# A treatise on the disease commonly called Angina pectoris / by William Butter.

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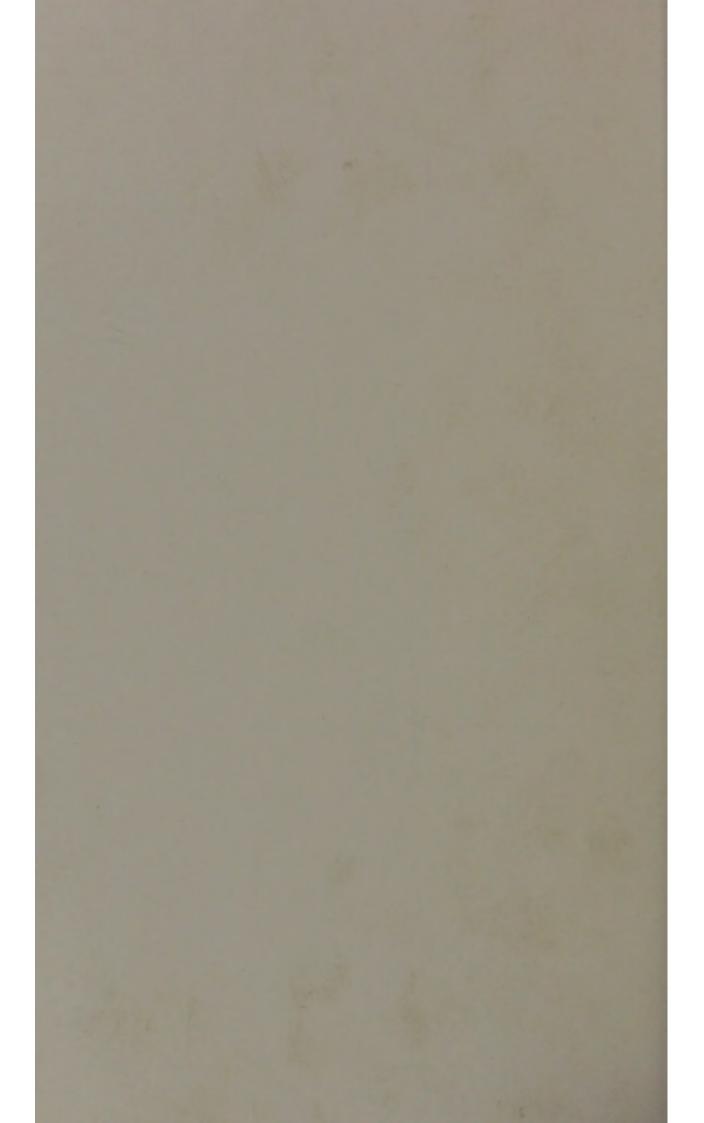
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# TREATISE

A

#### ON THE

### DISEASE

COMMONLY CALLED

## ANGINA PECTORIS.

### By WILLIAM BUTTER, M. D.

Fellow of the Royal College of Physicians and Member of the Medical Society, both of Edinburgh.

Quòd si jam incidat mali genus aliquod ignotum, non ideo tamen fore medico de rebus cogitandum obscuris: sed eum protinus visurum cui morbo id proximum sit, tentaturumque remedia similia illis quae vicino malo sæpe succurrerint, et per ejus similitudinem opem reperturum. CELSUS.

SECOND EDITION.

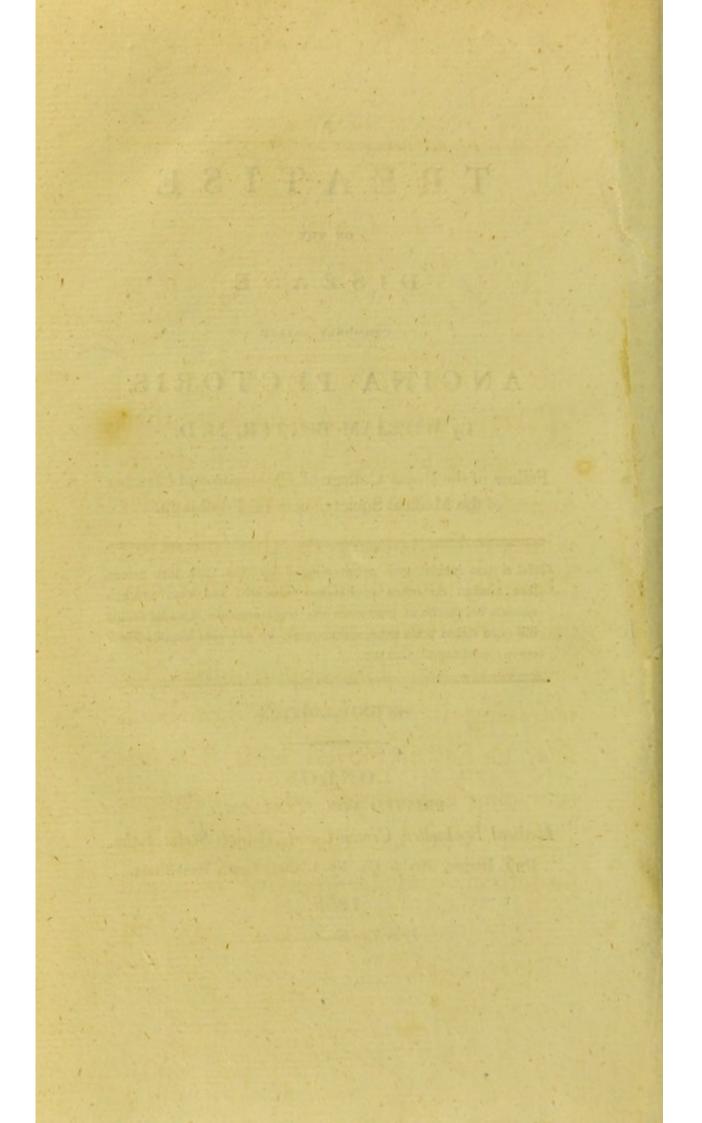
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1806.

Price Two Shillings sewed.



THE

PREFACE.

THE Author had feen more than one cafe, and had even determined the nature of the diforder which is the fubject of the following difcourfe, before he knew that any other contemporary phyfician had met with it. His opportunities for obferving it, which have not been few, he has employed with that unremitting earneftnefs which becomes a man who has the honour of his profeffion, and the good of mankind

at

at heart. He is happy that his labour hath not been in vain. The Diaphragmatick Gout, as to its fcientifick hiftory, is now complete, or nearly fo: and it is fairly refcued, with the patient's leave, from the lift of incurable difeafes.

It is but juft, at this diftance of time, once for all to remark, that *Hemlock* continues to be ufed for the *Kinkcougb*; and with fo much fuccefs, that, when all its qualities as a most defirable and complete cure are confidered\*, it must be allowed to be the first in Physick.

LOWER GROSVENOR-STREET, March 25th, 1791.

\* See a Treatife on the Kinkcough, p. 182.

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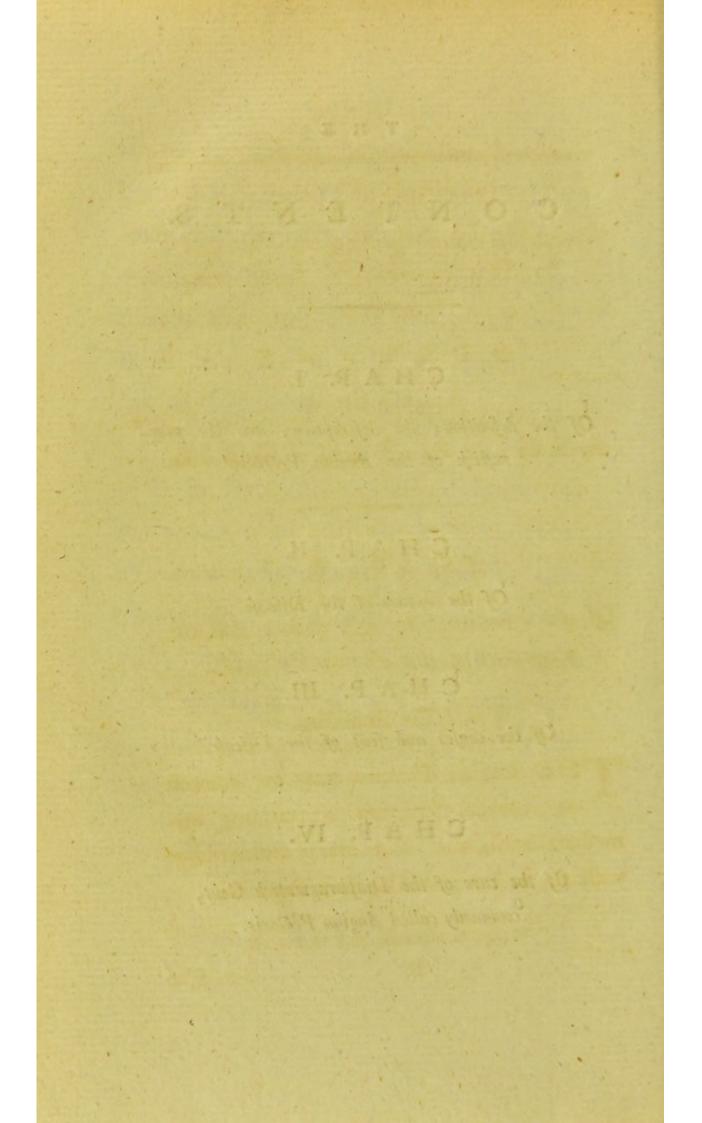
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# TREATISE

A

ON THE

### DISEASE

COMMONLY CALLED

ANGINA PECTORIS.

## CHAP. I.

Of the definition; the description; and the prognostick of the Angina Pectoris\*.

§ 1. The Definition.

THE Angina Pectoris may be defined an internal fenfation threatening immediate death, most commonly induced by walking, and removed by standing still.

\* Medical Transactions, Vol. II. Art. vi.

§ 2. The

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## § 2. The Description.

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The first attack of this diforder generally happens when the patient is walking. He is furprifed with a fixed pain at the breaft, which gradually, as he proceeds, increafes, till at laft he is obliged to ftop left he fhould die. On ftanding still this fymptom abates, and is entirely gone in a few minutes, efpecially if he belch wind. This folitary pain is compared to a cramp. Most frequently, however, the fixed pain at the breaft not only extends to other parts, but is also preceded and accompanied by other fymptoms. It is fometimes called an aching, fometimes a fmarting, and fometimes a sharp pungent pain. Some call it a violent pain that cannot be defcribed; others call it a numb pain; and others, a numb pain accompanied with a fenfe either of heat or cold indifcriminately. It is generally pointed to as being in the Sternum.

num, or Breaft-bone; and either in the hollow lower part, or in the moft prominent middle part of it. In this laft fituation, it is exactly in the middle, or inclined to either fide of that bone. The pain, at its commencement, commonly occupies a fpace as broad as the hand: but, as the pain increafes, that fpace diminifhes till at laft it can be covered by the point of a finger. It muft, however, be remarked, that the fit fometimes begins, and even completes its progrefs, without any pain.

The fixed pain, when in its loweft pofition, extends fometimes to the lower hollow part of the neck, producing there the ftoppage; and fometimes to the moft prominent part of the windpipe, with the like effect. It hath proceeded further in the throat, giving only a fenfation as though a vapour were iffuing out of the mouth; and to the ear, with the fame fenfation of an B 2 iffuing iffuing vapour, accompanied with a humming noife. Oftener it extends to the head, inducing giddinefs, and a fufpenfe of thought. Sometimes it extends backward and upward as far as the head: and then none of the effects mentioned take place. It fometimes ftrikes round the ribs on each fide, in a horizontal direction, and with a cutting fenfation. It has likewife happened that this pain, inftead of afcending, has defcended to fome part of the thigh; and then has gradually gone off, without producing any other effect.

The moft common courfe of the pain, when feated in the prominent part of the fternum, is along the fide of the neck between the windpipe and the fterno-maftoid mufcle, all over the fhoulder-blade, over the top of the fhoulder, and down the arm to the wrift, but oftener to the finger-ends. Sometimes, however, this pain does not extend tend beyond the sternum : and then none of the parts mentioned are affected in the fit.

The pain of the breaft, as hath been faid, is often preceded by other fymptoms. The common ones are, a heat in the part where the pain is to take place, and which gradually increases till the pain begins; alfo wind afcending from the inteffines into the ftomach, either in confequence of a general inflation of the bowels, or by a fucceffion of balls formed in the guts, the lower one always difperfing as another above fucceeds, until at last there is one high enough to empty itfelf into the ftomach. All this is done without any noife. If at any time the ball or knot difperfe with a noife, no fucceeding one follows, nor any fit for that time. It is proper to remark here, that if an impending fit is by any means put off, the next that happens is the ' more fevere.

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This pain of the breaft is also accompanied by particular fymptoms. Those vary according to the fituation of the pain. When the pain is in the hollow part of the sternum, the concomitant fymptoms are, uncommon inflation of the breaft, faintnefs, violent palpitations, great fulnefs and other uneafy fenfations of the bowels, intolerable heat of the palms and foles, and often heat, weaknefs, and pain from the elbows, very rarely from the fhoulders down, with fometimes a fense of discharging vapour at the finger-ends. When this pain extends round the ribs, it is ufually accompanied with infenfibility, which terminates in fickness and retching, and in the vomiting of phlegm, and indigested offensive stuff.

When the pain is at the prominent part of the sternum, it is accompanied with the fame dreadful sense of fulness within the breast. When there is an affection of the arms, arms, it generally varies according to the fituation of the pain. If the pain be central, both arms are equally affected: but if it be inclined to one fide, the arm of that fide is affected; and the other, not at all or flightly fo.

Sometimes the patient calls the fense of fulness within the breaft a difficulty of breathing; but much oftener, a fensation totally different. It is oftener allowed to be a difficulty of breathing, when the ftoppage takes place in the hollow part of the neck, or at the top of the windpipe. Sometimes both inflation and dyspnœa take place together, but much oftener in fucceffion; the former, to wit, during the ftoppage; and the latter, when that stoppage is going off. Sometimes a cough accompanies the fit, without troubling the patient at any other time. It even happens, though rarely, that neither inflation mor dyspnœa attend the

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fit;

fit; but then the latter takes place on the ftoppage giving way. Sometimes a difficulty of breathing comes in the intervals of the fits, without any warning or known caufe, continues a very few minutes, and ftrikes the patient with the fame apprehension of danger as the ftoppage.

As foon as the patient ftands ftill, the fit begins to decline; efpecially if he can belch wind, which is generally, though not always, the cafe. All the fymptoms gradually abate with the fame kind of fenfation as that with which they came on; and the more fpeedily, the more wind is difcharged. Sometimes the pain goes off gradually with a creeping fenfation, and leaving the patient difpofed to fleep. Sometimes the parts affected remain afterward fore to the touch. This diforder generally terminates in ten or fifteen minutes after the patient has ceafed from walking. Fits from walking come

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at fhorter intervals, and laft longer, provided that the ftomach is full. It has however happened, that an empty, and not a full ftomach, has proved the aggravating caufe.

If the patient proceed in his walk before every fymptom of the fit is gone, another will fucceed the fooner. But if he keep quiet till it is entirely gone, he will be able to walk longer before another return. And, if he perfevere in walking long enough, the fits will become gradually weaker, and will at laft leave him, provided that he hath difcharged wind copioufly in each. In that cafe, he can walk as though nothing ailed him for the reft of the day, provided that he neither eats nor drinks. One man afflicted with this diforder felt himfelf in that happy fituation, every day from eleven to one, even without the aid of walking. Those were the two hours immediately preceding his dinner.

## At first, the fit is chiefly apt to come on when the patient walks fast, and up an afcent. He can still walk on level ground, and ride, and even gallop on horseback, without a fit succeeding. In time, his exercise becomes more and more limited, till at length he can only ride in a carriage, or on horseback, at a flow walking pace, without bringing on a fit. The very attempt to mount a horse, or even to get into a carriage, will then occasion a fevere fit.

Not only walking, but paffions of the mind, fuch as anger, will bring on a fit. It hath however happened, that neither mental emotion, nor walking, have had any fuch effect; and that nothing lefs than actual running, or hard labour, could bring on the fit.

This diforder very often attacks the patient when quiet, and at reft, especially on a full a full ftomach; and fometimes in his fleep, particularly in the early hours of the morning. Thofe attacks laft longer than fuch as come from exercife. It has often happened that the fit has returned feveral times in the fame night, and whether the patient was afleep or awake. In thofe cafes, where attention has been given, the fit has been perceived to return at equal diffances. Even where it has happened but once in a night, it has always been at the fame hour, or nearly fo.

Sometimes the fit has returned as often as the patient has attempted to move himfelf in bed; and then the pain began at the part moft exerted in those movements, as the elbow; thence diffusing itself fo as to occasion the usual stoppage. Sometimes the pain has begun at the top of the head, descending commonly no farther than the region of the stomach, and with the usual effect; effect; though fometimes it has ftruck down over the whole body to the toes, accompanied with a general fenfe of coldnefs and other miferable feelings that could not be defcribed, and always with the ftoppage, and the greateft pain at the ufual place. On this laft fymptom declining, the cold has been fucceeded by a general glow of heat, and by copious eructations of wind, when every fymptom has gradually vanifhed.

The patient, upon the coming on of a fit, makes various inflinctive exertions for relief. The loofening of the cloaths about the trunk of the body gives eafe, particularly to women. Some are relieved by fimply bending the body forward. More find relief by preffing the pained part ftrongly againft fome hard fubftance, fuch as the top of a chair-back, while at the fame time the affected arm or arms are extended down towards the ground. Almost all feel as though though the belching of wind would relieve them. Some effect this with little difficulty. Others are obliged to make various exertions to bring it about; fuch as, ftretching the head upward and backward, and advancing the fhoulders alternately upward and forward, while, at the fame time, they make the common effort to break wind.

Patients labouring under this diforder generally complain of lofs of flefh and ftrength. They call the lofs of ftrength, fometimes a general weaknefs, fometimes an internal weaknefs, and fometimes only a weaknefs of the parts affected by the fits, as of the breaft, arms &c. The Larynx, or top of the windpipe, hath been weakened by thofe paroxyfms fo as very much to alter the voice: In other refpects, they generally feel between the fits as though nothing ailed them; except that they may be affected with a few fymptoms of a weak digeftion, fuch as flatulency, tulency, drowfinefs after meals, and the like. Sometimes, however, the patient is afflicted with colicks, which are removed by breaking wind, but oftener by the vomiting and purging of unnatural offenfive ftuff. Such an attack always renders the main difeafe both milder and lefs frequent for fome time after.

The pulfe, in the intervals of this diforder, is generally calm and regular, but of different degrees of ftrength. In fome cafes, it is quicker than natural, but regular. In others, it is irregular, being firm and flower than natural, and then quicker than natural and very low; and fo on alternately. The appetite is generally keen. A lofs of appetite is chiefly owing to indulgence. The digeftion is always weak. Sometimes the urine is natural; oftener it is of a deep colour, which it in great meafure lofes on depofing a copious groß fediment. The ( 23 )

The belly is commonly coffive: fometimes it is regular. The ftools are always unnatural.

This difeafe terminates either favourably, ambiguoufly, or fatally.

When it terminates favourably, it is fucceeded by a complete recovery, or, probably, by a regular fit of the gout. The complete recovery is either fudden and unexpected, or it is gradual, through a daily diminution of the fits both in force and frequency, till at laft they ceafe entirely.

The ambiguous terminations cannot perhaps yet be limited. Such as I have feen were fucceeded by mental derangement, or by a diforder of the throat refembling the common quinfey, or by a catarrh, or by external pains refembling the rheumatifun.

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It terminates fatally, either by fudden death, or by a confumption of the lungs, or by a fufpenfion of the digeflive power of the ftomach, or by a dropfy.

## § 3. The Prognostick.

vourably,

DOCTOR HARRIS imputes the chief difficulty in the cure of children's difeafes to the conceit of nurfes\*. I can, with great truth, impute the chief, if not the fole difficulty of curing the difeafe under confideration, to the want of conformity in the patient himfelf, particularly with regard to diet. His habits, in that refpect, are fo ftrong that he can hardly ever reftrain them, at leaft for any confiderable time together. Even the fear of death is not able to prevail over those his unfortunate attachments. What this fensation on the palate is, no

\* De morbis acutis infantum, p. 38.

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man can ever fay but for himfelf. It is certainly the moft varied of all the fenfafations with which the human race is endued; and produces, I believe, in many individuals, a propenfity as keen as any other animal propenfity whatever. Let no man, therefore, boaft of his being able to refift the unreafonable gratification of this appetite on every occafion; for, moft probably, he hath never felt, what fome, even of the ftrongeft minds, muft have felt when they could not refift it.

CHAP.

## CHAP. II.

## Of the nature of the Disease.

THE most important part of the scientifick history of this disease is now finished. It is defined, and described with as much accuracy as I am capable of. A prognostick is likewise delivered, which the future experience of physicians will vindicate. I am next to inquire into its nature. This I shall demonstrate by incontrovertible evidence drawn from the preceding description, as well as from other resources equally the result of my observation on the same disease.

First, then, it is observable that both men and women are liable to this diforder ; though it occur much oftener in men.

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Secondly, as far as I have obferved, it is not connected with any particular fhape or fize of body; for the tall, the fhort, and the middle-fized, the fat and the lean, the ftrongly made and the flender, are all equally fubject to it.

Thirdly, though it chiefly prevail on the decline of life; yet it is fometimes obferved both in the young and the middle-aged.

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Fourthly, between the paroxyfms the patient generally fays that he is in good health; except that he is affected with a few fymptoms of a bad digeftion, and with a degree of weaknefs general or partial.

Fifthly, laxative, and cordial aromatick medicines, Buxton and Kedleston waters, the cold bath, change of air and moderate exercise are of fervice in this difease.

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Sixthly,

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Sixthly, four vegetables, green tea, bloodletting, and purges, particularly the draftick, as well as fuch as are of the cooling kind, do harm.

Seventhly, during the paroxyfm the patient is relieved by preffing the pained part againft fome hard fubftance; by loofening the cloaths about the trunk of the body; by ftanding ftill if walking; by ftanding up if fitting; by fitting up and bending forward if lying; by the belching of wind; by the vomiting of phlegm; by a draught of cold water; by fpirit of lavender; and by opium: all which, together with many other facts already mentioned, evidently point out that this is a nervous fpafmodick difeafe.

Eighthly, it is a periodical difease when not diffurbed by adventitious causes, such as motion or emotion.

Ninthly,

Ninthly, patients afflicted with this difeafe, as far as I have feen, have almost ever been unconquerably luxurious or capricious in their diet; and have been particularly fond of the stronger malt liquors. I cannot fay that I have once met with such a case, where the patient was strictly temperate. It is, therefore, connected with the way of life.

Tenthly, fuch patients, in general, have, a great part of their time, been valetudinary, having been troubled with fymptoms of a weak digeftion, and with gouty affections either in a perfect or imperfect form : and it hath uniformly happened that those gouty affections have terminated on the commencement of our difease; and they have often been observed to alternate. This difease is therefore connected with constitution.

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Eleventhly,

Eleventhly, the fatal terminations of our difease are exactly the same with those of the gout.

Finally, from the whole of the preceding obfervations I am warranted to affert, that the difeafe under confideration is an irregular gout; and therefore that it is, like other affections of the fame kind, either imperfect or retrocedent according to circumftances.

In the next chapter we shall treat of the causes and feat of this irregular gout.

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non down of an an india a wear, or

## CHAP. III.

## Of the causes and seat of the Disease.

THE caufes of a difeafe are reducible to two kinds; namely, to the remote or predifponent, and to the occafional or exciting caufes. The former are inherent in the conflitution; the latter either may, or may not exift in the body. Neither a predifponent nor an exciting caufe can of itfelf produce a difeafe: but, when they are joined together, they form what is called the proximate caufe. This proximate caufe is the very effence of a difeafe; for, while it is prefent, the difeafe is prefent; and, when it is removed, the difeafe alfo is removed.

No phyfician, in my opinion, who ftrictly attends to what paffes in the paroxyfm of this difeafe, can fail of attaining the object

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in view; that is, a true knowledge of its proximate caufe. But in order that every reader, whether of the profession or not, may clearly understand this matter, it is neceffary to premise a short account of respiration.

Refpiration, or Breathing, confifts of two actions; to wit, of Infpiration or drawing in the breath, and of Expiration or expelling it. Those two actions, which alternate as long as life exifts, as they are very different in themfelves, fo they depend on very different caufes. The first, or Inspiration, is owing to the capacity of the breaft being enlarged in every direction by means of the intercostal muscles and diaphragm. The laft, or Expiration, takes place through the relaxation of those muscles by the influence of the mind; when, of course, the cavity of the breaft is diminished; as the ribs and diaphragm then refume their natural flate through

through their own elafticity. Every man is able to judge, from what paffes within himfelf, that any one of those actions being impeded will produce a stoppage, or difficulty of breathing; and that this affection can arise from no other cause.

Now, the patient, during the fit, generally complains of a dreadful fulnefs within his breaft, and of a ftoppage there, which, he infifts, is very different from a difficulty of breathing. Indeed, as the breaft is fo much diftended, the ftoppage cannot arife from what is commonly called a difficulty of breathing, that is, a difficulty of infpiration; for there can be no defire for more air, as more than enough is already accumulated. The ftoppage, therefore, must proceed from a difficulty of expiration: and this is evidently the cafe; for, if the patient had the power of expelling the air from his lungs, he would have no occafion to complain of fuch dreadful inflation. This

This impeded expiration must depend on the mufcles fubfervient to infpiration continuing to act independent on mental influence; that is, it must be owing to a spasmodick affection of the intercoftal mufcles and diaphragm. It would feem that those fleshy portions which fill up the interffices of the ribs, and are called the intercoftal mufcles, onlyact from fympathy with the diaphragm; for the pain in the fit often defcribes the whole courfe of the diaphragm at its infertions; and, in general, the pain is limited to fome finall fpot in the fternum; which would not be the cafe were the intercoftal muscles principally affected, but may eafily be explained from the vicinity of the diaphragm. This diaphragm, or midriff, is a thin broad fubstance, partly muscular or fleshy, and partly tendinous, which, in a transverse oblique direction, divides the breaft from the belly. An elegant reprefentation of this muscle, with its connections.

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tions, may be feen in Baron Haller's anatomical tables, plate firft.\*

This laft organ, therefore, being the part chiefly affected, the proximate caufe muft be fituated here, either in whole, or in part. The whole is not fituated here; for, in fuch a cafe, the difeafe could not have intervals, as the patient would certainly die of the first attack. The most rational predifponent caufe of gout evidently pre-. fents itself as exifting here, namely, a too great irritability or fenfibility : for it is univerfally allowed that a mufcle is endued with an excefs of irritability when it is more than ufually prone to action, and therefore not fufficiently fubfervient to the power of the Will. In the difease before us, the whole nervous fystem appears to be endued with too great fenfibility; and, from what hath been just now faid, the diaphragin is

\* Icon, Anatom. Fafcicul. I.

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proportionally affected with a ftill greater degree of it than any other part of the body. This excefs of irritability in the diaphragm beyond any other part of the body lays the foundation of the difeafe, which we may now venture to denominate the Diaphragmatick Gout.

Having thus eftablished the remote cause of the Diaphragmatick Gout, we now proceed to investigate its occasional cause. For the better attaining of this end, we must again have recourse to what passes in the paroxysm. Here we find that flatulence is the most obvious and the most regular exciting cause. But wind in the stomach and guts is never more than an effect. It abounds, in the former, from a flow and weak digestion; and in the latter, from the fame cause, but chiefly from feculent accumulations, the effect of languid intestines. That such accumulations often take place

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is certain : and that they undergo fermentations, and confequently generate flatulence in the first passages, is evident, from their having been often brought away in a fermenting state. Those accumulations, after they have discharged all their air, and confequently have ceafed to ferment, still continue by their acrimony to act as a ferment, or yeft, on the fresh matters that are pouring into the guts from the ftomach: and fo this process is constantly going on, with all the ufual confequences of generating elaftick air, and of adding to the morbid accumulation; till fuch time as by its bulk and acrimony, affifted by phlegm and indigested stuff that may abound in the stomach, fickness, colick pains, and other fymptoms are excited, which terminate in carrying off the offenfive load by vomiting and purging. Upon fuch a commotion as this, as may naturally be expected, the fits are milder and lefs frequent for a confiderable time after:

That

That inteffinal accumulation takes place in the diaphragmatick gout feems proved by the inflation of the belly and other fymptoms fo often indicating wind in the guts. Those very fymptoms, so generally alfo preceding a fit, together with the regular returns of all voluntary fits, fufficiently eftablish this accumulation as being the main exciting caufe of the difeafe. It appears, however, a peculiar circumstance that inteffinal flatulency flould be difcharged into the ftomach. This perhaps never happens but on the approach of a fit; when the motion of the guts determines upward, on account of the more weak and foliciting irritable flate of the flomach at that time. There is a fimilarity in this, and fome of the other fymptoms, to what we fee in the hyfterick fit. And it is more than probable that the deep diffrefs at the beginning of this fit, and which brings on all the other symptoms, is owing to the alarming,

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as being uncommon course of loathfome flatulency through the inteffines into the ftomach, which are the particularly irritable parts of the hysterical constitution.

Having thus discovered that feculent accumulations are the chief occasional caufe of the diaphragmatick gout, we shall next thew how, upon this principle, the fit can be brought on by walking. Fermentation is always rendered brifker by agitation; and the more brifk the fermentation, the more copioufly is the air generated. Now, when the patient walks, the accumulations in the first paffages must be agitated, partly by the general motion of the body, and partly by the increased action of the abdominal and other adjacent muscles. Hence more air is extricated than when the patient is at reft. This air, instead of passing downward, as it does in a healthy ftate, paffes upward for the reasons already given; and.

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and, forcibly entering the ftomach, diftends it; and, from its difagreeable irritation, occafions a spasmodick and painful contraction of the upper orifice of that bowel, or of the gullet opposite to the middle, or rather higher than the top of the fternum; or still higher, to wit, on a level with the most prominent part of the windpipe. The diaphragm, partly from the delicacy of its own frame, and partly from the preffure of the ftomach thus uncommonly diftended, is brought into ftrong action; and not being able to contract fully, on account of the bulk of the ftomach and general inflation of the bowels, it continues its exertions, according to the common laws of muscular action, aggravating the pain, and every other fymptom, till fuch time as the refiftance gives way. As foon, therefore, as the patient flands ftill, the air, inftead of pufhing into the ftomach, is repelled into the inteffines, partly

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by

by the diaphragm, and partly by the contraction of the ftomach, the refiftance from

above being now greater from the patient being at reft. Those fame means, together with the patient's inftinctive exertions, probably force open the conftriction of the gullet wherever it may happen to be, when the air is discharged gradually and copioufly by eructations. As foon as this is the cafe, the stomach becomes less and less diftended; and, of course, the diaphragm, after having overcome all refiftance, and fo having arrived at a complete contraction, returns with the intercostal muscles and ribs to a natural flate: when the cavity of the breast being restored to its smallest capacity, the accumulated air is expelled, and fo the fit is terminated.

It is observed in the description, that if the patient proceed in his walk before every fymptom of the fit is gone, another D will

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will fucceed the fooner. This may eafily be conceived; becaufe, in fuch a cafe, this remaining part of a fit may be confidered just the fame as another actually begun.

A perfeverance in walking argues a perfeverance in fafting. In that cafe, every fit muft become weaker and lefs frequent; as the flatulency becomes more and more exhaufted, till at laft little or none is left, from there being no fupply of frefh matter to keep up the fermentation, and from the air being drawn off, by those repeated paroxyfms, faster than the accumulation can fupply it. That this is a just explanation of the fast is evident, because there are no more fits while the patient abstains from food; but, as foon as he begins to eat and to drink, the diforder returns in the fame manner as before.

It is mentioned of one perfon, that he could walk about, as though he were in perfect

perfect health, every day, during the two hours immediately preceding his dinner. In this cafe, the occasional cause seemed to arife from the digeftive procefs; for he had none of those fymptoms which point out the afcent of flatulency from the inteffines. Now, to understand this matter aright, it is neceffary to obferve, that fuch patients, in general, like their dinner better than any other meal, and are most indifferent about a breakfast. In those cases where it happens that little or no breakfaft has been taken, there has been abundant time for the ftomach to empty itfelf of all fermenting contents; which will, of courfe, according to our doctrine, leave the patient in the happy fituation defcribed.

It is obferved that mental emotion, fuch as anger, will bring on a fit. The irritability of the body, both general and particular, is thereby increased for the time.

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It is also certain, that from fuch a cause, and in fuch a habit, both the stomach and guts will be immediately distended with wind. It is easily conceived, therefore, that a fit must be the consequence of such concurring circumstances.

The fit is apt to come after a full meal; becaufe, the flomach being now diffended by the food, and that diffenfion being fill further increafed by the air extricated in the digeflive procefs, the diaphragm will be brought into violent and involuntary action, which conflitutes the paroxyfm. If, in fuch a cafe, the patient flould walk; two caufes, any one of which is fufficient by itfelf to bring on a fit, will neceffarily, when concurring, render the fits both flronger, and more frequent.

Voluntary fits last longer thas fuch as come from exercife; because an immediate stop ftop can be put to the motion, which neceffarily fhortens the fit; but we cannot operate fo fuddenly upon an internal exciting caufe, efpecially when it is fo ftrong as to be of itfelf equal to the bringing on of a fit.

Though the diaphragm characterize the difeafe, yet, the ftomach, as hath been faid, contributes confiderably toward forming the paroxyfm. The following fymptoms, most of which fo generally attend the fit, and are peculiar to the ftomach, give undoubted proof of this; namely, faintness, fulness, pain, fickness, vomiting, and heat of the palms and foles. Heat of the palms and foles is a fymptom of imperfect digeftion. Unnatural heat may, perhaps, be incipient pain : and those fymptoms, heat and pain, may extend fo as to affect the arms in the fame manner. But it will be more fcientifical to receive D3 those, thofe, and fome other fymptoms in the preceding defcription as facts, than to attempt an explanation of them: becaufe every attempt of this kind muft be conjectural, and of courfe unfatisfactory, till fuch time as we are better acquainted with the minute ftructure of the nerves, and with that principle which renders them the medium of fenfe and motion.

The diaphragm may be convulted in fympathy with a cramp in the ftomach; and may be productive of fuch violent and fudden pain, as to obliterate, at the time, all perception of every other fymptom in the patient's mind. Thus the folitary pain mentioned in the defeription may be accounted for; though its being brought on by walking, and alfo its being relieved by breaking wind, fhew that the fit is not fo fimple as the patient would reprefent it.

The stomach, however, is not equally affected in every fit. Symptoms of a difordered ftomach chiefly prevail when the pain takes place at the lower hollow part of the sternum. As a further proof, this pain takes a courfe, which we know to be peculiar to that bowel, extending to the throat and head. Whereas, when the pain begins at the prominent part of the fternum, it arifes from an affection of the gullet which feems to have little or no connection with the flomach, but depends on a direct fympathy with the diaphragm. The courfe of this pain along the neck and shoulders and down the arms, arising from the near connection that fubfifts between the diaphragmatick and brachial nerves, confirms my opinion.

The heart is liable to be affected, as appears from the palpitations fo often attending the fit. When the diaphragm and D 4 ftomach, ftomach, therefore, are in the ftate juft now defcribed, the fpafm may be communicated to the heart itfelf. Sudden death probably happens in this way: and it would happen much oftener, were it not that the patient is frequently refcued from his danger by thofe automatick efforts of nature, ficknefs and vomiting. The patient, when thus brought to himfelf, fays, that he was feized with violent pain acrofs his ftomach and ribs, and at laft became infenfible; which circumftances render our explanation very probable.

The lungs are always affected : but that is, in general, a paffive affection; though they fometimes take an active part, as when a cough and dyfpnœa are among the concomitant fymptoms of a fit; and likewife when an alarming dyfpnœa comes in the intervals. This laft affection may be confidered as a variety of the fit wherein the lungs alone are concerned.

Thus,

Thus, though we have feen that the diaphragm characterizes the difeafe, and, in general, conftitutes its chief danger; yet, like a true gout, the feverity of its attack varies, falling fometimes on the ftomach, fometimes on the heart, and fometimes, though more rarely, on the lungs.

Having, at length, fully established the occasional cause of the Diaphragmatick Gout, it will be proper to remark here that this fame cause, in general, gives origin to the predisposition; unless when it hath been coeval with the conflictution, and, even then, it very much increases it. Such accumulations must disturb, and weaken the digestive power of the stomach; and so, beside imperfect chyle, acrid matters will find their way from the intestines into the blood. The blood being thus impoverished, and loaded with acrimony, the daily waste of the body will be imperfectly supplied; and,

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and, of courfe, the conftitution will become weaker, and more irritable. For those reafons, the present disease, and perhaps all gouty affections whatever may justly be faid to have their seat in the intestines.

I conclude this chapter with obferving, that, if the gout be found to refide in the firft paffages, one may be led to believe that it is at length deprived of its fling; and that the adage, fo opprobrious to our art, may now be reverfed with great propriety. Be that as it may, every fymptom of gout, whether regular or irregular, perfect or imperfect, can be explained, by this doctrine, more rationally, and more confiftently, than by any other yet given to the Publick.

We now proceed to the method of cure.

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## CHAP. IV.

Of the cure of the Diaphragmatick Gout, commonly called Angina Pectoris.

WE are at length come to the cure of a difeafe fingular in its afpect, and terrible from its tendencies. When viewed as a whole, it ftrikes with aftonifhment, and leaves us at a lofs. But, when each component part is examined by itfelf, the whole ftructure becomes obvious to a plain underftanding: and then, the only wonder is, that fuch a diforder fhould be deemed incurable.

The diaphragmatick gout is cured by a laxative medicine duly perfifted in, and by a proper diet.

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Take

Take of Socotorine Aloes and hard Sope, each two drams: beat them together into an uniform mafs with a fufficient quantity of honey; and divide this mafs into fortyeight equal pills.

Two of those pills, more or lefs, are to be taken every night, fo as to promote two or three stools daily, till they shall have put on, for some time, a natural appearance. This will be the cafe when the intestinal accumulation is removed.

The patient, at the fame time, fhould live on a diluting diet, which neither heats nor cools; fuch as weak broth, of the older meats, beef or mutton, alfo gruel and barley-water. Those should be taken in turn and plentifully, without regarding set meals. Bohea tea is not improper at the usual times. No folid food, whether animal or vegetable, not even bread, should be used.

Fermented or spirituous liquors are not necessary.-Malt liquors are justly forbid.

It is a groß error, which however generally prevails, that all fudden changes in living are dangerous. Indeed a fudden change from temperance to free living is very hazardous; but the contrary is far from being fo. I know, from repeated experience, that even the moft habitual drunkards may abftain from all fermented and fpirituous liquors entirely, even without gradual diminution; and not only with fafety, kut with the greateft advantage.

The method here recommended will have an immediate effect in rendering the fits milder and lefs frequent; and will, by degrees, remove them altogether. It acts by by preventing the afcent of flatulency; as the periftaltick motion of the guts is ftrengthened; and, at the fame time, is kept uniformly tending downward. Befides, the accumulation is daily diminifhing through the laxative which fends it off, and through the thin diet which prepares it for expulsion by previous dilution. I must likewife add, that lefs feculence is fupplied, from the digeftion being more complete, and from the food, by its own nature, affording lefs. As ultimate confequences of all this, the morbid accumulation is removed; the digeftive power of the ftomach is renewed; the blood is purified and enriched; nutrition is properly performed; the whole conftitution is ftrengthened; the irritable fyftem is restored to its natural standard; and fo the difeafe is completely eradicated.

Though this method be fufficient of itfelf to produce all the good effects mentioned;

tioned; yet, during the progrefs of the cure, it will, fometimes, be proper, for the more immediate comfort of the patient, to obviate or relieve difagreeable fenfations in the flomach or inteffines; fuch as, ficknefs, faintnefs, heat, pain &c. Means adapted to this purpose will likewife contribute to forward the cure by ftrengthening those first passages, and particularly the ftomach, which is a principal agent in determining the periftaltick motion downward. With those views, I have employed different medicines at different times, and all of them with good effects; fuch as, the Tincture of Guajacum, the Peruvian Bark, and Aromaticks, in different forms, the Extract of Hemlock &c. &c. But I have fometimes experienced the beft effects from a powder confifting of Ground Liverwort and Black Pepper, given from two fcruples to a dram twice a day. I am forry to have occasion to remark here, that

that this excellent medicine \* has undergone the fate which the Extract of Hemlock was threatened with a good many years ago: It is totally laid afide as being good for nothing—becaufe, forfooth, it cannot cure an incurable difeafe.

this purpole will we will chan

For relief in the fit, the patient may take a glafs of cold water, either with, or without a teafpoonful of Spirit of Lavender. The fimple element is, in my opinion, the beft; as it is of itfelf commonly fufficient to take off the ftricture of the gullet, wherever it may happen to be.

In the year feventy, my refidence being then in Derby, I was called, on the twenty-first of April, to Mr. John Bancroft, of Barrow upon Trent, who for

\* The powder called Antilyfus of former Difpenfatorics.

fome

Tome time had been afflicted with the Diaphragmatick Gout. I found him fitting up in bed. He told me that he had hardly lain down, and that he had fcarce had any fleep for the last thirty hours, on account of violent pain of his breaft, and great inflation of the trunk of his body, accompanied with almost constant eructations of wind ; which eructations produced little other effect befide that of faving him from fuffocation. I gave him immediately ten drops of laudanum; and faid till he had taken three more fuch dofes, with the interval of a quarter of an hour between each. He then became easier, was foon able to lie down, and had a pretty good night. Though, upon fuch great emergencies, we must be glad to have recourse to opium; yet, in all ordinary cafes, it will be more advisable to refrain from this medicine; as it uniformly hurts digeftion', and likewife retards the courfe of the belly; on E both

both which accounts it impedes the most effectual means of recovery.

This cure, as all cures ought, comes within the reach of every individual; and will prove effectual even to the most fedentary. The patient who can not very frictly fubmit to rules, may, while he is observing them as well as he can, amufe himfelf (and with advantage at a proper feafon of the year) by making a long journey, confifting of but few and fhort stages in the day. He can also go to either of the mineral waters recommended : though that of Buxton, in particular, is better calculated to prevent a relapfe than to effect a cure. The cold bath is a remedy of the fame kind. A perfon of a full habit should bathe every morning; one who is thin, every other morning, or but twice a week.

But

But a patient, once reftored to perfect health, will find the best preventive in a due observance of the rules of tem-. perance.

He fhould eat meat at no time but at dinner.—He may have plain broth, milk, or gruel, with bread, for fupper.

The fame liquid diet will be a fit fubftitute for fruits, roots, or greens.

He may use fmall beer for his common drink: but he should abstain from all other malt liquors.

He fhould be moderate in the use of wine or spirits. Often, none would be best.

He fhould live within his appetite; that his ftomach may have no more to do than it can completely perform.

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He fhould perfevere in the use of his laxative; so as to have a stool every day, and one extraordinary every second or third day.

Those rules, even at first, will be no great hardship to him who hath been able to follow out the method of cure: but, if persisted in, they will be less and less so; and will at length become a pleasure.

I shall conclude with making a few remarks on iffues; as they have been recommended in this difease, and on the best foundation, as far as a single instance can go, that of experience\*.

Iffues are commonly fuppofed to be an artificial excretion, which clears the confti-

. \* Medical Obfervations, Vol. vi. Art. 2.

tution

tution from morbid humours that can not be carried off by any of the natural emunctories. They were ordered, on this principle, in the cafe alluded to. This doctrine, however, is merely fpeculative; for it is not fupported by any one fact that is not controvertible.

Iffues are found not only to facilitate the cure, but likewife to contribute in preventing a relapfe of chronick ophthalmies and catarrhs, alfo of gouty and many other diforders. In all cafes where they have been found thus ufeful, the utility, in my opinion, is to be attributed to them merely as conflituting the weakeft parts of the body: and, of courfe, accidental caufes, fuch as cold, errors in diet &c. inftead of exerting their effects upon the parts weakened by the difeafe, exert them upon the iffues as being ftill weaker parts. As a proof of this, fuch patients, for example,

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when

when under the influence of a cold, always find that their iffues are painful, inflamed, and almost dry; while, at the fame time, they are generally preferved from the usual bad effects for which the iffues were intended.

Finally, after what hath been faid, it will hardly be credited that an iffue, by itfelf, can ever cure the Diaphragmatick Gout. And it is a pleafure to find that there is a cure for this difeafe independent of an auxiliary both painful and inconvenient. Though, where refolution is wanting to go through with the method of cure, recourfe muft be had to iffues, and to every other palliative, that life, while it lafts, may be rendered as tolerable as the habits of the patient will permit.

iffues as being that weaker parts. As a front of this S in S in Fig. I N I S in Fig. I or example,

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