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ELEMENTS

OF THE

PRACTICE

OF

PHYSIC.

PART THE FIRST.

CONTAINING THE

NATURAL HISTORY

OF THE

HUMAN BODY.

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THIS ESSAY

ON THE ART OF HEALING,

IN TESTIMONY OF THE AUTHOR'S

GRATITUDE,

IS WITH THE GREATEST RESPECT,

INSCRIBED

TO HIS GRACE

HUGH DUKE OF NORTHUMBERLAND,

A LOVER AND A PROMOTER

OF USEFUL ARTS,

BY HIS GRACE'S

MOST OBEDIENT SERVANT,

GEORGE FORDYCE.

THE NATURAL HISTORY OF THE HUMAN BODY.

A Diſeaſe is ſuch an alteration of the chemical properties of the fluids or ſolids, or of their organization, or of the action of the moving power; as produces an inability or difficulty of performing the functions of the whole, or any part of the ſyſtem, or pain, or a preternatural evacuation.

The CHEMICAL PROPERTIES of the FLUIDS.

THE fluids may be divided into

1*ſt*, The blood.

2*dly*, Thoſe formed during digeſtion, before the food is converted into blood.

3*dly*, The ſecreted fluids.

The blood conſiſts of

1*ſt*, The ſerum.

2*dly*, The coagulable lymph.

3*dly*, The red part.

4*thly*, The ſuperfluous water.

5*thly*, Extraneous ſubſtances introduced.

The ſerum, coagulable lymph, and ſuperfluous water, are diffuſed through one another; and the red part is mechanically mixed with them. Some of the extraneous ſubſtances are alſo mechanically mixed with them, and ſome diffuſed through them.

Properties of the Serum.

IT is fluid in any degree of heat between 30 and 160 of Fahrenheit's thermometer.

In a leſſer heat it freezes, in a greater it coagulates.

Coagulation is a ſeparation of an animal or vegetable matter from the water in which it was diſſolved; and is at the ſame time a change of the properties of that matter, rendering it inſoluble in water again by commixture alone.

The ſerum conſiſts chemically of a coagulable matter, and water in which common ſal ammoniac and phoſphoric ammoniac, and generally common ſalt, and frequently ſelenites, and fixed ammoniac, are diſſolved; but it is a queſtion, whether the water chemically combined in the ſerum is alſo united with thoſe neutral ſalts, or whether the ſerum, and the ſolution of theſe, are only diffuſed through one another.

It is probably in itſelf colourleſs, and inodorous; but it receives a yellowiſh or browniſh hue from the putreſcent part of the blood, and acquires a ſmell from the eſſential oil.

If it contained no neutral ſalts, it would be inſipid, and incapable of ſtimulating.

The

The ſuperfluous water may be ſeparated from it by filtration in the body, but that which is chemically combined with the other parts cannot.

All the water may be evaporated from it by a leſſer heat than 140 degrees of Fahrenheit's thermometer, if it be expoſed to the air. The other parts remain after this operation ſolid, and ſoluble again in water by commixture alone.

The ſeparation or addition of ſuperfluous water does not affect its viſcidity, ſo far as that is of any conſequence in the circulation; but the ſeparation of that water which is in chemical combination, may render it more viſcid.

The water in chemical combination is never ſeparated, while the ſerum is contained in the blood-veſſels; and of conſequence this part of the blood is always equally viſcid, ſo far as its viſcidity can affect the circulation or ſecretions.

It may be coagulated by acids, oils, alcohol, &c. but no ſubſtance can get into the blood-veſſels in a ſufficient degree of concentration to coagulate it, excepting by injection.

It may be coagulated by a juice ſecreted in the ſtomach.

It has ſeldom, if ever, been found coagulated in the body.

The only perceptible difference which has appeared in the coagulable part of the ſerum, from any obſervation hitherto made public, is, that ſometimes in coagulating its parts adhere more or leſs firmly, and that ſometimes it is of a deeper or lighter brown colour.

PROPERTIES of the COAGULABLE LYMPH.

IT is a compound of water and a coagulable matter.

As long as it continues in the courſe of circulation, it is fluid in any degree of heat between 30 and 120 degrees of Fahrenheit's thermometer.

When it is taken out of the blood-veſſels, it coagulates; whether it be in motion or at reſt, expoſed to the air or not, or in the heat of the human body, or in any other degree of heat.

If it be retained in a blood-veſſel, it continues fluid for more than three hours in any degree of heat between 30 and 120 of Fahrenheit's thermometer, and that whether it be in motion or at reſt. The ſmaller the blood-veſſel, the longer it continues fluid.

It has hardly ever been found coagulated in the blood-veſſels of a living animal, unleſs they have been enlarged into aneuriſms or varices.

It has generally been found coagulated in the large veſſels of the human body on diſſection, and ſometimes ſeparated from the other parts; but to all appearance theſe coagulations have almoſt always taken place after death.

When it is taken out of the blood-veſſels, it may be prevented from coagulating, by ſaturating the whole blood with common ſea-ſalt, and perhaps by ſome of the other neutral ſalts.

Although the coagulable part of the ſerum and coagulable lymph have different properties, the coagulum formed from both is pretty nearly the ſame.

The coagulum may be diſſolved in water by boiling or putrefaction; and may be united with concentrated acids, with cauſtic alkalis, and calcarious earth, and with ſome metallic ſalts, into a ſubſtance ſoluble in water: but none of theſe can get into the ſyſtem by abſorption, ſo as to produce this effect.

Both the ſuperfluous water and ſerum are capable of being ſeparated from the coagulable lymph, by filtration in the body.

When the blood is received into a proper veſſel, the coagulation of this part gives an appearance of ſolidity to the whole: but ſoon after the whole becomes thus apparently ſolid, part of the ſerum, of the ſuperfluous water, and of the water which was combined with the coagulable lymph, ouzes out from the whole maſs, and brings along with it part of any extraneous fluid that may be contained in the blood-veſſels; leaving behind what is commonly called the red globules, the coagulum of the coagulable lymph, and any ſolid particles that may have been in the blood. This is called the ſpontaneous ſeparation.

When the arteries are acting ſtrongly, whether the whole habit be ſtrong or not, the coagulable lymph is more fluid, and longer in coagulating. Of conſequence it lets the red particles, which are the heavieſt part of the blood, fall down towards the bottom, before it coagulates: and upon the ſpontaneous ſeparation, the coagulum is divided into two parts; the upper, conſiſting of the coagulum of the coagulable lymph alone (which has in this caſe been called the buff); the under, conſiſting partly of this, and partly of the red particles.

Although part of the coagulable lymph would ſeparate from the red particles, may be prevented by taking the blood from a ſmall veſſel, or from a ſmall

orifice, or by letting it run along the ſkin before it falls into the veſſel into which it is received, or by receiving it into a veſſel whoſe ſurface is large in proportion to its contents; as in all theſe caſes the coagulation is forwarded. On the other hand, if it ſtagnate in the blood-veſſel for ſome time before it is taken out, there will be a ſeparation, when none would otherwiſe have happened.

Whether the coagulable lymph ſeparates in part from the red particles, or not, it coagulates ſometimes into a firmer, ſometimes into a looſer maſs, generally in proportion to the ſtrength of the ſyſtem.

All the ſubſtances which coagulate the ſerum, have the ſame effect on the coagulable lymph; but none can be applied to it in the blood-veſſels, excepting by injection in a ſufficient degree of concentration to coagulate it.

The coagulable lymph is probably in itſelf colourleſs, inſipid, inodorous, and incapable of ſtimulating.

Whilſt it remains in the blood-veſſels, it is chemically combined with a certain proportion of water, from which it cannot be ſeparated but by coagulation; neither will it combine with a larger proportion.

Water mechanically mixed with it has no effect on its viſcidity, ſo far as that affects the circulation or ſecretions.

No other differences beſides thoſe already taken notice of are obſervable in its properties.

The coagulable lymph and ſerum are both capable of putrefaction, and are converted by it into a mucilaginous matter, not coagulable by any of the methods recited above.

If this mucilaginous matter ſhould undergo a further putrefaction, it emits a fœtid vapour, and is converted into ſaline ſubſtances and calcarious earth.

Properties of the Red Part.

UPON viewing this part of the blood with a deep magnifier in the ſolar microſcope, as it circulates in the blood-veſſels of a living animal, it appears to be divided into a number of ſmall particles, which are apparently annular, and exceedingly flexible.

While the animal is reſpiring, and the blood circulating, it is of a ſcarlet colour in the arteries, and of a Modena red in the veins; but if the reſpiration be ſtopped, that blood which circulates afterwards through the lungs continues of a Modena red. If it be taken out of the veins, kept moiſt, and expoſed to reſpirable air, it becomes of a ſcarlet colour; if it be taken out of the arteries, and covered from the air, or if it ſtagnate in them, its colour is changed to a Modena red. A light ſhade of Modena red is not ſcarlet, neither is a deep ſcarlet a Modena red. Various other ſubſtances alter the colour of this part.

It ſeems to have a ſweetiſh taſte, to be inodorous, and void of ſtimulus.

Its ſpecific gravity is but a very little more than the ſerum or coagulable lymph.

It is more inflammable than the other parts; and, on performing its chemical analyſis, it yields a large proportion of empyreumatic oil.

It is readily ſoluble in water, but not in the ſerum.

It is not ſoluble in a ſaturated ſolution of neutral ſalts.

It is capable of undergoing the putrefactive fermentation, the firſt ſtage of which breaks it down into ſmaller particles, and renders it of a dark colour. It afterwards is converted into a mucilage, and becomes ſoluble in the ſerum.

The Superfluous Water.

IT is diffuſed through the ſerum and coagulable lymph.

It contains a part, perhaps the whole, of the ſalts.

Theſe ſalts are chemically combined with a part of it only, and this ſolution is diffuſed through the remaining part.

The water diffuſed may be ſeparated from the ſolution by filtration in the body.

The ſolid part of the blood, left after evaporation of the water by a heat leſs than that of boiling water, amounts to from one fourth to one fifth of the whole.

Extraneous Substances.

A Great variety of extraneous ſubſtances, both fluid and ſolid, may be introduced into the blood-veſſels by abſorption; but none of them in ſuch proportion as to produce any alteration in the blood, except by fermentation.

When any ferment is introduced into the blood-veſſels, it acts upon a part of the blood only; the greateſt part remaining to all experiment exactly the ſame as before.

Of the PUTREFACTION of the BLOOD.

FErmentation is the converſion of one compound into another, by a new arrangement or manner of combination of its elements.

What is commonly called putrefaction conſiſts of two fermentations, which we ſhall call by the names of the firſt and ſecond ſtage.

All animal ſolids and fluids may be reduced by the firſt into a mucilaginous maſs, ſoluble in water, and diffuſible through any quantity of it.

The red part of the blood firſt breaks down into ſmaller particles, before it is formed into a perfect mucilage.

The firſt ſtage takes place without any effervescence.

The ſecond ſtage converts this mucilage into earths, and ſalts, a fœtid vapour, and fixable air.

The firſt and ſecond ſtage of putrefaction take place in a ſmall part of the blood, or it is deſtroyed by ſome other operation; for

After having coagulated the ſerum, if we ſqueeze out the water, and evaporate it, there is left a mucilaginous matter ſimilar to that formed by putrefaction.

The ſalts formed in the blood-veſſels, excepting phoſphoric ammoniac, may be formed by the laſt ſtage of putrefaction; and thoſe formed by the laſt ſtage are found in the blood-veſſels, excepting nitrous ſelenites, and nitrous ammoniac.

The

This mucilage, and theſe ſalts, are always carrying off by urine; the preſent blood is always diminiſhing, and the veſſels require a freſh ſupply from the food.

The blood is always in the moſt powerful circumſtances of putrefaction; which are, a heat of 98 degrees of Fahrenheit's thermometer, fluidity, a moderate expoſure to air, and motion: but it is prevented from putrifying by the action of the veſſels; nor can any ferment or other circumſtance induce the fermentation, till this action is altered, except perhaps the introduction of chyle intermixed with putrid matter.

In diſeaſes, the firſt ſtage often takes place in part of the blood; the ſecond ſtage ſometimes, although ſeldom.

Of

Of Digestion.

DIGESTION is the converſion of the food into chyle, and afterwards into blood.

The food may conſiſt of farinaceous or mucilaginous vegetable ſubſtances, or native vegetable acid, or ſugar, or expreſſed oil, or animal ſolids, or animal fluids containing a mucilaginous matter.

Theſe ſubſtances may be digeſted, if they be taken ſingly, or if they be mixed together.

The blood formed does not differ ſenſibly in its properties, whether the one or the other of them be uſed ſingly, or ſeveral of them together; provided the organs of digeſtion be ſufficiently powerful convert them into blood.

If the food be ſolid, it is generally broke down by the teeth, or by ſome other apparatus.

But maſhing it down with water is not ſufficient to alter its chemical properties, and convert it into chyle and blood.

It is mixed in the ſtomach with the watery fluids we drink, and with the mucilaginous watery fluids ſecreted by the ſalivary and other glands.

It is ſometimes diſſolved in water before it is uſed: but it is often rendered ſolid by a previous preparation, or coagulated by a ſubſtance ſecreted in the ſtomach.

Simple ſolution in water does not convert it into chyle or blood.

If it be previouſly diſſolved in water, it affords leſs nouriſhment than if exhibited ſolid.

It is neceſſary that it remain in the ſtomach for ſome time, in order to its digeſtion.

The only proceſs it can go through in the organs of digeſtion, that is capable of altering its chemical properties, is fermentation.

Its fermentation is not attended with efferveſcence in a healthy ſtomach.

If vegetable food be uſed, an acid is produced. This acid is deſtroyed in the duodenum by the bile.

If animal food be uſed alone, no acid is produced.

The ſtronger the ſtomach, and the more perfect the digeſtion, the leſs acid is formed from vegetable food.

No ſtage of the putrefactive fermentation takes place, during the converſion of it into chyle and blood, if the digeſtion be perfect.

The fermentation which takes place is peculiar to the organs of digeſtion, and has never been produced by any artificial means yet attempted.

The fermentation which takes place in the ſtomach, forwards the ſolution of ſolid food in the watery menſtruums.

Solid foods diſſolve ſooner in the ſtomach than they can be diſſolved in water in the ſame heat, by any means hitherto found out.

If the ſtomach does not act properly, ſolid food remains undiſſolved; vegetable, and mixtures of vegetable, and animal ſubſtances become more acid; animal ſubſtances putrify; a quantity of air is ſeparated; and the food is not digeſted and converted into chyle.

Only that part of the food which is digeſted affords nouriſhment; the nouriſhment therefore is in proportion to the food and the digeſtion.

When food, either from its quantity or quality, cannot be digeſted, it is apt to occaſion great diſ-

turbances

turbances in the ſyſtem, while it is contained in the ſtomach and inteſtines.

The only ſenſible alterations produced in the blood by different foods, are in its quantity; or in the proportion of ſuperfluous water; or that ſometimes a long uſe of animal food brings on a degree of putrefaction.

Of the CHYLE.

THE chyle is formed from the food in the inteſtines, and abſorbed by the lacteals.

The whole fluid abſorbed is not chyle, but a mixture of chyle, and the ſolution of thoſe ſubſtances, which were ſimply diſſolved in water without being digeſted.

Quere, Whether a ſimple ſolution of mucilaginous, animal, or vegetable ſubſtances, can be converted into blood, without being formed into chyle in the ſtomach and inteſtines?

Chyle is fluid, while in the lacteals; when expoſed to the air, it coagulates; it is rendered white, from a mixture of expreſſed oil.

When coagulated, a fluid may be ſqueezed out, which probably contains a coagulable matter, and ſugar.

The Secreted Fluids.

THEY either

Exiſt in the blood-veſſels, being mechanically mixed with the other fluids, and require only a mechanical ſeparation;

Or they do not exiſt in the blood-veſſels, their elements only being contained there: but theſe elements are not combined, ſo as actually to form the ſecreted fluid. It is therefore requiſite, that ſome chemical operation ſhould take place in the ſecretory organ, by which the elements ſhall be combined ſo as to form the matter ſecreted.

The chemical operation by which they are formed, is fermentation.

The fluids ſeparated mechanically, are

The matter of the inſenſible perſpiration.
The urine.
The ſweat.
The milk.

The fluids formed in the ſecretory organ by a chemical operation, are

The mucus.
The ſaliva.
The pancreatic juice.
The ſemen.
The bile.
The wax in the ear.
The ſebaceous matter.
The coagulating matter of the ſtomach, &c.

The MATTER of the INSENSIBLE PERSPIRATION.

IT is ſeparated from the ſurface of the lungs, and from the ſkin, by evaporation.

The quantity evaporated depends upon the quantity of ſuperfluous water in the blood-veſſels, the heat of the air, the quantity of air applied, and the contraction or relaxation of the veſſels from whence the evaporation takes place.

When the body is in its natural ſtate, that part of the inſenſible perſpiration, which is capable of condenſation, conſiſts of water, with a very ſmall proportion of a mucilaginous matter and eſſential oil, and ſometimes perhaps volatile alkali.

There is no reaſon to ſuppoſe, that any matter flies off that cannot be condenſed, from any experiment hitherto made; but it is rather probable that there is not.

Should any other ſubſtance, capable of emitting vapour in the heat of the human body, get into the blood-veſſels, or be formed on the ſurface of the ſkin, lungs, or in any of the paſſages of the air in breathing, it may be mixed with the inſenſible perſpiration.

Some of theſe ſubſtances may be putrid vapour, variolous, morbillous, and other infectious matters, alcohol, and other extraneous volatile ſubſtances, &c.

The matters thrown off by inſenſible perſpiration, may be evacuated by the other excretions.

The health is not in proportion to the quantity of inſenſible perſpiration.

The URINE.

THE urine, in the common ſtate of the body, is a tranſparent browniſh fluid, which upon cooling has a mucilaginous matter ſeparated, capable of being rediſſolved in heat.

In health, the ſeparating mucilage is generally in ſuch quantity as to remain ſuſpended in the urine after its ſeparation, forming what has been called the cloud.

It is ſometimes totally abſent in health, but much more frequently in diſeaſes; ſometimes it is in quantity ſufficient to carry the cloud to the bottom, and form a mucous ſediment; and ſometimes it falls down in a flaky powder, and forms what has been called a lateritious ſediment, which is commonly of a brick colour, and now and then white.

This laſt appearance often takes place on the going off of acute diſeaſes; but it alſo happens in health, and while diſeaſes ſubſiſt in their full force, particularly when they affect the urinary paſſages, or parts near them.

Sometimes the ſeparating mucilage is ſeparated in a powder, remains ſuſpended in the urine, and renders it turbid.

After the ſeparating mucilage is ſeparated, if the urine be filtrated from it, it is tranſparent, conſiſting of water which contains a mucilage, and ſalts.

1ſt, A mucilage, ſimilar to that formed by the firſt ſtage of putrefaction.

This mucilage is of a browniſh colour, and gives the greateſt part of the colour to the urine.

Its quantity varies conſiderably; but the proportion of it in the urine is always ſmall.

If the water be evaporated from it, it will rediſſolve, and it may be diffuſed through any quantity of water in any heat.

It is not coagulable.

2*dly*, The ſalts are common ſalt, common ſal ammoniac, phoſphoric ammoniac, vitriolic ſelenites, and muriatic ſelenites.

Common ſalt is contained in the urine, in conſequence of its being uſed in the food, or drink; and it is in proportion to the quantity uſed.

The other ſalts are contained in the urine independent of any ſaline ſubſtance taken into the body, except perhaps the vitriolic ſelenites.

The quantity of ſelenitic ſalts is commonly very ſmall; but ſometimes the urine is ſaturated with vitriolic ſelenites, which ſeparates, and chryſtalizes, upon the urine's ſtanding to cool.

The proportion of the ſalts varies conſiderably, but is always ſo ſmall as to form a diluted ſolution.

The ſolution is generally ſufficiently concentrated, to ſtimulate a very irritable part, but not always.

The dilution depends on the quantity of ſuperfluous water in the blood-veſſels, and on the quantity of that ſuperfluous water evacuated by the kidneys: ſo that, when the quantity ſecreted is large, the ſolution is generally diluted; when ſmall, more concentrated.

Watery fluids may paſs through the blood-veſſels, and by the kidneys, hardly carrying off any thing with them, eſpecially if large quantities be drank at a time, and the external veſſels be contracted.

Sometimes a quantity of calcareous earth is found in the urine, ſuſpended by mechanical mixture, or at leaſt not combined with an acid.

Any extraneous ſubſtance, ſoluble in water, that may get into the blood-veſſels, may be evacuated along with the urine; ſuch as acids, alkalies, neutral and other ſaline ſubſtances; infuſion of rhubarb, and other mucilaginous vegetable juices; bile, pus, and other fluids formed in the body.

If the kidneys are relaxed, or ſtimulated; chyle, ſerum, coagulable lymph, and even the red part of the blood may be thrown out.

The red part may alſo be broke down by putrefaction, and paſs off by the kidneys, of a very dark colour, diſturbing the tranſparency, and ſometimes forming a ſediment.

If the heart and arteries act more ſtrongly, or frequently, than they do in their natural ſtate, a quantity of expreſſed oil comes away with the urine, and forms a film on the ſurface, or a ring round the veſſel into which it is received.

The urine always contains a portion of the eſſential oil of the urinary paſſages, and ſometimes a portion of their mucus.

The SWEAT.

AS far as we are capable of judging from the ſmall quantity that can be collected, it contains nearly the ſame ſubſtances as the urine; only that inſtead of the eſſential oil of the urinary paſſages, it is mixed with the ſebacious matter of the ſkin, which gives it a degree of whiteneſs, and a ſmell different from that of the urine.

The MILK.

IT is ſecreted naturally in the breaſts of women for the nouriſhment of their young, ſometimes during pregnancy, and always after child-birth. There are ſaid to have been inſtances of its being ſecreted at other times, and from other parts of the body.

It is a whitiſh fluid, which ſeparates into two parts upon being left at reſt in a moderate degree of heat: The upper part conſiſts principally of expreſſed oil, with a mixture of the other part, and is whiter and more opaque.

The under part conſiſts of a ſolution of coagulable matter and ſugar, in water; with a ſmall mixture of expreſſed oil, and is called the ſkim-milk.

The expreſſed oil is fluid in the heat of the human body, but ſolid in the heat of the atmoſphere.

It is only mechanically mixed with the other part.

It is tinged with, and receives a flavour from, the eſſential oil of the food and of the body.

It is found not only in different proportions in the milk of different women, but alſo in the milk of the ſame woman at different times, and even in that which iſſues from the different excretory ducts of the glands of the ſame breaſt.

The coagulable matter only differs from the coagulable matter of the ſerum, in its coagulability, and its proportion to the water.

It is not coagulable by a leſs heat than that of boiling water, and by that only, if the water be evaporated from it.

It may be coagulated by acids, alcohol, ſeveral metallic and aluminous ſalts, and vegetable juices; but it requires that they ſhould be applied to it in a greater degree of concentration than the ſerum does, in order to its coagulation.

Heat aſſiſts the coagulating power of theſe ſubſtances.

It is readily coagulable by the coagulating juices of the ſtomach, and coagulates in the ſtomach of a living animal, whether any acid be contained in it or not.

The ſugar contained in the milk does not differ in its properties from that of the ſugar-cane.

Its proportion is always ſmall.

When a woman makes uſe of vegetable food, it ſeems to be in greater proportion than when ſhe uſes animal.

The milk of a bitch, uſing animal food alone, contains ſugar.

If milk be kept for ſome time expoſed to the air, and in the heat of the atmoſphere, or of the human body, the ſugar ferments, and is converted into vinegar, which coagulates the coagulable matter.

The ſame change may take place in the breaſt, if it ſtagnate there for ſome time, or if the woman be ſuddenly affected with any of the paſſions of the mind that are attended with anxiety.

If blood be taken from the arm after a full meal, the ſerum is often mixed with a ſubſtance which gives it a degree of whiteneſs and opacity.

The milk is ſecreted after a full meal in larger proportion, than after a woman has faſted for ſome time.

In the latter caſe, the proportion of the expreſſed oil, coagulable matter, and ſugar, likewiſe diminiſhes, and the milk contains beſides theſe the neutral ſalts of the blood, and acquires a bitterneſs from the ſebacious matter of the glands of the nipples.

In ſome women the milk always contains the ſalts of the blood, or the ſebacious matter of the nipples.

The ſebacious matter not only gives it a bitter taſte, but alſo, ſometimes, a yellowiſh colour and a thicker appearance.

The milk may contain any ſubſtance which is thrown into the ſtomach, and ſimply diſſolved in water, without going through the digeſtive fermentations, and being converted into chyle.

The MUCUS.

IT covers the ſurfaces of the membranes that are expoſed to any extraneous matter, ſuch as the ſkin and internal membrane of the mouth, noſe, lungs, æſophagus, ſtomach, inteſtines, urinary paſſages, &c.

It is a fluid of an adhefive viſcidity approaching to a ſolid, and of greater viſcidity in one part than in another.

It is a compound of a coagulable matter and water.

It is more or leſs viſcid, according to the quantity of water with which it is combined.

It is of different degrees of viſcidity in different parts of the body.

It will not combine with more water than what is already contained in it; neither can its viſcidity be altered by digeſting it with water, unleſs it begin to putrify; nor can the more viſcid mucus of one part be converted into the leſs viſcid of another.

If the water be evaporated from it by a gentle heat, the coagulable matter remains ſolid: if this be immerſed in water, it will abſorb that quantity which evaporated from it, but no more, and it will regain its former fluidity and viſcidity.

It, for the moſt part, contains either no neutral ſalts, or ſo ſmall a proportion as cannot eaſily be rendered ſenſible to experiment. It is colourleſs, inſipid, inodorous, and incapable of ſtimulating.

It combines with concentrated vitriolic, nitrous, and muriatic acids, with concentrated ſolutions of ſome metallic ſalts, and alſo with concentrated or diluted ſolutions of cauſtic alkalies and cauſtic calcarious earth, into compounds ſoluble in, and diffuſible through water.

Acids and ſome metallic ſalts diſſolved in water, and concentrated, but not to that degree as to diſſolve it, alcohol and aluminous ſalts coagulate it. It is alſo coagulable by the heat of boiling water, but not by a leſs degree of heat.

The

The mucus defends the membranes from being ſo much ſtimulated by any application as they would be, if they were not covered with it.

If the ſecretion be ſuddenly increaſed, the matter ſecreted is often a thin watery fluid containing the ſalts of the blood, and in conſequence of them capable of ſtimulating; and the membranes are not defended from external applications.

If a greater ſecretion ſhould continue than what naturally takes place, the mucus retains the ſalts, but often acquires a viſcidity, and becomes incapable of being diffuſed through water: its colour alſo often grows white, greeniſh, or yellow; and now and then it acquires a ſmell.

The SALIVA.

IT is ſecreted by ſeveral glands in the mouth; and the principal part of it is thrown down into the ſtomach, to anſwer ſome purpoſe in the digeſtion of the food.

It is a fluid of an adheſive viſcidity, with difficulty diffuſible through water.

It conſiſts of water, a coagulable matter ſimilar to that of the mucus, and the ſalts of the blood, but not in ſo large a proportion as they are contained in the ſerum.

It contains a larger proportion of water than the mucus.

In its other properties it is ſimilar to the mucus.

The Pancreatic Juice.

IT appears to be ſimilar to the ſaliva, except that it is leſs viſcid, and contains a larger proportion of the ſalts of the blood.

The ſaliva and pancreatic juice are probably watery menſtrua for the ſolution of the food in the ſtomach and inteſtines, their viſcidity preventing them from being abſorbed before they produce that effect.

They have been ſaid to act as ferments during the digeſtion; but as the fermentations of the ſtomach have never been made to take place out of it, we cannot judge of this by any experiment hitherto communicated to the public.

The Bile.

THE blood from which the bile is formed has probably gone through one circulation, without being expoſed to the air in the lungs, or mixed with the fluids brought by the lymphatics from the different parts of the body.

The blood, from which the bile is formed, paſſes through the veſſels of the abdominal viſcera, before it arrives at the liver; but it does not take up any ſubſtance from them, or at leaſt not in ſuch a quantity as to be ſenſible to any experiment yet made; but, on the contrary, it appears perfectly ſimilar in all ſen-

ſible qualities to the blood returning by the veins from the other parts of the body.

There is no appearance of bile in the vena portarum of a living animal.

When bile in the jaundice is contained in the blood-veſſels, it is ſecreted by all the ſecretory organs, and it is evidently contained in all the ſecretions.

The bile is formed from the blood in the ſecretory veſſels of the liver.

It runs along the hepatic ducts into the ductus communis cholidochus, and from thence partly into the duodenum, and partly into the gall-bladder.

It continues for ſome time in the gall-bladder, and becomes more perfect in its properties there; from thence it returns into the ductus communis cholidochus, and paſſes into the duodenum.

The bile is a fluid of an oleaginous viſcidity, conſiſting of a ſolution of a ſolid matter in water.

If the water be not evaporated from it, no alteration is produced on it by any heat between 32 and 112 degrees of Fahrenheit's thermometer.

The bile is diffuſible in any proportion of water.

If the water be evaporated from the ſolid part by a heat not exceeding 112 degrees of Fahrenheit's thermometer, it is ſoluble in, and diffuſible through, any quantity of water.

The ſolid matter of the bile melts if it be heated, and is decompoſed if the heat be encreaſed.

If it is diſtilled by itſelf, it yields a larger proportion of empyreumatic oil than any of the other fluids, except the expreſſed oil and red part of the blood.

It is of a yellow colour, and a ſweetiſh bitter taſte.

When it is not combined with more water than it generally is in the gall-bladder, it does not putrify

more

more readily than the blood ; but if it be diluted with water or watery fluids, it putrifies more readily.

Acids and ſome of their compounds decompoſe it, and precipitate from it a reſinous matter.

The acidity of the acid is loſt by its combination with the other part; but if more acid be employed than what is neceſſary for the decompoſition, the acidity of the ſuperfluous quantity remains.

The matter precipitated has the peculiar ſmell of the animal.

It is ſolid in the heat of the atmoſphere, melts in a moderate degree of heat, and burns very readily.

It is not ſoluble in water.

It is partly ſoluble in alcohol.

If the paſſage of the bile into the duodenum be ſtopt, acidities are apt to take place in the inteſtinal canal, the periſtaltic motion does not go on properly, the fæces loſe their peculiar colour and ſmell, and often acquire a more putrid fœtor, and the digeſtion is hurt, but not entirely prevented.

The properties of the other ſecreted fluids have not been ſufficiently inveſtigated by experiments for us to be able to give any ſatisfactory account of them.

The Chemical Properties of the Animal Solids.

THEY are a compound of a coagulable matter and water.

They are naturally flexible; but, if the water be evaporated from them by a gentle heat, they become friable.

The water chemically combined, cannot be ſeparated from them by expreſſion. Expoſed to about a red heat, they are decompoſed; and if they be diſtilled by themſelves, volatile alcali, empyreumatic oil, water, and calcareous earth, are formed.

When free from eſſential oil, blood, and the ſalts of the fluids, they are colourleſs, inſipid, and inodorous.

They differ in their flexibility and elaſticity.

Fibres and membranes are readily flexible, not capable of being broke by bending, and have a leſs degree of elaſticity.

Cartilage is leſs flexible, capable in general of being broke by bending, and more elaſtic.

Cartilage often ſupplies the place of bone in young animals.

Heat, dilute acids, neutral ſalts, alcohol, metalic, and aluminous ſalts, aſtringent juices of vegetables, and ſeveral other ſubſtances, coagulate them, *i. e.* ſeparate part of the water chemically combined, and of conſequence contract them, diminiſh their flexibility, and harden them. Subſtances coagulating the animal ſolids, are called Aſtringents.

If they be expoſed to a freezing cold, the water freezes; and upon thawing their texture is found to be altered.

Concentrated vitriolic, nitrous, and muriatic acids, cauſtic alkali's, even in a diluted ſolution, quick lime, and ſeveral of the metallic ſalts, combine with them into a ſubſtance diffuſible through, or ſoluble in, water, and deſtroy their texture.

They are capable of putrefaction in the ſame manner as the animal fluids.

The

The General Structure of the Body.

The Blood-Vessels.

THERE are cavities in the body, called blood-veſſels, in which the red part of the blood, the coagulable lymph, and part of the ſerum and ſuperfluous water, are uſually contained.

They conſiſt of the heart, arteries, capillaries, and veins.

The heart conſiſts eſſentially of two cavities, there being two hearts, properly ſpeaking, joined together in the human body, ſerving for two circulations of the blood; one through every part of the body, and one through the lungs.

The left ſide of the heart ſerves for the general circulation, and conſiſts of two cavities, the auricle and the ventricle.

The auricle is a cavity which opens into the pulmonary veins at one end, and into the ventricle at the other. There is a valve placed at the opening into the ventricle, which prevents any fluid from paſſing from the ventricle into the auricle.

The auricle is in part covered with muſcular fibres.

The ventricle is a cavity ſurrounded with muſcular fibres, having one opening into the auricle, and another into a pipe, called the aorta or great artery.

At the opening into the aorta, there are valves, which prevent any fluid from paſſing from the aorta into the ventricle.

The aorta is a tube which begins at the heart, and dividing into ſeveral branches, goes to every part of the body.

It does not divide at once, but branches out as it paſſes along.

When it has arrived at any part, and divided into very ſmall branches, theſe open into one another, ſo as to have a free and perfect communication every way: from theſe ariſe a ſmaller ſet of tubes, which alſo communicate in the ſame manner; and from them again ariſe a larger ſet, which have likewiſe a free communication.

The firſt ſet have been called capillary, or anaſtomoſing arteries: the ſecond have not got a name: the third have been called capillary veins; but I would term all of them capillary veſſels.

From the third ſet ariſe tubes which terminate in the heart, joining together as they go on towards it, and forming principally two large tubes, which open into the right auricle.

Theſe are called veins.

The veins which are ſubject to frequent compreſſion, from the action of the muſcles, have valves which open towards the heart.

Each artery, capillary, and vein, is nearly cylindrical, but ſomewhat irregular in its diameter.

No muſcular fibres appear on the arteries, capillaries, or veins in the human body.

Theſe veſſels are all of them elaſtic, and capable of being diſtended, ſo as to contain a larger quantity of fluid than what is neceſſary to render them cylindrical.

Their elaſticity is not ſufficient to overcome the weight of their ſides and keep them cylindrical, if they

they are not filled with a fluid, excepting in that part of the aorta neareſt the heart.

When an animal is dead, and no chemical or mechanical change has taken place in the veſſels, the elaſticity is the ſame as when the animal was alive.

When an animal is dead, and the veſſels act by their elaſticity alone, they are incapable of contracting to half the ſize they are of at their utmoſt diſtention, ſuppoſing them to continue cylindrical.

When an animal is alive, the blood-veſſels are always cylindrical, excepting when they are compreſſed by a conſiderable external force.

They are always full of blood.

When an animal is alive, the veins, capillaries, and ſmall arteries, are ſometimes contracted to leſs than half the ſize they are of at other times; therefore the veins, capillaries, and ſmall arteries, in a living animal, have a contractile power independent of their elaſticity, by which they adapt themſelves to the blood, and continue cylindrical.

This power is ſimilar to the muſcular power.

When the veſſels contain more blood they become longer, or their diameter is enlarged, or both; and, *e contra*,

When they contain leſs blood, they become ſhorter, or their diameter diminiſhes, or both.

The contractile power of the veſſels is capable of diminiſhing either their length or diameter.

When an animal dies, the arteries and veins loſe their cylindrical form, and are flattened, and the capillaries contain leſs blood in them.

The arteries, veins, and capillaries of a living animal, are commonly contracted to a greater degree than they can be by their elaſticity.

The elaſticity is commonly endeavouring to diſtend them.

If the veſſels are emptied to ſuch a degree that they cannot adapt themſelves to the blood, and continue cylindrical, the animal dies.

The moſt eſſential effort of the living power, is, to adapt the veſſels to the blood.

The Course of the Circulation of the Blood.

THE blood paſſes from the left auricle of the heart into the left ventricle, from the left ventricle into the aorta, and from thence by the ſmaller arteries to the capillaries in every part of the body; from theſe it returns by the veins to the right auricle of the heart. The blood, for the moſt part, moves in one uniform direction in each artery, viz. from the heart towards the capillaries: it alſo moves in one uniform direction in each vein, viz. from the capillaries towards the heart; but although it moves in general from the arteries through the capillaries into the veins, yet its direction in any one capillary may be, and often is, altered and reverſed.

Both the general velocity with which the blood moves through the whole ſyſtem, and the proportional velocity of its motion in particular veſſels, are conſtantly varying.

The POWERS producing the CIRCULATION of the BLOOD.

THE force with which the blood moves in the veins, and the muſcular contraction of the auricle, which takes place during the relaxation of the ventricle, propels the blood into the ventricle.

When a certain quantity of blood is propelled into the ventricle, its muſcular fibres contract, being probably ſtimulated thereto by the blood.

This contraction of the muſcular fibres of the right ventricle diminiſhes or obliterates it, and propels the whole, or part of the blood contained in it, into the aorta; the valve placed at the opening of the auricle into the ventricle, preventing its return into the auricle.

When the ventricle has emptied itſelf into the aorta, it relaxes and receives a freſh quantity of blood from the auricle; the blood being prevented from returning from the aorta by the valves placed at its opening into the heart.

The action of the heart tends to produce an equal and uniform circulation in every part of the body.

The CIRCULATION *doth not depend on the* ACTION *of the* HEART *alone.*

The circulation is not equal and uniform through the whole body, but the ſame quantity of blood flowing from the heart, a greater proportion of it ſometimes circulates through one part, ſometimes through another.

If the heart be the ſole power propelling the blood forward, the circulation can only be increaſed in any one part by an increaſe in the ſize of the veſſels, or removal of ſome obſtruction to the circulation there, or a diminution of the ſize of the veſſels, or obſtruction to the circulation in the reſt of the body; and *e contra* the circulation can only be diminiſhed in one part by a diminution of the ſize of the veſſels, or obſtruction to the circulation there, or an increaſe of the ſize of the veſſels, or a removal of ſome obſtruction to the circulation in the other parts of the body.

The principal cauſes producing an alteration of the ſize of the veſſels, or an obſtruction to the circulation, are,

1*ſt*, An increaſe or diminution in the diſpoſition to contraction in the capillary veſſels, or in the external preſſure.

2*dly*, The meeting of the ſtreams of blood in the anaſtomoſing veſſels.

3*dly*, The attraction of the blood to the ſides of the veſſels.

The diſpoſition to contraction in the capillaries of a particular part, or the external preſſure, may be increaſed, ſo as actually to produce a diminution of the ſize of the veſſels of that part, (notwithſtanding the action of the heart,) and by conſequence a diminution of the circulation of the blood in that part.

As the obſtruction ariſing from the meeting of the ſtreams of blood in the anaſtomoſing veſſels depends on the velocity with which it moves, it tends to render the circulation in a part equal, by preventing an increaſe or diminution of it.

As the blood is thoroughly mixed in the right ventricle of the heart, and is diſtributed from thence to the different parts, no alteration in its attraction to

the ſides of the veſſels can produce an increaſe or diminution of the circulation in a particular part.

It has been ſuppoſed, that a viſcidity in the fluids, or an increaſe of the ſize of their particles, often produced an obſtruction to the circulation; but this opinion has not been proved, or rendered probable, by any experiment hitherto made public: on the contrary, the red globules appear to be always nearly of the ſame ſize, except when they are broke down by putrefaction: the ſerum and coagulable lymph ſeldom or ever appear more viſcid than when in their common ſtate; and, if they were, their viſcidity would affect the ſyſtem equally.

The diſpoſition to contraction in the capillary veſſels, or the external preſſure, may be ſo much diminiſhed, as that the action of the heart continuing the ſame, the ſize of the veſſels of a part may be increaſed, ſo as actually to occaſion a greater circulation of blood in that part.

If the heart be the ſole cauſe of the circulation, the only material alteration that could take place in the proportion of the circulation in the different parts, muſt depend on an increaſe or diminution of the diſpoſition to contraction in the veſſels, or on an alteration in the external preſſure.

But the circulation may be increaſed in a particular part, the motion of the heart continuing the ſame, by cauſes which do not diminiſh the diſpoſition to contraction of the veſſels of that part, nor increaſe the diſpoſition to contraction in the veſſels in the other parts of the body, nor produce any effect on the external preſſure.

Therefore the heart is not the ſole power which propels the fluids through the part in which the circulation is thus increaſed.

The cauſes capable of increaſing the circulation in a part, are generally ſuch as tend to excite muſcular motion, and are called ſtimuli.

Some part of the body, brought into action by theſe ſtimuli, is capable of increaſing the circulation independent of the action of the heart.

The arteries are endowed with a muſcular motion, by which they may increaſe the circulation in a particular part, or aſſiſt the heart in the general circulation of the blood.

The arteries at each contraction of the heart are diſtended; at each relaxation they contract.

This alternate contraction and dilatation might depend on their elaſticity.

If their contractions and dilatations depended on their elaſticity, their ſize at their utmoſt contraction in the living body ſhould be equal to that produced by a fluid injected into them, with a force capable of overcoming the reſiſtance the blood meets with in the capillary veſſels, which, in the human body, is probably equal to eight feet perpendicular height of water.

But their ſize, even at their utmoſt ſtate of dilatation, is leſs than that produced by a fluid injected into them, with a force equal to one foot perpendicular height of water, when the animal is dead.

Therefore their contractions and dilatations do not depend on their elaſticity.

The additional force which occaſions an increaſe of the circulation, in a particular part, muſt depend on the action of the arteries or capillaries.

As the capillaries do not contract and dilate alternately, and as the direction of the blood in any one

of

of them is quite undetermined, this additional force cannot depend on the action of the capillaries.

If the arteries contracted and dilated by their elaſticity, no additional force could be applied from their contraction and dilatation; ſince the heart would loſe more force, in diſtending the arteries, than they would re-apply to the blood in contracting.

If the arteries, upon being diſtended by the blood thrown into them by the heart, are excited to a muſcular contraction, and when they have performed this contraction relax, and like the ventricle of the heart, receive the blood eaſily into them, and when they are again diſtended, are excited to a ſecond contraction, they may apply an additional force to that of the heart, ſo as to promote the circulation through the whole body.

If ſuch contractions and dilatations be greater in any particular part, they will promote the circulation in that part; in as much as, when they are relaxed to a greater degree, they will ſuffer the blood to paſs through them more readily into the capillaries; and, when they contract, they will empty themſelves more thoroughly into the capillaries.

The arteries have a muſcular contraction and dilatation, ſimilar to that of the ventricles of the heart, by which they apply an additional power to that of the heart, ſo as to promote the general circulation through the whole body, and often to increaſe the proportional circulation in a particular part.

The motion of the blood is regulated by the action of the heart and arteries, and the contraction of the capillary veſſels; and theſe are meaſured by the pulſe.

The PULSE.

Indicates	by	It is called
1*ſt*, THE ſtrength of the contraction of the heart,	Strength, Weakneſs,	Strong. Weak.
2*dly*, The quantity of blood thrown out at each contraction,	Fulneſs, Smallneſs,	Full. Small.
3*dly*, The number of contractions,	Frequency, Slowneſs,	Frequent. Slow.
4*thly*, The regularity of its action, as to ſtrength, quantity or frequency,	Regularity, Irregularity, Intermiſſion,	Regular. Irregular. Intermittent.
5*thly*, The ſtrength of the action of the arteries,	Hardneſs, Softneſs, Redoubling, Trembling,	Hard. Soft. Redoubling. Trembling.
6*thly*, The irrtiability of the veſſels,	Quickneſs, Regularity, Slowneſs,	Quick. Regular. Slow.
7*thly*, The medium diameter of the arteries,	Dilatation, Contraction,	Great. Small.
8*thly*, The quantity of blood in the veſſels,	Oppreſſion, Smallneſs,	Oppreſſed. Empty.
9*thly*, The contraction of the capillaries,	Obſtruction, Freedom,	Obſtructed. Free.

The STRUCTURE of the LUNGS.

THERE is a ſet of veſſels in the lungs which contain air, and another which contain blood.

The AIR VESSELS.

The air veſſels conſiſt of a pipe, called the trachea; one end of which opens into the throat, and communicates with the amtoſphere by the noſtrils and mouth; the other divides into branches which go to every part of the lungs, and whoſe ends open into ſmall cavities, or cells.

The air in the lungs is generally in motion; for either that which is at preſent contained in the cells, is paſſing through the trachea into the atmoſphere, or a freſh parcel is paſſing from the external atmoſphere through the trachea into the cells.

The whole of this motion is called reſpiration: when the air is paſſing in, it is called inſpiration; when it is thrown out, expiration.

When the thorax is enlarged by the action of one ſet of its muſcles, the preſſure of the external atmoſphere forces the air into the lungs; the other ſet of muſcles which contract the thorax when put in action, force the air out of the lungs into the atmoſphere. But the preſſure of the atmoſphere on the ſurface of the body counterbalancing its preſſure on the ſurface of the lungs, neither the muſcles of inſpiration nor thoſe of expiration are aſſiſted or counteracted by it.

If the air continues at reſt in the lungs for many minutes, or if a man continues to reſpire the ſame

air, or if he breathes air that hath ſerved for the inflammation of fuel or pure fixable air, he dies.

It is not determined whether pure inflammable air will ſerve for reſpiration.

Some vapours kill immediately if taken into the lungs, independent of their being unfit for reſpiration.

The BLOOD-VESSELS.

The air veſſels of the lungs conſiſt of two ſets, viz.
1*ſt*, The Pulmonary.
2*dly*, The Bronchial.

The PULMONARY VESSELS.

The right ſide of the heart is ſimilar to the left, excepting that both the auricle and ventricle have fewer muſcular fibres, and that the auricle receives blood from the venæ cavæ, and the ventricle throws it into the pulmonary artery.

The pulmonary artery begins at the right ventricle of the heart, and goes from thence to every part of the lungs in the ſame manner that the aorta goes to every part of the body.

When the pulmonary artery hath divided into very ſmall branches, theſe do not open into one another and form anaſtomoſing veſſels like the ſmall branches of the aorta; but they join again, and form veins, which uniting together, go to the left auricle of the heart commonly in five trunks.

The CIRCULATION *of the* BLOOD *through the* PULMONARY VESSELS.

The blood paſſes from the right auricle into the right ventricle, from the right ventricle into the pulmonary artery, from the pulmonary artery into the pulmonary veins, and from the pulmonary veins into the left auricle.

The POWERS *propelling the* BLOOD *through the* LUNGS.

The muſcular fibres of the right auricle contracting, propel part of the blood contained in it into the right ventricle, and they are aſſiſted by the force with which the blood moves in the veins.

The muſcular fibres of the right ventricle being ſtimulated to contract when it is full, propel part or the whole of the blood contained in it into the pulmonary artery, the blood being prevented from returning into the auricle by the valve placed at the opening of the auricle into the ventricle.

After the ventricle has contracted, it relaxes and receives the blood from the auricle, it being prevented from returning from the pulmonary artery by the valves placed at the opening of the pulmonary artery into the ventricle.

The blood is thrown by the right ventricle through the pulmonary artery and veins into the left auricle.

Perhaps the pulmonary artery hath a muſcular power, ſimilar to the muſcular power of the other arteries, by which it promotes the circulation of the blood through the lungs.

The blood meets with the ſame obſtructions in its paſſage through the lungs that it does in its paſſage through the other parts of the body, excepting that there being no anaſtomoſing veſſels, there is no obſtruction from the ſtreams of the blood meeting in them, and oppoſing each others motion.

The blood meets with ſome additional obſtructions in its paſſage through the pulmonary veſſels, beſides thoſe it meets with in the other parts of the body, viz.

1ſt, The motion of the lungs in reſpiration, as there are no valves in the veſſels, tends to retard the circulation, although the reverſe hath been aſſerted.

2dly, If a ſufficient quantity of reſpirable air be not received into, and thrown out of the lungs, the motion of the blood in the pulmonary veſſels is conſiderably retarded.

The BRONCHIAL VESSELS.

An artery ariſes from the aorta, and ſpreads itſelf through the lungs, terminating in anaſtomoſing capillary veſſels, which open into veins in the ſame manner as the other branches of the aorta in other parts of the body.

The blood circulates in theſe veſſels in the ſame manner as in the other veſſels, ariſing from the aorta in other parts of the body.

The

The EXTRAVASATION and ABSORPTION of the LYMPH.

PART of the ſuperfluous water and ſerum is continually paſſing through the ſides of the veſſels, particularly the capillaries, into the cellular membrane, and all the cavities of the body, ſo as to keep their ſurfaces moiſt.

It has been ſuppoſed that they paſſed through tubes appended to the ſides of the blood-veſſels; but ſuch veſſels have never been demonſtrated, nor is there any reaſon for ſuppoſing that they exiſt, excepting in the glands.

The fluids, commonly extravaſated, have been called the lymph.

It is uncertain whether it paſſes through the accidental pores in the ſides of the veſſels, or by cylindrical organiſed holes; but it is moſt probable that it paſſes through organiſed holes, as the ſecretion is regular and conſtant.

The pores or veſſels it paſſes through, are called exhalants.

It is abſorbed by the lymphatics.

A lymphatic is a tube nearly cylindrical, divided by valves, ſo as to have the reſemblance of joints.

They ariſe from the cellular membrane, and cavities, and the greateſt part of them go to the thoracic duct.

The valves allow the lymph to paſs from the cavities to the thoracic duct, but prevent its paſſing from the thoracic duct to the cavities.

The

The lymphatics in paſſing from the cavities to the thoracic duct, go through the lymphatic glands.

The ſtructure and uſe of theſe glands are not as yet aſcertained.

The thoracic duct is a tube which begins near the diaphragm, and commonly terminates in the left ſubclavian vein.

At its opening into the left ſubclavian vein, there is a valve which allows the lymph to paſs from it into the vein, but prevents the running of the blood from the vein into the thoracic duct.

Some of the lymphatics terminate in veins. Theſe are ſimilar in ſtructure to thoſe which terminate in the thoracic duct.

The POWERS *producing the* EXTRAVASATION *and* ABSORPTION *of the* LYMPH.

The contractile power of the blood-veſſels ſqueezes the lymph into the cellular membrane and cavities.

The quantity thrown out is in proportion to the force of the circulation, the fluidity of the ſubſtances contained in the blood-veſſels, or the quantity of the more fluid ſubſtances, and the degree of contraction of the capillaries and exhalants.

The joint of a lymphatic opening into a cavity, endeavours to fill itſelf from that cavity by its action as a capillary tube, the valves preventing the return of the lymph from the other part of the lymphatic. In like manner a lymphatic may fill itſelf entirely from the cavity in which it terminates, but its action as a capillary tube will not tend in the ſmalleſt degree to propel the lymph into the veins.

It is moſt probable that the joint of the lymphatic, next to the cavity, having abſorbed a ſufficient quan-

tity of lymph to fill it, is ſtimulated to contract and propel the fluid into the next joint, and ſo on to the thoracic duct, or vein, in which it terminates; and having emptied itſelf, and being relaxed, it fills itſelf again from the cavity, and ſo continues to act: for there is apparently no other power in the body capable of producing a regular flow of the lymph through the lymphatics into the blood-veſſels.

For in a living animal where the veins are contracting, and preſſing the blood, if one end of a capillary tube terminate in a vein, and the other in a cavity; and if there be no action in that tube, excepting that which ariſes from its being a capillary one, or from the motion of the blood in the vein; if there be any motion in that tube after it is full, it will always be from the vein into the cavity, and never from the cavity into the vein, let the tube be of any ſize or ſhape whatever.

Further; the alternate preſſure of the lymphatics ariſing from the alternate contractions and relaxations of the blood-veſſels, or muſcles, is not ſufficiently powerful, univerſal, or equal, to produce a regular flow of the lymph through the lymphatics into the blood-veſſels.

Neither does the cellular membrane and cavities force the lymph into the lymphatics, and through them into the veins.

The extravaſation of fluids from the blood-veſſels into the cellular membrane and cavities, and their reabſorption, generally take place in the above manner.

Sometimes the coagulable lymph is thrown out by the exhalants.

When the coagulable lymph is thrown out, it moſt commonly coagulates.

If

If it coagulate, it cannot be taken up by the lymhatics, till it be rediſſolved.

In many caſes it rediſſolves, and is abſorbed much ſooner than it can be rendered ſoluble in water, by putrefaction when out of the body. At other times it continues in the cavity for many years.

The red part of the blood is alſo ſometimes thrown out by the exhalants. In this caſe, its particles are broke down probably by the firſt ſtage of putrefaction, and it is afterwards reabſorbed.

The ſame things may happen, if the red particles and coagulable lymph are extravaſated in conſequence of the rupture of a blood-veſſel.

In particular parts, as in the corpora cavernoſa penis, the extravaſation and abſorption is probably performed in a different manner, and by different veſſels.

All abſorbent veſſels muſt have a power of propelling the fluids into the blood-veſſels, ſufficient to overcome the force of their contraction, by which they endeavour to propel the blood out of any opening.

The HEAT of the HUMAN BODY.

THE bodies of quadrupeds have a diſpoſition to maintain the ſame degree of heat nearly.

The heat of quadrupeds of the ſame ſpecies is generally the ſame, eſpecially in mankind.

The common heat of the human body in health, is ninety-eight degrees of Fahrenheit's thermometer.

The heat is the ſame throughout the whole body, excepting that a cold ſubſtance applied to the ſkin diminiſhes its heat; and the heat of the blood, flowing from a vein in an extremity that is expoſed to a cold atmoſphere, is reduced two or three degrees.

Otherwiſe the heat continues the ſame, whether that of the atmoſphere, or other ſurrounding bodies, be greater or leſs than ninety-eight degrees, unleſs when it produces a diſeaſe; the conſequence of which is an increaſe or diminution of the heat of the body.

The body is capable of reſiſting different degrees of external heat or cold, according to the habit it has acquired. There are inſtances of its bearing 20 degrees below 0 of Fahrenheit's thermometer, with very moderate cloathing, and 115° above, without alteration.

The heat may be increaſed or diminiſhed by alterations in the body itſelf, eſpecially in diſeaſes.

The heat has ſeldom been obſerved to be leſs than ninety-four, or more than a hundred and ten degrees of Fahrenheit's thermometer.

An increaſed action of the living power in any part, or in the whole body, increaſes the heat; and *e contra*, a diminution of the action of the living power, diminiſhes the heat either in quantity or degree.

Fluids rubbing againſt ſolids, or very ſmall particles of a ſolid immerſed in a fluid rubbing againſt one another, or againſt a ſolid, produce no ſenſible heat; therefore neither the friction of the blood againſt the veſſels, nor the friction of the red particles againſt one another, or againſt the veſſels, produces, maintains, or regulates the heat of the body.

It has not been proved, by any experiment hitherto made public, that the fermentations producing, or deſtroying the fluids, generate heat; and if it were, theſe fermentations do not go on ſo regularly, univerſally, or conſtantly, as to produce, maintain, or regulate the heat of the body.

The heat is not at all in proportion to the evaporation, as a double quantity evaporated by the inſenſible perſpiration, makes no alteration in the heat.

The power which produces, maintains, and regulates the heat of the human body in health, produces heat when the ſurrounding ſubſtances are heated to a leſs degree than 98 of Fahrenheit's thermometer, and cold, when they are heated to a greater degree.

The NERVOUS SYSTEM.

THE brain is a ſoft maſs, internally of a white colour, externally of a greyiſh or aſh colour.

It is furniſhed with blood-veſſels in the ſame manner as the other parts, excepting that larger arteries anaſtomoſe, and the ſmaller veins enter more ſuddenly into a large trunk, whoſe ſides are of a firmer texture.

In quadrupeds it is contained in the cavity of the head.

In man it is in a larger proportion to the whole body, than in any other quadruped, or any bird or fiſh hitherto known.

From the white part maſſes of fibres ariſe, which go to every part of the body. Theſe are called nerves.

One large maſs paſſes down through the cavity of the ſpine, and is called the ſpinal marrow.

A little of the cineritious part, is contained in the middle of this, and alſo in the optic nerves.

The brain, ſpinal marrow, and nerves, are covered with membranes of a much firmer texture.

The nerves proceed from the brain in trunks, which branch out as they paſs to the different parts of the body.

Upon examining the trunks with a microſcope, they appear to conſiſt of very ſmall fibres, which are only ſeparated from one another in the branching.

In their paſſage they ſometimes join again, forming roundiſh maſſes called ganglions, from whence they proceed to the different parts.

When they divide into very ſmall branches, they have been ſuppoſed to become ſofter, and ſeem to go to every the ſmalleſt part.

The SENSIBILITY, MOBILITY, and IRRITABILITY of the BODY.

THE ſenſibility is a property of the body, by which external ſubſtances applied to it, excite ſenſations in the mind.

The mobility is an original power of motion, by which certain parts of the body are capable of moving themſelves without any external motion impreſt.

The Irritability is a property of the body, by which external applications to particular parts excite a motion in the moveable parts, independent of the motion impreſt.

Theſe properties depend on the brain and nerves.

The SENSIBILITY.

The ſenſibility depends entirely on a part's being connected with the brain by the nerves; for,

If the nerves going to any part be cut through, the ſenſibility is loſt.

If the nerves going to any part be moderately compreſt, the ſenſibility is diminiſhed.

If the nerves be compreſt ſtrongly, the ſenſibility is loſt.

If the preſſure be ſoon removed, the ſenſibility recurs.

If the preſſure be continued for a long time before it is removed, the ſenſibility returns more ſlowly, or not at all.

Preſſure on the brain, diminiſhes the ſenſibility of the whole body.

If a ſmall branch of a nerve be cut through, ſo as to take off the ſenſibility of a part of the ſkin, it may be reſtored in time.

The ſenſibility may be impaired, or loſt, without any ſenſible preſſure on the nerve, or alteration of its ſtructure.

When there is no wound in the body, the ſenſations appear to be in the place where the application exciting them is made.

If an extremity be cut off, an application made to the ſtump, may produce ſenſations which appear to be in the part amputated.

Query. Can a ſenſation be excited apparently in a part by an affection of the nerve going to it, the body being whole?

Every part of the body is capable of ſenſation in a ſound or morbid ſtate.

The bones and cartilages do not appear to be ſenſible in a ſound ſtate, whatever application be made to them; but in a morbid one they may become ſenſible.

All the other parts of the body appear to be ſenſible in a ſound ſtate; for the diſtention of a part conſiderably beyond its preſent diſpoſition to contract, either by its muſcular power or elaſticity, is capable of exciting ſenſations in every other part of the body.

There are applications, which are capable of exciting ſenſations in one part, that produce no ſuch effect in another.

Some of the ſenſible parts are only capable of ſenſation from diſtention in a ſound ſtate, ſuch as the membranes.

One part may be ſenſible to an application which another is not, and the ſecond part may be ſenſible

to another application, which the firſt is not; as the effluvia of muſk do not affect the eyes, although they affect the noſtrils, and the rays of light affect the eyes, but not the noſtrils.

Some parts of the body are only capable of the ſenſation of pain; others are capable of various ſenſations, of which pain is always one.

Some applications are capable of exciting pain only; others may excite various ſenſations.

Every ſenſation excited in a very great degree, is painful, and ſeveral are alſo painful from being very weak.

Thoſe parts of the body, which are capable of a variety of ſenſations, are generally called the organs of the ſenſes. Theſe are,

The ſkin, the mouth, the noſtrils, the eyes, the ears; the ſtomach is capable of ſeveral ſenſations beſides pain, but not of ſo great a variety as the organs of the ſenſes.

Some other parts of the body are alſo capable of ſome ſenſations not painful.

All the ſenſible parts may have their ſenſibility increaſed or diminiſhed.

The Mobility *and* Irritability.

Parts capable of original motion, are called the moving parts.

In many of the parts capable of original motion, there are red fibres called muſcular fibres.

In ſome of the parts capable of original motion, no ſuch fibres have hitherto been demonſtrated.

All the parts of the body are not capable of original motion.

The muſcles, blood-veſſels, lymphatics, ſecretories of the glands, and ſkin, are capable of original motion.

The

The moving parts are capable of contracting beyond that degree of contraction which would ariſe from their elaſticity.

All the actions of the body, and all the power which it exerts, depend upon the contraction of the moving parts.

When a muſcular fibre, or any other moving part, continues in action for a conſiderable time, it does not, in general, exert one continued contraction, but a number of alternate contractions and relaxations. The relaxations, when the body is ſtrong, or the whole ſtrength is not exerted, are often hardly diſtinguiſhable; but when the habit is weak, or the whole force exerted, they become very apparent.

A contraction may however probably continue for a very long time, without any intermediate relaxation, as in a ſpaſm.

When any motion takes place in conſequence of a relaxation, it is from the elaſticity or weight of the part, or from ſome external power.

The original motions are produced by volition ideas of the mind, or certain external applications, called ſtimuli.

There muſt be the ſame intercourſe, which is neceſſary for ſenſation, between the moving part, and the brain, by means of the nerves, to render volition capable of exciting a motion in it.

Many of the moveable parts are incapable of being put in motion by the will.

An idea of the mind may excite a motion independent of, and contrary to the will, provided the part be connected with the brain by the nerves, as for ſenſation.

The will may acquire a power over a moving part, which it could not affect originally.

The motions excited by the will are called voluntary motions; thoſe excited by ideas, or ſtimuli, independent of, or contrary to the will, are called involuntary.

All the parts of the human body, capable of voluntary motions, have red muſcular fibres.

The will and ideas are both capable of producing contractions and relaxations in the moving parts.

If the communication between the brain and a moving and irritable part, be cut off by cutting thro' the nerve, a motion may be ſtill excited in it by a ſtimulus; hence ſtimuli may excite motion without affecting the brain, and therefore all the motions excited by them, are not begun in the brain, and carried along the nerves to the moving part.

If a nerve be cut through, ſo as to leave a portion of it adhering to a moving part, a ſtimulus applied to the nerve, may excite a motion in the moving part. Hence, the action of a nerve upon a part, may excite a motion in it; and the motions excited by the nerves, do not all ariſe in the brain.

If the communication between the brain and a moving part by the nerves continues, a ſtimulus applied to the brain may excite a contraction of the moving part.

The motions produced by the application of ſtimuli to moving and irritable parts are apparently the ſame, whether the part be connected with the brain by the nerves, or not; excepting that the motions excited, become more languid after the moving part has been ſeparated ſome time from the brain, and at laſt the power of motion in it is entirely loſt.

The ſame things are true of the motions excited by the application of ſtimuli to the nerves going to a moving part.

Hence,

Hence, it is probable, that the motions excited by the application of ſtimuli to a moving and irritable part, or to the nerve going to a moving part, do not ariſe in the brain, but immediately in the nerves, or in the part; the brain in this caſe only keeping up the life of the part, and rendering it capable of motion.

When a ſtimulus produces a contraction in a moving fibre, the force of that contraction is often far greater than the force with which the ſtimulus was applied. Therefore, when a ſtimulus excites a motion, it is not in conſequence of a communication of the power employed in applying that ſtimulus: nay, the motion may be the very reverſe of that which would have been produced by the exertion of that power.

When a ſtimulus applied to a nerve produces a contraction in a moving fibre, it is a queſtion whether the motion is excited in the nerve, and communicated to the fibre, or produced immediately in the fibre, without any motions being excited in the nerve; for in this laſt there is often no apparent motion excited.

It has been conjectured by ſome, that the motion was communicated by a fluid flowing through the nerves as tubes; by others, that it was communicated by vibrations; and by others, that it ariſes from an elaſtic vapour ſurrounding the nerves: but none of theſe conjectures are founded on experiment, neither are any of them any ways capable of accounting for the appearances.

As the influence of a ſtimulus on a moving fibre is not occaſioned by any mechanical communication of motion, may not a ſtimulus applied to a nerve, exert its influence on a contractile fibre, without any

mechanical communication by any motion running along the nerve.

If the brain is not diſeaſed, and two parts of the body communicate with it by the nerves, as for ſenſation, an application made to one of theſe parts may excite a contraction or relaxation in the other, although none of the ſubſtance applied, be carried from the one to the other, and although no ſenſation be excited by the ſtimulus. Hence a medicine applied to one part of the body, may produce an effect upon another, although none of that medicine be carried to the part on which that effect is produced.

The effect of an application upon a part at a diſtance from that where it is made, may be the ſame which it would have produced if applied to that part; or it may be the reverſe, or totally unconnected with it.

Quer. May not the application in this caſe influence the diſtant part, without any communication from a mechanical motion running along the nerves of the one part to the brain, and from the brain by the nerves to the other part?

An application to one part, may produce a motion in another, although it would have had no effect, if it had been made to the part itſelf

A ſtimulus applied to a part incapable of original motion, may excite a motion in a moving part at a diſtance.

If the communication between the brain and any part of the body, by means of the nerves, be cut off, applications made to that part, will not affect the other parts, nor will applications to the other parts, produce motions in that; unleſs the nerves be cut off from a muſcle, whoſe fibres have been accuſtomed to contract at one and the ſame time, ſuch as the heart.

In that caſe, if you ſtimulate one of theſe fibres, the whole are brought into immediate contraction; thoſe not ſtimulated, contract, to all appearance, as ſoon as the one to which the ſtimulus is applied.

As in this caſe the communication between the fibres by the nerves is cut off, and as after cutting thro' the nerves of a ſmall part of the body, the ſenſation may in time be reſtored, is there not a communication of nervous influence, between the parts that are in contact, independent of the nerves?

The parts on which ſtimuli are capable of acting ſo as to produce motion, are called the irritable parts.

All the parts of the body are irritable in a ſound ſtate, excepting the bones, cartilages, and tendons.

All the parts of the body may become irritable in a morbid ſtate.

Stimuli may produce motion in a diſtant part, when applied to a part incapable of original motion; or, in other words, all the irritable parts are not moving parts.

An application that produces relaxation, or diminiſhes contraction, is called a ſedative.

A ſubſtance may act on one part as a ſtimulant, on another as a ſedative.

A ſubſtance may act on one part as a ſtimulant or ſedative, and have a leſs effect, or none at all, when applied to another, although otherwiſe equally irritable. Such ſtimuli are called ſpecific.

There are ſome parts upon which ſtimuli in general produce greater effects than they do upon others.

A greater number of ſubſtances act alſo upon theſe parts.

The membranes, ligaments, and blood-veſſels, excepting the heart, are incapable of being affected by any other ſtimulus but diſtention.

Some of the applications capable of affecting the moving parts, tend to deſtroy the fibres by mechanical or chemical effects; ſome of them have no mechanical or chemical power of action.

The irritability and mobility of a part may be increaſed, diminiſhed, or entirely loſt.

CUSTOM and HABIT.

CUSTOM is the frequent repetition of any application to the body, capable of affecting the ſenſible or irritable parts, or it is the repetition of any action or motion of the body.

Habit is the effect of ſuch repetition.

An application, producing a ſenſation, may have its power increaſed or diminiſhed by cuſtom.

If the mind pays particular attention to any impreſſion, its force and diſtinctneſs is increaſed. Hence ariſes the improvement of the eye, ear, &c. in diſtinguiſhing objects in painting, tones in muſic, &c.

If the impreſſions are very ſtrong, ſo as to excite great attention, their force is increaſed.

If the impreſſions are not attended to, their force is diminiſhed. Hence after living for ſome time near any thing producing a great noiſe, the noiſe is hardly heard.

The power of the will, in producing motion, may be increaſed by cuſtom, and diminiſhed by diſuſe.

The

The will, in frequently producing a motion, may not only have its power increaſed, but it is alſo capable of producing that motion with greater accuracy, and by frequent attempts may acquire a power over a moving part, upon which it has naturally little or no influence.

A motion may ariſe from a volition in conſequence of cuſtom, which was not naturally connected with it; as a man in turning in a loom does not will the motion of his hand, but of the end of the chizel.

Quer. Can a man produce two diſtinct motions by his will at once; or, when two diſtinct motions are produced, does the will produce them ſucceſſively? The impreſſion ariſing from one volition remaining till the mind renews it, after having produced the other, in the ſame manner as the impreſſion of a flame making a circular motion, remains on the eye, ſo as to give an idea of a compleat circle.

The power of producing two diſtinct motions, apparently at the ſame time, is greatly increaſed by cuſtom.

From the above circumſtances the facility of execution acquired by cuſtom ariſes.

The power of an idea in exciting motion, may be increaſed or diminiſhed by cuſtom.

An idea ſtrongly impreſt on the mind, is for the moſt part more powerful in exciting a motion, than one weakly impreſt.

The power of an application in impreſſing an idea, may be increaſed or diminiſhed by cuſtom, as is above deſcribed, and of conſequence the power of an idea in exciting motion.

Suppoſing the impreſſion on the mind the ſame, if an idea has frequently produced a motion, its power

is increaſed. On the contrary, if an idea has been often excited, and if the motion depending upon it has by any means been prevented, its power is diminiſhed, or loſt.

The action of an application producing, diminiſhing, or altering the mode of, contraction of a moving part, and which at the ſame time has no effect on the mind, may be increaſed or diminiſhed by cuſtom.

If it be often applied, ſo as always to produce its effect, its power, or the certainty of its action, is for the moſt part increaſed.

An application of an equal apparent force does not always produce the ſame effect. If the ſame quantity of ipecacuhan be twice exhibited at the interval of ſeveral days, it may vomit at the firſt exhibition, and not at the ſecond; or it may produce vomiting at the ſecond exhibition, and not at the firſt.

In applying medicines, which do not act as ſimple ſtimuli, their particular effect cannot be increaſed by increaſing the doſe, they being converted into ſimple ſtimuli. Thus ſmall doſes of ſaccharum ſaturni produce coſtiveneſs, but a very large doſe frequently purges.

An application frequently repeated, ſo as to produce its proper effect, often becomes more conſtant and uniform in its action, although it may become neceſſary that it ſhould be applied in a greater degree.

If an evacuating medicine be repeatedly exhibited, it generally requires a larger doſe at the ſecond, and ſome of the ſubſequent exhibitions, to produce the ſame effect as the firſt; but if theſe produce the effect, the power of the medicine is afterwards increaſed.

The more violent the effect of any application, the more is its power increaſed by repetition.

If an application be made in ſo ſmall a degree, as not to produce any effect, or if its effects are by any means counteracted, its power is diminiſhed or loſt.

The repeated application of ſome medicines in any circumſtance diminiſhes their powers.

All the natural powers of action in the body are increaſed by frequent exertion.

If two or more fibres have been accuſtomed to contract together, either by the action of the will, by an idea, or by ſtimuli; or if the contraction in one of them be produced by the will, while the other is brought into action at the ſame time by a ſtimulus, the producing of a contraction in the one by an application to it alone, will produce a contraction in the other. If they be fibres of the ſame muſcle, and acted upon by a ſtimulus, this will happen after the communication with the brain by the nerves is cut off, but not otherwiſe.

If, after this habit is acquired, one of theſe fibres is made to contract frequently, while the other is prevented from contracting, the habit is loſt or deſtroyed.

If any motion, or ſtate of the body, be repeated at a particular period of time, it will often return at that period, although no other cauſe be applied but the habit acquired.

A habit may be deſtroyed by counteracting and preventing its effects.

Two habits may be ſo connected, that preventing the one from taking place, may prevent the effects of the other.

Cuſtom has alſo a powerful influence on the mind.

Exercise, Rest, Sleep.

WHEN a moving part is brought into action by the will, an idea, or ſtimulus, that action ſometimes ceaſes upon removing the cauſe, ſometimes it continues after the cauſe is removed. This laſt frequently happens in the production of diſeaſes.

When it is neceſſary for the continuation of an action, that its cauſe ſhould be continually or repeatedly applied, the original power ſeems gradually to be exhauſted, ſo that the motions for the moſt part become gradually weaker, and at laſt are not to be produced, as in the caſe of exerciſe.

There are ſome actions which are neceſſary for life, that are continued by the application of ſtimuli, and nevertheleſs do not exhauſt the original power; ſuch as the action of the heart, the periſtaltic motion of the inteſtines, &c.

If theſe actions are increaſed beyond their common pitch, or beyond what can be allowed by the preſent ſtrength of the ſyſtem, they alſo exhauſt the original power.

A great exertion of the faculties of the mind alſo, exhauſts its powers.

Reſt reſtores both to the body and mind their powers of action

In perfect ſleep, both the body and mind are at reſt, excepting in thoſe particulars where an exertion is neceſſary to life. Theſe exertions are in the alternate contractions of the heart and arteries, the motion of the muſcles in reſpiration, the tone of the muſcular fibres, blood-veſſels, and other moving parts, the action of the lymphatics and excretory ducts, the periſtaltic motion of the inteſtines, &c.

The

The common exertions of the body and mind, when a man is awake, exhauſt to ſuch a degree, as to require that reſt which is found in ſleep to allow the original power to recruit itſelf.

In ſleep the mind is often brought into action, ſometimes from affections of its own, ſometimes from affections of the body. The body alſo exerts other powers beſides thoſe neceſſary for life. In theſe caſes the original power is leſs recruited, and that in proportion to the exertion.

Although the original power may be ſo far exhauſted as to require to be recruited by ſleep, that ſtate may nevertheleſs be prevented by any thing exciting great attention of the mind, by applications to the body producing uneaſineſs or pain, or by an increaſed action of any of its parts, or by any action or contraction which continues after its cauſe is removed.

The ſame cauſes may render ſleep leſs perfect, although not ſufficient to prevent it altogether.

Although reſt is not compleat at the beginning of ſleep, it has a tendency to become ſo during this ſtate of the body. In particular, all actions and contractions remaining after their cauſe has been removed, are apt to go off.

During ſleep the original power appears to be ſo much accumulated, as to give a diſpoſition to action, both to the mind and body, from the ſlighteſt cauſe, and this ſtate of the body goes off of courſe.

At the beginning of ſleep, the reſt is generally leſs perfect; it becomes gradually more ſo for a certain time afterwards. When the original power is recruited, the mind begins to be put in action, and at laſt the whole ſyſtem, at which time ſleep goes off.

A continued or ſtrong action of one part of the body, may not only exhauſt the original power in that part, but alſo in all the others.

A great

A great exertion of the powers of the body, may exhauſt the powers of the mind, and *é contra*, a great exertion of the powers of the mind, may exhauſt thoſe of the body.

A frequent exertion of the original power in one part of the body, tends to ſtrengthen that part, but to weaken the other.

An exertion of the original power, increaſes the loſs of fluids, and renders a greater quantity of food neceſſary. Hence animals that require a conſiderable quantity of nouriſhment when awake, may ſleep for ſeveral months without any being taken in.

A loſs of fluids generally increaſes the powers of digeſtion, excepting when they are diſordered by diſeaſe.

A moderate exertion of the powers of the body, in proportion to the preſent ſtrength, powers of digeſtion, food, and ſleep, tends to ſtrengthen the whole body.

A violent or continued exertion of the original power, if it be not recruited by food and ſleep, may weaken to that degree as to kill.

A repeated exertion of the powers of the mind, tends to ſtrengthen its faculties; but at the ſame time to weaken the original power in the body.

Unleſs the body be endowed with a certain degree of ſtrength, the mind cannot exert itſelf powerfully.

Exerciſe of the powers of the body, tends to weaken the mind, except ſo far as is neceſſary to give the body the proper ſtrength.

But a moderate exerciſe of the body and mind together, tends to ſtrengthen the whole ſyſtem, ſo that by cuſtom the original power in the whole may be increaſed.

F I N I S.

ELEMENTS

OF THE

PRACTICE

OF

PHYSIC.

PART the II.

CONTAINING

The HISTORY and METHODS of Treating

FEVERS

AND

INTERNAL INFLAMMATIONS.

By GEORGE FORDYCE, M. D.

Member of the Royal College of PHYSCIANS, and Reader on the PRACTICE of PHYSIC, in LONDON.

LONDON: Printed for JOSEPH JOHNSON, in *Pater-Noſter-Row*,

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THIS ESSAY

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IS WITH THE UTMOST RESPECT,

INSCRIBED

TO HIS GRACE

HUGH DUKE OF NORTHUMBERLAND,

A LOVER AND A PROMOTER

OF USEFUL ARTS,

BY HIS GRACE'S

MOST DEVOTED SERVANT,

GEORGE FORDYCE.

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GEORGE JORDYCE

Advertiſement.

FROM an Opinion that a plain Deſcription of Diſeaſes, attempted with as much Preciſion and as little Theory as poſſible, and accompanied with the proper Remedies, might be uſeful; the Author of the following Sheets has been long employed in preparing Materials for ſuch a Work, by an attentive Obſervation of Diſeaſes themſelves, by an accurate Comparriſon of their Appearances, with the Accounts which have been given of them by other Writers, and by a careful Collation of thoſe Accounts: With what Succeſs the PUBLIC will be able to judge, and has a Right to determine. A Part of this Work having been printed ſeveral Years ago, and the Notes from his Lectures on the Subject of it, which have been taken by his Pupils, having been handed about from Time to Time; he is apprehenſive they may have fallen into the Poſſeſſion of ſome who are diſpoſed to make an improper Uſe of them. And as no Man wiſhes to loſe the Fruits of his Labour (eſpecially in a Study which he has made the Buſineſs of his Life) the Author has ventured on the preſent Publication, intending to proſecute what remains, with the utmoſt Diſpatch and Care.

CONTENTS.

The Symptoms, Diſtinctions, Prognoſtics, and Indications of CURE, with the REMEDIES in FEVERS.

THE Periods of FEVERS begin with all or moſt of the following Symptoms;

(a) Languor, Wearineſs, Weakneſs, Inſenſibility of the Extremities, Cold and Trembling, Pain in the Back. *Symptoms of the Cold Fit, or firſt Stage.*

(b) Paleneſs; a dry, foul Tongue, and Thirſt; tranſparent Urine; Coſtiveneſs, and Suppreſſion of other Secretions; paleneſs and dryneſs in Ulcers; a quick, ſmall, intermittent Pulſe; Pain in the Limbs, Joints, and Forehead; Blindneſs; *Delirium.*

(c) Anxiety, Oppreſſion and Swelling about the *Præcordia*; quick and laborious Reſpiration, ſometimes with Cough; Rigor, and Horror; Flatulencies, Loſs of Appetite, *Nauſea*, and Vomiting.

According to the Violence of theſe Symptoms at any Time of the Diſeaſe, the Fever is violent; and when they are intirely carried off, it is cured.

Theſe are produced by *Cauſes.*

1ſt, Certain Paſſions of the Mind ſuddenly excited, the Principal of which are Fear, Grief, and Anxiety.

2d, Cold apply'd to the Body.

3d, Putrid, variolous, morbillous Matter or Pus, acting upon the ſenſible Parts.

4th, Retention of certain Subſtances in the *primæ Viæ*, as indigeſtible Food in the Stomach, *Fæces* in the Inteſtines.

5th, Changing of Cuſtoms or Climates, to which the Body has been habituated; at leaſt aſſiſting the other Cauſes.

Theſe Cauſes, except variolous, morbillous Matter and Pus, produce Fever immediately, without any previous Alteration.

Any two of them acting together, are more powerful in exciting the Diſeaſe, than one ſingly.

They act more certainly on irritable Habits.

2d Stage or hot Fit

Unleſs when the Symptoms of the firſt Stage deſtroy the Patient, they are followed by

RIGOR, and HORROR; Heat riſing from the Præcordia, and diffuſed from thence over the Body irregularly, unequally, and flushing; a ſtrong, full, obſtructed Pulſe; or a very quick, ſmall One; great Pain in the Head, and Joints; *Stupor*, and *Delirium*; univerſal Soreneſs; Redneſs ariſing in different Parts irregularly; the Urine higher coloured, but perfectly tranſparent; ſweating, in the Head and Breaſt, or over the whole Body; partial Secretions; *Petechiæ*.

Criſis

The Symptoms of the firſt Stage are gradually relieved.

At laſt the Pulſe becomes free; all the ſecretory Organs are relaxed; hence the Skin grows ſoft and moiſt, the Tongue likewiſe is ſoft and moiſt, the Belly is open, and the Urine in greater Quantity, not perfectly tranſparent when diſcharged, after a little Time becoming turbid and opaque, and at laſt depoſiting a copious Sediment: The Secretions are often greatly increaſed; there ariſes a copious and univerſal Sweat, or a Purging, or great flow of Urine.

The quickneſs of the Pulſe, and all the other Symptoms of the firſt and ſecond Stage gradually ſubſiding, the Patient recovers his Health, but is conſiderably weaken'd.

Or there ariſes an Inflammation or Hæmorhage, in ſome

ſome Part of the Body, the Symptoms of the firſt Stage ſuddenly diſappearing, or being greatly diminiſhed.

FEVERS are,

Species.

The EPHEMERA SIMPLEX, conſiſting of one Period only.

RECURRENT FEVERS conſiſting of more than one Period, no ſingle one laſting more than 24 Hours, or till the Evening following.

RECURRENT FEVERS are,

Varieties.

The INTERMITTENT, in which the Symptoms of one Period go off intirely before a ſecond ariſes, or there are only left a ſlight Pain in the Back, a foul Tongue, ſome Contraction and Paleneſs on Part of the Skin, with Languor.

The REMITTENT, in which the Patient is greatly relieved; but the Pulſe continues quick, and ſeveral other Symptoms are not carried off before the ſecond Period begins.

The CONTINUED, in which one Period begins before the former is conſiderably abated.

Types.

In Intermittent Fevers, the Diſeaſe is more apt to recur at the End of 48 Hours from the beginning of the former Period, than at any other Interval; ſuch are called *Tertians:* next to this it is more apt to recur at 24 Hours, when they are called *Quotidians*; or at 72 Hours, when they are called *Quartans*; but there are Inſtances of their recurring at all other Intervals.

QUOTIDIANS are frequently converted into TERTIANS, and TERTIANS into QUARTANS.

The Symptoms indicating great Strength, often happen in Quotidians; the Symptoms of the firſt Stage are violent in Tertians; and thoſe indicating Weakneſs, are frequently found in Quartans.

But Symptoms of Strength and Weakneſs occur ſometimes in all the Types.

In Fevers recurring at the End of 24 Hours, when every ſecond Period is more violent, they are called *Double Tertians*; when every third, they are called *Triple Quartans*.

In Continned Fevers the Exacerbations happen commonly in the Evening every Day, and are equable at the Beginning, but gradually increaſing; in the Middle every other one is more violent; and at the End every third, when they likewiſe gradually decreaſe.

In continued Fevers at the Beginning, for moſt Part, the Veſſels act ſtrongly; at the End weakly.

In all Fevers, the more violent the Attack at any particular Period, the greater Chance there is of the Paroxyſm's running thro' its Stages, and producing a perfect Criſis.

In continued Fevers left to themſelves, more violent Exacerbations oftner happen, on the fourth, fifth, ſeventh, ninth, eleventh, thirteenth, fourteenth, ſeventeenth, and twenty-firſt Days, than on any others.

On thoſe Days the Periods either go thro' all their Stages, and a perfect Freedom from the Diſorder is produced, (in which Caſe for moſt Part it does not recur;) Or the Diſeaſe goes off by the Exacerbations becoming gradually leſs and leſs, and being followed by imperfect critical Symptoms.

Prognoſtics.

The Danger ariſes from the Violence of the Symptoms of the firſt Stage, and the *Delirium* produced from thence; or from too ſtrong an Action of the Veſſels; or from great Weakneſs in the Patient.

Violent Symptoms of the firſt Stage.

The firſt is indicated by the Diſeaſe's being preceeded by long continued Languor, Wearineſs and Weakneſs: its being attended by great Proſtration of Strength;

the

the Skin's being rough, dry, and unequal; Ulcers becoming perfectly dry; the Pulſe being much contracted, quick, and intermittent; the Tongue and Mouth's being dry, the Tongue covered with a dry, rough Furr, and the Thirſt un-extinguiſhable; the Urine's being pale, perfectly tranſparent, and in ſmall Quantities; the Nails, Fingers, and Feet, remaining cold and pale; the Noſe ſharp, Temples and Eyes hollow; Skin of the Forehead contracted; Ears cold; and Face univerſally pale, or of a duſky Colour: The Breathing's being ſhort, quick, and laborious, the Patient moving his Noſtrils; the *Præcordia* tenſe, ſwelled, and hard; the Anxiety and reſtleſſneſs great; the Patient's picking the Hairs off the Bed Cloaths, and hunting Flies; the Imagination hurried; the Sleep reſtleſs and un-refreſhing; the Thirſt's going ſuddenly off; violent *Delirium*, or a total Inſenſibility and Convulſions appearing.

Symptoms of ſtrong Action of the Veſſels.

The Second is indicated by a hard, full, ſtrong Pulſe; a great Redneſs; a full and quick Reſpiration; a dry white Tongue; great Pain in the Head and Joints; ſweating about the Head and Breaſt, or all over the Body; red ſwelled Eyes; *Stupor*; *Delirium*; Convulſions.

Symptoms of Weakneſs.

The Third is indicated by, partial, or univerſal, or cold colliquative Sweating; Purging; Tears; great Secretion of Urine; or any other partial Secretion, the Reſt not taking Place at the ſame Time; Urine with a mucous Cloud or Sediment; Symptoms of putrid Blood, as a black Furr upon the Tongue, thick and black Urine, *Petechiæ*, putrid Secretions, as putrid *Fæces &c.* A ſmall, quick, trembling Pulſe; the Patient lying ſeemingly ſtupid, without much Uneaſineſs, or on his back with the Legs and Arms extended, ſlipping out at the Foot of the Bed; fainting when in an

Poſture, or upon any Evacuation; *Delirium*; *Subſultus tendinum*; the *Fæces* and Urine evacuated without the Knowledge of the Patient; the Pulſe loſt in the Arm.

Symptoms ſhewing the Mode of Continuance.

When the Symptoms of the firſt Stage come on with great Violence, the Diſeaſe is oftener an *Ephemæra Simplex* or *Intermittent*, than a Continued Fever.

When the Symptoms *(a)* of the firſt Stage attack the Patient more violently in Proportion to *(b)* *(c)* the Diſeaſe is apter to be continued, and *e contra.*

When the *Tertian* Type is evident on the firſt Days of a Continued, it is generally changed into an Intermittent.

The more perfect the Criſis, the leſs Danger of a Relapſe, and *e contra.*

Continued Fevers, whoſe Types are changed by Evacuations, are leſs apt to be cured by a Criſis, and have more imperfect Criſes than thoſe running thro' their natural Periods.

Fevers, which in the beginning are neither attended with ſtrong Symptoms of the firſt Stage; nor thoſe indicating great Strength or Weakneſs generally continue long.

Varieties of Continued Fevers.

Fevers that are continued, and have the Symptoms of the firſt Stage violent, are, the *Plague*, *Malignant Fevers.*

Continued Fevers, in which the Symptoms of the firſt Stage are at the Beginning ſlight, if attended with great Symptoms of Strength, are *Inflammatory Fevers*; if otherwiſe, low *Nervous Fevers.*

Indications of CURE in FEVERS.

Indications of Cure.

I. INDICATION. All Applications increaſing the Diſeaſe, rendering the hot Fit irregular, or diſturbing the natural Periods, are to be avoided.

(A) The Food is not to be of difficult Solution or Fermentation; flatulent; producing an adheſive Solution; diſagreeable to the Stomach; nor in too great Quantity.

Proper Subſtances for FOOD are,

(a) Decoction of Rice, Barley, Oats, *&c.*

(b) Shell'd Barley, Oats, Rice, boiled; or fermented, and baked into Bread, afterwards toaſted.

(c) Broths of Pullets, lean Mutton, and Beef.

(d) Pullets about nine Months old, roaſted or boiled.

(e) Whitings, Flounders, Soals, Dace, Roach; theſe Fiſhes however are ſeldom to be uſed.

(B) The *Primæ Viæ* are to be cleared of any offending Matter, by gentle Emetics and Laxatives, or Glyſters, according to the Strength of the Patient.

(a) Proper Laxatives are, Sal Glauberi verus, Tartar Vitriolatum, Tartar Solubile, Pollychreſtum Rupellenſe, Sulphur, Radix Rhei, Manna, Caſſia, Tartar, Fructus Tamarindorum.

(b) Laxatives uſed in Glyſters are, Decoctum Commune pro Clyſmate, Sal commune, Sal Glauberi, Oleum Lini, Sacharum Rubrum, Electarium Lenitivum.

(C) Great external Heat and Cold are to be avoided, as are likewiſe ſudden Changes from the one to the other, and Air unfit for Reſpiration.

The Bed-Chamber is to be large, and the Bed placed ſo as to avoid Currents of Air.

Heat is to be generated by Fewel burning in an open Fire-Place; Cold by ſprinkling the Floor with Infuſions or diſtill'd Waters of ſome of the Aromatic Herbs, ſuch as Thymus, Roſmarinus, Lavendula, Roſarum Flores.

(D) Sleep may be procured by

(a) Attention to an uniform murmuring Noiſe.

(b) Antiſpaſmodics and Sedatives, as Oleum Dulce, Oleum æthereum in Spiritu Vini ſoluta et Aqua Commixta.

(c) Opium, which is ſeldom uſeful, frequently prejudicial.

(E) Pu-

(E) Putrid Air, Fear, Grief and Anxiety, are to be avoided.

II. INDICATION. Accidents arising from too ſtrong Action of the Veſſels, ought to be avoided;

(A) By Bleeding, according to the Strength of the Patient, and Violence of the Symptoms of the 1ſt Stage.

(B) The Food is to be ſuch as affords little Nouriſhment. [Vid. Ind. 1ſt. *(A) (a)*]

(C) By Sedatves given internally, ſuch as

Acidum Vitriolicum, Muriaticum, Limonum, Tamarindorum, Berberis, Mororum.

(D) By Laxatives, ſo as to procure two or three Stools. Vid. [Ind. 1ſt. *(B) (a)*]

III. INDICATION. The Strength is to be ſupported, when the Symptoms of Weakneſs come on.

(A) Stimulants and Antiſpaſmodics are to be given according to the Weakneſs, ſuch as Sack, Madeira, Mountain, Port, Claret, Moſchus, Camphora, Caſtor, Alkali Volatile.

It hath been the practice with this View, to give the Spices, and other Subſtances whoſe Virtues as Stimulants depend on their eſſential Oils; but as they generally quicken the Pulſe and greatly increaſe all the Symptoms of Irritability, I think they ought to be laid aſide; Bliſters, upon the ſame Account, are not ſo uſeful for this Purpoſe.

IV. INDICATION. Irritability arifing towards the End, is to be taken off.

(A) By Acids. Vid. [Ind. IId. *(C)*]

(B) By Cortex Peruvianus, if there are remarkable Remiſſions.

V. INDICATION. The Symptoms of the firſt Stage

ar

are to be immediately taken off, or diminiſhed,

(A) By giving internally Medicines to relax the ſmall Veſſels throughout the Syſtem by their Action on the Stomach, ſuch as Nitrum Commune, Ammoniacum Commune, all the other neutral Salts, Radix Ipecacuanhæ, Radix Senecæ, Preparationes Antimonii, Aqua Frigida.

(B) By external Applications producing Inflammation, ſuch as Cantharides, Semina Sinapi.

The gentle Stimulants commonly called *Diaphoretics*, as Contrayerva *&c.* have been by many Practitioners uſed for this Purpoſe internally ; but their Action is extremely doubtful.

VI. INDICATION. The Diſeaſe is to be prevented from Recurring.

(A) Symptoms of the firſt Stage remaining after the Criſis, and facilitating the Re-production of the Diſeaſe are taken off by Vid. [Ind. V. *(A)*]

(B) By counter-acting the Cold Fit, before, and at the Time of, the Acceſſion.

(a) Vid [Ind. V. *(A)*]

(b) By the Application of Stimulants *(i)* externally, as Allium, Sinapi, Aromata (2) internally, as the Aromata, Alkali Volatile, Vinum, Opium, Moſchus, Camphora.

(C) By Medicines preventing any Application from affecting the Syſtem, ſo powerfully as it would do naturally, (i. e. deſtroying Irritability) ſuch as Cortex Peruvianus, Vitriolum et Muria ferri, Vitriolum Cupri, Alumen, Cortex fraxini.

The PLAGUE.

Cauſes. IT is always produced by putrid Vapour applied to the Body, ſometimes acting as the ſole Cauſe, ſometimes in Conjunction with others; and more or leſs powerfully, according to the Irritability.

Diſtinctions. Of all continued FEVERS this attacks the Patient with the moſt violent Symptoms of the firſt Stage: theſe too increaſe in it, the faſteſt at every Exacerbation, and produce the Symptoms of Weakneſs the quickeſt, particularly thoſe of putrid Blood.

In cold Climates the Symptoms of Strength often appear at the Beginning with great Violence.

Prognoſis For moſt Part the Symptoms of the firſt Stage ariſe to ſo great a Height, as to deſtroy the Patient before the End of the firſt Week.

General Prevention. The putrid Vapour in the Air, may perhaps be deſtroyed, by impregnating it with Acids; as by burning great Quantities of Wood, or detaching great Quantities of concentrated Muriatic Acid from Sea Salt by the Vitriolic, and evaporating it.

Particular Prevention. Fear, Grief and Anxiety, indigeſtable and flatulent Food, Coſtiveneſs, Cold, and the other Cauſes of Fever, are to be avoided as much as poſſible.

Medicines deſtroying the Irritability of the Body, may be exhibited (as a Glaſs of Wine) when any one is unavoidably expoſed to the Infection in Circumſtances where it would act more powerfully. The Bark may always be uſed as a Preſervative, with Advantage, in the following- or a ſimilar Form.

(No. 1.) ℞ Vin. Rubr. Luſit. ℔ij
Cort. Peruv. } aa ℥ ij
—— Cinam. }

Digere per Horas xlviij Calore 100 Grad. Therm. Faren. et col. Capt. Coch. iiij ter indies.

The

Cure.

The Fever is to be put a ſtop to if poſſible, by the moſt powerful Means of taking off the Symptoms of the firſt Stage.

(No. 2.) ℞ Pulv. Ipecac. Gr. vi ad xij.
Tart. Emet. Gr. i. ad iij. Ft. Pulv. Emet.
Vel. Ft. cum. Syr. Scilit. Q. S. Bolus Emet.
Vel. ℞ Tinct. Ipecac. ℥ſs ad ℥j.
Tart. Emet. gr. j. ad iij. Ft. Hauſt. Emet.

Capt. Veſp. Hora ix Superbib. Infus. Cham. vel Card. Benedict. nequaquam tamen ultra modum urgeatur Vomitus; in lecto etiam detineatur æger.

After the Operation of the Emetic, the Patient is to be laid in Cotton or Flannel, his Head bound round, and when warm the following Draught is to be given.

(No. 3.) ℞ Aq. Menth vulg. vel Cinnam. Ten. vel. Alexit. ſimpl. — ℥jſs Aut. talis alterius.
L. L. —— —— gtt x ad xxv. vel
Syr. Diacod. —— ʒjſs. ad ʒvi.
Aq. Menth Spir. vel. Nuc. Moſch. vel.
Cinam. Spir. —— ʒij. Aut. T. A.
Syr. Moror. — — ʒij.

If a Sweat can by theſe Means be produced, it is to be kept up by Medicines producing equable Circulation.

(No. 4.) ℞ Tart. Emet. gr. ¼ ad gr. j.
Sach. Alb. gr. x m Ft.
Pulv. Capt. om. iv. ta. vel Sexta Hora cum Hauſt. ſequent.
℞ Aq. Menth. vulg. ℥iſs. Nuc. Moſch. ʒij. Syr. Moror. — ʒij m Ft. Hauſt.

If the Vomiting ſhould continue, it might perhaps be adviſeable to add a few Drops of Laudanum to the Draught.

The Patient is to drink copiouſly of any warm watry Fluid at the ſame Time.

If by this Means the Fever ſhould be carried off, the following Medicine may be made Uſe of to prevent a Relapſe.

(No 5.) ℞ Pulv. Cort. Peruv. Subt. ʒſs ad ʒj.
Ft. Pulvis
Vel. Cum. Syr. Croc. Q. S. ft. Bolus.
Vel. ℞ Aq. Alexit. ℥jſs.
Pulv. Cort. Peruv. ʒſs ad ʒj.
Syr. e Cort. aur. } a a ʒij.
Aq. Cort. aur. Spir. }
Ft. Hauſt.

Capt. om. ivta vel. vjta Hora.

If the Symptoms indicating great Strength ſhould be very violent, it may be neceſſary to take away a little Blood. No ſolid Food is to be uſed.

From the Deſcriptions given, and Methods of Cure applied by the different Authors, who have treated of the PLAGUE in the cold Climates, the above ſeems to be the moſt promiſing Means of ſaving Patients, who would otherwiſe certainly be deſtroyed from the Violence of the Diſeaſe.

An Inflammation of a lymphatic Gland, ſometimes ariſes at the Beginning, and diminiſhes or entirely carries off the Fever. This Inflamation is never to be taken off, but always brought to Suppuration.

The

The VIOLENT FEVER;

Otherwiſe called the

PUTRID, MALIGNANT, JAIL, CAMP, HOSPITAL, or PETECHIAL FEVER.

Cauſes.

IT generally proceeds from the ſame Cauſes that produce the Plague, only not applied in ſo great a Degree.

Diſtinction & Prognoſis.

This Fever attacks the Patient with violent Symptoms of the firſt Stage; particularly thoſe mark'd *(a)* The Cold often returns alternately with the Heat, for the 1ſt 24 Hours; the Symptoms indicating Strength ſometimes appear, but ſeldom to any great Degree; the Fever increaſes greatly every Evening, ſo that *Delirium* comes on about the Beginning of the ſecond Week; and the other Symptoms of the firſt Stage encreaſe with ſuch Violence, as to deſtroy the Patient: Otherwiſe each Exacerbation becomes leſs towards the End of the ſecond Week and afterwards; the *Delirium* is converted into a *Stupor*; the Criſis happens from the Beginning of the ſecond, to the End of the third Week; or the Diſeaſe gradually leaves the Patient, with very imperfect critical Symptoms. From the middle of the ſecond Week, and ſometimes ſooner, the Symptoms of Weakneſs, particularly thoſe indicating Putrid Blood, begin to appear; eſpecially if Bleeding and Stimulants have been uſed, and often ariſe to ſuch a Height as to kill the Patient.

Sometimes, altho' ſeldom, at the Beginning an Inflammation ariſes, alleviating, but hardly ever intirely terminating, the Diſeaſe.

When Putrid Vapour is applied, it ſometimes produces at firſt, only ſome of the Symptoms of the firſt Stage, which

which continue ſeveral Days, till a freſh Cauſe of Fever gives Occaſion to a conſiderable Increaſe of them followed by a hot Fit, and the Fever proceeds as above.

General Prevention.

The Air is frequently to be changed in Places where it is liable to putrify, and the putrid Matter that has been generated, is to be deſtroyed by Acids converted into Vapor.

Particular Prevention.

As in the PLAGUE.

Cure.

If ſome few Symptoms only ariſe from putrid Vapor, they are readily carried off by the Emetic (No. 2.) and Draught (No 3.) or by (No. 4.)

No Blood is to be taken away, unleſs the Symptoms indicating great Strength, which are enumerated Page [5] be extremely violent, and even then, with Caution; and the Bleeding hardly ever requires to be repeated.

We are to endeavour to leſſen the Fever at the Beginning, by the Emetic (No. 2.) and the Stomach is to be ſettled by (No. 3.) but Sweating is not to be attempted.

Untill the fifth Day of the Diſeaſe, if the Fever continues increaſing violently; in the Evenings following that in which the Emetic was given

(No. 6.) ℞ Sach. Alb. gr. xx.
Tart. Emet. gr. ſs. ad gr. j. divid. in Pulv. ij. Capt. unum Hora viij alterum Hora xj. Veſpert. cum Hauſt. (No. 4.)

At the Beginning, thro' the whole Periods, gentle Sedatives may be uſed, as

(No. 7,) ℞ Aq. Menth, vel Cinnam. ten. vel Alexit. ℥iſs Succ. Lemon. vel Mororum, vel Acid. Vitr. vel Mur. Q. S. ad gratam acedin. Syr. Violar. — — ℥j.
Ft. Hauſt. om. ivta vel vjta Hora Sumend.

If

If the Belly is not kept ſufficiently open, to one of the Draughts may be added

(No. 8.) Add. Hauſt. Suprapræſcrip.
Sal. Glauber. ver. ʒ j ad ʒ ij vel Tart. Vit. ʒſs ad ʒj vel Tart. Solub. ʒi ad ʒjſs.

Small Doſes of neutral Salts have been exhibited at this Time of the Diſeaſe, but for the moſt Part without Advantage, and ſometimes with Detriment to the Patient.

If the Symptoms of the firſt Stage ſhould encreaſe with great Violence in the ſecond Week, particularly Delirium, Bliſters are often applied to the Head and Back, with great Advantage; but bliſtering the Patient from Head to Foot from this Time to the End of the Diſeaſe, exhauſts his Strength, quickens the Pulſe, produces Petechiæ, and renders the Syſtem extremely irritable.

Acids are continued now, and to the End of the Diſeaſe, with ſenſible Advantage.

The Belly is to be kept open if neceſſary by Glyſters, from this Time to the End of the Diſeaſe.

(No. 9.) ℞ Decoc. commun. pro Clyſm. ℥ viij ad ℥ xiv.
Elect. Lenetiv. ʒvj ad ℥jſs vel Sal Glaub. ver. ℥ſs ad ℥j.
O. Lin. ℥jſs.
m Ft. Enem. pro re nata. veſp. injic.

The greater the Weakneſs the leſs of the Purgative is to be apply'd.

As the Symptoms indicating Weakneſs appear, the Strength is to be ſupported.

Bibat Æger Vin. ℥ſs ad ℥ij bis ad Sexties Indies.

(No. 10.) ℞ Aq; Menth. ℥jſs
Moſch. Chin. gr. ij ad gr. vi, vel Camph. amygd. Solut. gr. ij ad gr. x, vel Alk. volat. mit. gr. x ad xx. Syr.

Syr. e Cort. Aur. } aa ℥ij
Aq; Menth. piper }
m Ft. Hauſt. cap. vj ta quaque horâ.

If theſe Medicines render the Pulſe quicker, they are to be changed;

And the ſimple Stimulants are, I think, to be avoided: if any is given, the Rad. Serp. Virg. will be the moſt uſeful and may be added to (No. 7.)

If in the latter Part of the Diſeaſe with great Weakneſs, there be conſiderable Remiſſion without Stupor.

(No. 11.) ℞ Aq. Menth. Vulg. ℥jſs
Pulv. Cort. Peruv. gr. xv ad ℥ſs
Syr. e Cort. Aur. ℥ij
Aq. Menth. Piper. ℥j m F. Hauſt.
Vel Loco Pulv. Cort. Peruv. decoct. ſequent. ℥ſs ad ℥j

(No. 12.) ℞ Cort. Peruv. Craſs. Pulv. ℥j
Aq. Font ℔ij.
Coquantur Simul ad ℔j. S. A.

No Criſis is to be attempted to be brought on towards the End, by Medicines producing equable Circulation.

The Food throughout the Diſeaſe, is to be of thoſe Articles marked *(a)* *(b)*

The INFLAMMATORY FEVER

S Produced in very ſtrong Habits by all the Cauſes of FEVER, frequently by Cold, but ſeldom by putid Vapour. *Cauſes*

The Symptoms of the firſt Stage are ſlight, particularly oſe marked *(a)* but they are followed by a violent hot t, in which all the Symptoms indicating Strength appear a great degree, the whole Fever being often entirely rminated by Topical Inflammation or Hæmorhage, leavg only the *Inflammatory Diatheſis*; or in a few Periods the atient is deſtroyed by the ſtrong Action of the Veſſels mediately affecting the Brain, or depriving him inrely of Sleep, and in conſequence of that, cauſing Derium, violent Convulſions, and Death. If none of eſe things happen, in the ſecond Week the Strength miniſhes, the Fever goes off with a perfect Criſis; or perfect critical Symptoms appear after each Exacerbaon, theſe becoming gradually leſs. The white Cruſt vering the Tongue in falling off, leaves ſometimes tle Exulcerations behind. *Diſtinction & Prognoſis.*

By avoiding the Cauſes of Fever. *Prevention.*

The Action of the Arteries is to be diminiſhed, *Cure.*

Ft. V. S. ad ʒviij vel ʒxvj bis ter quaterve repet. pro re nata.

(No. 13.) ℞ Aq; Alexit. ʒjſs.
Sal. nitr. ℈j ad ℈ij, vel Sal. Alk. V. Fix. ſucc. Limon. Satur. ℈j vel Spt. Minderer ʒſs.
Syrup Limon. ʒij m Ft. Hauſt. om. ivta vel vjta Hora Sumend.

The Belly is to be kept open by (No. 8)

The Action of Blifters, if there be no particular In flammation, is extremely uncertain.

If when the Fever is almoft entirely gone off, th Delirium from want of Sleep continues, the Syftem be ing greatly weakened, after all Other Means of pro curing Sleep have been tried and have failed, Opiate may be ufed fometimes with advantage.

If any Exulcerations arife in the Mouth, they ar cured by

(No. 14.) ℞ Træ Rofar. ℥viij.
Mel. Rofar. ℥j ad ℥ij m Ft. Gargarifm utatur fæpius.

The Food in the Inflammatory State is to be of th Kinds marked *(a)*; when the Strength diminifhes; tho marked *(b)* may be ufed.

When the Fever is entirely removed, Relapfes a prevented by (No 5.)

This Fever after the *Inflammatory Diathefis* is co quered, ends fometimes as the Violent Fever, and this cafe is to be treated in the Same Manner.

Th

The Low Nervous FFVER.

N this Fever the Irritability of the Body is very great; in consequence of which, the Periods throughout the whole Disease are often irregular, and not well marked.

Persons predisposed to the Disease.

It attacks People of Phlegmatic Temperaments; or those weakened by using Food not sufficiently nourishing for their Exercise, by great Evacuations, long continued Use of Stimuli, &c.

Causes

It may be produced by all the Causes of Fever; but arises most commonly from Affections of the Mind, and from Cold.

Distinction & Prognosis.

For most part at the first Attack, and in some of the following Exacerbations, the Symptoms of the first Stage are few, and those not violent, and they are followed by very slight hot Fits: the Periods however increase gradually; but it is often the End of the first Week before the Disease is compleatly formed, or gives the Patient so much Uneasiness as to make him apply for Relief. From this time it continues to encrease considerably, and is attended with the Symptoms of Weakness, particularly those indicating great Irritability, which often arise to such a Height, as of themselves, or with the Fever, to destroy the Patient. The Crises happen generally in the third Week, or later; or if there be no compleat Crisis, the Exacerbations become gradually less violent, and more irregular, and at last leave the Patient: In this case the Disease is often drawn out to a great Length.

If the Patient be very Weak at the firſt Attack, both the Symptoms of Weakneſs and Fever are ſenſibly greater at the Beginning, and the Diſeaſe is much ſhortened.

Prevention The Patient is to be ſtrengthened (Vid. Hiſt. Diſeaſe) and the Cauſes of Fever are to be avoided.

Cure The Fever at the Beginning may often be removed, or ſo much leſſened, as to be of little Conſequence; *(a)* by the Emetic (No. 2) and Draught (No. 3); or *(b)* by (No 6); or *(c)* even by (No. 4); or *(d)* by the neutral Salts with gentle Diaphoretics, as

(No. 15) ℞ Aq; Menth; vulg; ℥jſs
Alk. V. Fix: Suc: Limon. Satur. ℈j
Pulv. Contrayer. — gr. xv: ad ℥ſs
Syr. Croc. } aa ℥iſs
Aq; Menth. Piper. }
m Ft. Hauſt. Capt. ivta quaque Hora.

If *(c)* *(d)* fail of producing the deſired Effect, they frequently encreaſe the Weakneſs and Irritability conſiderably, towards the End of the Diſeaſe.

If the Head ſhould be much affected towards the Beginning, a Bliſter applied to it or to the Back, often diminiſhes the Fever greatly.

If by any of theſe Means the Fever is carried off, it is prevented from recurring by (No. 5)

A Stool if neceſſary, may be procured by gentle Laxatives at the Beginning.

(No. 16) ℞ Aq; Menth; vulg: ℥jſs
Rad. Rhei Pulv: gr: x ad xviij
Tr^æ Sen — — —
Syr: e Cort: Aurant: } a a ʒj
m Ft. Hauſt: Capt. pro re nata.

Afterwards by Glyſters (No. 9.)

When the Weakneſs begins to appear in any great degree, the Patient is to be ſupported in the ſame manner as in the violent Fever: But ſimple Stimulants are to be given with ſtill greater Caution, on account of the Irritability.

If at this time any conſiderable Remiſſion ſhould appear, the Bark as in (No. 11) may be given every three or four Hours, during ſuch Remiſſion, with advantage.

The Food is to be of thoſe Articles marked *(a) (b) (c)* and even *(d)* if the Stomach will bear it, and ought likewiſe to be acidulated.

N. B. *It is to be remarked, that theſe Fevers are all of the ſame Species, and are only varied by the Violence of the firſt Stage, and by the Strength or Weakneſs of the Patient, which as they differ under different Circumſtances in a great many Ways, ſo they produce an almoſt inconceivable Variety in the Diſeaſe.*

INTERMITTENT FEVERS.

THEY happen from all the Cauſes of FEVER, but generally from Cold.

Cauſes

Diſtinction & Prognoſis.

The Periods for moſt part, even from the Beginning, are violent in all their Stages; they are ſometimes perfectly diſtinct at the firſt, but frequently run more or leſs into one another, and are attended with the Symptoms indicating Strength, eſpecially in the Spring, and in cold Climates: Theſe gradually decreaſe, the Periods become more diſtinct, and the Fever often changes its Type. In many Caſes the Intermiſſions become perfect, and continue ſo for ſome time; till the Symptoms of Weakneſs appearing, the Fits re-double, anticipate, grow irregular, and leave the Patient, or run into one another, and deſtroy him.

The Weakneſs occaſioned by this Diſeaſe is great, and often not to be recovered without Difficulty. It renders the Patient ſubject to Dropſies, and other Diſeaſes ariſing from it, which are frequently fatal.

If an *Intermittent* attacks a Weak Patient, the Intermiſſions for moſt part are not perfect even from the firſt, and they become gradually leſs ſo, till at length the Patient ſinks.

If one Fit of Fever attacks a Patient ſo as that the Period is compleated in a few Hours, and no Symptom left, it ſeldom recurs, and never without a freſh Cauſe.

When

When a Spaſmodic Contraction of the *Ductus Choledochus* occaſions the throwing a Quantity of Bile into the Blood Veſſels, from whence it is ſecreted into the different Glands, the Intermiſſions are ſometimes rendered leſs perfect.

The Cauſes of Fever, particularly Cold, are to be guarded againſt. (Vid. the Catarrh.) *Prevention*

In Habits where there is no great Weakneſs, a perfect Intermiſſion is to be procured (1) by cleanſing the *Primæ Viæ*; for which purpoſe the Emetic (No 2) may be given in the Intermiſſion; a gentle Purgative may likewiſe be uſed. *Cure*

(No. 17) ℞ Infuſ. Sen. ℥jſs
P. Rad. Rh. ℈j ad ℥ſs
Syr. Roſ. } a a ℥ij m
Tr[æ] Sen. }

Capt. Intermiſs. Temp. ita ut Purgatio ex toto ceſſaverit ante Paroxyſmi Acceſſionem.

(2) If the Symptoms of Strength are violent, Bleeding will be uſeful for the ſame purpoſe.

(3) By Medicines producing an equable Circulation.

(No. 18) ℞ Aq; Menth. vulg. ℥jſs
Tart. Vitr. ℥ſs ad ℈ij vel Sal. Amm.
℈ij ad ℥j vel Tart. Emet. gr. ¼ ad gr. j
Aq; Menth. Piper. } a a ℥ij m
Syr. Moror. }

Capt. om. vta vel vjta Hora.

The Emetic as above, will likewiſe act in the ſame manner.

The

It ſometimes happens that a Perfect Intermiſſion being procured by theſe Means, the Diſeaſe leaves the Patient.

If notwithſtanding ſuch Intermiſſion the Fever continues, the Fit is to be prevented

(1) By Medicines removing Irritability.

(No 19) ℞ Cort: Peruv: Opt: Subt: Pulv: gr: xv ad ʒij
Capt: e Cyath: vin: generoſ: Horæ
Quadrantis ad hor: iv Intervallo ita ut
Æger ſumat: ʒvi ad minimum inter duos
Paroxyſmos.

As great a Quantity is to be given at a time as the Patient's Stomach will bear; and the Intervals between the Doſes are to be as long as poſſible.

If any Symptom of the Fit recurs, the Bark is to be omitted till the Time of the next Intermiſſion, and is then to be repeated in the ſame Quantity and Manner as before, provided the Paroxyſm has been greatly leſſened: The ſame Meaſures are to be purſued during the time of the third Period, when the Medicine is to be omitted for one or two Periods; and this is to be practiſed twice or thrice, (at longer Intervals each Time.)

If there be any Symptoms of Inflammation in the Breaſt, they ſhould be removed before the Exhibition of the Bark.

Symptoms of Bile in the Blood Veſſels, are not to be attended to any farther than as they render the Intermiſſions imperfect.

If the Bark has been given imprudently, *viz.* when the Patient is ſtrong and no perfect Intermiſſion has taken

place,

place, we are to omit it till ſuch Intermiſſion is procured by the above Means; but even then it acts leſs powerfully, than it would otherwiſe have done.

If the Bark purges, from five to ten Drops of Laudanum may be given three or four times a Day.

If the Patient continues long Bound, a Stool may be procured by a ſmall Doſe of Rhubarb or Aloes.

If the Stomach will not bear the Powder, the Decoction or Extract may uſed; or it may be applied in a Glyſter, or even externally, though theſe Methods are never ſo ſure of Succeſs.

If the Diſeaſe attacks a Weak Patient, or has continued till a ſtrong Habit is much weakened, the Bark is to be given at the Time of the beſt Remiſſion; it commonly brings on a ſevere but regular Fit, and upon continuing its Uſe the Fever leaves the Patient.

(2) By counteracting the cold Fit at the Time of its coming on.

(No. 20) ℞ Aq; Cinnam: Spirit: ℥j ad ℥ij
Menth: vulg: ℥j
Tart: emet: gr: ſs ad gr: jſs
L: L: gtt: xx ad xl
Syr: Croc: ℥ij m
Capt: ante Paroxyſmi Acceſſionem; Æger quoque in Lecto detineatur.

When the Diſeaſe is cured, or the Fits become ſlight and irregular, the Patient is to be ſtrengthened (Vid. Hyſteric Diſeaſe.)

The

The Symptoms, Diſtinctions, Prognoſtics, and Indications of CURE, with the REMEDIES in INFLAMMATIONS.

Symptoms

IN every INFLAMMATION, the Pulſation of the Arteries is increaſed; there ariſe a greater Degree and Senſe of Heat; a greater Redneſs; an Itching, ſoon converted to an acute and often a throbbing Pain, augmented on the Part's being ſtretched; a Swelling produced by a Diſtention of the Capillary Veſſels and the Veins, and ſometimes by an Extravaſation of Fluids; alſo a Contraction, and In-ability of Motion, in the muſcular Fibres.

More Fluids circulate thro' the Part, and more are ſecreted in it when inflamed, than when in its natural State.

The Senſibility and Irritability are encreaſed by Inflammation, and are produced by it in Parts where they they did not ſubſiſt before.

Cauſes

INFLAMMATION is produced by

1. External *Stimuli*, (Mechanical, Chemical, or Medical.)
2. Diſtention.
3. Diviſion of an irritable Part.
4. *Mucus* thrown out of the Follicles of the mucous Glands, before the neutral Salts are abſorbed.

Theſe Cauſes operate more powerfully on Habits in which the Veſſels have great Strength or are acting ſtrongly; and on Parts that are very irritable or ſenſible.

Effects of Inflammation on the Syſtem.

INFLAMMATION *(a)* ſometimes has no Effect on the Syſtem in general, *(b)* ſometimes it produces *Inflammatory Diathęſis*; *(c)* ſometimes Symptoms of Irritation.

(a) In

(a) In Habits not very ſtrong, if the Inflammation is ſmall, and the Pain not violent, or if the Part is eaſily diſtended, the Syſtem is not affected.

Inflammatory Diatheſis

(b) In ſtrong Habits, or where the Pain is great, and the Patient not very weak, it produces *Inflammatory Diatheſis*, by ſome called *Inflammatory Fever*; the Symptomsof which are, a hard, and for moſt Part, a ſtrong, full and quick Pulſe; Blood when taken from the Arm more fluid, ſo that the red Globules fall to the Bottom, the coagulable Lymph coagulating afterwards ſtrongly, and adhereing to them, ſo as partly to form a Cruſt on the Top, called by ſome the *Buff*; a full and frequent Reſpiration, attended ſometimes with a Cough; a dry white Tongue and Thirſt; Reſtleſſneſs; Urine becoming turbid when Cold, and ſometimes depoſiting a lateritious Sediment; univerſal redneſs, Heat, and Swelling; Watchfulneſs and *Delirium*; *Stupor*, with red, ſwelled, protuberant, and often dull Eyes, ſometimes converted into a violent, ſometimes into a low, muttering Delirium, often at laſt terminating in Convulſions and Death.

Inflammatory Diatheſis differs eſſentially from Fever, in as much as the Symptoms of the firſt Stage do not neceſſarily proceed, or accompany it, and as it does no encreaſe by Exacerbations followed with Relaxations.

It is excited by many Cauſes, beſides Inflammation, (Vid. Pulmonary Conſumption.)

Symptoms of great Irritation.

(c) Where the Pain is very great, or the Habit very weak and irritable, the Symptoms of Irritation take Place, *viz.* a very ſmall, quick Pulſe; Faintings, coldneſs of the Extremities, eſpecially when an internal Part is affected; Delirium; Convulſions, or long continued Spaſmodic Contraction of the Muſcles, ſometimes terminating in Death.

Beſides

Beſides theſe, various other Symptoms are often produced, when particular Parts are inflamed, and their Functions thereby deſtroyed or hurt.

Progreſs and Termination.

If the Cauſe of an Inflammation is removed, it ſometimes goes off ſoon; ſometimes continues for a long Time, or terminates in another Diſeaſe.

(A) It goes off by

(a) Simple Reſolution, when upon removing the Cauſe, the Symptoms diminiſh gradually, and at laſt leave the Patient.

(b) Reſolution by Evacuation, (1) when the Mucous Glands of the Part inflamed, or near it, do in Conſequence of the Inflammation ſecrete a conſiderable Quantity of *Mucus*, at firſt thin, and tranſparent, afterwards becoming viſcid, and changing its Colour to white, greeniſh, or yellow, often ſtreaked with Blood; (2) when an Hæmorhage ariſes in the Part affected; (3) when a large or long continued Evacuation happens from ſome Part of the Body.

(c) Reſolution in Conſequence of Fever, when a cold Fit of Fever is produced and carries off the Inflammation.

(d) Metaſtaſis; when an Inflammation ariſes in another Part, and carries off the Primary one.

N. B. In all theſe Caſes *Calloſities* are ſometimes left.

(B) The Inflammation continues for ſome Time without Alteration, or terminates ſoon in Suppuration, Gangrene, or Scirrhus.

(a) The Inflammation continues for a conſiderable Time without greatly encreaſing or diminiſhing, and without terminating in another Diſeaſe.

(b) Suppuration; (1) when a Quantity of Blood is

thrown

thrown out into any Cavity (the Inflammation continuing) it ferments, and is converted into *Pus*, which afterwards acts as a Ferment on the ſolid Parts, and gives occaſion for the Converſion of the Whole into a Matter, ſimilar to itſelf, the Symptoms of the firſt Diſeaſe going off. Sometimes a Membrane is formed round the Pus, which prevents it from acting upon the circumjacent Parts; but more frequently it likewiſe ferments with them, till it has made itſelf an Opening by which it is evacuated. This happens ſooner or later according to the Diſtance of the Inflammation from the Skin, or the Surface of a Cavity opening externally. While it is taking Place, the *Pus* ſometimes ſeperates the Muſcles and other Parts from one another, by deſtroying the Cellular Membrane.

After the *Pus* is evacuated, a freſh Inflammation ariſes; more Matter is formed on the Surface of the Cavity; a Quantity of Fleſh grows up and fills it; afterwards a Scarf Skin covers the Whole, and the Part is reſtored.

Sometimes the Surface of the Cavity continues to be deſtroyed; the Ulcer is enlarged; a Portion of the Matter is abſorbed, and producing Hectic Fever, the Patient dies. (Vid. Pulmonary Conſumption.)

(b) (2) When a Quantity of Fluid remains on the Surface of an Inflamed Membrane or other Part, it is converted into *Pus*, which ſometimes ferments with the ſolid Parts underneath, and deſtroys them.

(c) Gangrene and Mortification: In this Caſe the Symptoms of Inflammation go off, and the Part becomes paler or of a brown Colour, Flaccid, and at laſt Black; the Scarf Skin is raiſed up in large Puſtules,

which contain a ſemi putrid *Ichor:* At laſt the whole Part putrifies; and the Gangrene and Mortification ſpread, until they deſtroy the Patient, by affecting a Part neceſſary to Life, or elſe by producing a Fever attended with the Symptoms of Irritation.

This Diſeaſe ariſes without any previous Inflammation, from Preſſure, Ligatures on the Veins, Weakneſs, Extravaſation of great Quantities of Blood, and the Application of Sedatives.

(d) Scirrhus and *Cancer.* When the Inflammation is carried off, but a Quantity of Matter is left in the Secretory Veſſels of ſome Gland, occaſioning a Hardneſs and Swelling This often continues for a conſiderable Time without Alteration; but upon the Application of any *Stimulus*, the Matter depoſited ferments, and is converted into a peculiar Fluid inflaming the Part, and producing an Ill-conditioned Ulcer called an open Cancer. In this Ulcer Good *Pus* is never formed; but the Patient is exhauſted and deſtroyed by the Pain, the Evacuation and the *Stimulus* ariſing from the Cancerous Matter abſorbed.

Scirrhus ariſes without any previous Inflammation from the proper Fluid ſtagnating in the Gland, or Extravaſation from Contuſion or *Venous Plethora.*

Prognoſis.

Simple Reſolution takes place when the Syſtem is not Strong, when the Inflammation is but ſmall; when it affects the Skin only, or a ſoft Part, or one not very ſenſible.

Reſolution by Evacuation is produced (1) when the Mucous Membrane is primarily or ſecondarily inflamed, or when in conſequence of the Inflammation, the Mucous Glands near the Part affected, are ſtimulated to a

greater

greater Secretion; (2) when the Capillary Veſſels of the inflamed Part are ſpread on a Membrane conſtantly moiſtened, and in a Cavity opening externally; (3) is accidental.

Reſolution in conſequence of Fever, happens principally when the Inflammation aroſe at the beginning of the hot Fit, diminiſhing but not entirely carrying off the Fever: A Febrile Exacerbation, ariſes in the Evening naturally, or from ſome new Cauſe, and takes off the Inflammation.

Metaſtaſis is accidental. The nearer the ſecond Inflammation is to the original One, the more violent it is, or the greater the Senſibility of the Part it affects; the more certainly it carries off the firſt Diſeaſe.

(B) (a) Happens if the Skin be the Part affected, the Diſeaſe not violent, and the Cauſe be frequently repeated.

Suppuration happens (1) when the Cellular Membrane or Parts covered with it, are affected: It takes Place more readily when the Patient is young, or of a Sanguineous Temperament, or of a Strong Habit, or when the Diſeaſe happens in the Spring; (2) when the Skin is inflamed ſo as that the Scarf Skin is raiſed from it; or when a Mucous Membrane is affected and the Inflammation continues, notwithſtanding the encreaſed Secretion of Mucus; or in Wounds.

Gangrene and *Mortification* happens when the Skin is the Seat of the Diſeaſe, or when the Inflammation is violent ſo that the Part is greatly compreſſed, or when any conſiderable external Preſſure is applied.

Scirrhus

Scirrhus happens when a Gland is the Seat of the Diſeaſe, and the Inflammation terminates without coming to Suppuration.

Indications of Cure in Inflammations.

Cure

RESOLUTION is to be procured if poſſible.

1. INDICATION. The Cauſes firſt producing the Inflammation, and thoſe which afterwards continue it, are to be removed.

The Method of removing many of the Cauſes is obvious. Peculiar Means of taking off ſome of them, are theſe that follow.

(A) Stimulating Fluids, formed or ſecreted on the Surface of an irritable Membrane, are prevented from acting.

(a) By covering the Membrane ſo as that they cannot touch it, (1) with expreſſed Oils, ſuch as *Sperma Cæti, Oleum Amygdalarum, Oleum Olivarum, Sevum Ovillum, Axungia Porcina, Butyrum*; or (2) with Vegetable Mucilages, as, *Infuſum Seminum Lini vel Cydoniorum, Decoctum Radicis Altheæ, Sacharum.*

(b) By deſtroying them with *Preparationes Mercurii, &c.*

(c) By taking off the Irritability of the Membrane, with *Cortex Peruvianus, Præparationes Plumbi, Stanni, &c.*

(B) Diſtention of the Internal Veſſels, is removed by reſtoring the Circulation on the External Surface of the Body. (Vid. Fevers Ind. v.)

(C) The Endeavour to diſtend the Capillary Veſſels beyond their Tone, is avoided by relaxing them with

Aqua tepida ſcilicet ad Caloris Corporis Humani Gradum, Olea Expreſſa pura. (vid. *A. a. j.*)

II. INDICATION. The ſtrong Action of the Arteries is taken off.

(A) By emptying them. The Methods are *(a) Venæ Alicujus majoris in Brachio, vel Corporis alia aliqua parte Sectio ita ut quam citiſſime magna Sanguinis Copia eximatur; (b) Venæ vel Arteriæ Sectio, vel Hirudinum Applicatio ad Partem affectam;* *(c)* Purging with *Salia Neutra, Tartarus, Manna, Caſſia Fiſtularis, Fructus Tamarinderum, Radix Jalappæ.*

(B) By the Application of Sedatives to the Stomach, as, *Acidum Vitriolicum, Muriaticum, Limonum; Infuſum Theæ, Sarſæ; Aqua Calida.*

(C) By the Application of Sedatives to the Part, as *(a) Herbum Abſinthii, Matricariæ; Radix Bryoniæ albæ. Flores Roſarum rubrarum (b) Acidum Vitriolicum, Muriaticum, Acetoſum; Alcohol; vel Farina Avenæ; Aqua ſoluta vel Commixta. (c) Præparationes Cupri, Plumbi, Zinci; Alumen.*

(D) By raiſing an Inflammation on the Skin near the Part originally affected, (except when the Skin itſelf is inflamed) by Means of *Cantharides, Semina Sinapi, Cauterium actuale, Acida, Alkali Volatile, Frictio.*

III. INDICATION. Is the Management of Reſolution by Evacuation from the mucous Glands.

(A) The Evacuation is produced or aſſiſted by *Stimulants*, as *Radix Scillæ, Gum Ammoniacum, Balſamum Tolutanum, Radix Alii, Acidum Muriaticum, Limonum.*

B (Vid. Ind. 1ſt. *A, a,)*

(C) The Secretion of the *Mucus* is to be ſtopped, after the Inflammation is carried off, *(a)* by ſtrengthening the Syſtem; *(b)* by applying Aſtringents, as (1) *Salia et Calces Metalorum,* (2) *Balſamum Copaibæ, Peruvianum, Canadenſe, Terebinthini.*

Where

Where the Inflammation cannot be cured by *Reſolution*; or when an external Inflammation has ariſen in the hot Fit of a Fever, and has diminiſhed or entirely carried it off; and ſometimes in Inflammations occupying Glands, *Suppuration* is to be produced, in Order to which;

IV INDICATION. The Inflammation is to be kept in a proper Degree.

(A) If it is too violent and tending to Gangrene, it is to be diminiſhed. (Vid. Ind. 2.) *(A. a. c.) (C. a.)* (Ind. 1ſt. *C.)*

(B) If it is too ſlight, it is to be encreaſed by Stimulants, *(a)* applied to the Stomach, as (1) *Cortex Peruvianus*, (2) (Vid. Ind. 3. *C. b.* 2) (3) *Belladona, Solanum Cicuta.*

(b) Applied to the Part, (1) *Farina Lini, Fænugreci*; *Oleum Lini.* (2) *Galbanum, Terebinthinum, Thus.* Theſe, though ſometimes uſed, are generally too powerful.

V. INDICATION. If a Gangrene is come on, it is to be prevented from ſpreading.

(A) By *Vinum, Moſchus, Camphora, &c.*

(B) By *Cortex Peruvianus.*

(C) By ſtimulating the Part with *Oleum Terebinthini, Scarificatio, &c*

VI. INDICATION. The Management of a *Scirrhus.*

(A) It is prevented by producing *Suppuration.*

(B) If it be already formed, and (1) is large, encreaſing, and detached, it is to be cut out; or (2) if it is ſmall, and continues of the ſame Size, nothing is to be done; *Diſcutients* are dangerous.

VII. INDICATION. The Management of a *Cancer.*

(A) Good *Pus* is produced by (Vid. Ind. 4, *B. a.* 3.) *Arſenicum.*

(B) The Pain is relieved by deſtroying the Senſibility of the Part with *Præparationes Plumbi, Stanni.*

The INFLAMMATION of the BRAIN.

Cauſes.

IT ariſes, from an encreaſed Action of the Veſſels in the Syſtem, produced by hard Drinking, Anger, and indigeſtible or viſcid Food in the Stomach; from an expoſure of the Head to the Sun; or from *Inflammatory Diatheſis* happening at the Beginning of a Fever, or in any other Diſeaſe.

Symptoms and Cauſes of Delirium.

Delirium comes on with Watchfulneſs, or reſtleſs and un-refreſhing Sleep with Dreams, loſs of Memory, the Patient's picking Hairs from the Bed-Cloaths; Inſenſibility to external Objects; the Functions of the Body are diſturbed; the Imagination hurried, and Diſcourſe incoherent.

It may happen from Fever, *Inflammatory Diatheſis*, great Irritability, and *Mania*, without any Topical Inflammation of the Brain.

Symptoms

There ariſes a throbbing Pain in the internal Parts of the Head, which, if the *Meninges* are affected, is acute; if the Subſtance only, obtuſe, and ſometimes but juſt ſenſible. The Eyes for the moſt Part are red, and ſwelled, Tears frequently flow from them, and ſometimes a watery *Mucus*, or Blood drops from the Noſe: The Face is often fluſhed. Theſe Symptoms are attended with more or leſs of the *Inflammatory Diatheſis*, according as the *Meninges* or Subſtance of the Brain are affected. They are followed by *Stupor* and *Delirium*, which ſometimes becomes violent, and is attended by Convulſions; and in any Caſe, unleſs ſome natural or artificial Means of *Reſolution* are applied, the Patient for moſt Part is cut off. Sometimes however, the Inflammation goes on to Suppuration, eſpecially if the Subſtance of the Brain is affected: In that Caſe, the Symptoms abate, a

Stupor

Stupor only being left: But in proceſs of Time, unleſs the *Pus* be abſorbed, the whole Brain is deſtroyed.

It is prevented by avoiding or counteracting the Cauſes. *Prevention.*

The moſt powerful Means of *Reſolution* are immediately to be employed. *Cure.*

Fiat V. S. e Brachio ad ℥xij, xx, vel xxx pro Diatheſi Inflammatoria aut Corporis Viribus et repetatur pro re nata.

After the Strength of the Syſtem or *I. D.* are diminiſhed.

Fiat Venæ Sectio e Vena Jugulare, vel Arteria Temporale; vel Temporibus applicentur Hirudines.

At the ſame Time Evacuations from the Inteſtines may likewiſe be performed with Advantage.

(No 21) ℞ Infuſ. Tamarind. ℥iv.
Sal. Glaub. ver. ℥ſs ad ℥iſs.
vel. Tart. Solub. ʒij ʒvj
vel. Polychreſt. Rupell. ℥ſs ad ℥j
Syr. Roſar. ʒij
m Ft. Hauſt. Purgans Capt. Poſt V. S. et repet. pro re nata.

When the Purgative is not operating (No. 4.) or (No. 13.) may be given.

After having diminiſhed the Strength of the Veſſels,
Applicet. Emplaſt. Epiſpaſt. Capite raſo.

The Food throughout the Diſeaſe is to conſiſt only of Decoctions of Farinaceous Seeds in Water, acidulated.

N. B. *When an Inflammation ariſes at the Beginning of a Fever, and It as well as the* Inflammatory Diatheſis *continues, ſuch Fever is alſo to be attended to in the Cure of the Inflammation, and the Treatment varied according to the Violence of the Fever.*

The

The ANGINA.

(*Commonly called the Inflammatory Angina.*)

Definition.

IT is an Inflammation of any of the Parts about the Throat, excepting the Skin and mucous Membrane;

Cauſes.

It ariſes from Cold, Diſtention of the Parts; *Stimuli* applied to them, and the other Cauſes of Inflammation.

Theſe act more powerfully in People of Sanguineous Temperaments, in the Spring, and in thoſe affected with *Inflammatory Diatheſis*, eſpecially at the beginning of an Inflammatory Fever.

Symptoms.

The Symptoms are thoſe common to Inflammation; or thoſe ariſing from the Paſſage of the Air into the Lungs, of the Food or Drink into the Stomach, of the Blood in the Jugular Veins, or the Serum in the Lymphatics of the Neck's, being obſtructed.

The common Symptoms of Inflammation are, (according to the Part affected) either external Swelling, with Redneſs and Pain, gradually encreaſing and becoming harder; or Swelling with Redneſs, and Pain in the Tonſills, *Fauces*, *Velum pendulum Palati*, about the Root of the Tongue, or *Pharynx*, gradually encreaſing; or laſtly, a very acute Pain in the Region of the *Larynx*, without any external Appearance.

If the mucous Membrane is affected, a larger Quantity of thick, viſcid Mucous is ſecreted.

More or leſs of the *Inflammatoay Diatheſis*, is produced according to the Part affected, or the Strength of the Patient.

When an *Angina* ariſes at the Beginning of a Fever, the Fever is ſometimes entirely terminated, ſometimes only diminiſhed; in which Caſe, its Symptoms continue along with thoſe of the Inflammation. If

If the *Larynx*, *Trachea*, or Parts adjacent, are inflamed, the Paſſage of the Air into the Lungs is obſtructed, and there ariſe, a Difficulty of Breathing, Anxiety about the *Præcordia*, ſwelling of the Veins of the Neck, ſwelling of the Face, *Stupor*, Lividneſs about the Eyes and in the whole Face, *Delirium*, a very Quick Irregular Pulſe, and at length the Patient is ſuffocated.

If the Muſcles ſerving for Deglutition, the Tonſils, *Pharynx*, or Parts adjacent are affected, there ariſe, a Pain in attempting to ſwallow, with a Senſe of Swelling in the Throat; a Difficulty in ſwallowing; *Nauſea*; the Food and Drink return by the Noſtrils, or getting into the *Larynx* produce violent Fits of coughing; at laſt the Paſſage of the Food and Drink into the Stomach, is totally ſtopt up, and the Patient is deſtroyed.

If the Lymphatics of the Neck are compreſſed, there ariſe *Ædematous* Swellings of the Face, and other Parts of the Head.

If the jugular Veins are obſtructed, *Ædematous* and livid Swellings ariſe in the Face, Tongue, Throat, and Parts adjacent, the Eyes become red and protuberant, the Patient is affected with *Stupor* and *Delirium*, and at laſt is ſuffocated.

Diſeaſes to be diſtinguiſhed from the Angina.

Swellings about the Throat, ariſe from *Scirrhus*, *Scrophula*, and Dropſy, as well as from Inflammation, as do likewiſe Pain, and Difficulty of Swallowing and Breathing from Catarrh, Exulceration, ſpaſmodic Contraction of the Muſcles, and *Paralyſis*.

Termination of the Inflammation.

If the Patient is not deſtroyed by the Reſpiration, Deglutition, or Brain's being affected, the *Angina* terminates, as other Inflammations, but principally in Suppuration, Gangrene and Mortification.

When

When Suppuration takes Place, the Swelling diminiſhes, and the Symptoms are ſomewhat relieved; the *Pus* opens itſelf a Way externally, or internally, and generally produces an Ulcer eaſily cured, but it ſometimes is apt to form *Sinus's*, or fall into the Lungs and bring on Exulcerations in them.

Gangrene and Mortification in moſt Parts of the Throat are fatal.

N. B. *As Inflammations of theſe Parts about the Throat may ariſe independant of one another, as their Symptoms, Progreſs, and Termination, are various, they ought to be conſidered as different Diſeaſes.*

Cure. The CURE is beſt performed by Reſolution, for this Purpoſe 1ſt, Evacuations are to be produced, *viz.*

(a) By Bleeding from the Arm in Quantity according to the inflammatory Diatheſis, and repeatedly, until it is greatly diminiſhed;

(b) By Bleeding from the Part by opening the jugular Veins, or thoſe under the Tongue, or applying Leaches.

(c) By Purgatives, as (No. 21.) repeated every Day for the firſt two or three Days of the Diſeaſe.

2d, By producing Inflammation externally upon the Skin.

(No. 22.) ℞ Ol. Olivar. ℥j.
Alkal. Volat. Cauſt. ʒij ad ℥j.
Camph. Gr. xxx.
m Ft. Liniment. inunq; Fauces externe ſepius.

After

After the *Inflammatory Diatheſis* is conſiderably diminiſhed by Evacuation, Bliſters are to be applied as near the Part as poſſible, provided the Skin itſelf be not inflamed.

3d, If the external Inflammation be conſiderable, Fomentations and Poultices are to be applied.

(No. 23.) ℞ Flor. Cham.: vel Summit. Abſynth.: vel Summit. Centaur. Minor.: Manip. ij.
Rad. Bryon. Alb. recent. ℥j.
Folior. Malv.: vel. Alth. Man. j. contunde et leviter coque in Aq. Font. ℔ iiij.
Colatura utatur pro Fotu ter indies.
Add. Herbis Coctis.
Unguent Simpl. ℥j
Ft. Cataplaſma Part. affect. applicandum.

4th, When we are not exhibiting Purgatives, or in the Intervals of their Operation, (No 4) or (No 13) are uſed with great Advantage.

5th, The Inflammation may ſometimes be diminiſhed, by augmenting the Secretion from the mucous Glands of the Mouth and Throat, and we are to endeavour to prevent the Mucous Membrane from being affected by the Salts of the thin Mucus.

(No 24.) ℞ Aq; Cinnam. Ten. ℥viij
Oxymel. Scillit. ℥ſs
m
Ft. Gargariſma utatur ſæpius.

(No 25.) ℞ Syr. ex Alth. } aa ℥j.
Ol. Amygd. }
Conſerv. Cynoſb. ℥ſs.
m Ft. Linctus Capt. Coch. unum parvum frequenter.

6th, Sedatives are applied to the Part generally with greater Advantage.

(No 26.) ℞ Tr^{æ} Roſar. ℥viij.
Mel. Roſar. ℥iſs.
m

Lavantur Fauces, et Os leniter ſed ſæpius.

The Air of the Room ſhould be moderately warm, and the Patient ought to avoid ſpeaking, and for Food to make uſe of the Barley Water only.

If the Paſſage of the Air into the Lungs, be ſo much obſtructed as to threaten immediate Suffocation, *Bronchotomy* is to be performed.

If no Fluid can be got into the Stomach, the Blood Veſſels may be ſupplied in ſome Meaſure by Glyſters.

(No 27.) ℞ Aq; Font. ℥vj
Amyl. Alb. ʒiij.
ſolve.

Ft. Enema Injic. om. ivtâ. vel vjtâ Horâ.

If the Blood be prevented from returning from the Brain, ſo as to endanger immediate Suffocation, the Patient is to be bled in the Jugular Veins.

If the inflamed Parts ſuppurate, the Mouth and Throat are to be kept moiſt with Infuſion of Lintſeed, or Decoction of Althæa Root; and as ſoon as there is any Fluctuation of Matter felt, an Opening is to be made into the Abceſs

The

The INFLAMMATION of the LUNGS, or PERIPNEUMONY.

IT is produced by Cold applied to the Skin, Mouth, or Stomach; by *Inflammatory Diatheſis*; by an over Diſtention of the Lungs; or by Catarrh. *Cauſes.*

Any ſolid Subſtance falling into the Lungs by the *Trachea*, or a Wound penetrating into them, produce the Inflammation, but with different Symptoms.

Theſe Cauſes act more powerfully in People ſubject to Inflammation in general; in thoſe who have narrow Cheſts; or who have been formerly affected with *Peripneumony*, *Aſthma*, or frequent *Catarrhs*; where the Lungs adhere to the *Pleura*, ſo as at any Time to prevent a free Reſpiration; or where external Inflammations that were become habitual, are taken off.

Symptoms, and Progreſs.

The Inflammation begins with an obtuſe Pain in the Breaſt, ſometimes occupying one Side, ſometimes both, accompanied with a difficulty of breathing and Cough, the Air from the Lungs being peculiarly hot. There ariſe a Senſe of Fulneſs in the *Thorax*, Anxiety about the *Præcordia*, with Reſtleſſneſs, a Loſs of Appetite and Sleep; a quick Pulſe, ſometimes hard, but ſeldom ſtrong, or regularly full; and often turbid Urine. The Difficulty of breathing and Senſe of Fulneſs increaſe; and a Quantity of thick Mucus being ſecreted occaſions a Sound, as the Air paſſes thro' the Branches of the *Trachea*. The Patient is not able to lie down, and the Paſſage of the Blood thro' the Lungs is obſtructed, ſo that the Veins of the Neck begin to ſwell, the Pulſe becomes every Way irregular. The face ſwells and of a

dark red Colour, eſpecially about the Eyelids and Cheeks. The Tongue likewiſe ſwells, and becomes of a dark red; The Eyes are dull; *Stupor* and a low *Delirium* ſucceed, and at length the Patient is ſuffocated.

If the Symptoms do not riſe to ſo great a Height, and at the ſame Time no Means of Reſolution have been applied before the fourth Day, or if theſe Means are not ſufficiently powerful, or if they are not continued until the Diſeaſe is totally carried off, a Suppuration takes place, and is indicated by ſlight and frequent Shiverings, the Pain at the ſame Time going off gradually; the Senſe of Fulneſs and Cough, with the other Symptoms diminiſhing, and the Patient being only able to lie on that Side which was moſt affected.

SUPPURATION, unleſs the Abceſs breaks ſoon into Lungs, or the *Pus* is abſorbed into the Veſſels, is generally fatal, producing Hectic Fever and Pulmonary Conſumption, (Vid. the Pulmonary Conſumption)

If the Inflammation be very violent, Gangrene and Mortification ſometimes, tho' ſeldom, ariſe: In this Caſe the Breathing is ſomewhat relieved; but the Pulſe becomes extremely quick and weak; the Patient ſpits up a blackiſh fœtid Ichor, and is ſoon carried off.

The Inflammation of the LUNGS is a Diſeaſe of the Bronchial Artery only.

They who are deſtroyed by acute Diſeaſes, are by no Means cut off at laſt by an Inflammation of the Lungs, s has been ſuppoſed.

It ſhould be diſtinguiſhed from Difficulty of breathing in Fever, from other Inflammations of the Breaſt, from *Catarrh*, *Aſthma*, and thoſe Difficulties of breathing which happen in chronical Diſeaſes.

It admits of a natural Cure,

1ſt, By a Secretion of *Mucus* from the Lungs, ſpit up at firſt thin and with uneaſineſs, becoming gradually thicker, and of a greeniſh or yellow Colour, often mixed with Blood, relieving and gradually diminiſhing the Symptoms, ſo as to carry off the Diſeaſe before the fourteenth Day.

If there be a great *Hemorrhage* from the Lungs, it happens for moſt Part, that either the Patient is immediately ſuffocated, or an Ulcer is produced.

If the Matter ſpit up contains hard Maſſes, or is of different Colours from what has been deſcribed, altho' the Symptoms are relieved, there is Danger of an Ulcer.

If the Secretion continues watry, the Diſeaſe is ſometimes encreaſed by it.

2d, By an Inflammation or Hemorrhage ariſing in ſome other Part of the Body.

If the *Peripneumony* takes place after a cold Fit of Fever, and the Fever continues along with the Inflammation, which has been relieved either naturally or artificially, a Criſis in the ſecond Week ſometimes carries off both Diſeaſes.

Cure.

The Cure is performed (1) by ſimple Reſolution, or (2) by Evacuation from the Mucous Glands.

The firſt is obtained

(A) By emptying the Veſſels of the Lungs.

(a) By Bleeding. We are to be ruled as to the Quantity of Blood taken away, by the Strength of the Patient. For when from the Violence of the Inflammation the Pulſe is ſmall, very frequent and irregular, it often riſes and becomes regular after the Operation. From the Diſeaſe's encreaſing or recurring, it is frequently neceſſary to repeat this Evacuation two or three Times.

By

(b) By producing a free Circulation in the other Parts, by (N° 4) or (N° 13).

(c) By keeping the Patient in an Air moderately warm.

(d) With this view the Antients applied Ligatures on the Arms and Thighs, to confine the Blood in the Veins.

(e) The warm Bath has been uſed for the ſame Purpoſe in other internal Inflammations.

(B) By inflaming another Part; *(a)* by rubbing (N° 22) on the Side, *(b)* by Bliſters which are applied with greater Advantage to the Side and Back, than to the Extremities..

(C) By exhibiting Medicines which relax the Cappillary Veſſels throughout the Syſtem, and thereby diminiſhing the Quantity of Blood in the Lungs. (Vid. N°s 13, 4.)

To theſe have been added ſtimulating Medicines (as Volatile Alkali) to produce Sweating: but they often do more Hurt by their *Stimulus*, than Good in any other Way.

For the Management with Regard to the Food (Vide the *Phrenitis*.)

The ſecond Method of Cure is performed,

(A) By encreaſing the Secretion from the Mucous Glands, by Stimulants.

(No. 28.) ℞ Aq; Puleg: ℥jſs
Oxymel: Scillit. ʒij ad ʒvi
Aq; Menth: Piper. ʒj
m Ft. Hauſt. Capt: om: ivtâ Horâ.

(No. 29.) ℞ Aq; Puleg: ℥jſs
Gum: Ammon: gr. x ad xv
Syr: Limon: ʒij
m Ft. Hauſt. Capt: ut ſupra.

By inhaling the Vapour produced from the Infuſion of pectoral Herbs.

(B) By

(B) By defending the Mucous Membrane from the Salts contained in the Mucus ſo ſecreted, with Mucilaginous or Oily Medicines.

(No 30.) ℞ Amygd: decort: ℥j
Gum: Arabic ℥jſs
Mel. — — — ℥iv
Aq; Font. —— ℔ij
m Ft. S. A. Emulſio bibat poculum frequenter.

Or No 25, may be given.

Opiates have ſometimes been uſed, when the *Mucus* ſpit up was thin, and the Cough troubleſome: But as for moſt part they greatly encreaſe the Difficulty of Reſpiration, they are commonly hurtful.

(C) If notwithſtanding the Spitting, the Inflammation encreaſes, moderate Bleeding is uſeful to prevent the Suppuration; but the taking away a great Quantity, diminiſhes or ſtops the Secretion.

The ſame Remedy is to be uſed, if much pure Blood is ſpit up.

During the firſt Days eſpecially where the Patient is ſtrong, the Food ought to be the Farinaceous Decoctions acidulated. To theſe ſhould be afterwards joined Preparations of the Farinaceous Seeds, with preſerved Juices of Fruits, (as Currant Jelly *&c.*)

The Remedies in the firſt Method, except the plentiful and repeated Bleeding, may be alſo uſed in this; and on the other Hand, thoſe recommended under this Head, may be uſed along with the firſt: So that the only Queſtion is, whether the Cure is to be principally truſted to the Bleeding, or Evacuation from the Lungs by Spitting.

The

The firſt Method is to be followed in ſtrong; the ſecond in weak Patients, and when the Diſeaſe is accompanied with the Symptoms of firſt Stage of Fever.

The PLEURISY,

Or INFLAMMATION of the *PLEURA.*

IT has been much diſputed, whether this Diſeaſe be an Inflammation of the *Pleura*, or of the external Coat of the Lungs. It appears moſt probable, that the Inflammation ariſes in the *Pleura*, and ſpreads from thence to the Lungs.

Cauſes.

Its Cauſes are, Cold applied to the Skin; ſudden and great Diſtention of the *Pleura* in Inſpiration; drinking cold Liquors after being heated by violent Exerciſe. The Pleuriſy, and moſt other Inflammations ariſe frequently in the hot Fit of Fever, moſt commonly in the firſt Period, ſometimes in the ſecond, and leſs frequently in the third; either from the *Inflammatory Diatheſis* alone, or from a *Stimulus*, too ſlight to affect People in perfect Health.

Adheſions of the *Pleura* to the Lungs affecting the Breath, and the Cauſes which render People liable to Peripneumony, have the ſame Effect with Regard to the Pleuriſy.

The Manner in which Inflammation ariſes in Fever.

When a Pleuriſy, or other Inflammation, ariſes in the hot Fit of Fever, it is preceeded by *Horror* and *Rigor*, Cold, Quickneſs of the Pulſe, and ſeveral of the other Symptoms of the firſt Stage (V. Page 1) Theſe are followed by the Symptoms of the ſecond Stage, (V. Page 2) together with thoſe of the *Inflammatory Diatheſis*; (Vide Page 28,) after which, the Pain and other Symptoms of the Inflammation in the Side or Part affected, take Place, and the Symptoms of the firſt Stage of Fever commonly leave the Patient; thoſe of the *Inflammatory Diatheſis* con-

tinuing. Sometimes the Symptoms of the firſt Stage of Fever are relieved; in this Caſe, Anxiety about the *Precordia*, tranſparent Urine, particular Evening *Paroxiſms*, *&c.* continue along with the Inflammation, produce a different Progreſs and Termination of the Diſeaſe, and require a Variety in the Treatment.

Symptoms and Progreſs of the Pleuriſy.

When the Inflammation of the *Pleura* comes on, whether it be the original Diſeaſe, or preceeded by the Symptoms of Fever; it begins with an acute Pain in the Side, above the ſhort Ribs, ſometimes towards the Back (when it is leſs violent,) encreaſing greatly on Inſpiration, diminiſhing on Expiration, and from thence producing a Difficulty of Breathing: The Inſpirations are ſhort, the Ribs kept as much at Reſt as poſſible, and the Diaphragm and Muſcles of the *Abdomen* move conſiderably.

In all Difficulties of Reſpiration carried to a Height, the Patient is obliged to have his Body more or leſs in an erect Poſture: the Shoulders and Clavicles are raiſed: the Noſtrils move, and the Mouth is opened.

The Difficulty of Breathing in a Pleuriſy produces a Cough, which is ſhort, ſuppreſſed, and ſome-times dry; but at others attended with a ſpitting of Mucus from the Lungs, at firſt thin, and proceeding afterwards exactly as in the Peripneumony, and relieving or curing the Diſeaſe in the ſame Manner.

If the Patient be not affected with *Inflammatory Diatheſis* before the Inflammation, it is always brought on in a few Hours; and its Symptoms (Vid. P. 28) are ſometimes ſo violent as to deſtroy the Patient: The Difficulty

culty of Reſpiration alſo encreaſes, ſometimes to ſo great a Degree, as to prevent the Blood from paſſing through the Lungs; the Brain is compreſſed, and he is ſuffocated with the ſame Symptoms as in the Peripneumony (Vide Page 43, 44.)

If Gangrene and Mortification take Place, the Pain ceaſes ſuddenly, without any apparent Cauſe; the Pulſe is very frequent, quick, ſmall, weak, and often irregular; *Delirium* with Convulſions come on, and the Patient is certainly deſtroyed.

If he does not die in any of theſe Ways, and if the Diſeaſe be not relieved by the Spitting, or ſome other natural or artificial Method, Matter is form'd; which is ſhown by irregular Coldneſs and Shiverings, the Pain going off, or becoming ſlight and obtuſe. If it points externally a Fluctuation is felt on the Part affected; if the *Pus* is contained in the Cavity of the *Thorax*, it is felt between the lower Ribbs, and the Patient cannot lie on the oppoſite Side. If any Means of Reſolution have been applied, ſo as to diminiſh the Inflammation, and a Suppuration nevertheleſs comes on, it often does not begin till much later in the Diſeaſe, ſome-times not before the fourteenth Day.

This Termination is moſt commonly fatal. (Vide the Pulmonary Conſumption.)

It is cured naturally by a Spitting, & the other Means enumerated in the Peripneumony. (Vide P. 45)

Progreſs of an Inflammation attended with Fever.

If this or any other Inflammation begin with the Symptoms of the firſt Stage of Fever, and they remain after the Pain has ariſen, when the Inflammation is diminiſhed

by any natural or artificial Means; it frequently happens that the Fever continues, encreaſes, and is attended with Weakneſs, till the Patient die.

If the Inflammation go off by Reſolution, the *Pleura* and external Membrane of the Lungs generally adhere.

Diſtinctions

It ſhould be diſtinguiſhed from other Inflammations of the Breaſt, *Diaphragm*, intercoſtal Muſcles, Inteſtines and Liver; from ſpaſmodic Pain in the Side or Inteſtines; and from Rheumatiſm of the Side.

Cure of the Pleuriſy.

As in the Pleuriſy, the *Inflammatory Diatheſis* or general Inflammation, is greater than in moſt topical One's; it yields better to Evacuations, eſpecially to Bleeding. To this therefore in general we truſt principally for the Cure; and in the Caſe of a ſtrong Habit, take away from twenty to thirty Ounces of Blood at once; repeating the Blood-letting, if the Diſeaſe continues, to twelve, ten, eight Ounces, or leſs, according to the Circumſtances, as long as the Pulſe is hard, unleſs the Symptoms of the firſt Stage of Fever have continued: in this Caſe, ſuch a Quantity of Blood muſt not be taken away, nor the Bleeding ſo often repeated.

All the other Remedies recommended in the Peripneumony, are equally applicable in the Inflammation of the *Pleura*; and are to be uſed in Aid of the Bleeding from the Syſtem in General.

Cupping Glaſſes, with and without *Scarification*, have been applied in both Diſeaſes, ſometimes with Advantage; but the cold Air to which the Skin is expoſed during the Operation, often over-ballances the good Effect of it.

The

The Belly is to be kept open by Antiphlogiſtic Laxatives; (Vide N° 8.) but ſtrong Purgatives are not to be given in any Inflammation of the Breaſt, where the Mucous Membrane of the Lungs is not the principle Part affected.

The Food is to be the ſame as in the Peripneumony.

Treatment of an Inflammation attended with Fever.

When the Symptoms of the firſt Stage of Fever, preceed this or any other Inflammation, and remain after it takes Place, Bleeding often carries off the *Inflammatory Diatheſis*; but the Inflammation and Fever continue: In this Caſe, further Evacuation is of no uſe, and therefore we muſt proceed in the Cure by the other Methods recommended in each Inflammation; in this for Example by Expectorants, Relaxants, Bliſters, *&c.* If the Fever ſhould continue, and the Symptoms of Weakneſs come on, the Strength muſt be ſupported, as has been ſhewn in the End of Fevers, notwithſtanding ſome little Pain remaining in the inflamed Part.

The Inflammation of the INTERCOSTAL MUSCLES.

The ſpurious Pleuriſy.

THIS Diſeaſe has been called the *Spurious* Pleuriſy, It ariſes nearly from the ſame Cauſes, is attended almoſt with the ſame Symptoms, and is to be cured in the ſame Manner.

Its Difference from the Pleuriſy juſt now deſcribed, appears in theſe Particulars; it is produced by external Cauſes; a Swelling appears externally, with Pain on the Part's being touched; there is leſs Pain on Inſpiration, and of Conſequence not ſo great a Difficulty of Breathing;

Breathing; the Cough is for the moſt Part dry; the general Inflammation does not ariſe in ſo great a Degree; the Lungs are not ſo apt to be affected; Gangrene and Mortification ſeldomer take Place; the Patient is never ſuffocated; and there is but little Danger from Suppuration.

It is ſeldom or never cured by a Spitting; but on the other Hand Fomentations and Poultices are applied to the Part, with much greater Effect than in the Pleuriſy. Purgatives may alſo be uſed with greater Freedom.

The INFLAMMATION of the MEDIASTINUM.

Inflammation of the Mediaſtinum.

THIS Diſeaſe is alſo in many Things ſimilar to the Pleuriſy: its Cauſes are the ſame. The Pain ſtrikes obliquely from the *Sternum* through the Breaſt to the Back: there is a Difficulty of Breathing, and Cough, attended ſometimes with a Spitting. Theſe Symptoms however, are not ſo violent as in the Pleuriſy; nor is the Pain on Inſpiration ſo much increaſed, or the *Inflammatory Diatheſis* ſo great: Suppuration is with greater Difficulty avoided; and, when it happens, is commonly fatal.

It is to be cured in the ſame Manner as the Pleuriſy.

The

The INFLAMMATION of the PERICARDIUM.

THIS alſo has many Things in common with the Inflammation of the *Pleura*; but the Pain is deeper ſeated, and is not ſo much encreaſed upon Inſpiration. *Inflammation of the Pericardium.*

If the Heart is affected, the Pulſe becomes ſmall, irregular, and intermittent, with immenſe Anxiety. The Patient falls into *Syncope's*, and is ſoon deſtroyed.

It is to be treated alſo as the Pleuriſy.

The PARAPHRENITIS, OR INFLAMMATION of the DIAPHRAGM.

IT ariſes from the ſame Cauſes as the Inflammation of the *Pleura*. The Pain is very violent and deep ſeated in the lower Part of the Breaſt, or under the ſhort Ribs; or ſtriking between them and the Back: The Belly is drawn up and kept as much at reſt as poſſible; the Reſpiration is exceſſively quick, ſmall, and difficult, and performed principally by the Muſcles of the Breaſt; the Patient is frequently affected with Sickneſs and Hiccup; the Pulſe is for the moſt Part very frequent, ſmall, hard, and often irregular; there is great Anxiety; the other Symptoms of Irritation (Vide P. 28,) come on, and Death frequently enſues. If this does not happen, the Progreſs, Termination, and Manner of Treatment are nearly the ſame as in the Pleuriſy. *The Paraphrenitis.*

Of

Of theſe Inflammations in the Breaſt, that of the *Pleura* near the fore Part of the Ribs, and that of the Lungs are the moſt frequent.

The Inflammation of the *Pleura* is almoſt always attended with ſome Degree of the Inflammation of the Lungs; ſometimes all theſe Parts are inflamed together; but more commonly only one takes Place in the ſame Patient.

The

The INFLAMMATION of the INTESTINES.

The Diſeaſe

THE Inflammation of the exterior Coats of the INTESTINES (of which the Symptoms and Manner of Treatment are here laid down) differs greatly from that of the Interior, Villous, or Mucous Membrane; this laſt being attended with Dyſentery or *Apthæ*. (Vid. the Dyſentery.)

The Cauſes

It is brought on by external Cold, indurated *Fæces* heavy or hard Bodies lying in the Inteſtines, Introſuſceptions, Adheſive Stimulants, *Hernias*, and Wounds. It takes Place alſo, as other Inflammations in the Beginning of a Fever. (Vid. the Pleuriſy.)

Symptoms and Progreſs.

The Symptoms are a Pain in the Belly, occupying different Parts according to the Inteſtine affected; but fixt to the Place in which it aroſe at firſt. It is always extremely acute; ſometimes however it encreaſes a little by Fits, and ſometimes is a little eaſier. For the moſt Part the whole Belly is affected, at the ſame Time, with ſpaſmodic Pains & Flatulency. The Pulſe becomes ſmall, hard, frequent, quick, and often at laſt irregular and intermittent. Coldneſs of the Extremities together with a ſudden and great Proſtration of Strength take place. The Muſcular Fibres of the inflamed Part contract ſo that nothing can paſs through; and ſometimes the *Sphincter Ani* in ſuch a Manner that a ſmall Pipe can with Difficulty be introduced into the *Rectum*. Flatulencies in the Stomach, Sickneſs, violent Reachings, and Vomiting are frequently produced. The Tongue is dry, with great Thirſt, and the Urine often pale, ſometimes in ſmall Quantity and diſcharged with Difficulty. The Breathing is quick, the Patient bending forward, and compreſſing his Belly, the abdominal Muſcles being

ſometimes ſpaſmodically contracted. At laſt *Delirium* and Convulſions come on from the Irritation, and the Patient is deſtroyed.

This Inflammation frequently terminates in Gangrene and Mortification, in which Caſe the Pain goes off, and the Patient appears to himſelf for a little relieved; but the Pulſe continues frequent, ſmall, and often irregular, and the Extremities cold; *Delirium* and Convulſions ſoon come on, and he is cut off.

If it is left to itſelf, this Diſeaſe kills ſometimes in ten or twelve Hours, and almoſt always before the End of the third Day; ſo that there is ſeldom any Suppuration: but if the Inteſtines ſuppurate, the Pain diminiſhes, and is converted rather into a Senſe of Diſtention; irregular, cold Fits, with the other Symptoms of Internal Suppuration ariſe; and the Contraction of the Muſcular Fibres of the Inteſtines, the great Frequency of the Pulſe, and other Symptoms go off.

The Abceſs may break either into the Cavity of the *Abdomen*, or into the inteſtinal Canal; In the firſt Caſe it is generally fatal, producing a Hectic Fever: (Vid. the Pulmonary Conſumption.) In the ſecond the *Pus* is evacuated by the *Anus*, ſometimes at firſt pure, afterwards mixt with the *Fæces*, gradually diminiſhing if the Ulcer heals, and the Patient is reſtored; or a conſiderable Quantity of Matter continues to be diſcharged, a Hectic Fever is produced and he ſinks.

At the Beginning of the Diſeaſe, after the Pain has continued for a few Hours, ſometimes a great Secretion takes Place in the Inteſtines, the Villous Membrane is alſo affected with Inflammation, and it is converted into a Dyſentery: On the other Hand, when in an Inflammatory Dyſentery the Secretion is imprudently checked

checked by Aſtringents, this kind of Inflammation often ariſes.

It ſhould be diſtinguiſhed from the Stone in the Kidneys or Ureters, from Inflammation of the Kidneys, and other abdominal *Viſcera*; from the Pleuriſy and other Inflammations of the *Thorax*; and particularly from ſpaſmodic Pains in the Inteſtines, and Obſtruction where there is no Inflammation.

Cure.

It is to be cured by the immediate Application of the moſt powerful Means of Reſolution; we are therefore to bleed to the Quantity of 12 or 16 Ounces, notwithſtanding the ſmallneſs of the Pulſe, and ſeeming Weakneſs; for the Pulſe becomes fuller, and the Proſtration of Strength goes off, when the Inflammation is diminiſhed; as on the other Hand they are encreaſed by Stimulants; the Bleeding is to be repeated at ſhort Intervals till the Pulſe becomes ſoft.

Purgatives are contraindicated by the Contraction of the inflamed Part, and when they have been given, & have not purged, they have often evidently encreaſed the Pain, and other Symptoms: But Evacuations from the Inteſtines by Means of Glyſters, are made with Advantage, (N° 9,) may be thrown in every two or three Hours, till a Stool is procured. Relaxants have not ſo frequently been exhibited internally, as in other Inflammations; nevertheleſs when uſed, they are of great Service. (Vid. N° 13, 4.)

The Circulation is to be brought to the Surface of the Body by the warm Bath, or Fomentations applied to the Belly: but great Care is to be taken, leaſt Cold from the Air or Moiſture in coming out of the Bath, or changing the Fomentations, ſhould do more Miſchief than

the Remedy does good: Theſe are alſo uſeful when the *Anus* is much contracted, ſo that Glyſters cannot be given.

Some Degree of Inflammation of the Skin of the Belly has been raiſed by Cupping-Glaſſes with Benefit: but Bliſters have not been commonly employed.

If theſe Means ſhould fail of Succeſs, Opiates ſometimes Cure by taking off the Contraction, eſpecially when joined with Relaxants.

(N° 31.) ℞ Aq: Menth: Vulg. ℥iſs
Syr: Diacod: —— ℥ij ad vj.
Tart. Emet. —— gr. ⅓ ad gr. ſs.
m Fiat Hauſtus.

The Food both during the Inflammation, and for ſome Days after it is cured, ought to be Farinaceous Decoctions, or moiſt Preparations of the Farinaceous Seeds, as Panada, &c.

The INFLAMMATION of the STOMACH.

Cauſes.

IT ariſes nearly from the ſame Cauſes as that of the *Inteſtines*, excepting Introſuſception, hardened *Fæces* and *Hernia*; and it is more liable to be produced by Acrid Subſtances.

Symptoms and Progreſs.

The Symptoms are for the moſt Part the ſame in both Diſeaſes, excepting the Situation. In this Caſe the Pain occupies the Region of the Stomach; and even the mildeſt Things thrown down encreaſe it greatly, and at the ſame Time bring on the Sickneſs and Vomiting: The Diſeaſe is altogether more acute, and unleſs the moſt powerful Means of Relief be immediately employed, proves fatal.

It

It is cured by the ſame Method as the Inflammation of the Inteſtines; excepting only that we can ſeldom exhibit any internal Medicines, on Account of the great Irritability of the Stomach. *Cure*

If either of theſe Inflammations are occaſioned by Wounds, there is frequently little or no Pain, although all the other Symptoms take Place and the Patient is cut off *Difference of the Diſeaſe when ariſing from Wounds.*

The INFLAMMATION of the RECTUM.

IT is ſeldom ſo acute as that of the *Duodenum*, *Jejunum* or *Ilium*, nor ſo apt to produce ſmalneſs of the Pulſe, or Coldneſs of the Extremities, or to affect the Stomach, neither is there ſuch a Stricture as to render the Inteſtine impervious.

The Cure is the ſame, except that Purgatives are uſed with Advantage, and Laxatives ought always to be employed.

The

The INFLAMMATION of the SUBSTANCE *Of the* LIVER.

Cauſes

IT is produced by the common Cauſes of Internal Inflammation, and by Obſtruction of the Hepatic Ducts, or *Ductus Communis Cholidochus*, and is more common in warm Climates.

It ariſes ſometimes at the Beginning of a Fever, as other Internal Inflammations. In this Caſe it is preceeded by the Symptoms of the firſt Stage, and the Fever for the moſt Part continues. (Vid. the Pleuriſy.)

Symptoms and Progreſs.

The Inflammation begins with an obtuſe Pain in the Region of the Liver, which is often but juſt ſenſible. This Pain gradually encreaſes, but is never very acute, if the Membranes are not affected; nor is it accompanyed by any great degree of General Inflammation. The Pulſe therefore at the Beginning is not at all altered, when the Patient is free from Fever; and frequently but very little till the Time of Suppuration. The Swelling when large, or when the Convex Part is affected, is externally viſible, and occaſions a Difficulty of breathing with a Cough, but ſeldom any conſiderable ſpitting; when the Concave Part is inflamed, if near the Stomach, it brings on Sickneſs, Thirſt, Hiccup, Vomiting; or if near any conſiderable Hepatic Duct, or the *Ductus communis Cholidochus*, it prevents the Paſſage of the Bile into the *Duodenum*, and a Jaundice takes Place. But in all other Caſes of Inflammation of the Liver, the Quantity of Bile thrown into the *Duodenum* is encreaſed, and the Evacuations become bilious.

Terminations

All the Terminations of Inflammation may poſſibly happen

happen in this Diſtemper; but by much the moſt common is Suppuration, which is attended by the ordinary Signs of internal Ones, together with a Fluctuation which is ſometimes felt when any Part of the Liver immediately under the Integuments is affected: the preceeding Symptoms of the Diſeaſe at the ſame Time diminiſh or go off entirely.

When the Abceſs is conſiderable, a ſufficient Quantity of Matter is abſorbed to produce a Hectic Fever. (Vid. the Pulmonary Conſumption.)

The *Pus* opens to itſelf a Way (1) into the Inteſtines, by deſtroying the Coats of an Hepatic Duct, or a Part of the *Duodenum*, or (2) into the Cavity of the Belly, or (3) laſtly, if the Liver adheres to the *Peritoneum*, through the Integuments of the *Abdomen*.

(1) In the firſt Caſe ſeveral Purulent or Ichorous Stools are immediately brought on, and the Matter afterwards continues to come away with the *Fæces*.

(2) In the ſecond, the Senſe of Weight, and the Swelling (if any there were) diminiſh or go entirely off; the Inteſtines are ulcerated; Pains in the Belly and Dropſical Symptoms come on, and, together with the Hectic Fever, kill the Patient. When the *Pus* is contained in the *Abdomen*, it ſometimes gets through the external Integuments, particularly at the Rings of the Muſcles.

(3) In the laſt Caſe, there is an Ulcer opening externally.

In whatever Way the *Pus* is evacuated, unleſs the Patient is aſſiſted by Medicine, a Hectic Fever is produced, and he dies.

Some-

Sometimes after Inflammations of the Liver, and other Internal Parts, on opening the Body, Collections of Water without any Appearance of *Pus* have been found.

Diſtinctions It ſhould be diſtinguiſhed from Inflammation of *Pleura*, Diaphragm, Muſcles of the *Abdomen*, and Spaſmodic Pain.

Cure. The Cure is performed by Bleeding, Bliſters, Relaxants &c. as in other Internal Inflammations; but the Symptoms at the Beginning not alarming the Patient, it is often too late before the Remedies are employed; and from the Slightneſs of the General Inflammation, Evacuations having leſs Effect, this Diſeaſe frequently terminates in Suppuration, which however is to be avoided if poſſible.

For this Purpoſe we are to bleed to twelve or fourteen Ounces any Time before the fifth Day; eſpecially if there is any *Inflammatory Diatheſis:* and the Bleeding is to be repeated, if the General Inflammation continues, or the Patient is relieved, but not cured.

If there is a free Paſſage for the Bile into the *Duodenum*, Purgatives are alſo uſeful (Vid. N° 21.)

In other Caſes Relaxants (Vid. N° 13. 4.) and Bliſters applied to the Part are principally to be depended on, and in all are uſeful.

If it be too late for the Application of theſe Remedies, or if they fail and a Suppuration takes Place; as ſoon as we know this from the Symptoms (N° 11) is to be taken four or five Times a Day, encreaſing the Quantity of the Bark, ſo that the Patient ſhall take from three Drachms to half an Ounce every 24 Hours.

If the Abceſs points externally, we are to open it as

ſoon

ſoon as poſſible; provided their appears from its Immobility that there is an Adheſion of the Liver to the *Peritoneum*, and the Doſe of the Bark is to be encreaſed to ʒi ad ʒij. every 24 Hours, 'till a good Suppuration and Granulation comes on. The Medicine is to be uſed in the ſame Manner, if from the Purulent or Ichorous Stools we judge that the Abceſs has broke into the *Duodenum*.

Mercury has been given with the ſame Intention, in as great Quantity as could be taken without Salivating the Patient: but the Bark appears to me to be preferable.

When any Abceſs breaks into the Cavity of the *Abdomen*, the ſame Means may be uſed, but the Diſeaſe is commonly fatal.

The INFLAMMATION of the MEMBRANES of the LIVER.

IT ariſes from the ſame Cauſes as Inflammation of the Subſtance, but the Symptoms differ as follows, the Pain is more acute, it is attended with *Inflammatory Diatheſis*, reſembles more a Pleuriſy of the Right Side when the Convex Part is affected, and is to be treated nearly in the ſame Manner as that Diſeaſe.

The INFLAMMATION of the CELLULAR MEMBRANE, lying under the *PSOAS* Muſcle.

IT is produced by the common Cauſes of Internal Inflammation, and alſo by Strains, and Bruiſes.

It agrees very much, excepting for the Situation, in its Symptoms, Progreſs, and Termination, with the Inflammation of the Liver: i. e. the Pain is ſituated in the Back, for the moſt Part rather lower than the Region of the Kidneys; both it, and the other Symptoms of the Inflammation, are ſlight, and ſeldom attended with any great Degree of *Inflammatory Diatheſis:* The Diſeaſe likewiſe terminates commonly in Suppuration, notwithſtanding which, the Pain ſometimes continues, falling gradually lower; in other reſpects the uſual Symptoms of Internal Suppuration ariſe, ſuch as Irregular Coldneſs, Hectic Fever, *&c.*

The *Pus* makes its Way through the *Cellular Membrane*, ſometimes into the Cavity of the *Abdomen*, when it is fatal, (Vid. Inflammation of the Liver); ſometimes externally in the Thigh, a little on the out-ſide of the Lymphatic Glands in the Groin; ſometimes it appears in the Loins; or diſſects along the Attachments of the Abdominal Muſcles to the Spine of the *Ilium*, and forms a *Tumor*, with Fluctuation in the Hip; or it paſſes down into the *Pelvis*, and gets to the *Perineum*, or reſembles the *Hemmorhoides*; often producing *Caries* in the Bones of theſe different Parts, and Pain on moving, or Inability of Motion in the Muſcles.

When

When the Tumor and Fluctuation appear, the Matter may on Preſſure be moſt commonly forced back ; and when the Abceſs is opened, a large Quantity of it runs out ; it is likewiſe afterwards preſſed out by moving the Muſcles of the Parts affected.

It ſhould be diſtinguiſhed from Inflammation, and Stone in the Kidneys, or *Ureters*; *Bubos* ; *Hemmorhoides*; and Inflammation, and Suppuration of thoſe Parts where the *Pus* in this Diſeaſe makes it's Appearance externally.

It is to be treated in the ſame Manner as Inflammation of the Liver, (except for the Situation), both in the State of Inflammation and Suppuration.

The INFLAMMATION of the SUBSTANCE, And External COAT of the KIDNEY.

THIS Diſeaſe is not common, as a Determination of Fluids to the Kidneys, occaſions an encreaſed Secretion of Urine, ſometimes mixed with Blood, which prevents the Inflammation.

It ariſes from the common Cauſes of Internal Inflammations, or from external Injury.

A Stone in the Kidney produces Inflammation, but moſt commonly of the Internal Membrane and *Tubuli Uriniferi.*

The Inflammation begins with a Pain in the Region of the Kidney, (i. e. in the Back, near the Articulation of the ſhort Ribs, higher up on the Left Side than on the Right) often ſhooting down by the *Ureter* to the Bladder, and by the Spermatic Chord to the Teſticle. The Urine is pale, its Evacuation frequent, in ſmall Quantities at a Time, and perform'd with Difficulty, a Senſe of Heat and Pain: there is ſometimes external Redneſs. The Leg of the Side affected is ſeized with *Stupor*; and the Pain is encreaſed upon ſtanding, walking, coughing, lying on the oppoſite Side, or in any other Caſe where the Kidney is moved, or the ſurrounding Parts extended. The Pulſe is hard and frequent, and as the Pain encreaſes, often becomes ſmall, quick, and ſometimes intermittent, with Coldneſs of the Extremities, cold Sweats, Sickneſs, Vomiting, Fainting, *Delirium*, Convulſions, &c. as in the Inflammation of the Inteſtines, although not in ſo great a Degree, nor ariſing ſo ſoon in the Diſeaſe.

It

It admits of a natural Cure, *viz.* the Urine grows higher coloured, is ſecreted in greater Quantity, and at laſt is copious, thick, and mixed with Mucus, relieving and gradually diminiſhing the Pain and other Symptoms, till the Patient's Health is reſtored.

It may alſo go off by *Metaſtaſis*, *&c.* as other Internal Inflammations: Or it may terminate in Gangrene and Mortification, which in the Interior Parts of the Body are almoſt conſtantly fatal, and nearly with the ſame Symptoms, (Vide the Pleuriſy.) In this Caſe there is likewiſe an Alteration of the Colour of the Urine, accompanied with *Fœtor*; or the Inflammation may go off and leave a *Schirrus*, which is known from the Patient's being relieved, although the natural Cure has not taken Place, nor any Symptom of Suppuration appear'd; from a ſenſible Hardneſs ſometimes continuiug in the Part; a *Stupor* in the lower Extremities on the Side affected; and a Diminution of the Secretion of Urine.

Or the Kidney may ſuppurate, which is indicated by the common Symptoms of Internal Suppuration.

It is to be remarked, that, although Inflammations often ſuppurate on the fourth Day, yet if any natural or artificial Method of Cure be applied, or even when a Membrane is the Part affected, the Suppuration is retarded, but nevertheleſs if the Remedy ſhould not be ſufficiently powerful, comes on at laſt, ſometimes ſo late as the fourteenth.

The Abceſs breaks (1) into the *Pelvis*, (2) into the Cavity of the *Abdomen*, (3) or laſtly, externally.

(1) In the firſt Caſe, the Senſe of Weight and Diſtention of the Kidney, if any there were, ſuddenly goes off,

goes off, and at the ſame Time the Urine is mixed with *Puſ*, which ſubſides to the Bottom, at firſt in great Quantity, and continues afterwards to come away in leſs.

If the Matter is white, thick, and not fœtid, the Ulcer ſometimes heals; otherwiſe a Hectic Fever comes on, and the Patient is cut off; or laſtly, the Ulcer may continue a long Time, without proving fatal.

The Ulcer generally heals ſoon, or not at all.

(2) if it break into the Cavity of the *Abdomen*, it kills, (Vide the Inflammation of the Liver.)

(3) If it open externally, the Urine comes away with the *Puſ*, and an Ulcer is formed of very difficult Cure.

Inflammation of the Kidney ſhould be diſtinguiſhed from a Stone obſtructing the Ureter, from Inflammation of the *Pſoas Muſcle*, and other adjacent Parts, and from Inflammation and ſpaſmodic or other Pains in the Inteſtines.

The Cure is to be performed by the Medicines commonly uſed in Internal Inflammations; to which may be added the following

(1) Gentle Diuretics.

℞. Sem. Lin. ℥ſs
Sem. Petroſel. ʒſs
Aq. Font. Bullient. ℔j
Infundantur ſimul per Hor. ſs. et cola.
Collatur. Adde.
Succ: Limonum et Sach. Alb. Q. S. ad gratam Acedinem Dulcedinemque bibat Poculum frequenter.

A moderately warm *Semicupium* may alſo be uſed to promote the Secretion of Urine.

(2) Mild Laxatives and Glyſters. (Vide 9, 8.)

(3) If there ſhould be any External Symptoms, Fomentations and Poultices may be uſed. (Vide N° 23.)

Lying on the Back, as it prevents the Paſſage of the Urine into the Bladder, is to be avoided.

If the Kidney ſhould ſuppurate, the Treatment is to be nearly the ſame as in Suppurations of the Liver, (Vid. Inſl. of the Liver.) and the Patient is alſo to take Infuſion of Linſeed, or Decoction of Althea Root for his common Drink after the Abceſs is broke, in order to dilute the Urine, and prevent it from ſtimulating the Surface of the Ulcer, which would hinder the Cure.

Some have propoſed the Exhibition of the Balſams of Trees, to promote the Granulation; but the Bark appears to me to be preferable.

The Management of the Food &c. in theſe Suppurarations, is to be the ſame as in the Pulmonary Conſumption.

The INFLAMMATION of the BLADDER.

THE Inflammation of the Exterior Coats of the Bladder differs alſo from the Abraſion, Exulceration, or Inflammation of the Internal or Mucous Membrane.

It is produced by the Cauſes of Internal Inflammation, by the Rubbing or Preſſure of a Stone, and external Hurts.

The Neck of the Bladder is thicker than the *Fundus*, and more expoſed to Injury from the Stone and Bruiſes.

The Stone in the Bladder more commonly produces an Inflammation or Abraſion of the Mucous Membrane than this Diſeaſe.

The Inflammation begins with a violent Pain in the Region of the Bladder, i. e. in the *Perineum*, or in the Belly, immediately above the *Os Pubus*, deep ſeated, and ſometimes attended by a Redneſs in theſe Parts. If the Neck be the Part affected, there is a Retention of Urine together with a conſtant *Stimulus* to its Evacuation; if the Bottom be the Part diſeaſed, there is a continual dribbling, with great Efforts to throw out a larger Quantity at a Time, which the Patient conceives to be contained in the Bladder. Theſe Symptoms are accompanied with frequent Attempts to expel the *Fæces* with which the *Rectum* appears to the Patient to be always loaded; theſe encreaſe the Pain very much, particularly when any *Fæces* are actually contained, and eſpecially if they are hard. The Pulſe is frequent and hard, the Extremities become cold; there is immenſe Anxiety and Reſtleſſneſs, with Sickneſs, Vomiting, Delirium, and the other Symptoms of Irritation, as in the Inflammation of the Inteſtines, and the Patient for the moſt Part is cut off in a ſhort Time.

It alſo frequently terminates in Gangrene and Mortification, the Pain goes off, but the other Symptoms continue, and the Patient dies ſoon after.

Or it may be carried off by an encreaſed Secretion of *Mucus* from the internal Membrane, gradually relieving the Symptoms; or by a *Metaſtaſis*.

Or if the Diſeaſe ſhould not be ſo violent, eſpecially when the Neck of the Bladder is the Part affected, it may proceed to Suppuration, moſt of the Symptoms going off; uncertain Rigours and Coldneſs taking Place; and a difficulty in making Water, or a total Retention, with a conſtant Irritation to its Evacuation, or a *Teneſmus*, with a Senſe of Weight, (as the Abceſs occupies the Neck or *Fundus*,) remaining till the *Pus* is Evacuated.

The Matter may make its way into the Bladder, & come away with the Urine, leaving an Ulcer there; or into the cellular Membrane, and from thence externally by the *Perinæum*, after deſtroying the circumjacent Parts in its Paſſage, and producing a *Sinous* Ulcer; or it may get through the *Peritoneum* into the *Abdomen*, when it generally brings on fatal Symptoms. The Ulcers in the Bladder and *Perinæum*, are of difficult Cure.

Diſtinctions.

It ſhould be diſtuinguiſhed from Inflammations of the circumjacent Parts, and from Retention of Urine produced by other Cauſes.

Cure.

It is to be cured by the common Means of Reſolution in internal Inflammations; as Bleeding, Relaxants, &c.

Theſe are to be employed immediately on the Appearance of the Diſeaſe, and proſecuted with Vigour or it will ſoon be fatal. There ſhould be added gentle Laxatives, or Glyſters to keep the Belly open, eſpecial-

ly the firſt, as Glyſters by preſſing on the Bladder, when a Part near the *Rectum* is inflamed, may be detrimental, and ſhould therefore, only be uſed when there are indurated *Fæces*.

(N° 9.) but in ſmaller Quantity is proper in this Caſe, otherwiſe (N° 8) may be exhibited twice a Day, or oftner, as there may be Occaſion.

If there ſhould be External Symptoms, Fomentations and Poultices are to be applied, taking Care that they do no Hurt by their Preſſure, and that the Cloaths or Herbs, be not too moiſt, leſt the Water ſhould run upon the Linen and Bed Cloaths.

(N° 33) ℞ Flor. Cham. Manip. ij.
Folior. Rut. vel. Matricar. Manip. j.
Capit. Papaver. Alb. ſem. dempt. ℥j
Rad. Alth. recent. ℥j
Optime contundantur et coquantur in Aq; Font. q. ſ. per Minut. v. Decocto Utatur pro fotu et Herb. Coct. pro cataplaſmate addend. unguent. ſimpl. ℥ij.

If there ſhould be none, the Skin of the Belly, and *Perinæum*, is to be rubbed with N° 22, which is preferable to Bliſters, on Account of the Inconvenience of their Application.

The Drink ſhould be mucilaginous Decoctions; and, if the Urine be retained from a Stricture in the Neck of the Bladder, only in ſmall Quantities.

In this Caſe too, it is neceſſary to evacuate the Urine by Art, to avoid Gangrene and Mortification, but this ſhould be done with great Caution.

If notwithſtanding the uſe of theſe Remedies, and after ſufficient Evacuation, a ſpaſmodic Contraction, and Pain ſhould continue; Opiates, as in Inflammations of the Inteſtines, may ſometimes be uſeful.

If the Bladder ſuppurate the *Pus* is to be evacuated as ſoon as poſſible, and the Remedies already recommended in Ulcers of the Kidneys, are to be employed.

The INFLAMMATION of the WOMB.

Cauſes. IT ariſes from the common Cauſes of internal Inflammations, Tearing, Bruiſes, external *Stimuli* and Obſtructions of the *Menſtrua*, or *Lochia*.

It happens frequently after Abortions, and Child Birth, eſpecially when the *Lochia* are prevented from coming on, or are ſtopt by Cold, or any other Cauſe, and is then attended with Symptoms different from thoſe, which appear when an *Uterus* not lately impregnated, is inflamed.

Symptoms and Progreſs. In the firſt Caſe there is a Pain at the Bottom of the Belly, more diſtended, and for the moſt Part, neither throbbing, nor conſtantly very acute; the Pulſe is frequent, eſpecially after Child-Birth, often ſmall, ſometimes irregular, and in Strong Habits, and after early Abortions hard; the Patient is affected with *Delirium*, *Subſultus Tendinum*, and the other Symptoms of Irritation; the Womb gangrenes, and mortifies, & the Patient ſinks. In the ſecond the Pain is more conſtant, bounded, and throbbing, the Pulſe Hard, Full, and Strong, with the other Symptoms of *General Inflammation*; or if the Diſeaſe riſes to a greater Height, it is ſmall, and very frequent, with the other Symptoms of Irritation; Suppuration is alſo more liable to happen: in both, as different Parts of the Womb are affected, there is Strangury; or Suppreſſion of Urine; or *Teneſmus*, and Pain in going to Stool; or Pain in moving the lower Extremities; or Swelling with Heat, to be felt upon introducing the Finger into the *Vagina*, the *Os Tincæ* being ſhut: Univerſal Reſtleſſneſs, thick Urine, Pain from external Preſſure take Place; and, if it ſhould happen in an impregnated *Uterus*, an Abortion follows.

It may

It may be naturally cured by the *Menſtrua*, or *Lochia*, breaking out plentifully; or after Child-Birth, or Abortion, by the Patients falling into a conſtant, equal, gentle, long continued Sweat. Or it may terminate in Gangrene and Mortification, with the uſual Symptoms of Internal ones, and kill.

Or it may Suppurate, with the common Symptoms, and the Abceſs formed may break into the Cavity of the *Uterus*, Bladder, *Rectum*, externally by the *Perineum*, or into the Cavity of the *Abdomen*.

In this laſt Caſe it is fatal, and in the others, leaves Ulcers difficult of Cure.

Or it may be cured by *Metaſtaſis*.

Or it may leave a *Scirrhus* behind.

Inflammation of the Womb in delicate, or weak Women, after Child-Birth, where there is no Hardneſs, but great frequency of the Pulſe, is for the moſt Part fatal. The only Remedies we can employ in this Caſe, are the keeping the Patient in Bed, moderately warm, exciting if poſſible a gentle, conſtant Sweat, by *farinacious* Decoctions in ſmall Quantities at a Time, but frequently repeated; and applying Antiſpaſmodic Fomentations, and Poultices, (as N° 33) to the lower Region of the Belly, and external Parts of Generation; Bleeding encreaſes the Weakneſs without diminiſhing the Inflammation: Relaxants produce great Sweating or Purging, without Relief; and all very conſiderable Evacuations are hurtful. The Belly not having hitherto been rubbed with Stimulants and Antiſpaſmodics, it is worth while to try them, and (N° 22) may be uſed: But Bliſters, beſides the Inconveniency *Cure.*

conveniency of their Application, are apt to render the Pulſe more frequent. In Abortions, and Labours where the Patient has not been ſo much weakened, when the Pulſe is hard and not very frequent, it is uſeful to take away Blood, but this Evacuation cannot in general be often repeated with Advantage; and therefore the Cure is afterwards to be committed to Relaxants (N° 4) and antiſpaſmodic Fomentations and Poultices, (N° 33) taking Care that the firſt produce no purging, and keeping the Patient in Bed, moderately warm. When the *Lochia* have ſtopped, ſtimulating *Emenagogues* have ſometimes been uſed, in many Caſes with manifeſt diſadvantage, and ſeldom with good effect.

If the Pain continue in theſe Caſes, notwithſtanding the above Treatment, Opiates may ſometimes be given with Succeſs, as in Inflammations of the Inteſtines.

When the Inflammation attacks a Womb not lately impregnated, the common Remedies uſed in internal Inflammations are to be employed, according as the Diſeaſe is attended with *Inflammatory Diatheſis*, or the Symptoms of Irritation.

We are always to guard againſt Preſſure on the Part affected, whither that Preſſure be external, or ariſe from Urine contained in the Bladder, or from *Fæces* in the *Rectum*; In the ſecond Caſe by the Catheter, and in the third by Glyſters, which after Labours, where the Patient is weak, ſhould conſiſt almoſt ſolely of watery Fluids.

The Food, when the Patient is much reduced after Labours, muſt be Animal Broths; otherwiſe *farinaceous* Decoctions.

If the

If the *Uterus* ſhould ſuppurate, we are to endeavour to procure an Exit to the *Pus* as ſoon as poſſible; which however can hardly be done, except when it points in the *Perinæum*, where Poultices of Bread, Milk and Oil, are in this Caſe to be applied; and as ſoon as any Fluctuation is felt, the Abceſs is to be opened.

N. B. Inflammations alſo ſometimes ariſe in the other Abdominal *Viſcera*; but, being attended with Symptoms ſimilar to thoſe already treated of, excepting for the Situation requiring a ſimilar Treatment, and happening but ſeldom, they are not here enumerated.

The

The CATARRH.

IT is an Inflammation of, or greater Secretion from the Mucous Membrane of the Noſe, Eyes, Throat, Mouth, or Lungs, and properly ſhould be divided into different Diſeaſes.

Cauſes.

It ariſes generally from Cold, ſometimes from the Paſſions of the Mind, perhaps alſo from *Stimuli.*

The Effects of Cold on the Body.

The Effects of Cold, according to it's different Application are various, *viz.*

When the Skin is expoſed to it gradually, and not to ſuch a Degree, as to kill by it's ſedative Power, it produces a Contraction of the External Veſſels, an Increaſe of the Internal Circulation, and Secretions, and checks the cutaneous Perſpiration, but for the moſt Part no Diſeaſe enſues; on the Contrary, greater Strength of the whole Habit: Sometimes however, Scaley Eruptions on the Skin; troubleſome Ulcers in the Extremities; difficulty of Breathing with Cough, and a great Secretion of Mucus in the Lungs, where they have been weakened by frequent or long Catarrhs, eſpecially where the Cheſt is narrow; and in very irritable Parts, (as the Skin in Children) Eriſepelatous Inflammations, enſue.

When the Change from Heat to Cold is ſudden, it is often followed by Rheumatiſms, Catarrhs, Diarrhæas, & Dyſenterys, Inflammations, particularly Internal ones, Fevers, &c. and frequently ſuch Changes are attended with no bad Conſequences.

Cold has ſometimes theſe Effects, when applyed for a few Minutes; at other Times it fails, unleſs it be continued longer.

The

The Danger is often as great, and ſometimes even greater, when a Part only of the Body is cooled.

It is not the abſolute, but relative Degree of Cold, that brings on theſe Diſeaſes; for whatever the preſent Heat be, a ſudden Diminution is dangerous, and more ſo when the Thermometer is high; and *Cæteris paribus*, the greater the Change, the greater the Effect.

More People are affected by it in Spring, and Autumn, than in Winter, or Summer, on account of the greater Difference, at theſe Seaſons, of the Temperature of the Air, in the Day and Night, in Places expoſed to the Sun, or in the Shade, and in Subſtances, more or leſs compacted.

Cold may be communicated by the Air, or any ſolid, or fluid Matter, or it may be generated on the Surface of the Body; but it does not act, in all Caſes with equal Power.

The more readily any Subſtance communicates it's Heat the greater are it's Effects, and *e contra*: Hence cold Metals, Stones, and moiſt Cloaths, eſpecially of a firm Texture &c. are dangerous.

The Vapours ſurrounding the Body, defend it from the External Atmoſphere; hence Cold Air in Streams, does more Miſchief, than when at Reſt.

Cold is generated.

(1) By Evaporation; hence Moiſture on the Skin, and Cloaths, is extremely hurtful, and eſpecially when the Water is pure; as ſome Subſtances united with it, Neutral Salts for example in Sea Water, diminiſh it's Volatility, and conſequently it's bad Effects; and others as eſſential Oils, ſtimulate and counteract it.

(2) By the Solution of Water in Air; hence Winds that have paſſed over large Continents, or high Hills, having but little Water Chemically combined, diſſolve readily the Matter of the Inſenſible Perſpiration, and any Moiſture that may be on the Skin, and are apt to produce Diſeaſes; neither are People thoroughly defended from this Air in Houſes, eſpecially thoſe who have been much affected with Rheumatic Pains; hence alſo if Water be Mechanically mixed with Air (which in this Caſe is commonly ſaid to be moiſt,) the Heat of the Body makes a Solution take Place immediately upon it's Surface, which again generates Cold, an Atmoſphere therefore containing it in this State is alſo dangerous.

Air Chemically dry, blown over any moiſt Place, diſſolves the Water, and becomes Cold; hence the Eaſt Wind here, and ſimilar ones in other Countries are by much the coldeſt.

Air into which Water has juſt evaporated, (as for example in a Chamber of which the Floor or Walls are moiſt) is cooled both by the Solution and Evaporation of the Water, and alſo by the Solution of it on the Surface of the Body, and is from theſe Circumſtances extremely apt to bring on Diſeaſes.

An equal Expoſure to Cold affects ſome Perſons much more than others, and the ſame Man at one Time more than at another.

Thoſe of more irritable Habits are more ſubject to be injured by it; hence if any one has been ſurrounded by warm Bodies for a conſiderable Time, as in warm Climates in the Summer, eſpecially when long or very warm in Bed, or where cover'd every where with warm Cloaths, &c. Diſeaſes, and thoſe of the worſt kinds,

kinds, as Fevers and Dyſentery, are very apt to ariſe, even from ſlight Applications of Cold.

If the Circulation be greatly increaſed in the external Parts, and the Cauſe of this Encreaſe have ceaſed and Cold be applied, it is ſeldom that a Man eſcapes; and if any cold Fluid, eſpecially without Stimulus, be taken into the Stomach, it has the ſame Effect, as if it were applied to the Skin: Hence drinking cold Water, or bathing after being heated with Exerciſe but now at reſt, or any other Expoſure to Cold, in the ſame Circumſtances, or going from a Room heated to a great Degree, into the open Air &c. is extremely dangerous.

A Man runs a great riſk of catching Cold, when the Powers of Circulation are weak; as after Evacuations, when the Stomach is empty, when the Strength has been reduced by Diſeaſe, &c.

Thoſe un-accuſtomed to Changes in the Temperature of the Air, and thoſe in whom Cold hath already produced Diſeaſes, are more liable to be affected.

Expoſure of a Part of the Body un-accuſtomed to Cold, is very apt to do Hurt.

Coldneſs acts more powerfully when joined with Anxiety, Fear, and the other Paſſions of the Mind, in which the Force of the Circulation is diminiſhed, or the external Veſſels contracted; and alſo with putrid Vapour, or Air partly unfit for Reſpiration.

Cold contracts the external Veſſels, throws a greater Quantity of Blood on the internal, and obſtructs the cuticular Perſpiration; but its Effects are not in proportion to the Contraction, or Obſtruction, but to the Quickneſs of the change of the Circulation, the Irratibility of the Habit and Univerſallity of the Contraction.

We may prevent it from having any bad Effect by avoiding or counteracting it.

It may be avoided, by covering the Body with Cloaths of a looſe Texture, as Flannels, Callicoes, *&c.* and wearing them next the Skin, where there is great Danger, and by taking Care not to expoſe it, in thoſe Circumſtances where Cold is moſt liable to affect it.

It may be counteracted

(1) By encreaſing the Force of the Circulation by Stimulants, as Wine, *&c.* or Exerciſe; hence when actuated by any of thoſe Paſſions which increaſe the Circulation, as Courage, Enthuſiaſm, *&c.* any Degree of Cold almoſt can be born without Detriment.

(2) By ſtrengthening the Syſtem.

(3) By diminiſhing the Irritabillity by Opium, Bark, living in a colder Atmoſphere, *&c.*

(4) By gradually accuſtoming the Body to bear changes from Heat to Cold, which ought never to be ſuch as will bring on any Diſeaſe.

Predisponent Cauſes of the Catarrh.

CATARRHS are apter to ariſe from Cold in the Spring and Winter in variable and cold Climates, and in variable Weather; and they happen more readily to People who have narrow Cheſts or long Necks, or ſuch as have formerly been affected with them, eſpecially if Tubercles are left in the Lungs; or to thoſe of lax Habits, or whoſe Parents were ſubject to this Diſeaſe.

Symptoms

Sometimes the inflammatory Symptoms preceed the encreaſed Secretion, in which Caſe it has been called a *Hot Catarrh;* ſometimes the Secretion of the *Mucus* is encreaſed at the Beginning, the Inflammation coming on afterwards, but ſeldom in ſo great a Degree; when it is ſaid to be a *Cold Catarrh.*

In

In the firſt Caſe the Symptoms, according as the different Parts are affected, are

A Redneſs, Heat, Soreneſs and Senſe of Diſtention in the Eyes and Eye-Lids, there being at the ſame time a great Secretion of Tears, and watery *Mucus*, containing neutral Salts, which running down the Cheeks ſometimes ſtimulates and inflames them. When the Noſe is affected, there is a Senſe of ſtuffing and ſwelling in the Noſtrils, an Alteration of the Voice, a Loſs, of Smell; and if the Inflammation runs high, there is ſecreted a thin *Mucus* which produces Heat, Soreneſs in the Noſtrils, Sneezing, and ſometimes Inflammation with Excoriation of the upper Lip; or falling backwards into the Throat, *Trachea*, or Lungs inflames them. Theſe are now and then attended by a ſwelling of the Noſe, or of the whole Face, with a Degree of Langour and Stupor, and a Deafneſs, Soreneſs of the Ears, and Running from them. When the Throat is the Part diſeaſed, the Tonſils and other Parts are Red, Sore, and hot; accompanied with a Secretion of watery Mucus, which Stimulates and occaſions a conſtant troubleſome tickling Cough, ſometimes the whole Mouth is Sore; there are little Excoriations of the Tongue, and a conſtant flow of Saliva, with Soreneſs of the Salivary Glands, and the Lips are inflamed and excoriated. When the *Larynx* or *Trachea* are affected, a Soreneſs is felt in them, attended with Hoarſneſs, and for the moſt Part with a troubleſome tickling Cough. In the Lungs this Diſeaſe produces a Soreneſs, Tightneſs, and Senſe of Stuffing in the Breaſt, with difficulty of Breathing, and violent Cough, with which either nothing, or only a watery Mucus is at firſt ſpit up, and which produces Soreneſs under the *Sternum*, and in the Sides, and ſometimes Head-Ach, Sickneſs, and Reaching.

Sometimes

Sometimes all theſe Parts are affected at once, but frequently one only at firſt, the Diſeaſe ſpreading from thence to the others.

It is attended with more or leſs of General Inflammation, according to the Strength of the Patient, or Violence of the Diſeaſe, the natural Evening *Paroxyſm* of Fever is alſo encreaſed, and with it all the Symptoms; and this together with the Cough, often deprives the Patient of Sleep, eſpecially in the fore-part of the Night, going off in the Morning with a gentle Moiſture on the Skin.

In Weak or Scorbutic Habits (as they have been called) the Pulſe becomes frequent, but not often hard; the Appetite is loſt; and their is great encreaſe of the Evening *Paroxyſm* of Fever, and ſometimes the Diſeaſe is preceeded by or accompanied with a Fever.

In the Cold Catarrh, the Secretion of the Mucus comes on Firſt, there is therefore a Running from the Noſe; but the Matter is not Watery, but Viſcid, tho Thin, & not very Stimulating, or the ſame kind of Mucus, in the Throat produces a Cough, by which it is thrown off, and ſometimes *Nauſea*, or in the Lungs a Cough with Spitting, (which is much more conſiderable after Sleeping) but no great Soreneſs, or Senſe of Stuffing. Theſe are followed in a Day or two by the Inflammatory Symptoms, but not in a great Degree; nor is the whole Syſtem often much affected.

There are in this Diſeaſe all the Varieties imaginable, from the moſt partial, to the moſt univerſal, from the ſlighteſt to the moſt Violent, from the moſt Inflammatory to the leaſt Inflammatory, from the whole Syſtem being not at all, to it's being very much affected, accord-

ing

ing to the Cauſe producing the Diſtemper or the Habit of the Patient.

The Symptoms already enumerated, are followed by a Secretion of Mucus in greater Quantity, becoming viſcid, if it was not ſo at the Beginning, and loſing it's *Stimulus*; & if the Inflammation is great, ſometimes growing White or Yellow, and being now and then tinged with Blood; as this goes on, or as the other Symptoms gradually abate, the Secretion diminiſhing, and the Mucus returning to its natural Colour and Conſiſtence, till the Diſeaſe is cured.

When the Patient is in a Cold Atmoſphere, the Cough is for the moſt Part more troubleſome; the other Symptoms alſo are prevented from being carried off, and the Diſeaſe is prolonged; and if he is ſuddenly expoſed, a freſh Exacerbation enſues, and it runs through the ſame Courſe: By either of theſe it may be continued during the Winter, and going off in the Summer, recur upon the Return of the Cold Weather, and from the ſlighteſt Cauſe becomes habitual, and now and then the Secretion is ſo conſiderable, that it greatly weakens, and ſometimes cuts him off.

If the Inflammation be great, it ſometimes runs deeper than the Mucus Membrane, and *Angina* or *Peripneumony* come on; and if there be Inflammatory *Diatheſis*, and the Cough be very violent, a pleuriſy may be produced.

Or an *Hæmoptoe* may ariſe (vid. Pulmonary Conſumption.)

Or an Excoriation, and Exulceration of the Lungs; and of Conſequence Pulmonary Conſumption, may take place, eſpecially where there are Tubercles.

Or it may be cured by *Metaſtaſis*, eſpecially by Eruptions about the Mouth.

It is much apter to terminate ill, in thoſe naturally diſpoſed to be affected; and when cured it often leaves Adheſions of the Lungs to the *Pleura* or *Tubercles*.

Diſtinctions It is to be diſtinguiſhed from *Angina*, *Peripneumony*, the ulcerous Sore Throat, Veneral, and other Exulcerations in the Throat, Pulmonary Conſumption, hooping Cough, *Aſthma* and other Difficulties of Breathing, and Inflammation of the Mucous Membrane preceeding or accompanying the Small Pox or Meaſles.

Cure The Cure is performed, firſt by weakening the Syſtem, by Evacuation according to the General Inflammation, or the Strength of the Patient.

If therefore there ſhould be conſiderable Inflammatory *Diatheſis* and eſpecially, if the Breaſt be the Part affected, we are to Bleed to ℥ xii vel xvi, & repeat the Operation if the Hardneſs of the Pulſe &c. continue; but if the Inflammatory Symptoms be not great, and do not affect the whole Habit, it is unneceſſary, and when the Patient is weak, and the Secretion thin, and in great Quantity, it is even ſometimes hurtful.

Purging alſo diminiſhes the Inflammation, and may be alſo uſed when the Secretion is too great.

(N°34) ℞ Tamarind. ℥iij.
coque in Aq. Font. ℥vj per v Minutos
colatur. adde
Sal. Cathart. Glaub. ℥vj. ad x.
vel Pollychreſt. Rupell. ℥iiij ad vj.
Mann.——————℥ſs
Træ Senn. ℥iij.
ft Potio Purgans capt. mane ij vicibus, Intervallo Horæ ſs.

When the *Inflammatory Diatheſis* is not very conſiderable, or where it has been diminiſhed by bleeding, after the Purgative in the Evening, an Opiate may be uſed.

(N° 35,) ℞ Aq. Cinam. Ten. ℥jſs.
Aq. Cinnam. Spir. ʒiij.
Syr. Diacod. —— ℥ſs ad. ℥j.
Tart. Emet. gr. — ½ ad gr. ſs.
Ft. Hauſt. capt. H. S.

If the Inflammatory Symptoms ſhould continue, or the Secretion be ſtill too great, the Purgative, and when proper, the Opiate, may be repeated after a Day's Interval.

2dly, By taking off the Inflammation when it occupies the Breaſt, eſpecially if there be any acute Pain, by Bliſters applied as near to the Part principally affected as poſſible; or when the Throat is ſore, or there is Hoarſeneſs, by uſing (N° 22.)

(3dly) By promoting the Secretion, where it is not ſufficient, (vid. the *Peripneumony* and *Angina.)*

(4thly) By giving Mucilaginous Medicines to cover the Mucous Membrane, and allay the Cough.

(N° 36,) ℞ Sem. Lin. ℥ſs.
Aq. Font. Bull. ℥iv.
Infundſimul per Hor. dein adde
Aq. Font. Bull. ℥xx.
Syr. Limon. —— ℥ij.
Colaturæ bibat cyath. calid. frequenter.

(N° 37.) ℞ Aq. Puleg. ℥jſs
Sperm. Cœt. ʒſs
Vitell. Ov. Q. S.
Syr. Pect. ʒiij
Ft. hauſt. om: ivta Horâ ſumend, or (N°s 25, 30,) may be uſed.

When the Complaint is ſlight, theſe Mucilaginous Medicines are often ſufficient for the Cure.

(5thly) By reſtoring the Circulation to the Skin by Relaxants (N^os 4, 13,) which are uſeful in all Caſes, and where the Inflammatory Symptoms are much diminiſhed, or have not come on, Opiates are added to them with Advantage.

(N° 38,) ℞ Extract. Thebaic. gr. ij
Amygd: Decort: gr. x
Tart: Emet. gr. ij
Ft: Pill: vj capt. j^nam ter indies.

When the Inflammation is great, the Patient ſhould be confined to vegetable Farinaceous Food, and the Drink ſhould be Mucilaginous warm Infuſions, or Decoctions, acidulated; & he ought to be confined to a Room moderately warm; but in ſlighter Caſes this is not neceſſary.

Nothing contributes more to the Cure, than avoiding Expoſure to Cold, eſpecially in thoſe Circumſtances where it has the greateſt Effects on the Syſtem, and this Precaution is particularly neceſſary in thoſe naturally liable to the Diſeaſe, or where it hath continued long, or when there have been frequent Relapſes.

If it be drawn out to a great Length, and the Secretion hath weakened the Patient, ſtrengthening Remedies are to be employed, and riding on Horſeback in a pure dry Air is frequently of Service, but theſe are only to be practiſed when there is little or no Inflammation: Reſinous pectoral Medicines have ſometimes been given here alſo with Succeſs.

The

THE

ERISEPELATOUS SORE THROAT,

OR

SORE THROAT attended with ULCERS.

Prediſponent Cauſes.

IT is more frequent in the latter Part of the Autumn, than at any other Time of the Year, and it generally attacks Children, and People of lax Habits.

Cauſes.

It is often, but not always produced by Expoſure to Infectious Vapour; when it is not, it moſt probably ariſes from Cold, in Habits prediſpoſed to the Diſeaſe.

Symptoms and Progreſs.

It begins ſometimes with *Rigor* and *Horror* and Coldneſs, but theſe Symptoms, as well as thoſe affecting the whole Syſtem, during the Progreſs of it, ſeem rather to ariſe from Irritation than from a Regular Fever. The Symptoms of Inflammation in the Throat, are at firſt a fiery Redneſs, ſometimes without much Swelling, ſometimes with a pretty conſiderable but puffy One, which does not prevent the ſwallowing, or breathing in any great Degree, & is attended with a Stiffneſs of the Neck; this is ſoon followed by whitiſh Sloughs, not riſing above the Surface of the Membrane, often ſurrounded by a Redneſs, which according to the Diſeaſe is in all the Degrees from a very Florid Colour to almoſt a Black; the Sloughs change gradually to an Aſh Colour, and ſometimes to a Blackiſh one, giving an offenſive Smell to the Breath, ſpreading and running deeper till the Patient is cut off. In this Caſe, the Parts on Diſſection have rather the Appearance of Rottenneſs than of an animal putrid Maſs; or the Sloughs fall off, leaving Ulcers, which either fill up and Skin over, or are covered with

freſh Ones; ſometimes alſo the Patient recovers without any ſenſible Separation.

At the ſame Time if the Diſeaſe be violent, the Mucous Membrane of the other Parts of the Body is affected, and Sickneſs, Vomiting, and ſometimes Purging, come on at the Beginning; theſe generally leave the Patient in about 24 Hours, but if they continue, they add very much to the Danger: the Eyes are alſo Red and Watery, the Membrane of the Noſtrils is inflamed, a watery ſtimulating Fluid runs from it, and ſometimes Hemorhages enſue, which are often fatal if they ariſe in the third, or fourth Day, or afterwards: there are alſo Inſtances of the *Vagina's* being inflamed, and exulcerated, and of the *Menſtrua*'s coming on, although it be not their uſual Period. After a Day or two, the Skin of the Extremities and of the Throat externally, is often affected with Eriſepelatous Inflammation, and little Eruptions take place, relieving the Sickneſs, Purging and other Symptoms ariſing from the Mucous Membrane of the Inteſtines being diſeaſed.

Theſe are accompanied by Symptoms of Irritation, in a greater or leſs Degree according to the Diſeaſe; when ſevere, it moſtly begins with *Rigor* and *Horror*, Coldneſs followed by Heat, Frequency of the Pulſe, Reſtleſſneſs, Anxiety, Heavineſs of the Head, and Pain in the Forehead; to theſe ſucceed the Symptoms of the Inflammation, moſt of the others continuing; the Pulſe ſeldom becomes hard, full and ſtrong, but often exceſſively frequent and ſmall: the Evening Paroxyſm of Fever is very conſiderable, and is often attended by *Delirium*, even ſometimes the firſt Night after the Attack; in the Morning the Patient falls into a moderate Sweating, and is ſomewhat relieved, but the Symptoms in general

general encreaſing, he is in many Caſes carried off on the fourth or fifth Day, a remarkable Obſcurity of the Eyes coming on ſome Hours before his Death; otherwiſe the Throat begins gradually to put on a better Appearance, and all the Symptoms diminiſhing, he is cured. When the Diſeaſe is very ſlight, the Syſtem is hardly affected.

Diſtinctions.

It is to be diſtinguiſhed from the *Catarrh*, *Angina*, other Exulcerations, and *Aphthæ*.

Cure.

As this Inflammation ariſes in lax and irritable Habits, and is not accompanied with general Inflammation, but with the Symptons of Irritation; Evacuations, eſpecially by Bleeding or Purging, are not only uſeleſs but detrimental.

It is alſo to be obſerved in the Treatment, that for the moſt Part, the Sloughs, which are a Species of Gangrene, appear before any Medicines are applied.

At the beginning a gentle Emetic may be exhibited with Advantage, eſpecially if there be Vomiting and Purging.

(N° 39) ℞ Infuſ. Flor. Cham. ℥iv
Tart. Emet. —— gr: ſs ad gr. j
Solution. bibat calidam ſuperbibendo Infus. Flor. Cham.

The Patient is alſo to be kept in Bed moderately warm.

If the Purging continues, it is neceſſary to check it by Stimulants, or Opiates.

The Action of the Veſſels is to be kept up by Stimulants.

(N° 40) ℞ Aq; Cinnam. ten. ℥jſs
Aq; Nuc. Moſch. ʒij
Pulv. Contr. ſimpl. gr. viij ad ʒj
Syr. Limon. —— — ʒiij
m ft. Hauſt. om. tertiâ vel iv^ta Horâ ſumend.

And if the Ulcers be ſpreading faſt, the Bark in Decoction, to the Quantity of an Ounce, or even more, in 24 Hours, has been exhibited with Succeſs, taking Care in caſe the Anxiety and Reſtleſſneſs are encreaſed by it, to omit it.

Wine, as old Hock, may be given along with the Drink, which ought to be acidulated, if it does not produce a Purging.

The volatile Liniment may alſo be applied externally to the Throat with good Effect; and Bliſters have been ſometimes employed.

In the mean Time the Throat is to be waſhed with Acid, and Aſtringent Gargles; which may alſo be thrown in by a Syringe, when the Patient cannot uſe them himſelf.

(N° 41) ℞ Trⁱᵃ Roſar: ℥viij
Acid: Vitriol. gutt. x
Alumin. —— ʒſs
Trⁱᵃ Myrrhæ ʒj
m ft: Gargariſma utatur ſepius.

The Food may conſiſt of the Subſtances marked (Fevers Ind. 1ſt. *A. a. b. c.*)

The

THE

CHOLERA MORBUS,

DIARRHÆA and DYSSENTERY.

Definition

THOSE Purgings, which are attended with a Degree of Inflammation in the Inteſtines, are here to be treated of.

Cauſes

A Purging may be brought on by Purgatives, Acidity, or Putreſſency, of the Subſtances contained in the *Primæ Viæ*; too great a Quantity of Bile; *Pus* either from an Abceſs, or ſecreted from the Blood Veſſels; Laxity of the Glands of the Inteſtines; general Weakneſs; the Periſtaltic Motion of the Inteſtines, going on too quickly; and no Inflammation of the Mucous Membrane taking Place, it may go off without any bad Conſequences; or weaken thePatient, and cut him off, without terminating in Dyſſentery.

Thoſe who have been rendered weak, or irritable by a hot, or long continued Summer, or by living in a warm Climate, or in Putrid Vapour are peculiarly liable to this Diſeaſe.

It is produced by Cold, or Putrid Vapour, or ariſes as a partial Evacuation in Fever, or from a Purging from any Cauſe if it has either continued long, or happened in a Habit prediſpoſed; or it begins with Phlegmonous Inflammation of the Inteſtines.

Symptoms of the Cholera Morbus.

When the whole *Primæ Viæ* are conſiderably affected at the Beginning, Sickneſs, Pain, Flatulency, and Diſtention

tention of the Belly come on, and are accompanied by frequent Vomitings and painful Purging of Bile, and all the other Fluids ſecreted into the Inteſtines, together with the Symptoms of Irritation, *viz.* a frequent & ſometimes ſmall and unequal Pulſe, Heat, great Anxiety and Thirſt, and after ſometime Cold Sweats, and Spaſmodic Contractions of the Extremities; & the Patient ſinks ſometimes in twenty four Hours, and it is called the *Cholera Morbus.*

of the Diarrhæa. If on the other Hand the Diſeaſe be very ſlight, & not attended with much Inflammation, there is a copious Purging of all the Fluids ſecreted into the Inteſtines, with little Pain, Sickneſs, or even loſs of Appetite, or Alteration in the Pulſe, and if the Patient avoid freſh Expoſure to the Cauſes, theſe Symptoms leave him in two or three Days, the *Fæces* acquiring their former Conſiſtence, and the Evacuations becoming leſs frequent.

of the Dyſentery. If it be in a middle Degree, and does not take place as a partial Evacuation in Fever, it comes on with External Coldneſs, loſs of Appetite, and ſometimes Sickneſs and Vomiting; theſe are attended by Flatulency, frequent, copious, thin Evacuation of Bile, and all the other Fluids ſecreted into the Inteſtines; dryneſs of the Tongue and Thirſt, a frequent, but not a hard and full Pulſe, and there is generally at firſt but little Pain; in a Day or two however, the Stools begin to be leſs copious, become frothy, and are preceeded by conſiderable Pain, and no Bilious Matter or *Fæces* are evacuated, (excepting now and then,) but they become ſlimy, often ſtreaked, or mixed with Blood, and Fœtid; and there is the Appearance of Fat, and often hard Maſſes, and ſometimes Concretions of coagulable Lymph, reſembling the internal Coates of the Inteſtines, and it appears

from Diſſection, that the Diſeaſe has left the upper Part of them, and that it now occupies the *Colon*, *Rectum*, and the End of the *Ileon:* to theſe Symptoms are added *Teneſmus*, (that is, a frequent, but fruitleſs Attempt to Evacuation) & now and then a Soreneſs about the *Anus*, & an Appearance of *Pus* in the Stools: there is alſo in ſome Caſes Strangury; and in others *Aphthæ*, ſpreading through the whole inteſtinal Canal to the Throat, eſpecially after the Diſeaſe has continued ſome Time.

The Symptoms of Irritation, together with the Evacuation, ſometimes weaken and cut off the Patient in a Week or two, and that even when they were ſlight at the firſt; ſometimes again, they diminiſh, and the Diſeaſe runs out to a much greater Length; Swellings of the Belly, dropſical Symptoms, and thoſe commonly attending Weakneſs, coming on before his Death; but now and then the Purging gradually goes off, and he is naturally cured.

The lower Part of the *Colon*, and *Rectum*, alſo ſometimes gangrene, and mortify, the Pain is relieved, but the other Symptoms continue and encreaſe, the Matter evacuated becomes blackiſh, ichorous, and exceedingly fœtid, and Death ſoon follows.

Although the Diſeaſe at firſt hath nearly the Violence of the *Cholera Morbus*, it may end in a *Dyſentery*; which may alſo be brought on by Purgings ariſing from any Cauſe, the Stools growing frothy, and the other Symptoms following; in the firſt Caſe it is more acute, and ſoon terminates fatally; in the laſt it often runs out to a great Length, and ſometimes goes off.

When a *Dyſentery* comes on in the Spring, or in cold Climates, there is often a tendency to phlegmonous Inflammation, and it begins with an acute Pain in the

Belly, which is ſoon followed by a Purging, and attended with Hardneſs, Frequency, and Fullneſs of the Pulſe, and the other Symptoms of general Inflammation; theſe continue for ſome Days, and the Diſeaſe afterwards proceeds as before.

If it takes Place as a partial Evacuation in Fever, it is preceeded by the common Symptoms of Fever, generally thoſe of a violent one, (Vide P. 13.) the Purging coming on (as already deſcribed) in the firſt, ſecond, or third, and ſometimes on any other Day, and the Patient being exhauſted by both Diſeaſes, is ſoon carried off. Sometimes the Fever has the Appearance of an Intermittent, or Remittent, the Purging being more frequent in the Remiſſions, and either ſtopping or diminiſhing in the Exacerbations. Sometimes alſo the Fever is relieved, and if the Patient be not exhauſted, gradually goes off.

Diarrhæas often come on in the *Criſes* of Fevers, the Fever leaving the Patient, and the *Diarrhæa* ſtopping in a Day or two of itſelf; and ſometimes Purgings, without any Dyſenterick Symptoms, happening towards the End of Fever, weaken and kill the Patient.

Exulcerations have been found on Diſſection in the Inteſtines of thoſe who were long afflicted with the Diſeaſe, but only Inflammation in recent Caſes.

Prevention.

In the Autumn after hot or long Summers, and in warm Climates, care is to be taken to avoid Cold in thoſe Circumſtances in which it is moſt liable to affect the Syſtem; and in Camps, the Vapour from putrid *Fæces*; and if there be great Danger, the Bark may be uſed, (Vide N° 1.)

In

A moderate Uſe of four Fruits in warm Summers, and hot Climates, tends alſo to prevent the Diſeaſe.

Cure of the Cholera Morbus.

In the *Cholera Morbus*, if the Vomiting, Purging, and other Symptoms be very ſevere, Chicken Broth without Salt, Decoction of Barley, Solution of Gum Arabic, or any other mucilaginous Fluid, are to be drank plentifully, to prevent the Inflammation from being increaſed by the Efforts, or by the Neutral Salts in the Matter ſecreted, until the Patient be ſufficiently reduced to render the Exhibition of Opium ſafe. If they be not in ſo great a Degree, a ſmall Quantity of Emetic Tartar (gr. $\frac{1}{4}$ ad gr. ſs.) or ſome other Relaxant, may be given diſſolved in Part of the Liquor, and repeated in three or four Hours: Or if the Vomiting be not very troubleſome, from 20 to 30 grains of Rhubarb may be taken with Advantage, the Patient drinking ſome of the above-mentioned Liquors.

When the Strength is reduced by the Evacuation, and the *Primæ Viæ* cleared of Feculent Matter by this Treatment, the Vomiting and Purging are to be ſtopt by Opiates, (and N^{os} 3, 13.) may be uſed; but if the Patient ſhould be ſo much weakened by the Evacuation, and Irritation, before any Aſſiſtance is called in, as to be in Danger of ſinking, they are to be exhibited immediately. In both Caſes the Opiate is to be repeated in a ſmaller Doſe at ſix or eight Hours Interval, for two or three Times.

Of the Diarrhæa.

Diarrhæas when un-attended by Sickneſs, Fever, Irritation, or Pain, and when they have not continued long, only require the *Primæ Viæ* to be cleared by a Purgative encreaſing the periſtaltic Motion, ſuch as

(N° 42.) ℞ Aq; Menth. Vulg. ℥iſs
Aq; Nuc. Moſch. ℥iij
Pulv. Rhei — — ℈j ad ℥ſs
Syr. e Cort. Aur. ℥ij
m ft Hauſtus. Capt. ante Meridiem vel Hora Somni, and that the Patient ſhould uſe Food of eaſy Digeſtion, and avoid Expoſure to Cold.

If they be attended with any of the above Symptoms, or continue above two or three Days, they are to be treated in the ſame Manner as Dyſenteries.

Of the Dyſentery.

If in a Dyſentery the Pulſe be hard, full, and ſtrong, as it often is in cold Climates, in the Spring, and in ſtrong Habits, we ſhould endeavour firſt of all to take off theſe Inflammatory Symptoms by Bleeding, which ſometimes requires to be repeated; but where they are not preſent, as they ſeldom are in the Autumn, in warm Climates, or irritable Habits, this Evacuation is uſeleſs and frequently detrimental.

After the Bleeding, where it is proper, or otherwiſe without performing that Operation, the *Primæ Viæ* are to be cleared of both the Feculent Matters, and Fluids ſecreted into them; theſe as in all other Caſes of increaſed Secretion where the Glands are inflamed, being very apt to ſtimulate and putrefy.

When the Stomach is much affected, an Emetic is to be exhibited, and it ought to be managed in the ſame Manner as has been directed in Fevers, as we wiſh it here alſo to exert its Relaxing Power, and throw the Circulation on the Skin.

A Purgative is alſo to be given, and we ſhould chuſe thoſe which act principally by encreaſing the Periſtaltic Motion

Motion of the Inteſtines, as it is not a greater Secretion which is required, but an Evacuation of the Matters already contained. Although Rhubarb does not purge ſo copiouſly, yet as it clears the the *Primæ Viæ* better, it is preferable to moſt others. We rather chuſe therefore to continue to employ it with the older Phyſicians, than give it up as ſome late Practitioners have done, not conſidering the above Intention, nor the Progreſs of the Diſeaſe after its Operation, but merely the Copiouſneſs of the Evacuation. It may be given as in (N° 42.)

While the Diſeaſe continues it is to be repeated frequently for the ſame Purpoſe, and alſo to prevent any things being retained in the upper Part of the Inteſtines, where the Periſtaltic Motion is now going on too ſlowly.

After the Operation of the Purgative, we are to endeavour to throw the Circulation on the exterior Parts of the Body by Relaxants.

(N° 43) ℞ Pulv. Ipecac. gr. ij ad gr. v.
vel. ℞ Sacchar. Alb. gr. v.
Tartar. Emetic. gr. ¼ ad gr. ſs
ft. Pulv.
vel. ℞ Aq; Menth: Vulg: ʒiſs
Pollychreſt. Rupell. ϑij ad ʒi
Aq; Nuc. Moſch. ʒij
Syr. e Cort. Aur. ʒij
m ft Hauſt.
Capt. Omn. iv^ta horâ.

The Inteſtines are at the ſame Time to be defended by mucilaginous Medicines, and the Secretion checked by gentle Aſtringents.

(N°

(N° 44) ℞ Gum Arabic. ʒij
Solv. in Aq; Hord. ℔ij
adde
Syr. Limon —— ʒij
Bibat pro potu.

(N° 45) ℞ Aq; Font —— ℔ij
Corn. Cerv. Calc. et Prep. ʒij
Gum. Arab. —— —— ʒij
Coque ut Gum. Solvatur.
Bibat Poculum frequenter.

and if the *Teneſmus* be troubleſome, Mucilaginous Glyſters are to be exhibited, as (N° 27.)

It is alſo of conſiderable uſe to avoid as much as poſſible, any Attempt to go to Stool: and if there be Soreneſs about the Anus, it ſhould be rubbed with *Unguent Simplex*, or any other expreſſed Oil that is juſt fluid in the Heat of the Body.—Or if the other Symptoms are greatly diminiſhed, and this continues, an Opiate may be added to the Mucilage in the Glyſter.

Stimulants applied externally to the Belly, have been found uſeful in relieving the Pain.

(N° 46) ℞ Spt. Vin. Rectif. ʒviij
Ol. Menth. — ʒi
Sapon. Venet. ʒſs
Solve Ventr. applicentur lintea calida Linimento hocce madefacta ter quaterve indies.

At the ſame Time the Patient ſhould be kept in as pure Air as poſſible, providing that it be always moderately warm, and that he be not expoſed at any Time to Cold, eſpecially in thoſe Circumſtances in which it is moſt liable to affect the Syſtem.

The

The Food ought to conſiſt of Preparations of Farinaceous Vegetable Subſtances.

If notwithſtanding the Treatment already propoſed, the Purging ſhould go on, ſo that there is Danger to be apprehended from the Weakneſs, or Irritation, Aſtringents, and particularly Opium may be given along with the other Medicines, and from $\frac{1}{3}$ to half a Grain of it, may be taken every eight Hours: but when they are employed at the Beginning, eſpecially alone, they ſtop the Secretion, but leave the Inflammation, and Death enſues either from the Symptoms of Irritation, or now and then from Gangrene and Mortification of the Inteſtines.

If the Diſeaſe ſtill continues, and the Symptoms of Irritation are not very violent, the Opium is to be exhibited alone, or Spices are to be joined to it, or other Aſtringents may be employed, ſuch as,

(N° 47) ℞ Cort. Semaraubæ ℥ſs
Coque in Aq. Font. ℔ iſs ad ℔i Colaturæ Capt. ℥ij om. trihorio.

Vel ℞ Extract. Lign. Campeach. ʒij
ft Pill. xx capt. iij vel iv ſextâ quâque horâ.

Or Aſtringents, Spices, and Opium may be given together.

Or Opiates or Aſtringents may be added to the Mucilaginous Glyſters. But it is to be obſerved that it is the Secretion we wiſh to ſtop by theſe Aſtringents, and and not the Evacuation of the Matters already contained in the Inteſtines; for this Reaſon the Purgatives ought to be repeated, even during the uſe of them.

In recent Caſes we may expect the Cure to ſucceed quickly, but in thoſe of longer Continuance, a Perſeverance in the proper Remedies is neceſſary, eſpecially if the Inteſtines ſhould be exulcerated, and then indeed the Diſeaſe is frequently fatal.

A Dyſentery accompanying a Fever, is alſo very dangerous, as either Diſeaſe being cured, the other may continue, and as both together may ſoon weaken and kill; we are to endeavour to take off the Fever, by the Remedies already pointed out at the Beginning of a Violent one, and afterwards to treat the Diſeaſe as a ſimple Dyſentery, being more cautious in employing Aſtringents.

After the Purging is ſtopt, the Patient often becomes coſtive, and if he be ſuffered to continue in that State for two or three Days, he is apt to relapſe; the Belly is therefore to be opened by bitter Purgatives.

After the Diſeaſe is cured, the Bark may be employed to reſtore the Strength, and it is alſo ſometimes of uſe during the Purging when it has continued long, and the ordinary Symptoms of Weakneſs appear.

THE VENEREAL DISEASE.

ALTHOUGH it be not confined to the Mucous Membrane, yet as the principal Symptoms at the Beginning depend on Inflammation or Exulceration of this Part of the Body, it is to be treated of here.

It is always propagated by an Infection, which firſt made its Appearance in *Europe*, in *Spain*, and was carfrom thence to *Naples* in 1494, from which it ſpread almoſt inſtantaneouſly over *France*, *Germany*, *Great-Britain*, *&c.* *Cauſe.*

The Venereal Matter muſt be applied in a fluid State; 1ſt either to ſome Part of the Body where the Mucus is ſoft, as it is in the Parts of Generation, (which are generally firſt infected) or about the Nipples, Lips, *Anus*, *&c.* or 2dly to a Wound or Ulcer; or 3dly, it may paſs from a Mother to a Child, although commonly in this Caſe, it adheres to the Skin, in the Paſſage thorough the *Vagina.*

It almoſt always occaſions a Converſion of the *Mucus* of the Part, or of the Fluids of the Ulcer, or Wound, into a Matter ſimilar to itſelf; and when a ſufficient Quantity has been thus produced, it brings on an Inflammation in the Mucous Membrane or Glands, or in the Wound or Ulcer, and it is afterwards ſometimes abſorbed into the general Syſtem of Veſſels, but very ſeldom before; the firſt Symptoms therefore appear in the Part where the Infection was received.

When it is mixed with the ſoft *Mucus* it produces; Gonnorhæa.
1ſt, An Inflammation, and greater Secretion from

the Mucous Glands, when it is not often abſorbed into the general Syſtem, & the Diſeaſe is called a *Gonnorhæa.*

Lues Venerea

Or 2dly, One, or more little Eriſpelatous Inflammations, followed by ſmall Watery Puſtules, which break, and Ulcers called Chancres are formed, and it is commonly abſorbed in two or three Days, as it alſo generally is, when a Wound or Ulcer are at firſt infected, and ſometimes even in a *Gonnorhæa,* and always when a Child receives it from its Mother, and the Diſtemper is called the *Lues Venerea.*

The *Urethra* and *Vagina* are for the moſt Part affected with *Gonnorhæa,* and the *Glans,* Prepuce, *Labia Pudendi, Perineum, Anus,* Nipples, Lips, &c. with Chancres; although either may take Place in any of thoſe Parts.

Moſt People are infected by the Venereal Matter mixing with, and being retained in the *Mucus* of the *Urethra* or *Vagina,* or upon the *Glans, Prepuce,* or *Labia Pudendi,* from which it cannot be waſhed by the Urine, on Account of the Inſolubility of the *Mucus* in Water, and the Symptoms do not appear 'till after 24 Hours, nay ſometimes not 'till after three Weeks from the Time of receiving the Infection, but moſt commonly they ariſe in four, five, or ſix Days.

Gonnorhæa *from the* Urethra *in Men.*

A *Gonnorhæa* from the *Urethra* in a Man begins with an Uneaſineſs about the Parts of Generation, together with an appearance of a little whitiſh Matter, about the Orifice of the *Urethra,* and a little Swelling, and ſometimes Redneſs there, and a ſlight Pungency upon the Evacuation of Urine. The whitiſh Matter ſoon encreaſes in Quantity, the Inflammation about the End of the *Urethra* becomes more evident, and for the moſt

Part

Part there is now a Tenſion, and Hardneſs thorough the whole of it, a Swelling of the *Lacunæ*, and a ſenſation of Stricture in the *Penis*, particularly on Erection. The Matter ſtill increaſes, flows out, and grows thinner, loſes its Adheſiveneſs, and is of a yellow, or greeniſh Colour. There is now always a Redneſs about the End of the Canal, often a Pain from the Diſtention of the *Urethra* during the Evacuation of Urine, and a much ſeverer one towards the Orifice from its *Stimulus*, with an Increaſe of the Redneſs, juſt after it is evacuated. The Inflammation prevents the Extenſion of the *Urethra* in Erection, ſo that the *Penis* is at that Time curved downwards with great Pain, which is increaſed if it be raiſed towards the Belly, and the *Stimulus* occaſions it often to be erected, eſpecially when warm in Bed, and ſometimes prevents the Sleep, or awakens the Patient, and now and then produces Involuntary Emiſſions of the *Semen*.

Chordee.

Sometimes the Matter is very thin, or ſtreaked with Blood, all the Inflammatory Symptoms are more violent, and the Patient is affected with Strangury. The Prepuce alſo ſometimes is inflamed about the End, and cannot be drawn back, which is called *Phymoſis*; or being drawn behind the *Glans* cannot be returned, called a *Paraphymoſis*, when the Inflammation is increaſed by the Stricture, and now and then Gangrene and Mortification are produced; or the whole of it is affected with OEdematous Swelling alſo called *Phymoſis*. In all theſe Caſes Ulcers are apt to ariſe, eſpecially in the two laſt.

Hæmorhage.

Strangury.

Phymoſis

Paraphymoſis.

OEdematous Phymoſis.

Thus the Inflammation continues to increaſe, generally for about a Week or two; but it admits of a Natural Cure, for the *Mucus* waſhes off the Venereal Matter faſter

ter than it is formed, until at laſt the Infection is totally carried off. While this is taking Place, the Symptoms continue nearly the ſame for ſome Time; they afterwards begin gradually to decreaſe, the Erections are not ſo frequent, nor with ſo much Pain, there is not ſo much Inflammation, nor Pain from the Evacuation of Urine, the Matter becomes thicker, whiter, and adheſive, gradually diminiſhes in Quantity, becomes irregular often towards the laſt, pieces of Mucus having a fibrous Appearance being mixed with the Urine; at laſt the Running ceaſes, and the Inflammatory Symptoms, at the ſame Time gradually decreaſing, leave the Patient. Or the Infection being carried off, the Secretion continues but in a ſmaller Quantity, thicker and whiter, and with much leſs Inflammation for Months or ſometimes for Years, for moſt Part going off at laſt; or not being carried off, the Symptoms continue, although commonly with leſs Inflammation than at the Beginning. Or Exulcerations may be produced, the Matter abſorbed, and the *Lues Venerea* brought on, particularly when any freſh Cauſe of Inflammation is applied, when the Diſeaſe continues long, or the infected *Mucus* is ſuffered to remain between the *Glans*, and Prepuce. Or an Abſorption may ſometimes, although ſeldom happen without Exulceration, and be attended with the ſame Conſequence.

In Women. A *Gonnorhæa* from the *Vagina* and *Urethra* in Women, begins with a Heat, Itching, and Uneaſineſs about the Parts of Generation, followed by a Redneſs about the Orifice of the *Urethra* extending to the Mouth of the *Vagina*, a Running ſimilar to that already deſcribed, with Pain for the moſt Part upon the Evacuation of Urine, and alſo in ſitting when the Parts are preſſed upon, and in Walking

Walking, or upon the *Vagina*'s being diſtended. It has otherwiſe the ſame Progreſs and Terminations as in Men, except that the Symptoms are ſometimes increaſed after Menſtruation. But if the Diſeaſe affect the *Vagina* only, the Inflammatory Symptoms are often very triffling, or if they make their Appearance at the Beginning, go off, ſo that the Patient is hardly ſenſible of any other Inconvenience but the Running.

From External Parts.

A *Gonnorhæa* from any of the External Parts, very ſeldom happens, when it does, (as from the *Glans* for Inſtance,) it begins with Redneſs and Swelling, the Surface is ſometimes covered with a whitiſh Cruſt, ſimilar to *Apthæ*, and there is afterwards an ouzing of a Matter like that from the *Urethra*, the Inflammation at firſt increaſing; the Infection however is gradually waſhed off, and the Progreſs and Terminations are nearly the ſame as before deſcribed.

From the Eyes and Noſtrils.

Gonnorhæas may alſo ariſe in the Eyes, and Noſtrils, with Symptoms ſimilar to thoſe above-mentioned, except for the Part affected.

Strictures. In the Urethra *in Men.*

When a *Gonnorhæa* continues long, it ſometimes produces a Stricture in the Part, particularly in the *Urethra* in Men, ſo as to occaſion a Difficulty in the Evacuation of the Urine, often attended with great Pain; the Water flowing out in a ſmall Stream, or only by Drops: and now and then it alſo produces a Degree of Inflammation and a Diſpoſition to Contraction in the Bladder, and the *Urethra* alſo contracting, the Stoppage is increaſed; this generally goes off with a Secretion of *Mucus* from theſe Parts, but it may have the other Progreſſes and Terminations of an Inflammation of the Bladder; and often no ſuch Affection takes place, or if it does, goes off, and the Stoppage and Pain continues for Years. The

In the Urethra *in Women and* Vagina *& the Perpuce.*

A ſimilar Stricture takes Place in the *Urethra* in Women, but not near ſo frequently, and alſo in the End of the Prepuce, preventing it from being drawn back after all the other Symptoms are gone off, and in the *Vagina* preventing its Diſtention.

Phlegmonous Inflammation.

The neighbouring Parts particularly the Teſticles, Glands in the Groin, and ſometimes the *Perineum* are alſo ſubject to phlegmonous Inflammation from ſlight *Stimuli*, ſuch as Motion in Exerciſe, Preſſure, *&c.*

Inflammation in the Teſticles.

The Teſticle inflames with the common Symptoms of Swelling, Pain, Heat, Hardneſs, Redneſs, *&c.* the Running for the moſt Part at the ſame Time diminiſhing or ceaſing.

The Progreſs to Suppuration, Gangrene and Mortification and *Scirrhus*, is alſo the ſame as in other Inflammations of theſe Glands ; and it admits alſo of a natural Cure, for the Running begins to increaſe again, the Pain, Swelling, &c. decreaſe, and at length leave the Patient, the Swelling and Hardneſs often continuing for a conſiderable Time.

Bubos *without Infection.*

The Lymphatic Glands in the Groin likewiſe ſometimes inflame, even when there is no Abſorption of the Matter, but this Caſe can only be diſtinguiſhed from thoſe where there is by the Event, which is not to be waited for.

Inflammation of the Perineum.

The Inflammation of the *Perineum* is attended with the common Symptoms of that Diſeaſe.

Diſtinctions.

The Venereal *Gonnorhæa* ſhould be diſtinguiſhed from that in which there is no Infection; from the *Fluor Albus*, and other increaſed Secretions from the different Parts, ſubject to this Diſtemper; from Involuntary Emiſſions of the *Semen*; Ulcers in the Urinary Paſſages; and increaſed

creaſed Secretions from their Mucous *Membrane*, from a Stone or any other Cauſe.

Symptoms of the Lues Venerea.

When the *Lues Venerea* begins with a Chancre, there is at firſt a little Eriſipelatous Inflammation, with itching on the *Glans*, Prepuce, *Labia Pudendi*, *&c.* followed by one, or more ſmall Puſtules, filled with a tranſparent Fluid, becoming ſometimes white; theſe break, and a ſmall but ſpreading Ulcer is formed, ſometimes painful, generally inflamed, ſore, and unequal at the Bottom, often with hard, protuberant, aſh-coloured Edges, covered with whitiſh Sloughs, and of difficult Cure.

Chancres.

They ſhould be diſtinguiſhed from little Excoriations or Ulcers produced, either by rubbing the Parts; or by the Matter which ſometimes is accumulated about them, when they are not kept clean; or by the *Fluor Albus*, on the *Labia Pudendi*, or Thighs in Women, or on the *Glans* and Prepuce in Men: theſe when they ariſe from Coition appear immediately, and are of eaſy Cure, or go off of themſelves in a few Days.

Ulcer in the Urethra.

If the Diſeaſe begins with an Ulcer in the *Urethra* without *Gonnorhæa*, which it very ſeldom does, there is a Soreneſs, and Diſpoſition to the Evacuation of Urine, with Pain on its being evacuated, and an ouzing of a ſmall Quantity of a thin, watery Fluid; and ſometimes a *Gonnorhæa* follows.

Venereal Ulcers.

If an Ulcer or Wound are infected, they inflame, and ſpread with Soreneſs, or Pain, and Inequality of their ſurface; they are often covered with whitiſh Sloughs and have aſh-coloured Edges.

First Symptoms in Children. If Children receive the Infection from their Mothers, they now and then are born with Symptoms of the Diſeaſe, as Inflammations of the Skin, *Gonnorhæa*, &c. but for the moſt Part there is no Appearance for ſeveral Days, but, in about a Week, Eruptions with browniſh Scabs degenerating into Ulcers, ariſe about the Angles of the Mouth or other Parts of the Head, or over the whole Body.

Abſorption in Gonnorhaæ. It is not certainly known if there be at any Time an Abſorption in a *Gonnorhæa* without Exulceration, but ſometimes in long continued ones the infectious Matter gets into the Syſtem, perhaps from an Ulcer in the *Urethra*.

Inflammation of the Lymphatics. From the Ulcers, wherever they are, the Matter is abſorbed by the Lymphatics, and ſometimes, as it paſſes along, inflames them, and there is a Redneſs, Hardneſs, and Soreneſs in their Courſe to the firſt Lymphatic Glands; often however there is no Appearance of this kind.

Bubo. Whether there be or not, an Inflammation of the firſt Glands they paſs thorough, called a *Bubo*, is often produced, which as the Parts of Generation are moſt commonly firſt infected, is generally in the Groin, it begins with Soreneſs to the Touch, Hardneſs and Swelling of the Glands, theſe Symptoms increaſe and are attended with Pain, eſpecially on moving, Redneſs of the Skin, and the others common to Inflammation. It ſometimes terminates quickly in Suppuration, ſometimes like other Inflammations of Glands it ſuppurates very ſlowly, ſometimes terminates in ſchirroſity, very ſeldom in Gangrene; if it ſuppurates, when the Abceſs, formed from it breaks, or is opened, the Ulcer is generally

rally Venereal, I believe always ſo. The Ulcer is ſometimes dangerous from its Diſpoſition to ſpread and form Sinuſſes, and its Vicinity to large Veſſels, and it is generally cured with Difficulty.

It ſhould be diſtinguiſhed from other Inflammations of theſe Glands brought on by external *Stimuli*, as rubbing, *&c.* or by ſtimulating Fluids, as *Pus*, cancerous Matter, *&c.* paſſing thorough them; and from an Abceſs following Inflammations of the cellular Membrane below the *Pſoas* Muſcle, and from Ruptures.

Symptoms of the Matter in the Syſtem.

Whether a *Bubo* ariſes or not, the Matter continues its Courſe thorough the Lymphatics into the Blood Veſſels.

When the Venereal Matter gets into the Syſtem, it generally produces Inflammations and Ulcers in ſome Part of the Body, moſt commonly in the Mucous Membrane, or Skin; but ſometimes it may continue for many Years before it has any Effect; now and then it never makes its Appearance; and for moſt Part it has been abſorbed for ſometime before any Symptoms take Place.

If it be ſecreted in the Glands of the Mouth or Throat, it inflames the Membrane and occaſions Ulcers, attended with the common Symptoms of Exulceration in theſe Parts, ſuch as Hoarſeneſs, Pain and Difficulty in ſwallowing, *&c.* and ſimilar to the other Venereal ones already deſcribed; theſe Ulcers ſpreading the Bones become carious, and Openings are made from the Mouth to the Noſe, the Palate being deſtroyed; and the Noſe itſelf ſinks, its Cartilages and Bones alſo being eat away.

If ſecreted on the Skin it produces reddiſh, or purpliſh Spots; or an Eruption covered with browniſh Scabs, often degenerating into Venereal Ulcers, which, if they

happen in the Palms of the Hands, Soles of the Feet, or about the *Anus*, have often the Appearance of Fiſſures in the Scarf Skin, ouzing out a thin Matter with great Soreneſs and Pain.

If ſecreted in the Eyes, Inflammation and Exulceration ariſe there, with Loſs of Sight; if in the Ears the like Inflammatory Symptoms are brought on, (although ſeldomer,) with Deafneſs and *Caries* of their Bones.

Although the Parts of Generation were not the firſt infected, the Diſtemper ſometimes appears there and about the *Anus*, but not always.

Ulcers of the Lungs are now and then the Conſequence, and Pulmonary Conſumption. Sometimes too there is ſwelling of the Lymphatics and other Glands.

Or it affects the *Perioſtium* and Bones, and brings on Pains in them; eſpecially on the Body's being heated, and during the natural Evening Paroxyſm of Fever which they render more evident, going off with it in the Morning with Sweat; the *Perioſtium* ſwells, and becomes hard with an Appearance of ſwelling of the Bones, and ſometimes they do ſwell, at others become ſoft or carious.

Sometimes before the Matter gets into the Syſtem, or at any other Time of the Diſeaſe, Excreſcences ariſe on the *Glans*, Prepuce, *Labia Pudendi*, *Anus*, *&c.* either where there have been Ulcers, or without any previous Exulceration; they are of various Figures, are called Warts or by other Names, and are generally red and ſoft, ſometimes hard and callous, ſeldom painful.

Various other anomalous Symptoms are alſo brought on by the Infection or Irritation; but theſe if the Diſtemper

is

is not cured are at leaſt for the moſt Part prevented, from the general Knowledge of the Uſe of Mercury, and are not ſo often ſeen now, although the Infection has loſt none of its Virulence, as has been ſuppoſed.

There are Habits which will bear up againſt the Diſeaſe for many Years; whilſt, in others, the Appetite is loſt, the Pulſe rendered more frequent, the Evening Paroxyſm of Fever increaſed and continued thorough the Day Time, Dropſical Swellings of the Legs, ſwelling of the *Abdomen*, and other Symptoms of Weakneſs and Irritation come on, and the Patient ſinks.

Diſtinctions

Venereal Ulcers, Eruptions, Pains, *&c.* ſhould be diſtinguiſhed from thoſe ariſing from other Cauſes.

Prevention.

When the Infection is communicated by the Matter's being mixed with the Mucus of the *Urethra*, *Vagina*, *Glans*, Prepuce, *&c.* if no Running, Ulcer, or Puſtule have as yet appeared, it may waſhed off, and the Diſeaſe for the moſt Part prevented by

(N° 48) ℞ Cauſtic Com. Fort. Pharm. Lond. ʒj
Solv. in Aquæ Fountanæ —— ℔j
et cola per Chartam.

Some of the above Soluion is to be mixed by a little at a Time, with a Cup full of Water, till it be ſtrong enough to waſh the *Mucus* from the Mouth without giving much Pain. Fill a Syringe with this Liquor, and inject it into the *Urethra*, or *Vagina*, retaining it there for about a Minute; then add to the Remainder of the Liquor a Tea-ſpoonful of the Solution, and waſh the *Glans*, Prepuce, *Labia Pudendi*, *&c.* laſtly inject, and waſh with a little pure Water Milk warm.

Cure of the Gonnorhæa.

The *Gonnorhæa* may be cured

1ſt, By aſſiſting the natural Cure.

2dly, By Injections.

3dly, By Mercury alone: or the Succeſs of the two firſt Methods may be enſured by it.

The Natural Cure is aſſiſted,

1ſt, By diminiſhing the Inflammation by Bleeding if the Patient be Strong or Plethoric, the Pulſe Full and Hard, and the Chordee Frequent and Painfull; from ℥xij to ℥xx of Blood may be taken away, but the Operation ſeldom requires to be repeated, and the Frequency, and Pain of Erection are the only Symptoms we can hope to relieve by it, and that too in the Caſes now deſcribed, for (the Inflammation being kept up by the *Stimulus* of the Matter and the Urine) it either has no Effect in others, or is detrimental, eſpecially if the Habit be irritable.

2dly, By drinking plentifully of Mucilaginous Watery Fluids Acidulated (as N° 32 without the Sem. Petroſel.), to dilute the Urine and prevent its Neutral Salts from ſtimulating, and increaſing the Inflammation.

3dly, By the Application of Emolient Fomentations, and Poultices.

4thly, By injecting Oily or Mucilaginous Fluids into the *Urethra* or *Vagina*, and by rubbing them on the *Glans* Prepuce, *Labia Pudendi*, &c. as

(N° 49.) ℞ Sev. Ovil. curat: ℥i.
Ol. Olivar. —— ʒii. m
Liqueſcant leni calore Tempore Uſus.

5hlty,

5thly, By increaſing the Secretion a little by ſuch gentle Purgatives, as procure only two or three Evacuations a Day. Severe Purging often augments all the Inflammatory Symptoms, brings on Strangury and Exulcerations, gives occaſion to Inflammation of of the Teſticles, and other Neighbouring Parts; or it ſtops the Running before the Infection is waſhed off, and the *Gonnorhæa* either returns in a few Days, or Exulcerations take Place. Long continued Purging is apt to weaken the Stomach and Inteſtines, to hurt the Digeſtion, to produce obſtinate Gleets, and leave Hypochondriacal Symptoms, particularly in Irritable or Melancholick Habits.

6thly, By avoiding Exerciſe, Salt, Spices, and too much Animal Food, eſpecially at the Beginning, when there is a great deal of Inflammation.

If with the above Treatment the Inflammatory Symptoms diminiſh, the Running becomes thicker, and at the End of four or five Weeks leaves the Patient, there is then no Reaſon to ſuſpect the Syſtem to be infected.

If any of the Preparations of Mercury deſcribed below, be uſed with the above Remedies, their Effects are rendered more certain.

2dly, The Subſtances to be uſed in the Cure by Injections are

(N° 50) a. ℞ Aq. Font. ℥viij.
Gum. Arab. ʒvj.
Calomel 6ties ſublimati (Mercurii crudi ℥i. ſingulis Libris ſingulis Vicibus additâ) et in pulverem tenuiſſimum triti. ℥ſs. m.

(b) ℞

(b) ℞ Aq. Roſar. ʒi.
Merc. Subl. corros. gr. j.
ſolve
℞ Solution. præſcript, gtt xxx ad lx.
Aq. Roſar. ʒi. m

If this Injection be employed we are to begin with it weak, and gradually increaſe its Strength, ſo that the Patient ſuffer but little Pain after it is evacuated: a Piece of ſoft Linen Rag is to be kept between the *Glans* and Prepuce during its Uſe.

(c) ℞ Aq. Roſar. ʒij.
Sacchar. Saturn. gr. x ad xx.
ſolve

(d) ℞ Ol. Olivar. ʒij.
Mercurii, Saliva vel Mucilagine Gum.
Arab. extinct. ʒi ad ʒiij. m

Preparations of Copper, Zinc, and Vegetable Aſtringents have alſo been employed by ſome People.

A little of one of theſe Injections is to be thrown into the *Urethra* or *Vagina* at firſt four Times, afterwards three Times, and at laſt once in 24 Hours, and kept there for about a Minute.

The ſooner they are uſed the better.

No previous Treatment is required except Bleeding: (vide the firſt Method, in the Natural Cure.)

We ſhould always exhibit Mercury at the ſame time, in the Manner recommended in the *Lues Venerea*.

If a great Senſe of Stricture towards the Bulbous Part

of

of the *Urethra* ſhould be felt, or if the Running ſhould not ſtop in a Fortnight, notwithſtanding the Uſe of the Injection, it ſhould be left off; but the Mercury ſhould be continued, the Inflammatory Symptoms being kept off by the Bark: If the *Gonnorhæa* does not ſtop in a Fortnight more, Recourſe muſt be had to the Injection The Mercury is to be exhibited for a Week or two longer if the Symptoms do not go off in that Time. Bark may alſo be given at the Beginning, to the Quantity of an Ounce in 24 Hours for a Day or two, & afterwards to ʒiij; having firſt bled the Patient, if his Habit be Plethoric, or Pulſe hard. Should the Diſeaſe be carried off by the Injection in a few Days, it is nevertheleſs ſafer to perſiſt in the Uſe of the Mercury for a Month, but it is not always abſolutely neceſſary.

Omitting the Injection once or twice will often make it fail of curing when it would have otherwiſe produced that Effect.

The 1ſt, 2d, and 4th Remedies recomended in the Natural Method are to be uſed in this.

This Method for the moſt Part cures ſooner, with much leſs Pain, and with as great Safety, provided Mercury be uſed, as the former; and there is leſs Danger of Inflammation of the Teſticles, or the Glands of the Groin; or of Chancres or Strictures.

3dly, The Cure by Mercury is performed,

1ſt, By Bleeding, if the Patient be Plethoric.

2dly, By the 1ſt, 2d, 3d, 4th and 6th Remedies recommended in the Natural Method of Cure.

3dly, If at the Beginning, the Inflammation be troubleſome

bleſome an Ounce of Bark is to be given every 24 Hours, till it abates, and aftewards three Drachms.
4thly, Mercury is to be employed internally as in the *Lues Venerea.*

Cure of the Lues Venerea

When there is any Ulcer, or any Symptom of the Matter's having been abſorbed, the Patient cannot be cured with Safety and Certainty, unleſs Mercury be exhibited.

The Preparations of Mercury to be uſed are,

(N° 51.) ℞ Terebinth. Venet. ʒij
Mercur. Crud. — ʒj
Terantur ſimul quamdiu Guttula vel minima apparit, dein adde Unguent. ſimpl. ʒxiv.

Turpentine is here preſcribed, becauſe we are more certain of extinguiſhing the Mercury with it, than with any other Subſtance; although it is ſometimes apt to produce little Pimples on the Skin, which are however of no material Conſequence.

From one Drachm to three of this Ointment is to be rubbed thoroughly into the Thighs, Arms, or Legs, every other Night, begining, if a Salivation is not intended, with ʒj the firſt Time; and, if the Mouth is not at all affected, encreaſing it to ʒj ℈ij the Second; and gradually afterwards by gr. x at a Time as long as the Mouth will bear it. If it be, we begin with ʒij every other Night, and increaſe or diminiſh the Doſe, ſo that the Patient ſhall ſpit from ℔ij to ℔iv every 24 Hours.

(N° 52.) ℞ Mercur. crud. — ʒj
Terebinth. Venet. ʒiſs
Terantur ſimul quamdiu guttulla Mercurii aparit addendo Guttas aliquot Olei Terebinthini ſi opus ſit dein cum Q. S. Pulv. Glycir. Fiant Pillulæ LXXX Capt. j vel ij mane et Veſperi.

(q)

(b) ℞ Merc. calcinat. gr. j ad iij
Extract. Gentian. Q. S.
ft. Pill. capt. Veſp.

If either of the above Preparations, ſhould purge the Patient

(N° 53) ℞ Opii gr. $\frac{1}{3}$ ad gr. j
Tart emet. gr. $\frac{1}{3}$ ad gr. ſs
m ft. Pillula capt. mane et Veſper.

The Compounds of Mercury and Acids are much more uncertain Remedies than the above, and ought never to be uſed, unleſs the Patient be in a Situation where he runs the greateſt Riſque of catching Cold: when they are given, it may be in the following Form,

℞ Spt. Vin. dilut. (Angl. *Proof* dicti) ℥ſs
Merc. Sub. Coros. — — gr. ſs. ad gr. j
ſolve. Capt. mane et Veſper.

Whatever Preparation we employ, we ſhould give it in ſuch Manner, and in ſuch a Doſe, as to produce Hardneſs, Fulneſs, and moderate Frequency of the Pulſe, with as little ſenſible Evacuation as poſſible; for the Mercury cures ſooner, and with greater Certainty, when the Strength is but little, than when it is much reduced by it. Therefore, unleſs the Caſe be very urgent, we are to begin with ſmall Doſes at firſt, and afterwards gradually to increaſe them; giving Opium and Antimony, and now and then a ſmall Doſe of Rhubarb, if the Inteſtines are affected; and omitting the Medicine for two or three Days, if there be Symptoms of Salivation, till theſe be gone off.

The Symptoms of approaching Salivation, are a diſagreeable Taſte in the Mouth, and Soreneſs of the Gums or Salivary Glands.

The Ointment ſhould always be employed in bad Caſes, but in ſlighter ones, in *Gonorrhœas*, and where there is great Riſque of catching Cold, the Mercury may be uſed Internally.

It is never neceſſary to ſallivate a Patient, unleſs he be ſo irritable that the ſmalleſt Doſe of Mercury immeditely affects his Mouth, or unleſs the Diſeaſe be proceeding ſo faſt, that it would be Hazardous to wait till it was checked by the Remedy given in ſuch a Manner as to avoid Salivation; or excepting when we cannot truſt to his uſing it regularly. On the contrary, Salivation renders the Effects of the Medicine uncertain.

The Precautions neceſſary to avoid Salivation, are, 1ſt, exhibiting the Mercury as has juſt been deſcribed; 2dly, taking Care not to ſtimulate the Salivary Glands, either by rubbing the Skin over them, and keeping it too warm with Flannel, or by any Stimulus in the Mouth; 3dly, Avoiding ſudden Expoſure to Cold. It is to be obſerved, that the Patient is rendered irritable by the Uſe of the Mercury; hence Cold applied in the Circumſtances in which it is apt to produce Diſeaſes, (Vide the *Catarrh,)* brings on Salivation, Dyſentery, or Rheumatiſm; and the *Stimulus* of the Mercury being directed to the Salivary Glands, or Inteſtines, produces in them greater Inflammation, than that which takes place in a Salivation from Mercury alone, or in a Dyſentery from Cold alone. It is by no Means neceſſary however to confine him to a cloſe, warm Room, except in a Salivation; it is ſufficient if he wear Flannel or Cotton next his Skin, and carefully avoid a moiſt Atmoſphere, or Rain, and the Evening Air; on the contrary the Air of a cloſe Room often, nay ſometimes that of a large Town, prevents the healing of Venereal Ulcers, or even the Deſtruction of the infectious Matter by the Mercury, and the Patient cannot be cured, unleſs he be removed into a freer Air, or into the Country.

If notwithſtanding theſe Precautions, a Salivation ſhould

ſhould come on, we know of no Remedy which will remove it with any Degree of Certainty, although Sulphur, Camphire, and Purgatives, have been recommended for this Purpoſe; if therefore the Caſe be urgent, the beſt way is to let it go on, uſing the Mercurial Ointment as before deſcribed; and we ſhould confine the Patient to a Room where there are no Streams of Air, but which is not too warm; ſhould clothe him with Flannel, and give him Food of eaſy Digeſtion and good Nouriſhment. If the Symptoms are increaſing ſlowly, the Mercury ſhould be omitted till the Salivation goes off, and afterwards recurred to.

The Mercury whether we ſalivate or not, ſhould be continued four or five Weeks, even if the Symptoms ſhould leave the Patient before that Time.

It ſhould be continued till all the Symptoms are gone off, except

1ſt, When a *Gonorrhæa* remains with little Inflammation (Vide the *Gonorrhæa benigna)*

2dly, When the Patient is much reduced by it, and there are Ulcers which do not put on the Appearance of Healing. In this Caſe it is to be left off, and the Patient ſtrengthened, (Vide the Hyſterical Diſeaſe) and the common Means of curing Ulcers not Venereal, are to be employed; if theſe do not ſucceed, he is to return to the Uſe of the Mercury.

3dly, When Ulcers covered with fœtid Sloughs appear, and ſpread exceedingly faſt. In this Caſe Bark, and the other Remedies for Gangrene and Mortification, are to be made uſe of.

4thly, When only Rheumatic Pains remain, theſe often ariſing from the Mercury itſelf, are to be cured by Preparations of Antimony, and Sarſaperilla. If

If by the imprudent Uſe of Mercury, or Expoſure to Cold, a Salivation with great Inflammation of the Salivary Glands and Mouth is brought on, it is to be omitted, and the common Antiphlogiſtic Remedies uſed, till theſe Symptoms are carried off. If Dyſentery ſhould be brought on, we are to take away from ℥xij to ℥xvj of Blood, afterwards to give a Doſe of Rhubarb; laſtly to ſtop the Purging by (N° 53) leaving off the Mercury for a Day or two.

If Rheumatiſm is produced, it is to be treated in the Manner directed in that Diſeaſe.

If the Mercury ſhould occaſion General Inflammation to a Degree which may be dangerous, ℥xij ad ℥xvj of Blood are to be taken away.

If there be Venereal Ulcers of any kind, Bark may be given with Advantage along with the Mercury, to the Quantity of ℥ſs every 24 Hours; but we are to bleed firſt if the Patient be of an Inflammatory Habit, or Plethoric. The ſame Medicine may alſo be uſed in all Caſes where the Patient's Strength is reduced by the Mercury.

If there be Eruptions, or Pains in the Bones, Decoctions of Woods containing reſinous Subſtances, and Relaxants are of conſiderable Uſe.

(N° 53) ℞ Raſur. Lig. Guaiac. ℥iij
Coque in Aq. Font. ℔iv ad ℔i.
Colaturæ adde Tart. Emet gr ⅔ ad gr. iſs divid. in Partes iij. Capt. unam mane, alteram poſt pranſum, tertiam H. S. quotidie.

Guaiacum, Sarſaperilla, and ſome other Remedies, have

have ſometimes cured the Diſeaſe without Mercury, particularly in warm Climates, but they are never to be truſted to alone.

If the Patient be not ſalivated by the Mercury, he may uſe ſuch animal Food as is of eaſy Digeſtion, but he is to avoid Salt, Spices, and Wine.

The Treatment of particular Symptoms.

If there be an OEdematous *Phymoſis*, from ʒj to ʒiſs of Bark is to be given every 24 Hours, until the Inflammation abate, and afterwards ʒſs; Mercury likewiſe is always to be exhibited in this Caſe. *Phymoſis* from Stricture alone, frequently goes off with the other Symptoms. In every kind of *Phymoſis* Milk and Water is to be injected between the *Glans* and the Prepuce, three or four times a Day: and, if a very painful Ulcer ſhould be formed there, and ſhould not give way to Bark and Mercury, the Prepuce ſhould be ſlit open, or if that be not ſufficient, entirely cut off.

In the *Paraphymoſis* the Prepuce ſhould be cut, emollient Fomentations and Poultices applied, and the other Antiphlogiſtic Remedies employed: and Mercury is always to be exhibited.

Inflammation of the Teſticle is to be treated as any other external Phlegmonous Inflammation; the Teſticle is to be ſuſpended by proper Bandages; Fomentations and Poultices (N° 33) are to be applied: Purgatives as Evacuants are uſeful if they re-produce the *Gonorrhæa*; and ſtrong Vomits, where the Conſtitution will bear them, ſometimes, carry off the Inflammatory Symptoms immediately.

(No

(N° 54) ℞ Turpeth. Mineral. gr. iij ad v
Pulv. Glycyr. gr. xx m
Vel. Tart. Emet. gr. iij ad v
ft. Pulv. Emet. Capt. Veſper.
Superbibend. Aq. Calid.

When the Inflammatory Symptoms are gone off, Mercury ſhould always be uſed, and, if a Hardneſs remain, the Poultices are to be continued, and the Skin of the *Scrotum* rubbed with Volatile Liniment two or three Times a Day; and no other Means are to be uſed to ſtop the Running.

If a Stricture ſhould remain in the *Urethra*, and produce Inflammatory Symptoms, theſe are firſt to be taken off by the common Antiplogiſtic Remedies; after they are taken off, or where they are not preſent, the Stricture is to be removed by *Bougies*; and if the Infection has not been deſtroyed, Mercury is to be uſed. If after all theſe other Symptoms are gone off, the End of the Prepuce remain for ſeveral Weeks ſo contracted as to prevent Coition, it is to be cut open.

If Recent Chancres be the Symptoms of the *Lues Venerea*, they may often be cured by cutting off the Surface, or deſtroying it by Cauſtics, but the Mercury ſhould nevertheleſs be continued for a Month. The ſame External Applications are to be uſed to Venereal Ulcers, as to others of difficult Cure.

A *Bubo*, if it be juſt beginning, may ſometimes be prevented from Suppurating; 1ſt, By Bleeding when the Habit is Plethoric or Inflammatory. 2dly, By immediately rubbing as much Mercurial Ointment on the Patients Thighs as he can bear without Salivation; 3dly, By the Application of Fomentations and Poultices.

(N° 33) 4thly,

4thly, By the Application of Mercurial Plaiſters. 5thly, by *Sacharum Saturni* according to ſome Practitioners; but I am always afraid of any Salt of Lead when it lies long upon a Part.

If the *Bubo* be already large, with a good deal of Inflammation, it is better to promote its Suppuration by the Application of Poultices of Bread and Milk; and ſome Practitioners ſuppoſing that it prevents the Matters paſſing into the Syſtem, have thought, that it is better to do this always, but I think, as the Infection is now to be deſtroyed by Mercury, that it is better to prevent a Patient from ſuffering unneceſſary Pain. When the Suppuration is compleated the Skin covering the Abceſs, is to be altogether taken off either by the Knife or Cauſtic, and the Ulcer is to be treated as other Venereal ones.

If there be Excreſſences any where, the Infection is firſt to be got rid of by a long Courſe of Mercury, and, towards the End, they are to be cut off, and the Part below deſtroyed by Cauſtics, as far as it is of the Texture of the Excreſſence, and when the Sloughs have ſeparated, the Ulcer is to be treated as a common one.

Eruptions, and Pains in the Bones which cannot be cured by Mercury, *Antimony*, *Sarſaperilla*, or *Guaiacum*, ſometimes give way to the warm Bath.

GON-

THE

GONORRHÆA, BENIGNA, or GLEET,

IT is an increaſed Secretion from the Mucous Glands of the *Urethra* without Infection.

It may remain after the Venereal Matter has been deſtroyed or waſhed off in a Venereal *Gonorrhæa*, or it may ariſe from general Weakneſs, ſevere Purging, Exerciſe, frequent Coition, Cold, and Intoxication with Wine, and eſpecially in thoſe who have had long and frequent *Gonorrhæas*.

When it remains after the Infection has been carried off in a Venereal *Gonorrhæa*, the Running is commonly thicker, whiter, often adheſive, and incapable of communicating the Infection, the Inflammatory Symptoms are greatly diminiſhed, but they do not go off entirely. When it takes place from any other Cauſe, it begins with a Running nearly ſimilar to that in a Venereal *Gonorrhæa*, but generally leſs in Quantity, and is not attended with ſo much Inflammation, and is never Infectious. In both Caſes the Inflammatory Symptoms may, by Expoſure to any of the Cauſes, be increaſed to as great a Degree as when there is Infection, but they go off of themſelves in a few Days, and ſometimes the Running with them.

The Running ſometimes ceaſes of itſelf, in a Week or two, ſometimes it continues for Years without any detriment to the Patient, and now and then we meet with a Caſe where it weakens him, brings on Involuntary Emiſſions of the Semen, and at laſt kills.

If it aroſe from a Venereal *Gonorrhæa*, and Mercury has not been uſed at all, or not in a ſufficient Quantity,

if

or if there be a Suſpicion of Infection, it is beſt to begin by enſuring the Deſtruction of the Venereal Matter, by a Mercurial Courſe.

It is to be ſtopped in weak Habits by the Internal uſe of Strengthening and Aſtringent Remedies.

(N° 55) ℞ Cort. Peruv. ℥ij
Nuc. Gall. ʒij
Caryoph. Arom. ʒſs
Infunde in Vin. rubr. Luſit. ℔j per Horas xlviii cola: dein Infund. in Aq. Font. ℔j per Horam et cola. Colaturas miſce, et capt Æger Coch. iv ter quarterve indies.

The other Methods of Strengthning the Syſtem may alſo be uſed (vid. the Hyſterical Diſeaſe); but it is to be obſerved that the Cold Bath ſometimes increaſes the Running.

Reſinous Aſtringents as *Balſamum Copaibæ*, exhibited three or four times a Day, ſometimes ſuceed, but Care ſhould be taken to avoid exciting General Inflammation by them in Inflammatory Habits.

The Injections recommeded in the Venereal *Gonorrhæa* continued for two or three Weeks, ſometimes put a ſtop to the Diſeaſe.

Or Mercurial Ointment may be rubbed externally along the Courſe of the *Urethra* two or three times a Day.

By one or other of theſe Methods we can for the moſt Part Cure this Diſtemper; but it will continue ſometimes notwithſtanding our beſt Endeavours, and perhaps go off of itſelf at laſt.

FINIS.

ERRATA.

PAGE 3 L. 30, Strength is here, and in like Cases, put for strong Action of the Heart and Arteries. P. 16, N° 2, after Haust. add Capt. vj^{ta} vel iv^{ta} quaq. horâ. P. 19, L. 4, r. thorough-out. P. 24, L. 20, after Period r. and then returned to for 24 Hours. P. 34, l. 16, put'*(b)* beforeFlores. P. 38, L. 26, r. Inflammatory. l. 43, L. ult. after and, r. is. P. 44, L. 28, for s r. as. P. 46, L. 25, for ʒij ad vj, r. ʒj ad ʒij. P. 50, L. 2 after are, r. only. P. 64, L. 4, after of, r. the. P. 72, L. 16, for *Os Pubus*, r. *Ossa Pubis*. P. 85, L. 16, r. Languor. P. 87, L. 24, r. Mucous. P. 88, L. 6, for is to, r. should. P. 93, L. 8, for is to, r. should.