contracted from long mixing with the Urine, which is not found in those slimy Contents that flow down from the Kidneys, and are excluded with the serous Streams, as I have above explained.

After all, when notwithstanding the due Care and Observance of the best Rules to prevent it, the Stone in the Bladder grows very large, and the Pains are greater than Humane Patience can bear, the last Refuge from this dreadful Tormentor is, manual Operation, when Incision is made into the Bladder, and the Stone extracted through the Wound. So strong is the Principle of Self-Preservation, and so terrible the Idea and Apprehension of Death, that to continue a little longer in Being, Men submit, not only to a great Variety of lingering Sufferings and Calamities, but likewise to the acutest Pains, of which their yielding to this Method of curing the Stone is a most convincing Evidence.

Though the Cutting for the Stone is a painful Operation, and attended with the Hazard of Life, yet many Patients have been relieved by it, and continued after it many Years, especially those, that were Cut in their Youth.

Yet

Yet it must be acknowledged that many also have miscarried, either from the Nature of the Stone, their ill Habit of Body, the Unskilfulness of the Operator, or his want of sufficient Knowledge in Surgery to heal the Wound. And this Misfortune often happens likewise from the Patient's deferring the Operation too long, out of an Abhorrence of the Violence of the Cure, or from flattering Hopes that the Disease will not arise to such Extremity and torment them with such insufferable Symptoms. It is therefore the Interest of Persons afflicted with it to undergo the Operation, by which the Stone is extracted, when as yet it is of a moderate Size, and therefore more easy to be drawn through the Wound, and before their Strength is exhausted by long Sufferings and repeated Paroxysms of Torture, and before the Ulcer that is often formed by it, becomes deep and inveterate; and then while their Vigour is unwasted, and their Constitution otherwise hail, and the Stone not of an extraordinary Magnitude, the Operation is likely to be successful: And if these Rules were observed, the Lives of many of these unhappy Patients might be saved, that are lost for want of a timely Submission to this Method of Cure.

When the Stones lapsed from the Kidneys into the Bladder are not augmented there to that Proportion, as makes them incapable of entering into the Mouth of the *Urethra*, yet sometimes

sometimes after it has entered it is however too large to make its Way through that Aquæduct, and therefore stops in the Road, where it not only creates great Pain, but likewise obstructs the Current of the Water, till at length there is no Remedy left but the Surgeon's Art, who in this Case easily relieves the Sufferer by cutting upon the Stone where he feels it lodged, and thrusting it forth through the Orifice of the Wound : And this is the most practicable and least dangerous Instance of Cutting for the Stone.

As for Cutting into the Bladder and extracting the Stone thence, various Methods have been invented, of which a distinct and accurate History is not the Business of this Dissertation : It is enough for me in this Place to mention the most practicable and safest Way, and this, as I am informed, is that of cutting into the Bladder, in the Region above the *Os Pubis*, lately brought into Use. Whether there occur any dark and obscure Hints of this Practice in ancient or modern Authors, or whether the first Invention does Honour to the ingenious Surgeon Mr. *Douglafs*, it is certain, that either as Reviver or Inventor of this new Method, he has deserved well of Mankind, and merited the Thanks and Esteem of all the Faculty, since all Ways of performing this Operation known before, were accompanied with more Difficulty, more Suffering, and greater Hazard of Life.

Before the Patient consents to undergo this Method of Cure, great Care and Caution should be used that the Operator may be sure himself, and so able to satisfy the Patient that there is a Stone in the Bladder, the Cause of all his painful Symptoms, and fit to be extracted. For there have been other Diseases of the Bladder, that have so perfectly imitated the Stone in all its Symptoms, and have imposed upon Surgeons eminent in their Art, who after strict Search have pronounced the Case to be the Stone, yet when they have cut the Patient to relieve him, no Stone has been found, and upon opening the dead Body either a *Fungus* or some Excreescency grown to a great Bigness in the Neck of the Bladder, or some other Disease or Errour of Nature in the Bladder, appeared to be the only Cause of all the Nephritick-like Symptoms, that afflicted the Patient : And therefore, I say, the Undertaker before he attempts the Operation ought with the greatest Deliberation and most careful Scrutiny get the fullest Conviction in himself of the real Existence of the Stone in the Place he expects to find it.

A



A
 DISSERTATION
 UPON A
 DIABETES.



THE Serum of the Blood constantly fed and recruited, partly by Fluids, but chiefly by Liquids ingested into the Stomach and transmitted thence to the Veins, is of the greatest Importance, not only as it dilutes and attempers the active and fiery Parts of that Mass, but as it contains and conveys Nourishment to repair and augment all the solid Parts of the Body; and while it mingles and incorporates with the Blood, and forms one uniform fluid Mass, during its circulating

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Course

Course through the veiny and arterial Roads, it communicates by Percolation through the Glands and secretory Tubes, the watry Streams that fill the intricate and colourless System of the Lymphæducts, or Water-Pipes disseminated through the Animal Fabrick ; and while by Filtration through the Glands of the Kidneys, the superfluous Waters are separated, carried off, and excluded by the Bladder, the finer and more exalted Parts insinuate themselves into the Pores and minute Vacuities of the Brain, and are admitted into the inmost Recesses of that curious Organ, where the Animal Instruments of Imagination, sensitive Perception, and local Motion are all formed, and whence they are distributed through the System of the Nerves for the most eminent and necessary Service. Moreover, to free the Blood from immoderate watry Stores, and keep it in a healthful and regular Temperament, an immense number of Glands are planted in the Skin, by some of which the redundant Serum is in a great Measure strained from the Blood, and evaporates by copious Sweats, while by others, that serve for insensible Breathings and Transpiration, a great Quantity of Serum steals out in invisible Reeks and Steams, and mingles with the common Air. There is yet another considerable Drain, by which Nature when oppressed with depraved or excessive Serum relieves herself, and that is the Intestines, by whose Strainers a
great

great Measure of watry Humours is frequently discharged to Advantage : When the Serum of the Blood is thus derived or conveyed away in a proper and due Proportion, by the Mediation of these various Emunctories, the Animal Regimen is duly preserved in a regular and salutary State.

But when the Mouths or Passages of these Outlets are either too much extended, or on the other Hand become too close and narrow, they grow defective in the Performance of their Office ; whence great Disorders and various Diseases derive their Original. For Instance ; if the cutaneous Glands, that serve either for Sweat or invisible Perspiration, are suddenly closed up or contracted by the Impression of Cold Air, or other Causes ; the Consequence is, that the watry Humours, that used to evaporate and exhale through those Channels, return into the Veins, and excite Fevers, Coughs, Catarrhs, Head-aches, or other Sufferings. In like manner, when the Glands of the Intestines are shut up, or at least are too much drawn together, a sufficient Proportion of Serum cannot pass through to moisten, lubricate, and soften the recrementitious Mass ; whence the Guts grow hot and dry, the Fæces become indurated and incapable of Extrusion ; and this creates immoderate Heat, great Disorders of the Head and Stomach, and Pains in the Abdomen, till Nature is relieved of the oppressive Burden.

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And thus if the Tubes and papillary Strainers of the Kidneys are in the like manner perverted or obstructed, so that the watry Humours, that use without Interruption to glide through their Channels, are in a good Measure intercepted, their Course being thus stopped, regurgitate into the Blood, and for Want of Vent lay the Foundation of a total Suppression of Urine or a Dropsy.

On the other Hand, if these glandulous Organs of Filtration are too lax, and their Pores and Passages are too wide and gaping, the Event is contrary; for then an excessive Quantity of Serum rushes through the extended Outlets, which weakens and impoverishes the Blood, by defrauding it of its necessary Moisture. For Example, if the Orifices of the cutaneous Glands are too much dilated and open, such an exorbitant Degree of Serum will pass through by Sweat and Transpiration, as will spend the Strength of Nature, and rob the Blood of its best Riches. Thus we see that in acute Diseases, chiefly malignant Fevers, copious and profuse Sweats lay all Nature waste, while the Blood seems to be in a State of Colliquation and Dissolution; but this more evidently appears in some languishing and chronic Diseases, particularly scorbutick and errattick Fevers and wasting Consumptions, for in these Cases the Vigour of the Patient melts away and evaporates through the Pores of the Skin, in reeking Steams or imperceptible Exhalations.

lations. Thus likewise if the salival Glands in the Mouth lose their Tension, and become lax and gaping, an immoderate and noxious Flux of watry Humours run into the Mouth and provoke a continual Spitting, sometimes to the Quantity of more than a Quart in a Night and Day, as if a Salivation had been raised by mercurial Medicines; and this Symptom I have often observed in hypocondriacal and hysterick Patients. And thus if the Strainers in the Kidneys are too much stretched and widened, the watry Humours must run through them without Interruption in an exorbitant Measure. But here it must be observed, that in these forementioned Cases the depraved Disposition or Fusion of the Serum, usually concurs with the faulty Constitution of the Glands to produce these Events, and is often the principal Cause of them, of which hereafter. And now I am led to the chief Thing I intended, that is, the Explanation of the Nature, Symptoms, and Causes of a *Diabetes*; and the Way being thus prepared, I now undertake that Province.

*Of the Nature and Properties or
Symptoms of a* DIABETES.

A *Diabetes* is a redundant and profuse Discharge of Urine: An Expence which always enfeebles and impoverishes the Blood, and is sometimes too great for Nature to bear, and therefore she daily decays, and is often ruined and undone by her constant Losses. As in a copious, long, and contumacious, or by a more violent Flux of the Belly, the serous Stores of the Blood are so exhausted, that the Animal Spirits are depressed, and at length extinguished: And hence it appears, that some Physicians have incautiously called a *Diabetes*, a *Hydrops ad matulam*, a Dropsy of the Chamber-pot; for this is no more a Dropsy, than an obstinate *Diarrhœa*, or continued profuse, and colliquative Sweats, are that Disease, which in the same manner, though by different Outlets, carry off the Serum of the Blood in such an excessive Degree, that there is not enough left behind for the necessary Service of the Animal Oeconomy.

One great and constant Symptom of a *Diabetes*, is, that the Urine has lost its ordinary Smell; and another, that it becomes insipid and sweet to the Taste: The Reason of the first seems to be this, that the Serum having
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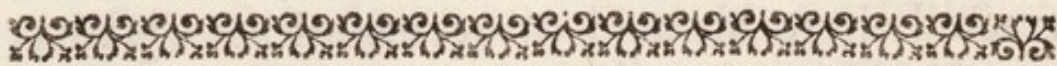
pass long and in great Quantity through the Kidneys, has by a constant Deluge washed away the sulphurous and lixivial Particles in the Kidneys, that used to communicate to the Urine in its Passage that nidorous and strong Smell peculiar to it, as likewise its proper brackish Taste: For we see by Experience, that when acid or acrimonious, fixed or volatile Salts are over diluted and dispersed through a great Quantity of Water, they lose their distinguishing Properties, and do not discover themselves to the Nose or the Palate. It is no Wonder therefore that a Torrent of watry Humours rushing continually through the Kidneys should too much dilute and carry off the lixivial Salts, that always lodge in that Bowel in a healthful State, so that they can no longer infect the Serum with an urinous Taste and Odour. But it is a Matter of greater Difficulty to account for the Sweetness of the Urine, which imparts a Relish and Sensation, like that of Sugar or Honey. The celebrated Doctor *Willis*, conjectures, that this Symptom arises from the Conjunction of the Salts of the Blood, with some Particles of Sulphur, which in this State of Colliquation or Dissolution, the Current of the Serum washes away from the fatty Parts, which partake in some Measure of this general Fusion or melting Disposition; and this Combination or Cohesion of the Salts, with a Proportion of oily Materials, dulcify the Urine and takes off its saline Taste; this is an

ingenious Notion, but whether solid is uncertain.

There are too Sorts of a *Diabetes*, though the Difference between them is not essential and specifick, but only of Degree; that is, the acute or chronical, or the hasty and slow. The first is, when upon a total or universal Præcipation or Colliquative State of the Blood, the serous Parts desert its Embraces and separate from it, like Whey from the coagulated Ingredients of the Milk, when an austere Mixture acts upon it, and dissolves the Union of the constituent Parts; for in this Conjunction a rapid Deluge of Water rushes through the Channels of the Kidneys, whose Water-Gates and Conveyances are now all unfolded, their Sluices drawn up, and all their secret Conduits set a running; in like manner, as when the Treasures of Snow collected in Winter on the *Alpine* Hills, and dissolved and thawed by the first hot Days of the returning Spring, flow down in Torrents through the abrupt Channels, and overspread the Vales with a sudden Inundation.

This general Melting and Solution of the Mass of Blood exhausts the vital Stores, wastes all Nature's Stock at once, and brings on inevitable Death in a few Days, no less than when the Veins and Arteries are all drained by a violent and excessive Hæmorrhage, that defeats all Remedies employed to suppress it. But sometimes a *Diabetes* proceeds with a slow
and

and lingering Pace, when the Emission or Profluvium of Urine, though immoderate, is however in a lower Degree, and not impetuous nor constant: And the Case is the same with its sweet Taste, which sometimes appears, but not in so high a Degree, as in an acute State of this Distemper; and then it is often restrained and diminished, or suspended to longer Intervals, by the Vertue of proper Diet and Medicines.



Of the Causes of a DIABETES.

TH E immediate Springs of this Disease are these: First, the Relaxation or the inordinate Wideness of the Tubes and Glands in the Kidneys, which suffer an excessive Quantity of Serum to pass through into the Bladder, as above explained; this is the Case in all other glandulous Strainers; if the cutaneous Glands have lost their due Tone, and their Orifices are too much dilated, excessive Sweats and invisible Transpiration must be the Consequence. If those planted in the Stomach and Intestines are perverted in the same manner, Vomiting or a Flux of the Belly will arise from the like Cause; that is, an excessive Quantity of serous Humours admitted by those Inlets, and rushing into the Cavities of
those

those Bowels, as I have before shewn at large. The other immediate Cause of this Disease, and perhaps the Principal, is the Colliquation and Fusion of the Serum, when the watry Humours are disjoined, and have lost their Hold of the Blood. In this loose and licentious State the Serum flows on in a Deluge, and rushes through the widened Channels of the Kidneys without Obstruction: And while the watry Parts, that lay stagnant in the Cells and Pores of the Organs of the Body, and contracted there an acid or acrimonious Quality, are stirred up by this universal Disorder, and mingle with the Blood, they precipitate it yet more, and more promote the Solution of its Continuity, and the Departure of the Serum from its Communion.

This will be illustrated, if we contemplate the Effect of a vehement Passion of Fear or Consternation upon the Apprehension of some great and imminent Danger; for then we not only see that the Tension and native Firmness of the Glands in the Kidneys and the Intestines is dissolved, but likewise that there is an extraordinary and general Fusion and Melting of the Blood, as appears from the copious Eruption of Urine, and the immoderate Evacuation of watry Fæces. In this Case, when the violent Impression is made upon the Brain by the frightful Object, the Animal Spirits driven through the System of the Nerves in extream Disorder and Confusion, not only relax

relax the Tone of the Glands and dilate their Mouths, but likewise by their acid Serositics communicated to the Blood, they precipitate the Serum, loosen the Constructure of the Mass, and occasion a transient Colliquation of the Humours, as I have explained in the foregoing Treatise of the Dropsy, where I speak of the Cure of an *Ascites*. And that acid Juices causing a Fusion and Coagulation of the Blood introduce a *Diabetes*, is evident from Experience; for several Persons have fallen into this Disease by intemperate drinking of *Rhenish-Wine*, Cider, and a Mixture of Water, Spirits of Wine, and Juice of *Lemons*.

The Causes of a *Diabetes* will be better understood, if we consider the copious Discharge of limpid, tasteless, and unodorous Urine, in hypocondriacal and hysterick Paroxysms, that is, in Fits of the Spleen and Vapours, as they are vulgarly called: For, during the Disorder and Confusion of the Animal Spirits hurried and driven about in their nervous Habitations, such a dis-union of the Serum from the Blood, and such an immoderate Extension of the Pores and Passages of the Kidneys is produced, as is attended with an Inundation of colourless and insipid Urine, that differs not from a *Diabetes* in Quantity or Quality, except its being free from a sweet Taste. A *Diabetes* then consists in a depraved Dilatation of the Glands in the Kidneys, that filter the Serum, and such a shattered and dissolute State of
Blood,

Blood, that makes it apt to run off in a great Profusion of unbrackish Waters. It is true, that where there is not a *Diabetes*, a great Flood of such clear and insipid Urine may pass into the Bladder, and push and stimulate that Receptacle to be excluded; and particularly this is the Case of Men of celebrated Abilities for emptying the Bottle and filling their Veins with strong Liquors, Champions of the first Distinction, that cover the Ground with the Marks of Surfeit, and the Bodies of those, that fall in the Night of Battle: For having distended their Vessels with an exorbitant Measure of Wine, or other generous Drinks, they render in Proportion, a great Quantity of Water, as pale, and thin, as that of the Rock, being over diluted, and not having staid long enough in the Strainers and the Bladder to imbibe a urinary Tincture. Some of these have been alarmed with the Fears of a *Diabetes*, while they observed their immoderate Evacuation of such insipid and colourless Urine, which however arises only from the excessive Quantity of the Liquors they drank, and not from any diabetical Fusion or Dissolution of the just Compages or Texture of the Blood, and therefore though it be a Moral, it is no Natural Disease.

This Distemper wastes and consumes the fat and fleshy Part of the Body, more or less according to the Degree of its Power and Prevalency. For not only the Fluids contained
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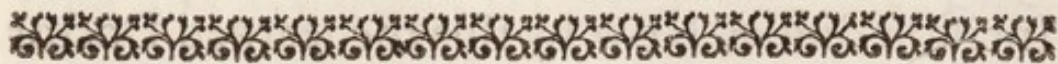
in the Veins, Arteries, and System of the Nerves that are in a State of Colliquation, but the softer and more tender of the solid Parts, partake of this melting Disposition, as we see they do in a hecick Distemper, an *Atrophy*, a *Marasmus*, or a long and copious Flux of the Belly; Besides this, the nutritious Juices communicated to the Blood, are born off in the continual and rapid Tide of the Serum; whence the hard Organs are left unrepaired and defrauded of due Nourishment; and thus the Body becomes unfucculent and emaciated.

It is no wonder that a *Diabetes* is accompanied with Thirst, and a feverish Disposition, since the profuse Evacuation of the Fluids of the Body leaves the Blood without sufficient Moisture, for the Service of the Animal Government, whence the fiery and more active Principles become unbridled and licentious; and when that happens inordinate Heats are introduced, a feverish Disposition being founded on that irregular Depression or Diminution of the serous Humours, and the intemperate and preternatural Dominion of the oily or sulphurous Ingredients, by which Means the Balance of Power is broken, the fundamental Laws of Nature subverted, and the Constitution of the Animal State in a great Degree unhinged and dissolved, or at least warped from its primitive Form. And this is no more than what happens in all other Instances, where the watry Stores of the Body are by a general Colliquation

Colliquation of the Fluids greatly exhausted, either by profuse Sweats, a Flux of the Intestines, or an excessive Discharge of pituitous Serosities, or phlegmatick Humours from the Lungs.

The antecedent and remote Causes that prepare and dispose the Blood to run into a *Diabetes*, are these; an irregular Diet, and copious drinking of improper Liquors, the daily and inordinate Use of Cyder, Ale, and acid Juices of the Grape, particularly *Rhenish*, and all other thin and sharp White-wines; for these by precipitating and causing Coagulations in the Blood, like Runnet mixed with Milk, prepare the Way for a Torrent of Serum to rush through the Pores and Channels of the Kidneys into the Bladder. Sometimes, as before suggested, the System of the Nerves perverted and depraved by other Distempers, communicates to the Blood, where a Confluence of their Currents happens, such degenerate and noxious Streams, as produce the same Effect, that is, the Fusion or Diminution of the Blood; for hypocondriacal and hysteric Passions have sometimes so far vitiated the nervous Serosities, by diminishing the Animal Spirits in frequent convulsive Efforts, violent Contractions and involuntary Extensions, as well as strong Agitations, and sometimes rigid, tentiginous, and unpliant Stiffness of the Muscles, that a *Diabetes* has been introduced upon those Diseases; and for the same Reason other long and languishing

languishing Distempers, especially those that affect the urinary Organs, as likewise deep and lasting Sorrow, continued Dejection of Mind, and various other noxious Impressions on the Instruments of Imagination and Sense, have either occasioned the Rise, or promoted the Encrease of a *Diabetes*.



Of the Method of CURE.

SINCE this Disease consists in a Fusion or Coagulation, whence arises a Schism in the Blood, and the Flaccidity or relaxed Tone of the urinary Strainers, it is manifest that such Medicines, that reunite the first, and contract and confirm the last, and prevent their Fusion, as well as those that remove the Causes and Occasions both of the one and the other, ought to be chosen for the Relief of the Patient.

Those Remedies, that restore the lax and dissolute Crasis of the Blood, and recover the due Combination and Order of the thinner Fluids, are in the first Place to be considered and searched after. And Reason will immediately suggest that Remedies endowed with a Vertue of contracting, Binding together, and Reassociating of the loose or disunited Mass, and therefore may justly be denominated Astringent, must be here employed; for this is
directly

directly to demolish the Disease by destroying the Foundations of it. The celebrated Doctor *Willis* condemns the Use of Astringents in this Distemper, as unavailing and insignificant; which is indeed surprizing, and the more so, inasmuch as he himself afterwards prescribes to the Patient *Syrup of Meconium*, that is, the *Syrup of the White Poppy*, whence *Opium* by Incision distills. Now by this the learned Doctor contradicts himself, for *Opium* and the Preparations of it are of all others the most astringent internal Medicines, and that in all Sorts of immoderate Evacuations, excepting Sweat. It is the Physicians right hand in Fluxes of the Belly, excessive Vomiting, Hæmorrhages, thin Rheums, Catarrhs, Coughs, and immoderate Discharges from the Nose, either alone or accompanied with vehement Sneezing, as well as in violent Pains of the Cholick, Gout, Stone, and obstinate Wakefulness: Besides that learned Physician approves of slimy, mucilaginous, and gummous Remedies, which admitted into the Veins involve and muffle up the noxious Salts, that cause the Fusion and Coagulation of the Blood, and restore it to its healthful Temperament; and hence they may properly be stiled Astringents, that is, Remedies that contract and bind close together the Parts of the Mass, and hinder their Secession, and Departing from one another. He likewise allows and recommends the Use of *Coral*, *Cinnamon*, and *Rhubarb*, and therefore I believe he ex-

cludes

cludes only acid and austere Astringents. This Assertion then should not have been so universally expressed.

In order to cure a *Diabetes*, two Things are to be attempted: The First is to contract the loose and too diffusive State of the Blood, that by this Means it may recover its due Connexion and regular Crasis. The Second is to defend and preserve it against the Returns of such a depraved and vitiated Constitution, to which Relapses it is too obnoxious, by breaking the Bonds asunder that tyed and restrained the seditious Serum, and laying waste the Fences that opposed its Deluge.

For the first Purpose those Remedies are demanded, that disengage the saline Concrescencies and Coagulations of the Blood, that being disentangled and at Liberty they may recover their former Posts and regular Subordination in the Animal Regimen. This may be illustrated, as Physicians have shewn, by observing that if you mingle with Milk when coagulated by the Addition of austere Juices, either fixed or volatile Salts, that Infusion will restore it to its former Temperament, while the Alkali's embracing and adhering to the acid Salts, set at Liberty the sulphureous and other Parts, that were locked in and imprisoned by them; by which Means those Parts now freed and disengaged, the irregular Concretions and Confederacies being severed and disassociated, the Mass returns again to its original

nal Mixture : And since there is so great an Affinity between the Blood and Milk, it is reasonable to think that the like Remedies may be useful in restoring it to its just Structure and Constitution.

In the first Place, the Remedies useful to restore the loose Texture or Temperament of the Blood, are such as thicken and confirm the Crasis of it : And therefore glutinous, mucilaginous, and slimy Things, are to this Purpose very pertinent ; as *Gum Arabick*, *Gum Tragacanth*, *Olibanum*, *Mastic*, &c. and those Medicines also, that are absorbent and repugnant in their Nature to acid and austere Humours ; such as *Coral*, *Pearl*, *Cinnamon*, &c. or such Remedies as are endowed with fixed, volatile, and alkali-zate Salts, and in the fourth Place, the several Preparations of *Opium* ; and no Medicines incrassate, bring close together, and recollect the Parts of the Blood when in a State of Separation, and thereby recover the due Union and Integrity of the Mass, that it enjoyed before the diabetical Schism, and the seditious Secession of the serous Humours happened to it, more effectually than the Juice of the *White Poppy* : And had the above mentioned Doctor lived to have seen the Success of Doctor *Eaton's* Balsamick *Stiptick*, he would not have confined the Name of *Stiptick* to acid and austere Salts : And lastly *Rhubarb*, as said before, is likewise a proper Astringent

tringent in this Case, as it is in many others. Out of these Medicines and Drugs, the following Forms may be compounded, which I have set down immediately after those that are vomitive or purging.

Vomitive Medicines are in the Beginning proper for Revulsion and arresting the exorbitant Profluvium of the Urine, and therefore may be given and repeated. The Forms are as follow.

Take of the Indian vomitive Root half a Drachm, of Tartarum Emeticum two or three Grains, of Rhue or Walnut-Water, three Ounces; make it a vomitive Draught, to be taken in the Morning or Evening.

Or, Take of Carduus-Water and Milk-Water each an Ounce and half, of Oxy-mel Scilliticum an Ounce, of Infusion of Crocus Metallorum, that is, Vinum Benedictum, six Drachms; mix them for the like Draught.

Purgative Medicines of *Rhubarb*, which is eminently endowed with an Astringent Quality, should be given once in five or six Days.

For Instance.

Take of fine Rhubarb a Scruple, of Cinnamon six Grains, Syrup of Cichory with Rhubarb, as much as will make a Bolus.

lus. In the Days free from purging, take the following Powder.

Take of prepared Coral, Pearl, and powdered Cinnamon, each two Drachms; of Gum-Arabick, and Tragacanth, each three Drachms; make it a Powder; take of it four Scruples in a Draught of Barley Cinnamon-Water twice a Day.

Or, Take of Conserve of Hips an Ounce, of Flowers of the Corn-Poppy powdered a Drachm and half, of Seeds of white Poppy a Drachm, of fine Chalk, of Coral, and Bole-Armenick, each four Scruples; Lapis Hæmatites two Scruples, Gum-Arabick a Drachm and a half, Syrup of Cowslips and the Corn Poppy in equal Quantity, as much as will make all into an Electuary. Take the Quantity of a large Nutmeg, drinking after it a Draught of small Barly Cinnamon-Water, twice a Day.

Or, Take of Crocus Martis Astringent, Trochiscks of Terra Lemnia, red Coral prepared, and red Saunders, each a Drachm; of burnt Hartshorn, and Chalk finely powdered, each a Drachm and half; of the Mucilage of Gum-Tragacanth, as much as will make a Mass. Form it into Pills of a middle Size; take four every Morning and Afternoon, drinking after them a Draught of Rice-Water

Water made in the manner of Barly-Water, which is likewise proper for common Drink.

Every Night going to Bed let the Patient take the following pacifick Draught.

Take of Barly Cinnamon-Water, and that of Corn Poppy or Cowslip, each an Ounce and half; of the Syrup of white Poppy five or six Drachms, or thirteen or fourteen Drops of liquid Laudanum; make it a Draught.

But after all the Varieties of Remedies recommended by Physicians for the Cure of this Disease, it must be acknowledged that Mineral Waters are the most prevalent, such as those of the *Bath* and *Bristol*; and indeed all those smooth, and soft Springs that break out of Chalk-Hills, for Chalk is allowed to be beneficial in this Distemper; and the Reason why these Waters have here so good an Effect, is this, that while they mingle in a great Quantity with the Blood, they not only dissolve the noxious Salts there, but carry them off in their Current through the Kidneys to the Bladder: And as Cholera in the Stomach and in other Places, as I have elsewhere observed, is not to be subdued by any Medicine hitherto discovered, that is endowed with any specifick Quality so contrary to it as to destroy

stroy or change its Nature, yet however, being diluted with a great Quantity of Mineral Waters and proper Decoctions, it loses its force and offensive Acrimony, in like manner as a small Proportion of *Spirits of Nitre, Vitriol, fixed or volatile Salts*, infused in a great Vessel of Water, as before remarked, becomes weak and undiscernable to our Senses; so the Salts, that cause a Solution, or diabetical Disposition of the Blood, by a plentiful and constant Dilution, are separated, dissolved and washed away, till the Blood recovers its regular Constitution; and as this great Advantage is gained by the copious drinking of the Waters before mentioned, so besides this Benefit that accrues from Dilution, the Mineral Waters, that flow from Chalybeate Springs, such as those of the *German-Spaw, Tunbridge*, and many others of the like Nature in this Kingdom, have from the volatile Parts of Steel, with which they are impregnated, an eminent Vertue to animate, strengthen, and confirm the Blood, and therefore must be greatly beneficial in this Distemper.

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