

The use of sea voyages in medicine : and particularly in a consumption, with observations on that disease / By Ebenezer Gilchrist, M.D.

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Gilchrist, Ebenezer, 1707-1774.

Publication/Creation

London : T. Cadell, 1771.

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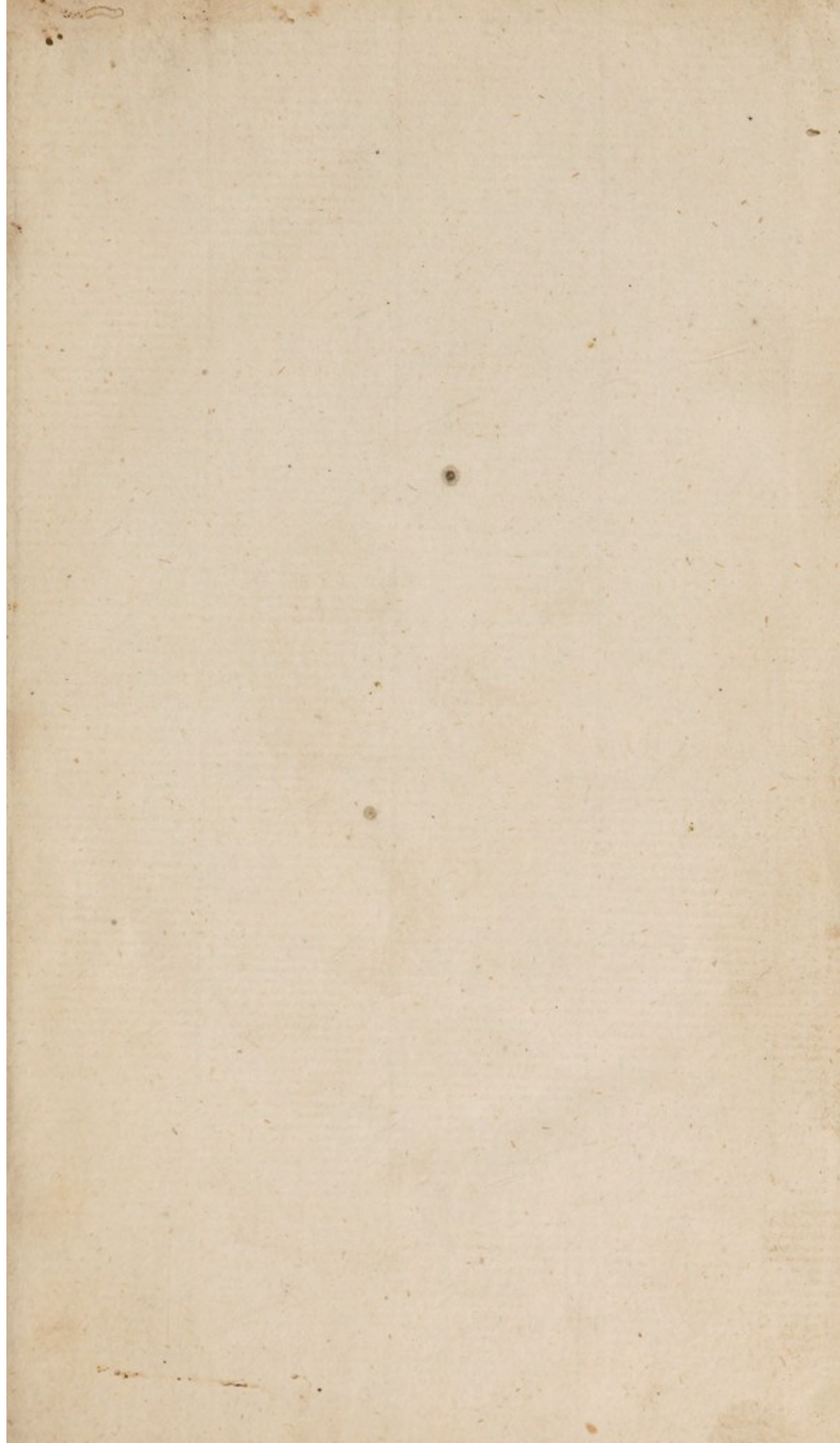
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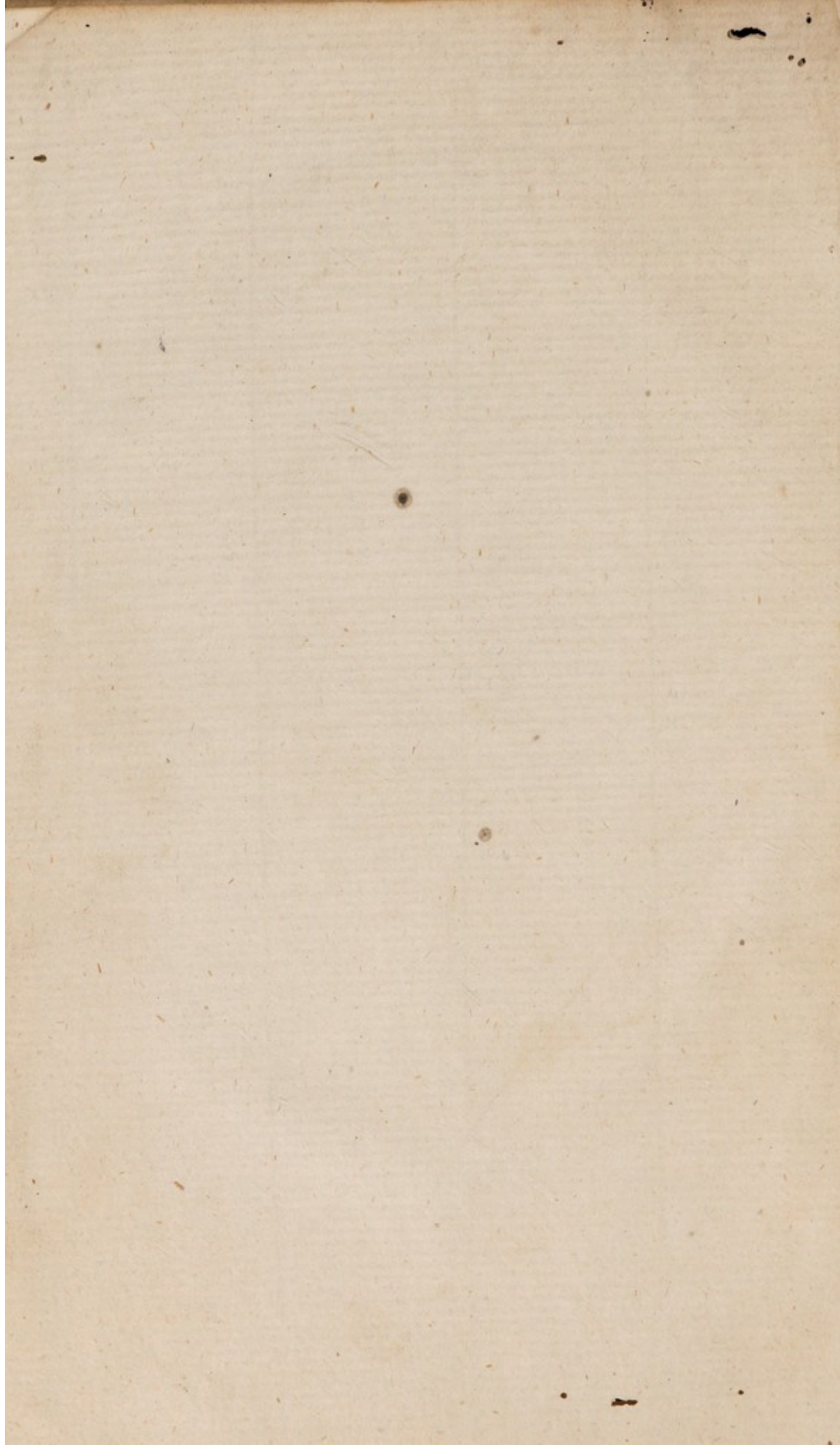


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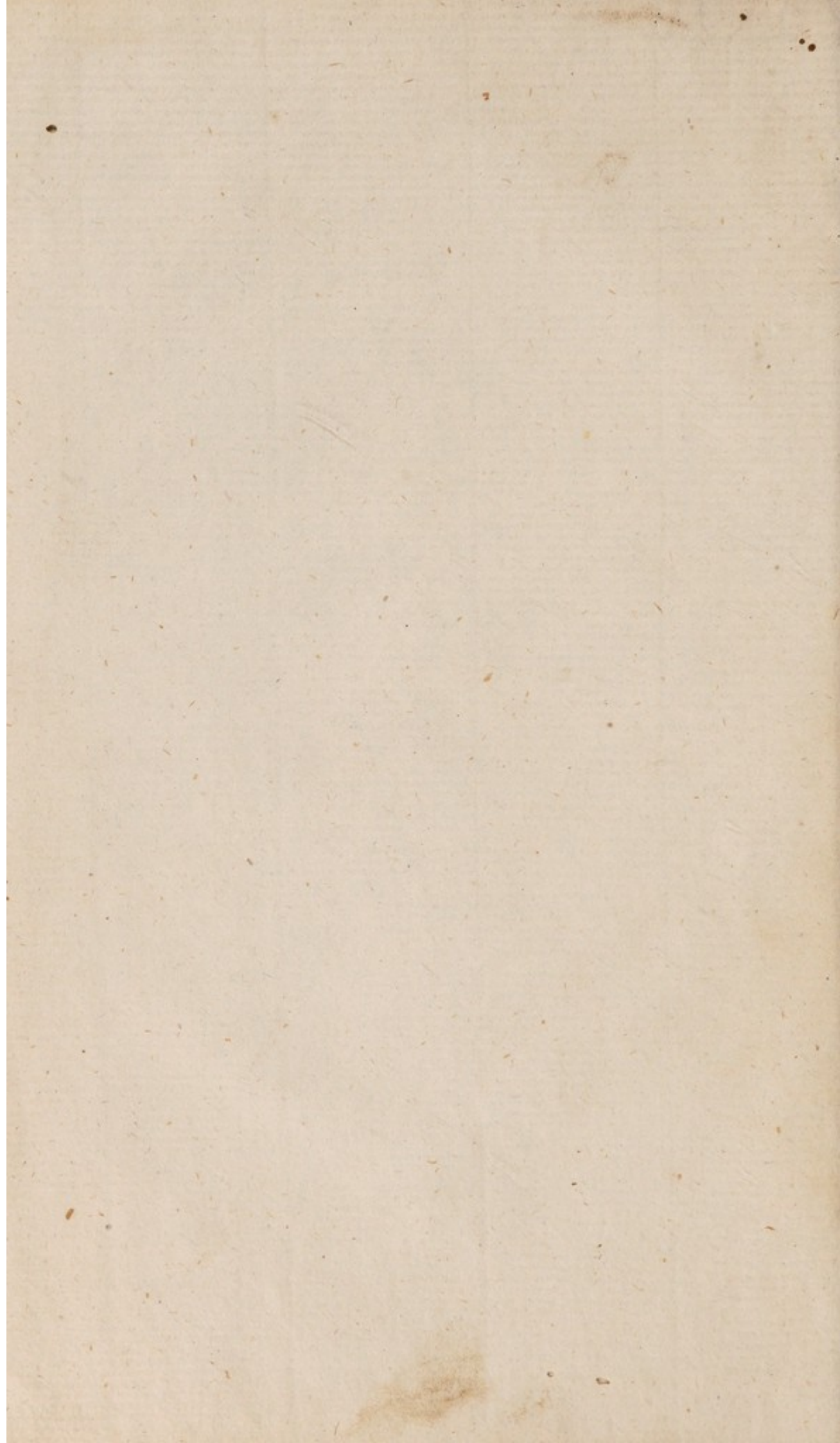


Supp. 59,309/B





U. S. B.
SEAS VOYAGE
PACIFIC



THE
U S E
OF
SEA VOYAGES
THE
U S E
OF
SEA VOYAGES
IN
MEDICINE.

LONDON:
Printed at T. Cadell's, in Strand.
MDCCLXXI.

THE
USE
OF
SEA VOYAGES
IN
MEDICINE

Wm. Lloyd Garrison

THE
U S E
OF
SEA VOYAGES
IN
MEDICINE;

And particularly in a

CONSUMPTION:

WITH
OBSERVATIONS on that DISEASE.

By EBENEZER GILCHRIST, M. D.

A NEW EDITION, revised, corrected, and enlarged.

L O N D O N :

Printed for T. CADELL, in the *Strand*.

MDCCLXXI.

THE
U S E
OF
SEA VOYAGES
IN
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MEDICINE
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TO
SIR JOHN PRINGLE, Bart.
PHYSICIAN IN ORDINARY
TO HER MAJESTY, &c.

S I R,

I Should fail in my duty, if, on this occasion, I did not acknowledge my obligations to you. The small performance I now offer you claims no merit but from the practice it recommends, and the intention with which it was written. Your knowledge and experience, and the rank you hold in your profession, give you a right to judge how far it may be useful in medicine; to the improvement of which, as a friend to science and to mankind, you have so much contributed. It will make me happy

vi DEDICATION.

if you approve of what I have done,
and continue to favour me with a
share in your friendship. I wish it
were in my power, on all occasions, to
give you a more convincing proof of
my regard than merely subscribing
myself,

S I R,

Your most obliged and

obedient humble Servant,

Dumfries, Feb. 1,
1771.

EBENEZER GILCHRIST.

P R E F A C E.

TH E notion that sailing, and living at sea, might be a remedy for some distempers, was early suggested to me on a particular and interesting occasion. What at first was indulged as a matter of speculation or amusement only, became afterwards an object of serious enquiry. It does not indeed, on a slight view of it, promise much information, and may not appear important enough to merit a formal disquisition. Yet I flatter myself that, when I have laid before the reader all my experience and conjectures relating to this subject, he will not find it altogether unworthy of his attention.

I was induced to publish the following sheets, that those to whom I had

communicated my sentiments in general, might fully see upon what principles and trials they were founded ; and the rather as so few were disposed to comply with my advice of going to sea, though the nature or circumstances of their disease seemed strongly to require it. Some doubted of its efficacy, others of its safety ; and besides, it lay under the disadvantage of being suspected, because uncommon. For these reasons, after having carefully searched into the opinions of authors of credit concerning it, I thought myself in some sort called upon to vindicate, in this manner, a practice which I had so much endeavoured to promote.

This small performance, however, does not pretend to be complete in all points, if in any. It is indeed no more than an essay, to revive, explain, and apply to practice, a part of natural knowledge, hitherto but little considered, either as a matter of curiosity, or of use.

In

In treating the subject I have brought together all that occurred to me from books, observation, and reasoning; in order that the reader, having every thing before him, might be enabled to judge what place this uncommon remedy deserves in medicine, and how far it is capable of being improved. For my own part, its good effects have not fallen short of my expectations, nor have I hitherto observed any bad ones from it. The instances given of cures, by living at sea, with the authorities adduced in support of this practice, will, I imagine, be sufficient grounds for farther trials.

Those who live at sea, or on its coasts, have opportunities of making many observations and experiments, for ascertaining some particular points which are here left undecided, and for discovering the causes on which they depend. All such are invited to lend their assistance toward the improvement of this branch of science, and
the

the practice connected with it, by communicating whatever may come to their knowledge, tending either to confirm, or to invalidate the truth of what is here advanced, and the propriety of what is proposed. The longest voyage I ever made did not exceed four days.

It is well known that the remedies now in use, though very numerous, are inadequate to the cure of several diseases. The physician, therefore, cannot be blamed, who departs from the ordinary methods that do not succeed, to search for others more efficacious; however difficult it may be to bring them into general practice. Whatever were the defects of medicine in early times, the ancients undoubtedly were possessed of many good remedies, and some of the greatest efficacy, which unfortunately have fallen into disuse by the neglect of the moderns. Of these I shall mention a few, by which we may form a judgement of the rest.

The

The use of wine in fevers, at least the liberal use of it, is repugnant to the common ideas of curing an acute disease, especially when attended with a delirium. But repeated experience of its superior effects, hath long ago convinced me that, in many alarming cases, wine is the chief thing to be relied on. Nor is the use of it confined to fevers properly nervous; but it may with caution be beneficially employed in all low fevers, whether accompanied with eruptions or not; and in all such I have found it a pleasant, cordial, antiseptic medicine, and for the most part effectual.

That bathing the whole body might be another great resource in fevers, I judged, as well from reason, as from the practice of the ancients; yet the fear of censure long withheld me from making trial of it. At present I could give many instances of its happy effects.

If the practice of bathing in fevers prevailed very much among the an-

cients, the drinking of cold water was no less familiar to them. They gave it freely about the height, in ardent and other fevers that were determined by a critical sweat, which it greatly promoted. By observing early what passed among the common people, I soon perceived that cold water might also be drunk with as much success as pleasure in low fevers.

Sailing, or living at sea, though for many ages past, scarce mentioned in relation to medicine, seems nevertheless to have held a distinguished rank among the great remedies of antiquity. How it came to be disused I cannot say; nor is it easy to foretell what reception it will meet with, now that an attempt is made to bring it again into practice. Whatever be its fate, I have not presumed to praise it on very slight grounds. But how earnest soever I may appear in setting forth its advantages, nay, though I have had repeated proofs of its efficacy, I shall not too confidently recommend the
general

general use of it, till confirmed by further observation. Amongst the various disorders for which failing is proper, a consumption is the one I have all along had principally in view; and therefore hints relating to it will so frequently occur, as to make a considerable part of this work. Nor will a particular attention to that distemper be blamed, when it is considered how little successful physicians have hitherto been in treating it, and that the subject in question is upon a remedy peculiarly adapted to its cure.

THE ACT

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ERRATA.

- Page 17, line 16, for *succession* read *succussion*.
 42, — 11, for *saneous* read *sanious*.
 57, — 7, for *effect* read *effects*.
 59, — 9, for *successions* read *succussions*.
 63, — 4, and p. 94, l. 19, after *Cælius* add *Aurelianus*.
 63, last line of the notes, for *cap. 3*, read *cap. 8*.
 65, first line of the notes, for *inaqua*, read *in aqua*.
 83, — 10, of the notes, for *dici*, read *diu*. l. 12, for an asterisk
 put a dagger.
 85, — 1 and 2, of the note, for *maræta*, read *maria æta*.
 109, — 9, for *fairly*, read *fully*.
 228, in the note, l. 3, for *transmiserent* read *transmiserint*.
 282, — 14, for *que* read *qui*.
 283, — 20, for *berbécée* read *berbacée*.

THE
USE of SEA VOYAGES
IN
M E D I C I N E.

C H A P. I.

Of the air at sea.

THE powerful influence of the air on animal bodies, as the means of life and health, and the cause, as well as the cure, of diseases, is evident from daily observation. No effect, indeed, is so great, but that it may be expected from a fluid possessed of such properties as gravity and elasticity, in constant motion, and pressing us continually on all sides. A fluid, besides, endued with many adventitious qualities, derived from
B heat,

2 THE USE OF SEA VOYAGES

heat, cold, moisture, and its various contents.

From the whole terraqueous globe there are constantly arising in steams and effluvia, more or less perceptible, innumerable particles of matter, being parts of all the bodies that earth and water contain.

These exhalations must therefore differ greatly, according to the soil, waters, minerals, and other substances that abound in different places; and will affect the bodies of animals differently, according as these things are in their nature hurtful or salubrious. Hence the causes of healthful and unhealthful situations, of endemial and popular distempers, as well as of some singular diseases, occasioned by a situation unfriendly to particular habits.

Accurate accounts have been given us of the constitution of the air in general. The particular constitution of the air at sea, in the several circumstances which render it different from
that

that at land, and with a view to health, hath not yet, as far as I know, been considered. A more exact knowledge of this seems previously necessary to an enquiry into the medical uses of living at sea.

1. The vast extent of the sea is to be considered, as it is spread over one half, at least, of the globe. From this wide expanded surface of water a great quantity of vapours is continually ascending, much greater in proportion than from the land. It is computed that, in the Mediterranean only, 5280 millions of tons rise in a summer-day; and farther south, where the evaporating causes are perhaps stronger, the quantity will be still larger. Sea air then is more humid than inland air.

2. Vapours from the sea, or rivers, generate a much greater quantity of air than exhalations from the land. Winds therefore blow more frequently, and more variously, at sea, and, with respect to land, from the sea.

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Hence, in the island of Britain, we have them two-thirds of the year in the southerly or westerly quarters. This is likewise the cause why storms continue longer at sea than at land.

3. Exhalations at land arise from numberless different substances; and in a small tract of country we observe the air to be of very different qualities; and particularly of a different temperature as to heat and cold: the effects are manifest. One side of a lake, bog, or mountain, is healthy, the other unhealthy. But the air at sea is not impregnated with such a variety of matters; the vapour there being always of one kind, as the subject from which it is raised is uniformly and universally the same. Nor will the vapour, which so much exceeds in quantity, be affected by the many different exhalations from the land, at least to any considerable distance from the shore, or to any great degree. Sea air, therefore, is more

more dense, because more simple, and consequently more elastic.

4. The air at sea is better ventilated; or, in general, it has a freer, quicker, and more constant motion. There are no impediments to its course here, as at land, from hills, mountains, rocks, and forests. For this reason it is more agitated, and purer, in opposition to that foulness which it contracts by stagnating. That there is more frequently a stagnation of the air at land, is evident from the clouds and haziness commonly observed hanging over land, by which sailors discover it at a great distance. The stagnation of the air at sea, even when it is not agitated by winds, is farther prevented by the many currents, and constant flux and reflux of the sea. By reason therefore of the greater humidity and density, and quicker progression of the air at sea, its action must needs be increased. Hence winds are more violent, or have greater force at sea than at land; especially as they are, more-

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over, frequently charged with much saline matter. For,

5. A great deal of marine salt is raised in the spray, tossed up and impelled by the winds: and in an atmosphere thus impregnated with a strong saline humidity, do sea-faring people live for weeks or months together, and have their bodies almost constantly moistened therewith.

6. The sea air is warmer than that at land. Those at sea seldom complain of cold, but are very sensible of a change when they come into soundings; much more for some days after they first come to live on shore. The earth is a dead inert body, and cannot, by the greatest force of the sun, be heated above a foot or two deep, and soon cools again. This great body must occasion a colder atmosphere, and cool the sea to a considerable distance. Accordingly sailors judge land to be near by the coldness of the seawater, which still increases as they approach the land. Winds blowing over
great

great tracts of land, or where frost and snow abound, are loaded with many rigid chilling particles. Hence it is, that north and east winds are so cold; while those from the south and west, where there is nothing but sea, I speak with regard to our own situation, are, for the most part, mild, cherishing, and warm. The greatest heats, on the contrary, in those parts of America nearest to us, are brought by easterly winds, blowing over a vast tract of sea. The sea-coasts with us, even pretty far north, are rarely subject to hard frosts, or lying snows. Instead of these they have more open seasons and more early harvests than other places. Were not the sea warmer, sea-faring people could not, but with the greatest hazard, bear to be so often drenched with it as they unavoidably must be.

7. There is in the air at sea, a constant undulatory motion, corresponding to the undulatory motion of the sea; whence a greater collision and

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conquaffation, and an increafed action of it in the way of impulfe.

8: That there is a true fpecific difference between the air at fea and the air at land, will appear more evidently, if we confider the nature of fea vapour. That the great quantity of vapour which riles was intended only to fupply this earth and atmofphere with moiſture, is too limited a notion; there being much more raifed than is fufficient for that purpoſe, which appears from the vaſt deluges of rain that fall at fea. As ſome other end therefore muſt be ſerved thereby, we naturally conclude that this vapour contains ſomething elſe beſides mere water.

And that a portion of ſea ſalt may aſcend in the vapour is not improbable; all effluvia being the formal ſubſtance of the bodies from which they are derived. Nature has ſecret methods of raifing and diſperſing ſalts; and wherever there is plenty of ſuch matter, and the means for
acting

IN MEDICINE.

acting upon it, there these salts must be plentifully raised. At sea therefore, and in the regions where salt abounds, there will be, at least, an equal quantity of effluvia from common salt as from other substances, which are discovered in great abundance in the air. Though evaporation, caused by heat, may not raise much fossil salt, winds skim off a fine pellicle, or lick up the surface of the water. The greater freshness of the surface of the sea is attributed to the exhalation of the salt; which shews that, however fixed, it may be dissipated; for the common exhaling causes are able to operate upon bodies the most ponderous; so that even gold itself suffers an abrasion, and may have its parts so divided as to mix with the air, and be suspended therein.

But as the oils, sulphur, and bitumen abounding in the sea, are more disposed to exhalation, they will also rise. This is confirmed by the smell of sea water; as all smell imports something

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something more than mere water, which is inodorous. These sulphureous oils, incorporated with air, produce many of the most considerable appearances in nature. Besides, being in some degree viscid, they must involve many particles of salt, which will likewise be carried up in the vapour.

A great deal of bittern salt too* is raised at sea; and being dispersed in the atmosphere, becomes the parent of other salts. It is said, moreover, to enter largely into the nourishment of plants. All nature is stored with salts, and these must be derived from some grand source. Salt abounds most in the sea, where it is subject to the forcible action of all the exhaling powers, the sun, winds, and subterraneous heat: and they confine the uses of it too much, who say that it is designed only to preserve the waters of the sea from corrupting, and to answer some

* Bittern is the lixivium which remains after making common salt, and contains many different salts.

alimentary and mechanical purposes. By means of an immense evaporation from the sea, the air is filled with a variety of saline corpuscles, in order to accomplish one great intention of nature, and of constant necessity, the propagation of salts through the universe. The natural salts indeed are few, their combinations and productions infinite.

Even the notion of an analysis at sea has obtained; and that by means thereof a peculiar acid spirit is constantly ascending in the vapour, more or less, according to places and circumstances. Sea air in the warmer climates is so corrosive that it soon destroys all metals and stony bodies. May not the acid of the air originally exist in the sea, till disengaged from the masses that contain it? By a wonderful process in nature all bodies are continually resolving into their first elements, or reproducing new ones, in a perpetual round.

C H A P. II.

Of sailing, as an exercise, compared with other exercises.

VARIOUS exercises have been contrived, or adopted, for the use of medicine. They may be distinguished into such as are performed by a voluntary muscular action, and those in which the body is passive. Of such approved efficacy are all the gymnastic methods, that one or other of them becomes in most diseases, more or less, a remedy; nay sometimes solely perfects a cure. And to render them more certainly beneficial, they are now carefully appropriated to the particular distempers in which long experience hath shewn them to be every way fit and useful.

Walking hath been accounted best for the purposes of nutrition, the distribution of the chyle, and plumping up the solids; and is the proper exercise of the studious. It is said,

said, moreover, to be the fittest for preserving health, while riding is esteemed the best for restoring it. Indeed, where it agrees, it is a manly cheering exercise, in a special manner adapted to the low-spirited and hypochondriacal. The particular condition of the gouty and corpulent, who are incapable of any great bodily exertion, admits only of vehicles, and other passive exercises, or that of the voice. The weak, hectic, and phthifical, as they can bear no higher, are directed to use the most gentle, such as, friction and gestation.

Not only is the kind of exercise prescribed according to the particular disease, but the necessary conditions, respecting the time, the degree, and the manner of it, are, with no less caution enjoined. Regard must be had likewise to age, sex, seasons, and the like. Every kind and degree is not fit for every constitution, far less in every malady, or at all times. What is only healthful, and a mere recreation to one,

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one, may to another be painful and hardly sustainable. The usual exercises of an athletic, which he performs with ease, would soon weaken, and wear out, the tender frame of a valetudinarian, or puny stripling. Vigorous bodies will habitually, and without injury, undergo the hardest labour, exposed to all the inclemencies of weather and seasons. Delicate subjects, on the contrary, cannot, but with pain and hazard, bear the slightest exercise in open air, except in the mildest weather and seasons. Some diseases require brisk and constant exercise; many will admit of neither. When the ruptured blood-vessels pour forth their contents, those motions which were safe and familiar before, would now be highly improper and dangerous. Exercise rashly undertaken in great heats of body or weather, in the accesses or attacks of diseases, might endanger inflammation, disturb the œconomy of nature, confirm the disease, or cause a fatal translation

flation of it. In the choice of exercise, therefore, many things must be attended to, in order to determine, from the circumstances of the habit or distemper, which is truly proper and preferable.

I have long thought that no exercise deserves our attention more than sailing, whether considered in itself, or as accommodated to certain diseases, in which it seems an appropriated remedy: nor can I help wondering that, while other exercises have been improved into very extensive use, this, though attended with many and manifest advantages, should be so little regarded, or so little recommended, especially in such a maritime nation as ours.

1. The first thing observable in sailing, is, the sea-sickness. This does not arise from any offending matter in the stomach or intestines, from the smell of the ship, or of the sea; but is owing entirely to the unusual agitation, causing such a commotion of the
parts

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parts within the head, as affects the whole system of the nerves in their origin.

2. At sea one is, for the most part, carried quickly, or as it were, driven, through the air, and often against adverse winds; by which the action of the air is much increased.

3. The rolling and tossing motion of the ship is a great addition to the exercise; as the muscles are thereby kept constantly and alternately in action, through the whole body, in order to preserve the equilibrium.

4. The constant undulatory motion of the air, above what it has at land, is a circumstance which in effect is a considerable exercise of itself. Besides the ordinary gravity and pressure of the air, it will act on the body with a force increased by the manner of its application, in repeated strokes; sometimes on one part, sometimes on another, by a sudden compression and expansion: so that while one side sustains a strong pressure, the other suffers

fers only a common degree of it, or less; and sometimes the body is squeezed between opposite pressures. We may form some idea of this from the action of a fulling-mill.

Sailing seems to correspond with most other exercises in their manner of acting, or their effects, and indeed to comprehend them all. When it is not vehement it resembles walking, in the gentle continued action of the muscles with which that exercise is accompanied, when used in a moderate degree. The benefit derived from riding depends upon the continued succession which the body suffers, and on being carried with considerable quickness through the air. Now, in sailing, there is a greater succussion from the vomiting; and in a ship driven by winds, a person is carried through the air with greater quickness than in any other ordinary exercise. Again, at sea a various action of the muscles is produced by the motion of the ship, and the constant ef-

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forts

forts that must be used to prevent falling; by which the body is put into all that variety of constrained, ever-changing attitudes observed in bowling, skating, rowing, and the like exercises, and in common labour. Exercise in a swing, or a coach, which sometimes causes vomiting, comes nearest to sailing, as does likewise our first exercise, the cradle.

Sailing then is an exercise compounded of gestation, and that of a particular kind; a preternatural spasmodic motion in vomiting; and a singular action of the air: nor can any other exercise lay claim to so many and such peculiar advantages.

It is constant: for as the ship is in perpetual motion, day and night, sleeping and waking, one or other of these exercises always take place, contrary to all other exercises, in which the sick are usually employed but a short while together, and the intervals between the times of exercise are long.

Though

Though failing, considered in all its complex circumstances, and powerful effects, is reckoned among the highest exercises, so as in some to cause great perturbation, it is really, after being a little used to it, the most gentle, and excites no irregular motion, or undue impetus of the fluids, with subsequent waste of them. Therefore it is not attended with lassitude, or lowness of spirits, with hurry and confusion, as other exercises often are. A man may sit or stand, walk, lean, or lie, as he likes best, and so relieve his body by a frequent change of posture, and prevent weariness. Other exercises of efficacy cannot be undertaken, by those who are weak and wasted, under fever and inflammation, or in a colliquative state, and many other such cases; and lower exercises are insufficient for any great purpose of cure. But failing is of mighty energy, yet safe; and, excepting the seasickness at first, is easily sustained. Scarce any circumstance of a disease

in which it is proper, can forbid its use, while the frame of the body or mind is not too much broken, nor any part corrupted: nay, even in this last case it is often highly proper.

To all these, as farther advantages, we may add, that at sea, you constantly breathe a peculiarly salutary air; and that the action of the air is greater, and increased by your being often carried through it with uncommon velocity. There is likewise a greater action of the muscles, of all the muscles of the body, of muscles not exercised in any other ordinary exercise, or not exercised in the same manner, nor so forcibly, nor with such effects and continuance. Nor is there occasion, in undertaking a voyage, for so many precautions as are necessary to be observed in other exercises.

C H A P. III.

Histories of cures by living at sea.

HISTORY I.

Consumption.

IN 1743, a young gentleman, whose mother and elder brother had died of a consumption, lost his appetite entirely, his flesh, and, which alarmed him more, his strength to a great degree. He had a dry husky cough, a fever with night-sweats, a meagre countenance, and a high hectic flush: in short, he seemed to be following his brother very fast, being of the same delicate make and complexion, and nearly of the same age. I judged it vain, and a losing of time, to go the same formal fruitless round with this brother that I had but just before gone with the other; and there was no hopes of a cure, but by putting a speedy stop to the disease in this ad-

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vanced stage. It was determined to make immediate trial of sailing. The first day of his being at sea he got a keen appetite, which increased so much, that in a few days he could eat heartily of the ship's provisions at every meal. He coughed little; and, as the noise hindered his sleeping, he frequently walked on deck in the night without hurt. It blew so hard all the voyage, which took up twelve days or more, that even some of the ship's crew were sea-sick; and they were once about to leave the vessel, or run her ashore. He was not sick; and by the time he got to Bristol all his complaints were gone. Having now an opportunity, he drank, as had been directed, the hot-well water for three weeks. After being a month longer at sea, the weather all the time blowing and foul, he returned, near the end of November, fat, hale, and strong; and has continued ever since in perfect health.

HISTORY II.

Consumption.

A STRONG, healthy, young woman, in assisting to extinguish a fire in the night, worked very hard for some hours, with scarce any clothes on; by which she was excessively heated, and sweated profusely. When the affair was over, she neglected going to bed, or cooling herself gradually; but after shifting herself, went about her ordinary business. In a few days a dry, hard, tearing cough seized her, with great difficulty of breathing, which increasing, wasted her exceedingly in a short time. All winter and spring she continued in a way that, considering the greatness of the malady, and of the cause, gave small hopes of her recovery, but what were founded on the disease becoming chronical, the symptoms not increasing, and a more favourable season coming on. At length, after a tedious

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ous use of many remedies, in summer she got free, in a good measure, of her cough, recovered flesh, and a tolerable state of health. But her breathing continued bad, and was so much affected by any motion or labour, that the gentlest presently overcame her. Thus she went on for some years, upon the whole gaining more strength. When, contrary to expectation, she had recovered a sort of settled health, in summer, without any sensible cause, her cough returned with greater violence than ever; attended with profuse night-sweats, looseness, and a surprising loss of flesh and strength. Nothing was able to stop the rapid progress of the disease. After much scruple, because of her weakness, I advised a voyage; but with more freedom at last, as she herself was fond of trying it. In two months she returned in all respects well, except that there seemed to be still some small difficulty of breathing, which, however, was no impediment to

to her labour or exercise. Sometime after she married, left her own country, suffered hardships and vexation, bore a child, became consumptive it was said, and died. When I say that a voyage lasted so long, it must, for the most part, be understood that the patient was not a third of the time actually at sea.

HISTORY III.

Consumption.

A YOUNG man, by riding all day in the rain, took cold. In a short time, a severe, dry, frequent cough came on, with short breathing, constant fever, and a great discharge of watery phlegm, from the excessive labour in coughing. Notwithstanding all that could be done to subdue the fever, and mitigate the symptoms, in six weeks time no advantage was gained; and a consumption seemed to be fast approaching. He was advised to go
to

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to sea. The vessel had not proceeded far, till, by the shifting of the wind, she was forced in again, and rode twelve days in an open bay exposed to the south, the weather and season being favourable. Here living in the sea air, and suffering the gentle exercise of the ship, his symptoms abated so much, that he laid aside his design of going to sea, and from this time daily recovered; nor has he ever had the smallest tendency to a relapse, though it is now many years since.

HISTORY IV.

Consumption.

A YOUNG gentleman caught a severe cold in winter, which was soon succeeded by a constant, vehement, dry, hoarse, hollow cough. Not recovering, though somewhat better at times in the following spring and summer, he made a long journey in the autumn. I now first saw him. The cough remained, with quick breathing,

breathing, heaving of the shoulders, and inability to make a full inspiration. He was frequently sick and faint, and wasted exceedingly, without fever, loss of appetite, or any increased evacuation. His wasted body resembled very much the aridity of old age. Two or three months, if so much, seemed to be the utmost term he could live to in this climate. He went to sea immediately. Just before this he had taken the mercurial pill, but with no evident effect. The first week at sea did not produce any change, except that he got a better appetite, which, on going ashore for ten days, grew worse. On putting to sea again, his cough abated, and gave him very little uneasiness during the rest of the voyage; his appetite increased; he gained good spirits and strength; and several large boils suppurated under his arm-pits before he reached Lisbon, which was in thirty-seven days from his going last on board. Contrary to what had been advised, for I
proposed

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proposed his living at sea altogether, if it agreed with him, he was persuaded to stay there in a country place, where he continued slowly to recover, but not to such a degree as he had expected. He returned however in May greatly mended; yet not so much as to make it safe for him to remain in Britain during the winter; which he therefore passed in Italy. Next summer he came home every way well, except that he had not got quite rid of his cough, which may expose him to some danger; but this he hopes to wear off by pursuing a sea-faring life; having always found the most sensible relief from coughing, and having had his health best at sea, and being sensible of a decline in it when he lived but two or three weeks ashore. Though the weather was very stormy during the whole of this last voyage of seven weeks, he thought it did him the most service, and restored him to something like a confirmed state of health.

Such

Such was this patient's situation when the above relation was given in a former edition of this treatise. After that he went to North America, where he lived several years seemingly in good health. His affairs in Britain obliging him to return, he met with discouragement and uneasiness here; his health declined, his cough returned, and terminated in a mortal purulent consumption.

HISTORY V.

Nervous pain of the stomach.

A YOUNG gentleman, bred to the law, was subject to a pain in the upper orifice of his stomach, derived perhaps from one of his parents, who was constitutionally subject to nervous complaints. A sedentary life, and much writing increased the disorder, which at last became so constant and severe, that he was rendered incapable of all business. Two years he passed in this state, with very little remission,

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mission, and scarce any interval free from pain; so that sometimes a worse distemper was apprehended. Every thing usually prescribed, or recommended, in such a case, was tried; nor were supposed specifics omitted; but all was to no purpose. He went to sea about the end of September, and was severely sea-sick all the time he was on board, but soon found benefit; in so much that, after having been absent near three months, he returned free from all his complaints. Two years after this he had some slight returns of his illness, and made another short voyage. Since that time, and indeed from his first going to sea, he has always been able to attend closely to business.

HISTORY VI.

Vapourish languor and fever.

A YOUNG gentleman whose father was of a lax phlegmatic habit, grew so fast that, at sixteen or seventeen, he
was

was uncommonly tall. From this quick growth, and an hereditary constitution, he was slow, languid, and unable to bear labour or exercise. A vapourish kind of fever seized him. He had pains in his stomach and sides, which were tender to the touch; and a forenefs, or pain like that from a bruise, all round the chest internally, made it difficult for him to turn in bed. There was a slow fever, with costiveness and palpitation; his tongue was white, foul, and moist. He had little thirst, but great inappetency and languor. A fortnight, or more, scarce finished this course, nor could he be restored from one fit before he was seized with another. I had indeed seen him recover, in some measure, from several fits; but could not, in the ordinary way, hit on the means of preventing a relapse. I therefore advised the sending him to sea in the intervals. He made two or three short voyages, with much advantage to his strength and spirits.

As

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As he grew stronger, he had less frequent returns of his illness; and for some years, only a stated annual fit. Of this he does not make so much account as to think sailing any longer necessary; enjoying at other times, as good health as a constitution somewhat delicate will allow.

HISTORY VII.

Consumption.

A GENTLEMAN caught cold in Virginia, under which he laboured seven or eight months. He came over to Britain in winter, and was sensibly better during the voyage. He coughed much; had great stuffing and constriction of the breast; laboured much in breathing; and upon any increased motion, sometimes on walking only the length of a street, he would spit blood. He had night-sweats, and was considerably wasted. I had no hopes but of keeping him from growing
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worse,

worse, till the season should be more favourable. Though, by the use of remedies, and a very exact regimen, he found some relief, and the disease did not any way increase, yet there was but little prospect of his recovery, especially as a consumption had been fatal to his family. In May he went to sea again. The information I received when the ship returned, was, that he grew in all respects easy, and continued so well during the voyage, that he thought himself at liberty to return to his former way of living. When he got to Virginia he renewed the use of the cold bath to which he had formerly been accustomed. Soon after he was suddenly taken ill on a journey, and died in a few days.

HISTORY VIII.

Consumption, with purulence and spitting of blood.

A YOUNG gentlewoman, of a delicate florid complexion, fell into a

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consumption; a distemper of which her mother, a brother, and a sister had died not long before. For some months she had a troublesome night-cough, with sweating, spitting of blood, a suppuratory fever every two or three weeks, and a great discharge of pus. A heavy, but very uneasy pain in the left side of the thorax was not her smallest complaint. By the use of remedies she seemed to mend considerably: but trusting no appearances in such a deceitful malady, I urged her going to sea, and she found herself much better by following that advice. Being obliged to live some days on shore, in a close place, when the weather was very warm, she was again seized with spitting of blood, from which she had been a long time free. In coming home, the ship put into a harbour, and there lay wind-bound a month. Here she sailed every day in a boat. Her return gave me equal pleasure and surprise. She had recovered her flesh, spirits, and looks,
and

and none of her complaints remained but a small degree of hoarseness. Overjoyed, and secure, as she imagined, of health, she would not be persuaded to go to sea again, saying she was very well; though from the circumstance of time spent in sailing, the great degree of the malady, and the remaining hoarseness, it was too evident, notwithstanding so great an amendment, that her cure was far from being complete or certain. In winter she had some slight returns of her spitting of blood, with matter; but was every way much easier than she had been the preceding winter. In spring a slow fever, then epidemical, seized her, which she got over; but from this time languished, became quite consumptive, and died.

HISTORY IX.

Spitting of blood and suppuration of the lungs.

A STRONG labouring man, from a weight falling upon his breast, was

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taken

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taken with spitting of blood, which often returned ; and sometimes he would spit a pound or two at a time. He had frequent suppurations, with large expectoration of pus ; and was so weak and emaciated, that, during the suppurations, he was confined to his bed. Under a strict regimen, and abstinence from spirituous liquors, which he had formerly used too freely, he made two or three short trips to sea in summer. From his first going to sea he had no spitting of blood ; the matter he used to spit, gradually dried up ; and he recovered so much, that, in October, when I happened to see him, he had a hale look, felt no remains of fever, and was able to go about freely, but not to follow his former occupation ; a little cough still remaining. Being obliged, in very bad winter weather, to ride a journey in great haste, he caught cold. A new suppuration came on, a copious purulent spitting quickly wasted him, and he died.

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HISTORY X.

Megrim.

A GENTLEMAN, long afflicted with a megrim, had occasion to go to sea, without any regard to his distemper, and was cured; though the voyage was short, commonly a few hours fail.

HISTORY XI.

Consumption from a pleurisy.

A YOUNG gentleman, many years ago, escaped with difficulty from a violent pleurisy by losing a great deal of blood, and was now in equal danger from the consequences of it. The pain of his side continued, he had a severe cough, and large expectoration, attended with melting sweats, and a remarkable loss of flesh. Under these he laboured many months. In summer the sweating and expectoration abated; but a hard, dry, continual cough remained; and such were his

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weakness and difficulty of breathing, that he could not bear the smallest exercise without frequently resting. He undertook a voyage of five or six weeks, out and home, and in a few days found himself relieved. The cough ceased, his appetite increased, and he recovered flesh and strength; inasmuch that he frequently did the business of a common sailor for his amusement. His breathing became easy. He returned in good health; and by going to sea three or four times, once every twelve months, has continued so; but in frost, or an easterly wind, he is subject to a cough and difficulty in breathing.

HISTORY XII.

Rheumatism and nervous complaints.

THE following history is given in the gentleman's own words. For two years I languished much from great relaxation of nerves, occasioned, I suppose, by living many years in a warm
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climate.

climate. I seldom failed to be attacked three or four times a year with fevers and agues. I suffered extremely from pains in my back, thighs, arms, and shoulders; so that I could scarce raise my body, or stand upright. I lost my appetite, flesh, strength and complexion; and had great lassitude, and aversion to business. For these complaints I took large quantities of medicine, and used warm baths and dry cupping, but without any real benefit. When just setting out on my West-India expedition, I was taken with a violent pain in the left side of my breast for which I was blooded, and applied many things both externally and internally. These not answering the intention, first one blister and then another were applied to the part, without effect. Before the last healed I was obliged to go on board. I had been but five days at sea when my appetite grew better. In ten or twelve days I found myself considerably stronger; though I observed no regi-

men in diet, nor did I take any medicine whatever. The pain in my breast continued, but was less violent. However I grew daily better, both during my voyage to St. Kitts, and while cruising among the leeward islands; so that when about to return I was quite fat, had a good complexion, and felt no pain in my breast, but on making a full inspiration. After my return to Virginia, the pain returned, and continued to increase till I went to sea again; when it again abated so much in a fortnight that it gave me little trouble. I had been but a short time in Britain when it increased greatly; and though by the advice of some of the most eminent of the faculty, I have found relief, it still returns from time to time.

This disease, changing its seat, became a nervous headach, violent, and of long continuance; which required frequent and large bleeding, and was much increased by the motion of the ship on going to sea.

H I S-

HISTORY XIII.

Consumption.

A GENTLEMAN, whose sister died lately of a consumption, was habitually subject to a cough, which increasing, with large expectoration of thick sweetish matter, grew very troublesome, especially in the night, and wasted him much. During a six weeks voyage he scarce ever coughed. But going ashore he lay in damp sheets, got cold, and the cough became again very troublesome. He returned nevertheless in winter, fat, well-coloured and strong, and continued so a year or more. After that his cough increased; a true purulent spitting came on; he had frequent large hemorrhages from the lungs; and notwithstanding the best means that I could devise, the event proved fatal.

It is presumed that, in this case, a consumption was, for a considerable time, prevented by sailing; and might have

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have been kept off much longer, had not an accident caused a return of the cough, and the remedy by failing been ever after declined.

HISTORY XIV.

Ulcer of the breast and lungs, with spitting of blood.

A GENTLEMAN, from the kick of a horse on his breast, had a spitting of blood, which frequently returned, attended with a large, purulent, faneous discharge, mixed with many pieces of membrane. He complained also of a sense of weight and foreness of the parts internally. Thus he continued several years wasting and languishing, though he made use of much medicine, prescribed by the best physicians in different places; nor was he ever free, for any time, from these discharges and complaints, except once for the space of a month. After coughing up larger pieces of membrane than usual, the discharge ceased again for some weeks,

weeks, which gave him great hopes that now he was to have no more returns of it. I insisted however, on his going to sea; arguing that this was the proper time for assisting nature to complete the cure. He was absent only a few weeks, eighteen days of which he was at sea, and one fortnight ashore, where he drank milk; yet he returned surprisngly mended; had got a great deal of flesh, and a ruddy complexion; and was able to walk several miles without being fatigued; whereas before he found it difficult to go slowly about, in the course of an easy business. He has now been many years free of all complaints from this cause.

Was living at sea the cure here? or, did it only serve to confirm the cure? It must be owned that it was undertaken at a lucky time. Would a journey by land have had such a remarkable effect in so short a time, or a much greater, even though we should consider it only as having restored the
 patient

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patient from a mere languid state, after so long an illness? Would it have been as safe, and as easily sustained in such a delicate and diseased state of the lungs, and such a degree of weakness?

HISTORY XV.

Doubtful and difficult recovery.

A GENTLEMAN, on account of a complicated illness, entered upon a long course of medicine. Before his disease was half subdued, he was seized with a violent epidemical dysentery, which interrupting that course, gave an opportunity to the former disease to get head again, and so occasioned the course to be protracted some months longer. The disease being at length so far overcome, that it was hoped time and other methods would carry off the remainder, the patient spent many months at home, in hopes of being perfectly restored. But the slow return of his health, and his continuing long emaciated, made the event

event doubtful, and gave great apprehensions of a hectic and consumption. Thus weak and wasted, with his legs much swelled, he beat about in the channel three weeks, in the depth of winter, and in a continued storm. The vessel putting in again, he lived some weeks ashore. During the storm, almost every one on board was sea-sick but himself, who the rest expected would never see the end of the voyage. He ate and drank heartily the whole time. Some foul deep scabs, which hitherto could not be cured, now sloughed off, and the parts healed completely. By the time he reached Lisbon, which kept him seven days longer at sea, he was almost wholly recovered; and has now long enjoyed a confirmed state of vigorous health.

HISTORY XVI.

Spitting of blood.

A YOUNG gentleman, tall, and inclining to be thin, with a soft, smooth skin,

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skin, and lank hair, was seized with a spitting of blood, and had several returns of it to a considerable degree. After the use of some remedies, I advised him to go to sea. The voyage out was about ten days. Coming home in winter, in a small deep-laden vessel, they laboured excessively, for some weeks, in a heavy sea, and stormy weather, till at last they were stranded; after which the patient lived four months in a low, wet, foggy, maritime place. Under such a threatening appearance, as is above described, a sea life was thought the most speedy and effectual way, not only to secure him against a relapse, but to prevent a consumption, which, some years before, had been fatal to two of his family, about the same time of life. Neither the terror and fatigue he suffered from the danger he was in, nor living so long in an uncomfortable place, caused any return of his disease, or any way impaired his health. He grew fat and strong,
and

and has now for some years continued in all respects well.

Since the above account was first written, the gentleman went to settle in the West-Indies, where he enjoyed a good state of health for seven or eight years. He then fell into a consumption, and returned to Britain; where, notwithstanding the length of his voyage home, he lived but a short time. The circumstances and period of his distemper, when he last put to sea, are not known.

HISTORY XVII.

Vapourish pains, languor, and fever.

A YOUNG gentlewoman, during the winter and succeeding spring, laboured under pains of the stomach and belly, especially in the right side; lost her appetite and strength, and was brought extremely low through excess of pain. She took many things, which either did her no good, or which her stomach would not retain. Her weakness and
disease

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disease increasing, and other remedies affording little or no relief, I advised a voyage to sea. Part of a letter from a reverend clergyman, her relation, will show the effects of it. “ My
 “ niece, after much languishing, and
 “ many fits of pain, adventured at last
 “ to follow your advice. Though she
 “ was so weak and sickly, that with
 “ difficulty she got to the vessel, and so
 “ ill by the way, and for some time
 “ after she landed, that they were a-
 “ fraid of the consequence, yet she
 “ recovered apace; and after another
 “ fit of vomiting in her return, she
 “ seems to be so much changed for
 “ the better, as could hardly have
 “ been imagined.” She was five
 hours going out, and sixteen in the
 return. By this trip she gained so much
 strength, and freedom from pain, that
 she was able to bear riding, from
 which, (having an aversion to the sea)
 and change of air and amusement,
 a thorough cure was expected. But
 she still continued all summer and au-
 tumn

turn in a doubtful way. At length being persuaded to repeat the same voyage, she soon recovered entirely.

Several others, under great languor, pains in the side and stomach, flatulence, want of appetite, vomiting, and the like vapourish complaints, have assured me that they found more real benefit from the sea-sickness, than from all they had used before ; so that a sensible turn was given to the distemper, which ended in recovery.

HISTORY XVIII.

Consumption.

A YOUNG gentleman, studying the law, contracted a hard, dry cough, which held him long, with profuse night-sweats, and great loss of flesh, strength, and appetite. Encouraged by the example and success of some of his acquaintance, who were thought to have been far gone in a consumption, he readily embraced the proposal of going to sea. The ship was unluckily detained in port six weeks
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longer than was intended ; in which time his legs swelled, and a looseness came on. In the first two days he was at sea he vomited much bile and phlegm ; his sweating, looseness, and the swelling of his legs went off ; and he could eat. He began now to spit matter in great quantity ; and, wasting daily, though he still retained his appetite and spirits, died on the voyage ashore.

Had the voyage been begun when first proposed, and the abscesses sooner broken, before the colliquative symptoms had made such a progress, we may judge from the benefit received even in such a weak state, that there were grounds to expect at least a longer reprieve, if not a better event.

HISTORY XIX.

Asthma.

A CLERGYMAN of the most relaxed frame, habitually asthmatic, sometimes to a great degree, and almost dissolved

dissolved into phlegm, when unable to use any other exercise of efficacy, made two voyages to sea. His asthma was not so much bettered, as his health was improved in other respects. Indeed, in such a great disease, more could hardly be expected; as the time of his being at sea was always short, nor was he affected with the sea-sickness.

HISTORY XX.

Consumption.

A GENTLEMAN, with ulcerated lungs, undertook a voyage. Fear and the sea-sickness so discouraged him, that he continued only eleven days at sea. The benefit he might have received, even in this short time, was interrupted by his going on shore for some part of it. He now made a long journey, drank Bristol water on the spot, used all the most approved remedies, returned to his own country, and, after languishing three or four months, died. He was of a consumptive family.

HISTORY XXI.

Palsy.

MANY remedies having been prescribed in vain, to a gentleman afflicted with a pretty high degree of universal palsy, I advised him to make a long voyage by sea, to drink the sea-water, to bathe in the sea, and, when he got to America to use rattle-snake broth. The disease had, in the course of a good many years, come on gradually; he walked ill, and his sight was confused, from a constant tremulous motion in his eyes. A fever which seized him on going over, it was thought would have done him service; but being of the depressed kind, served only, for the time at least, to enervate him more. After living about a year in the country, he returned much the same. This disease, in like circumstances, I have never seen cured by any method.

These are all the instances in which I have directed sailing and living at sea,

sea, for the cure of diseases *; excepting a few more, from which nothing could be inferred, as, in these cases, it was undertaken with great disadvantages. I have been informed of other instances of its thorough efficacy, in some diseases of a worse kind, and can fully credit them; but as I am not able to give an exact account of the circumstances, I only mention them. Indeed I am persuaded it would appear, if attended to, that many great cures are daily obtained by this method, though they were never so much as imagined to be owing thereto. As the experience here laid before the public is not the result of vague information, or a few flightier trials, it certainly ought to excite attention at least; and as plain facts speak for themselves, I shall only offer the following short remarks on the foregoing histories.

In almost all of them the good ef-

* These indeed were all when this treatise was first written. A supplement has been made since, containing a number of cures which are here annexed.

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fect of failing is evident, and the more remarkable as it happened in so many cases successively. The last four are not to be reckoned.

Hath any other method done so much good, in so many instances of the kind?

The benefit received was owing altogether to failing, for no other remedy was used, during the time the patients lived at sea.

It did not depend wholly on the exercise; for some were not sick at all, or but very little; and that mere gestation should resolve tumors, dry up pus, and heal ulcers, can hardly be conceived; or that those effects were entirely owing to an increased action, or greater purity of the air.

I have recommended failing in consumptive cases, chiefly, as it is particularly suited to their cure; and seeing no adequate remedy has yet been discovered, surely that should encourage, and will justify a serious trial of this in a disease so frequent and so fatal in Great-Britain,

Not

Not only is this method suited to the cure of a consumption in general, but, which cannot be said of other remedies, sailing and sea-air are equally accommodated to the different kinds and stages of it; that is, both to the crude state of simple obstruction, and to purulence; or ulceration from different causes.

It appears farther to be no less adapted to those concomitant circumstances, in which other exercises are frequently hurtful; namely, fever, inflammation, and spitting of blood.

The practice, if no other advantage is gained by it, procures at least, a manifest abatement of symptoms, or a suspension of the disease; which is a point of great moment; as thereby an opportunity is given of attempting a cure, by regular courses of medicine, if these be requisite, and greater benefit expected from them.

That several of the consumptive died, after trial of a sea life, is no just objection to the method proposed. The lungs, when once affected to any degree, remain ever after, or for a long time,

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weak, wasted, in part obstructed, or impaired in their motion; and, from these causes, liable to be again affected; till, in a course of time, the parts are strengthened, callosities removed, and the vessels rendered pliant and permeable.

The relapses that happened, and their fatal consequences, cannot be attributed to the want of efficacy in failing, but were plainly owing to accidents, which, with due precaution, might easily have been foreseen and prevented.

In most of the cases related, the voyage was undertaken so late in the disease, and when the symptoms were so far advanced, that not only the success, but even the safety of it was doubtful.

Nor was the time allotted for failing always sufficient, in a great degree of the distemper, to render the success complete in a perfect cure; which, as far as the nature and circumstances of the malady would allow, might have been accomplished by perseverance.

C H A P. IV.

Living at sea, a proper remedy in various cases, and how it operates.

AFTER so large a detail of facts, it is natural to enquire what there is in sailing, or living at sea, that makes it a fit remedy ; what effect it has, and how these effects are produced. As this subject has been but little attended to by the moderns, though well known in ancient times, it seemed necessary that we should be so much the more particular and minute in our enquiries into it, in which it is hoped we shall be indulged. Should it be thought that the operation of the sea is made to depend on too many circumstances, it must be observ'd that most of them are mentioned by authors ; and every one may judge for himself to which of them the effects should be attributed.

The first effect of sailing is the sickness, which generally takes place immediately ;

immediately ; and, at the very beginning of a sea voyage, cleanses the first passages from those bad humours, which, if retained, would vitiate the chyle, and prove a continual source of disorder in the bowels, as well as in the blood. So far it properly corresponds with the usual *præmittenda* in all regular courses of medicine.

But the benefit of sea-sickness is not restricted barely to the cleansing of the first passages. Vomiting, by deriving a greater supply of blood and spirits into the parts, warms and strengthens them ; and the long continued nausea, giving a lasting contractility, restores the tone of the stomach, and its appendages, when, from natural weakness, or some other vice, they are unable to do their office, and so bring on a bad digestion, the ill effects of which are felt in all the after concoctions. On these accounts, therefore, it must be a sure remedy in many diseases that have their seat in the alimentary canal, or depend upon its distempered state.

state. The invigorating power of sailing, on the stomach and bowels, is evident from the costiveness produced by it, and the great appetite which it seldom fails of procuring; even when it has been entirely lost, and could not be restored by any other method.

Vomiting, moreover, by the repeated successions it gives, and the evacuation it promotes, makes a strong revulsion, and, dislodging the impacted matter of diseases, becomes a powerful deobstruent. From daily experience we know that fixed obstinate pains, particular tumors, and topical inflammations, threatening a dangerous apostemation, are thereby entirely removed, or have their increase retarded. Rebellious ulcers it renders more tractable; and hemorrhages are wholly stopt, restrained, or prevented by it. Dropsies likewise, and a mania, sometimes yield to it. Nothing, perhaps, causeth more violent concussion, or greater distension in vomiting, than sea-sickness does; and therefore the
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commotion excited by sailing, was said to have the same effect as hellebore; and the vomiting, occasioned by the rolling of the ship, to be a cure in many diseases of the head, breast, and eyes, as well as all those for which hellebore was usually given *.

This sickness, however, is not always a consequence of being at sea. Even when the commotion is great, many are entirely free from it, and yet as certainly cured as those who are sick. There is a circumstance in sailing, though not regarded perhaps, which seems in some measure to sup-

* *Commotio denique, quæ in navigatione excitatur, vim habet helleboro levi et albo persimilem. Oribas. Medicin. collect. lib. 6. cap. 23.*

Quin et vomitiones ipsæ, in stabili volutione commotæ, plurimis morbis capitis, pectoris, oculorum mendentur, omnibusque propter quos elleborum bibitur. Plin. Hist. lib. 31. cap. 6.

Illa autem quæ fit procelloso in mari jactatio robustissimum hominem, non assuetum, vertigine, vomitu, anxietate intolerabili, ipso animi deliquio, afficit; hinc casu aliquando morbos inveteratos sic sanari novimus. Van Swieten Comment. in Boerhaav. aphor. tom. 1. p. 34.

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ply the want of this sickness. For several days, till the motion becomes familiar, every time the ship pitches, a strong involuntary contraction of the muscles of the abdomen is felt, as if the person were sinking or falling, and endeavouring to recover or save himself; which, upon the rise of the ship, immediately ceases, and the muscles are a moment at rest; till, by the fall of the ship, they are again put into action. Thus all the viscera of the lower belly are, for a great while, under a frequent, constant, alternate compression and relaxation. In this action too, which is sometimes pretty uneasy, especially if there is a head sea meeting the ship, the same mechanical impression is made on all the parts within the thorax. By every contraction of the abdominal muscles the diaphragm is strongly pushed upwards, which, when the contraction is over, instantly descends; so that the lungs themselves are, equally with the other bowels, subjected to a quick
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ſucceſſion of alternate preſſure and dilatation. The effects of all this may be eaſily conceived. It muſt have no ſmall influence in promoting a free circulation through the ſeveral viſcera ; and be a good means to reſolve obſtructions already formed, or prevent thoſe that are about to form. Glandular tumors, external, indolent, and not quite in an indurated ſtate, are often diſſipated by repeated friction, or gentle kneading, to which the action now deſcribed may be conſidered as not diſſimilar.

Sailing has been reckoned ſtill farther of uſe, as the air at ſea is poſſeſſed of real alterative virtues, on account of the many ſaline and other corpufcles of different powers, united with it, and plentifully imbibed by the inhaling veſſels, eſpecially thoſe of the lungs. The marine vapour, according to Oribafius, is not merely humid, but is likewise impregnated with dry and acrid parts, of an active penetrating nature. For this reaſon maritime
places

places were judged proper, whenever there was occasion to warm, resolve, or deterge. Sea air, on account of its saltness, is highly aperient, says Cælius, cleanses the body from impurities, and, like an alterative, corrects the whole habit *.

There is in the air a certain principle necessary to life, though we have no determinate notion of it. This seems

* Quæ autem in navibus (sit gestatio) hoc magis habet, quod in purgato aere, et in quo non humidi vapores, sed ficci et acres sint, efficitur; et ob eam ipsam causam est præstantior. Oribas. Medicin. collect. lib. 6. cap. 23.

Loca vero maritima ubi detergendum, aut aperiendum, aut calefaciendum, conveniunt. Id. lib. 9. cap. 11.

Etenim fluminales, vel portuosæ, atque stagni navigationes incongruæ judicantur, quoniam humectantes caput infrigidant exhalatione terrena: maritimæ vero laenter atque sensim corpus aperiunt, et, falsæ proprietatis causa, corpus adurunt; atque ejus habitum quadam mutatione reficiunt. Cælius Aurel. lib. 1. Morb. chron. cap. 1.

Est enim lacerantior, atque corporis apertionibus efficax, ob salinitatem maritimus aer. Id. lib. 3. Morb. chron. cap. 3.

to be maintained only by a free circulation; and therefore the unhealthiness of places, not duly perflated, is probably owing to the want of this principle; which the inhabitants of great cities and towns, and those who live in low and confined situations, are obliged, for the preservation of health, or the cure of diseases, to seek in the open country, and more ventilated situations. Perhaps too this vivifying principle abounds most at sea, as the air is there so much purer, milder, and more highly cherishing. Its excellence in these respects is experimentally known, even to the vulgar; nothing being more commonly spoken of than the freshness of the sea air; which carries along with it the idea of greater purity and wholesomeness. Aristotle observes that there is a more kindly ventilation at sea, or a more frequent blowing of temperate winds, to which he attributes its healthfulness; and it was reckoned
one

one great advantage of sailing that it is performed in a pure air*.

The exercise in sailing is one chief circumstance of its operation. Gestation at sea is quick, vehement, and incessant, in very various and opposite directions. In this rocking motion, therefore, there is a perpetual balancing, from a continual change of the center of gravity; by which means all the solids act, and the fluids are acted upon, with great variety and effect, and thus contribute to produce an uniform, well elaborated fluid, the blood. The lungs, by their unceasing motion, and thorough agitation of the blood, are the main instrument of sanguification; which, in many diseases, is very imperfect, especially when this organ is itself affected. Will not the constant various action, induced through the

* Cur qui in navibus degunt, quamvis in aqua, coloratiores tamen sunt, quam qui in paludibus? An loca commode aspirata, coloris præbere hilaritatem possint? Aristot. Probl. sect. 14. quæst. 12.

Oribas. ubi supra.

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whole system of the muscles in sailing, be a help to the impaired action of the lungs? And does it not, more than any other exercise, emulate, and supply the want of this sanguifying power in them? The benefit usually accruing to health from a sea voyage, even when the disease is not entirely cured, seems to be a proof that the juices are more perfectly elaborated.

A farther addition to the exercise at sea, besides the greater action of the air in general, arises from its undulatory manner of acting; by means of which it exerts much more efficacy, than when acting only by a constant equal pressure. It is owing to an unequal pressure of the air, in the way of impulse, that low-spirited and hypochondriacal people find themselves more brisk and lively in windy, blustering weather, though rainy, and in thunder. The contrary happens to them in calm, mild, close weather, though not rainy, as is usual in spring or summer, when they are
often

often worst. In such seasons and weather the air has but little action; the solids are more relaxed; and the humors, from these causes, are disposed to move slowly.

But living at sea must be considered as having a mighty influence on the mind, which, by consent, will powerfully affect the body. In sailing there is a strange mixture of passions; and these are sometimes in extremes. Seafaring people are frequently agitated between hope and fear; are sometimes merry, sometimes sad; exulting with joy when safe, and at rest; and in danger thrown into the utmost despair. Such various and sudden transitions of passions, are capable of removing the most inveterate diseases, and such as are not curable by any other method*.

There is one disease, to the cure of which sailing is, by its manner of opera-

* Verum gestatio per pelagus vehementissima est, et mutationes plurimas, et maximas facit. Nimirum cum anima mixtos affectus habeat, ex tristitia et spe, timore et periculo; modo gaudentibus et lætis, modo in agone

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operating, so much appropriated, and of so much importance, that a farther illustration thereof will not, perhaps, be unacceptable; and that is, a consumption.

A consumption is a local affection, and external, as it is exposed to the air. Every one knows that exercise, with change of air and climate, may be of sensible benefit to the habit; but few have considered the spray, and vapour at sea, as a suitable application to the lungs in particular. In speaking of this subject I presume it is granted me that, to attempt the healing of the part chiefly affected in a consumption, by applying a remedy directly to the part itself, is a reasonable and necessary intention. To cure the ulcer of the lungs is to cure the disease, which manifold experience must convince us can hardly be done

existentibus navigantibus. Omnia hæc composita sufficientem vim habent omnem veterem morbum exigendi, et e corpore excludendi. Ætius Medicin. contract. tetrab. prim. serm. 3. cap. 6.

by

by remedies that affect them remotely, and in a trifling degree, by means of the circumfluent blood only.

The necessity and success of fumigation in ulcerations of the lungs, is insisted on by authors; and many forms of remedies are proposed, in the way both of steam and fume, to be conveyed by proper instruments directly into the lungs. Drying antiseptic substances are likewise directed to be held in the mouth, that the air and spittle may be plentifully impregnated with their effluvia: nor, in that intention, is the method contemptible.

Instead of these artificial applications, though they were also in use, the ancients endeavoured to find a properly medicated air for the consumptive to breathe in. In this view those having ulcerated lungs were sent to Libya, where, by breathing the balsamic effluvia of the pines, with which that country abounded, they are said to have lived many years in safety free from their complaints. By Galen

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they were sent to Stabiæ, the situation of which, on the shore between Naples and Surrentum, seems to have been remarkably favourable. Sufficiently elevated, as well as defended from the east and north winds, and declining to the south, it was advantageously exposed to the mild healthful influences of the sea; and Vesuvius continually throwing out smoke and ashes, filled the air all round, sometimes to a great distance, with sulphureous drying exhalations. The internal heat of the mountain, which extended to Stabiæ, would, no doubt, likewise cause a transpiration of such effluvia.

With us the great resource in consumptions hath been to seek a warmer climate and a purer air. The advantage of the air in those southern places to which the sick are generally sent, consists in its mildness, the constancy of the weather, and the regularity of the seasons; which, compared with the air of places farther north,

north, that are cold and moist, and subject to frequent changes of weather, is, without doubt, preferable to them, and does less harm. May it not be a question, however, whether or no the prevailing opinion be just, that the finest air is always the best? It does not appear from experience to be so. The sick are often observed to grow worse in a pure, serene, dry air, and to live easiest in weather and seasons seemingly more unfavourable; in air particularly that, as Hoffman expresses it, is temperately humid*.

If,

* As the lungs are a constantly moving organ, the air-vessels, that there might be no resistance to their motion, are every where surrounded by a spongy cellular substance, and always kept soft and yielding, as well as properly defended by the mucus with which they are lined. From their peculiar use and texture, therefore, moist air appears to be the most friendly to the lungs, and necessary to preserve them from being inflamed, and so becoming less moveable, as they are apt to do in fevers, and in hot dry air. But moist air has a farther effect, being better adapted than dry air to cool, refresh and ventilate the blood in the lungs. The comfort and benefit of a shower is sensibly felt in great

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If, as hath been alleged, the air at sea is endued with greater gravity and elasticity than that at land, it will answer, with so much the more advantage, all the mechanical purposes of air in respiration; that is, it will the more freely dilate the weak, flaccid, or stiff, callous lungs; of consequence procure an easier circulation through them; and make a due compression on the tender blood vessels so liable to rupture,

heats, as it gives more spirits, and greater freedom of respiration. In ardent fevers, branches of trees, and succulent plants, set in pots of water, are placed in the chambers, and about the beds of the sick, with no small advantage. In hot climates, the custom is, to sit down, when almost suffocated, under the shade of a wet cloth, from which the most agreeable relief is obtained; the effect plainly of moisture. This is farther confirmed by another observation, that the sea-breeze, though cool, always brings on a breathing sweat, or free perspiration, and thereby makes the body easy; which the dry sultry land-wind never does, but disposes the blood to be putrid and adust. The quantity of moisture applied to the lungs, in inspiration at sea, must be very great, as the vapour is much greater there than at land; and the surface of the air-vessels is computed to be equal, at least, to that of all the rest of the body externally.

rupture, especially in a hot, unelastic air. It is hardly to be conceived what relief and refreshment some have found on first breathing the sea air. The asthmatic, and such as are faint, or dying, should have the windows and doors thrown open to let in a full stream of springy air, lest the lungs should suddenly collapse, and move no more. On the tops of high mountains, where the air is very light, one breathes with difficulty, has a suffusion of the eyes, vomits, and a spitting of blood ensues. A sudden sultry heat produced one night in several persons hemorrhages of the lungs. There is a parallel instance of this kind in history ninth of the present treatise. Hence a reason may be deduced why the consumptive often enjoy greater ease, and live with more safety, in the thick air of large smoky towns, than in a finer air; because being filled with grosser effluvia, it is not so capable of rarefaction, and of doing hurt by

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by its lightness, to those in whom there is a delicate texture of the lungs, and whose blood may be disposed to effervesce. Celsus makes it a necessary requisite that an air be chosen more dense than what the sick have been used to live in, and therefore were they sent to Egypt; where, from the frequent rains in its maritime places, the air, as Prosper Alpinus informs us, is very gross *. Formerly indeed they seem to have chosen situations on the sea coast, and a heavier air; which does not at all agree with our modern notions and practice. Some have been cured of a consumption by living in Holland. The disease is rare in that country.

But my principal view, as it is of principal concern, was to shew that sea air alone can boast the advantage

* Opus est cæli mutatione, sic ut densius, quam id est ex quo discedit æger, petatur. Ideoque aptissime Alexandriam ex Italia itur. Cels. lib. 3. cap. 22. De tabe.

of being, at all times, replete with particles fitly suited, in a strict medical sense, to the different morbid states of the lungs in a consumption. Sea air is a true pectoral, properly medicated, and is applied directly to the lungs themselves in inspiration. Nor will it be found inferior to balsams of the highest name; even supposing them to possess the utmost virtues that have been ascribed to them. Amongst the exorbitant number of internals called pectoral, how few can be said to merit that appellation? As such, their effects are very uncertain. They reach the part only by the long round of circulation, and affect the whole body indifferently; so as, in certain circumstances, to become equally good diuretics, and splachnics; or more generally sweeteners and antiscorbutics. But the kindly warmth, balsamic nature, and saline humidity of sea air, render it, in every intention, a fit and necessary, and often an effectual application to the lungs externally.

The

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The conjecture now offered, that sea air is possessed of all the requisites to constitute a true pectoral, may not, perhaps, be very readily admitted, nor shall I confidently affirm it. However, imagining that being frequently carried by water, would cool and refresh the weak parched lungs, cheer the spirits, and notably repress the fever; being likewise persuaded that there is something more in the vapour besides mere water, which gives it a resemblance to those medicated steams and fumes that are directed to be drawn into the lungs, and trusting but little to exercise at land for a cure, I made some cautious trials of the effects of living at sea: nor was I disappointed. The benefit was such as I had never observed from ordinary air and exercise; so great indeed as to convince me that it was attended with many advantages; and that the sea is a powerful means of cure, or of relief, in a malady which hath, almost always,

ways, bid defiance to every other method, even the most rational, and best concerted. I was farther encouraged in this opinion, by finding that the same notions were held by the ancients; and that failing is generally, and for the same reasons, recommended by them in a phthisis.

It has been remarked concerning the external application of sea water, which is still used by the vulgar in the same intentions, that it is good to extenuate ulcers already cleansed; for ulcers of fishermen; for callous or fistulous ulcers, and such as are badly cicatrized; spreading ulcers likewise it stops and mitigates*. In some such condition are the lungs commonly found in a consumption; and such effects, in some degree, will the spray and vapour of the sea have upon them. This vapour, which acts constantly on the lungs as a bath or fomentation, was, by physicians of earlier times,

* Hippocrat. lib. de liquidorum usu.

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said to be of a warm, resolvent, detergent nature. Aretæus particularly considered it as a healing application, saying expressly that, in a consumption, the saltiness of the sea communicates something that dries up the ulcers ; and experience seems to confirm it *.

* Cum ulceribus enim quiddam ficcum marina falsugo communicat. Aretæus de curatione morb. diuturn. lib. 1. cap. 8. de phthisi.

C H A P.

C H A P. V.

*Sailing accommodated to the distempers of
Great-Britain.*

THE natural constitution of the diseases of any place or country is conformable to the general constitution and more remarkable changes of the air; which again depend upon the soil, climate, and situation. Great-Britain being an island which lies pretty far north, and scarce any part of it above sixty miles from the sea, the general constitution of its air is cold and moist, the weather very changeable, often cloudy or hazy, foggy, turbulent, and in extremes. Laxity of the solids, a languid and irregular circulation of the fluids, and a retention of humors, with more or less corruption of them, are the certain and universal consequences. The diseases arising from such a condition of the solids, and disposition of the fluids, are, tenderness, or a valetudinarian habit;

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habit; scurvy, vapours in all degrees thereof, from lowness of spirits, to the highest nervous complaints; glandular obstructions; rheums; plethoras of different kinds; consumptions; and other affections of the lungs; and fevers of the flow, depressed, hectic, anomalous, intermittent kind. Of these I shall treat so far as coincides with the present design.

Tenderness.

This constitution of body is an habitual want of health, from causes not well known, or not well considered. Thinness or want of flesh often attends a valetudinary state. Many, especially younger subjects, though thin, feel, or complain of, no actual disorder. Others are continually ailing, subject to colds, toothachs, sudden feverish fits, and fits of looseness; and all their illnesses are very smart. Some again are pale and languid, and have signs of a watery colluvies; their
skin

skin is white and smooth, their hair soft, fair, thin, and lank; and their teeth bad. The blood is sometimes florid and resolved; at other times it is considerably fizy.

If tenderness or wasting, without any sensible cause, in the beginning of life, resist the ordinary remedies, and threaten some great and formal distemper, it must be attended to in time; and I had always that in view, in the trials I purposed to make of living at sea. The singular change of air, of climate often, and the no less singular exercise, consequent on sailing at sea, are able to produce great changes, in the humors, to resolve them when impacted, and mightily to strengthen the whole frame. It is a common observation that raw, puny, slender boys, going to sea, in two or three years, grow big, lusty, and strong.

Scurvy.

There is a species of scurvy so universal that there are few, perhaps,

G who

who have not, one time or other, symptoms or appearances of it; and numbers suffer from it a great part, or the whole, of their lives. Distinguished from the true scurvy, which consists in a dissolved, some say in a viscid, state of the blood, it appears to be a lymphatic disease; a foulness, acrimony, or other vice of the thinner fluids; manifesting itself by some internal disorder of the habit; or externally by eruptions, sometimes by ulcers and various discolorations of the skin. Among the many distempers said to arise from this impurity of the juices, a head-ach is mentioned, and a cholic, both of an obstinate chronic nature; and frequently terminating in a jaundice or dropy. In all these, and in a leprosy, (the highest degree of scorbutic acrimony, a cancer excepted,) sailing and living at sea are directed as a cure*.

The

* *Peregre proficiscatur ægrotus in regiones calidiores ex frigidioribus, et in sicciore ex humidioribus: confert*

The use of it seems to be more particularly insisted on in a dropfy. It is certain, says Dr. Towne, that in a beginning dropfy nothing conduces more towards recovery than exercise and change of air; no kind of exercise more than sailing, and no air more than sea air. Let me therefore exhort all such whose circumstances will admit of it, to leave the island, on the first approach of this distemper, and remove for some time to England †.

fert et navigatio, et in mari vitæ traductio. Aretæus *de curat. cephalææ*.

Motus et omnis exercitatio conferunt, five pedibus, five per equum, five etiam navigio corpus movere velint. Alex. Trallian. lib. 10. *de colico affectu ex frigido humore*.

Tum adhibenda longa navigatio. Cælius Aurel.

Erit præterea, perseverante passione, etiam longa navigatione curanda. Cælius Aurel. cap. *de aurigine*.

Vita in aquis dici ducenda est, et mare et navigatio conferunt. Aretæus *de curatione elephantiasis*.

* *Account of the diseases of the West-Indies*. Chap. of the dropfy. And to the same purpose Cælius Aurel. cap. *de hydrope*.

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One given over in a dropſy failed ſome miles in a boat, which made him vomit. After the vomiting he uſed exerciſe, and recovered. In another, on a ſhort voyage, the tumor almoſt miraculoſly diſappeared, and never returned*.

If we conſider the exerciſe, the re-
vulſion in vomiting, and the evacua-
tions it ſometimes promotes, ſailing
ſeems to be the moſt proper, eaſy, and
effectual means to prevent the water
from being collected again after tap-
ping †.

* Sic quidam hydropicus inflatus ventre, manibus, pedibusque, et facie, a medicis deſtitutus, et tanquam deſperatus, adiit littus marinum, et navicula per aliquot milliaria aſcendit in altum maris: et provocato vomitu, poſt vomitum exercitio utens, ſanitati reſtitutus eſt. Forreſti *ſchol.* ad obſ. 32. lib. 19.

Ex obſervationibus noſtris hæ non videntur prætere-
undæ. Johanni Blanche, negotiatori Pariſienſi in Angliam proſecto, hyeme, tumor cum miraculo quodam ſubſedit, evanuitque morbus, nec rediit. An quod integro, aut non ita læſo viſcere, aqua, partim calore nativo excitato, partim aere marino, reſoluta fuerit? Hollerius ſcholio-
graph. ad cap. 39. de morb. intern.

† Perfecta humoris detractiōe, ægrotantes præterea navicula exerceri hortamur. Cælius Aurel. cap. de
hydrope.

Though

Though this be not the proper place for it, I cannot omit mentioning here that sailing was held of use in disorders of the kidneys *.

Vapours.

If we suppose a want or effetenefs of blood, and, in consequence, a languid circulation, in the remote vessels especially, exciting undue oscillations, or a spasmodic disposition of the solids, we shall be able to form some idea of the nature, causes, and tendencies of a very various and perplexing distemper.

The *passio stomachica* of the ancients has the nearest resemblance, in many things, to our great modern national distemper the vapours; and in that case sailing, or at least sea air, was a remedy; as well as in several disorders that attend lownefs of spirits, or have an affinity to it: these are,

* *Dieta vero, inunctio, navigatio, et vita in mar-acta, omnia renum affectionibus remedia sunt. Aretæus de curat. calculorum et ulcerum in renibus.*

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pains in the stomach, coldness and inflation of it, want of digestion, loss of appetite, or a depraved appetite, and redundancy of bile and phlegm. It was recommended likewise in cases where hellebore was proper; and in those higher nervous disorders which are often the effect of low spirits, or a scorbutic habit; such as epilepsy, apoplexy, palsy, and maniacal affections*.

In

* To avoid references, as much as possible, I shall give only such quotations as are the most material.

Si vero pituita stomachus impletur utilis navigatio. Molestius est si stomachus bile vitiosus est. Necessaria gestatio, navigatio, et, si fieri potest, ex nausea vomitus. Cels. lib. iv. cap. 5.

In parvis vero navibus, et magnis ferri confert lepræ, et hydropi, et apoplexiæ, et frigiditati stomachi, et ejus inflationi, quoniam, quum coram littoribus maris fuerit, commovebitur ei vomitus, deinde quiescat, et conferet stomacho; sed navibus ferri in mare altum est fortius in removendo ægritudines quas nominavimus: propterea quod secundum animam lætitia et tristitia diversificantur; et secundum membra nutrientia eorum vero exercitium corporis exercitium est sequens. Avicenna, lib. i. fen. 1. doct. 2.

Valentiora,

In certain circumstances of the vapourish distemper, and some diseases that have a connexion with it, a strong and lasting revulsion, or revolution of the humors and spirits, becomes necessary; for the cause, even when it affects the first passages, as it often does remarkably, seems beyond the reach of common emetics. By a frequent repetition of these the sick are tired into an abhorrence of them; and the tone of the stomach is so much im-

Valentiora (gestationum genera in alto mari navi) vero his conveniunt qui gravium morborum initia sic sentiunt ut adhuc febre vacent, (quod et in tæbe, et in stomachi vitiis, et cum aqua cutim subiit, et interdum in morbo regio fit,) aut alii quidam morbi, qualis comitialis, qualis insania est, sine febre, quamvis diu manent. Cels. lib. 2. cap. 15.—Quin et terra marique peregrinari multum juvat. Mead, *monita et præcepta medica*, cap. de insania.

Novi epilepticos, qui in Indiam Orientalem transmigraverant immunes fuisse ab hoc morbo postea, quam diu ibi vixerunt: in patriam reduces, et subito abligurientes illa (ut solet sæpe hoc hominum genus) quæ magno labore nec minore periculo, sibi comparaverant, recidivam passi fuerunt quidam, alii manserunt ab hoc morbo liberi: Van Swieten Comment. tom. iii. p. 436.

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paired, that the disorder is confirmed by the very means intended to remove it. The sea-sicknefs can be fafely fuf-tained for hours, days, weeks, nay months; a longer time by far than we dare to attempt to promote vomit- ing, or but a naufea, by any medi- cine thrown into the ftomach, and af- fecting it immediately. This muft have a mighty effect in all thofe dif- eafes whose caufes are very remotely feated.

Under this article I muft take notice of a particular difeafe, for which, in- deed, I do not find failing mentioned as a remedy. If the intefines have not entirely loft their tone, might not failing be ufefully employed in old obftinate fluxes of the belly, that have eluded the power of all other reme- dies? Sailing caufes great coftivenefs. Capt. F. when in the Eaft-Indies, la- boured nine months under a fevere flux, and on that account was advifed to return to Britain. In a few days af- ter he put to fea, the difeafe went en- tirely

tirely off. Capt. S. too, for about a year before he left Bengal, was ill of a severe flux, attended with violent pains of the stomach and bowels, by which he was greatly emaciated. His physicians told him that he could not live a month longer in that country, which determined him to leave it. He recovered upon sailing, and imputes his cure wholly to the sea; having given over all medicines for some time before he embarked, as they rather did him hurt than good.

Glandular obstruction.

The extent of glandular obstruction may be conceived from the infinite numbers of glands, of various orders, dispersed every where through the body. It is most conspicuous in the evil, a disease more frequent than is commonly imagined. A scrophulous disposition often prevails, when there is no visible tumor; but, affecting some remote order of glands, or inward part, is the cause of many disorders
not

not readily understood, or suspected to proceed from it. At last, perhaps, a glandular swelling outwardly shews the nature of the malady. When it affects the glands internally it is seated chiefly in the pancreas, mesentery, and lungs; and frequently terminates in a hectic fever, and a pulmonary consumption.

Tendernefs, scurvy, vapours, and the evil, seem to have the same general causes; and therefore it is, that they so commonly afflict the same persons, and change so often the one into the other. Thus tendernefs hath been cured by a scorbutic eruption. A herpes, or other foulness of the skin, indiscreetly repelled, may bring on tubercles, glandular swellings, topical inflammations, extreme languor, or an oppressive low-spirited illness; which again hath been carried off by an eruption.

Rheums.

This is another class of diseases to which sailing, and sea air, have been
appro-

appropriated; though in most cases of rheums they may, perhaps, be thought unnecessary, or inexpedient, as other methods often succeed. Yet when they have all failed, going to sea hath, in many instances, proved a cure*. Oribasius and Ætius observe that maritime situations are proper for those who are troubled with any kind of rheum, especially of the cold kind; sea air being warmer than that of inland places. They are said to be good likewise, in pains of the nerves or joints; and when the nerves are affected by sympathy. In nervous pains, or a rheumatism, Celsus advises vehement gestation, or sailing; which, in other pains, he says, is hurtful†.

Under

* See hist. xii. chap. 3.

† Loca vero maritima hydropicis, et quibus quævis defluxio molesta est, accommodata sunt. Sed prosunt etiam omnibus iis qui nervorum et articulorum doloribus torquentur. Mediterranea sunt maritimis frigidiora. Oribas. *collect. med.* lib. ix. cap. 11. — Marinus vero (aer) fluidis affectionibus, et præsertim frigidioribus, utilis

Under the head of rheums may be comprehended all those disorders called colds, more particularly when they affect the lungs; a circumstance which, on many occasions, aggravates the disease, and increases the danger: so that a simple cough neglected, and left to take deeper root, frequently lays the foundation of a mortal consumption. In all coughs, according to the last cited author, a long voyage, and living near the sea, are useful*.

Asthma.

In frosty weather, or an easterly wind, some are grievously asthmatic, and often smartly feverish, from a constriction of the air-vessels, and the consequent inflammation. In moist

utilis est, et nervis per consensum affectis. *Ætius tetrab. i. ferm. iii. cap. 162.*

Atque in ipso potissimum dolore utendum vehementi gestatione est, quod in aliis doloribus pessimum est. *Cels. lib. iii. cap. 27.*

* Utilis etiam in omni tussi est peregrinatio, navigatio longa, loca maritima. *Cels. lib. iv. cap. 4. sect. 4.*

weather

weather the lungs are filled with a viscid phlegm, which hinders the free ingress and egress of the air, causing great difficulty of breathing, and labour in coughing. Some cannot breathe with ease, but in a free country air, and elevated situations. Others live easiest in the gross air of cities, and thick weather. An asthma frequently arises by sympathy from the stomach, or some other bowel affected.

It is chiefly owing to a different structure of the vessels of the lungs that different asthmatics require such opposite, and sometimes seemingly improper, airs to live in: for they may be of too rigid and too strait, of too lax or too delicate a texture, and endued with too much sensibility. So that the real vice of the lungs is not always to be discovered upon dissection. In the worst cases they often appear to be in all respects sound.

As the causes of an asthma most frequently depend on the constitution of the air, and the particular conformation
of

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of the parts, we thence understand why those afflicted with it find no lasting benefit from any remedy; and why so few remedies afford any benefit at all. The most certain relief, therefore, is to be obtained only from an air rightly constituted as to its qualities; and to this the asthmatic must at last have recourse. Sea air hath seldom been tried on purpose. In considering how it is accommodated to particular cases, it must be remembered that, besides its greater action in dilating the lungs, it is of a kindly, resolvent, detergent nature; and also that the sea-sickness may sometimes be of great use, especially in the case of tubercles.

In an asthma Cælius advises much living at sea, or in places near the sea*.

A person afflicted with an asthma, tending to a consumption, found so much relief from living on the sea

* *Utilis denique maritima, et plurima mare tenus conversatio. Cælius Aurel. cap. de asthmate.*

coast,

coast, that he was almost well. But on a change of situation, the disease returned violently, and continued, till he again breathed the sea air*.

Consumption.

A consumption is to be distinguished as proceeding either from tubercles, and other hardnesses of the lungs, attended with ulceration in consequence thereof; or from a catarrh affecting the breast with erosion, or else from the spitting of saltish, sweetish, and even sometimes insipid phlegm; whereby the substance of the lungs, and even of the whole body, is slowly consumed, without ulceration; which,

* *Æger, qui decumbit ad forum Boarium, asthmate ad phthisin vergente laborat; irritis plurimis remediis concessit Neptunum, et novum portum Antiatem; quando ibi degit, et marinum respirat aerem, morbo mitius cruciatur, ac pene paulo post sanus evadit. At si relicto aere marino ad vicinos se transferat campos, statim, et sine mora, asthmate, aliisque symptomatis, misere corripitur, et tamdiu molestatur donec marinum aerem denuo invisat. Baglivi de fibra motrice et morbosa, cap. de mutando aere in longis et difficilibus morbis.*

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if at all, does not come on till the last. This is called a pituitous consumption. In whatever form it takes place, it has hitherto been, for the most part, sooner or later, mortal. The present design extends only to the first species.

We often, indeed, meet with relations of a consumption cured, and of remedies that are said to have cured it; which, by their succeeding sometimes, if they really contributed any way to a cure, or by being confidently recommended, are apt to impose a belief of their efficacy in general; so that the sick are too readily persuaded to place a confidence in them. It may be of use to undeceive such; especially as a fond conceit of the virtues of certain popular remedies frequently misleads patients into a neglect or distrust of means that are certainly more rational and more effectual.

Here some plain practical observations fall naturally in our way; which, it is hoped, will, in several particulars, farther illustrate the nature of the distemper;

temper; point out the difficulties, as well as the dangers, that sometimes occur in treating it; and shew, in what circumstances, these two great affections, obstruction and ulceration of the lungs, are most frequently and successfully remedied, and by what means.

The former is happily, and not unfrequently, remedied when it comes on suddenly, with acute symptoms, fever, sickness, vehement cough, and wasting, whereby early warning is given of the danger; so that, by timely assistance, the fever may be subdued, and the fluxion prevented. This I have met with in an epidemical way; when several persons, at the same time under these appearances, were just running into a consumption. Less alarming symptoms at first might have betrayed the patients into a confirmed phthisis. In some, indeed, they ended in purulence; but as the constitution was good before, and the habit was not impaired by a long continuance of the disease, they recovered.

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In such cases the reasons and use of bleeding, blistering, sometimes vomiting, mild diaphoretics, nitre, bathing the extremities, and gentle purging, are obvious.

Ulceration of the lungs is also frequently cured when brought on by abscesses from accidental causes; such as fever, external injuries, or the supuration of a singular encysted tumor. I have seen many instances of cures in such cases. Few indeed die of them, provided they are not complicated with a bad habit, a phthical disposition, or a wrong conformation of parts. Nor is the cure owing to a multiplicity of pompous remedies: nature, duly supported and regulated, will of herself do a great deal. A moderate use of the natural balsams, such as agree best with the patient, is generally good; and, if nothing forbid, the bark may be given, especially toward the end, to prevent colliquation, strengthen the whole frame now much impaired, and confirm the
tone

tone of the part that was affected. But a vegetable diet, with much milk, has no small share in the cure: nay, in some extraordinary cases, I have attributed the success entirely to that.

A lady, habitually subject to such disorders, complained of languor, loss of appetite, and pain in her stomach, while her pulse scarcely discovered any sign of fever. She was treated accordingly. Without any preceding cough, stitch, pain, weight, or soreness of the breast, or difficulty of breathing, that could give the least suspicion of it, an abscess at last shewed itself in the lungs. She brought up great quantities of matter, green and intolerably foetid; was so emaciated, that she had truly the appearance of a skeleton, covered with a brown parched skin; and for many weeks seemed to be at the point of death. Her recovery was the more remarkable that, diet excepted, the remedies she used were trifling; for, through

mere weakness, she was, for a great while, not a subject for medicine.

A lady, after a feverish indisposition of many months, attended with severe pains in the stomach, great fluttering of the spirits, and a highly irritable state of the nerves, but without cough or difficulty of breathing, had an abscess of the lungs. For several weeks, together with matter, she coughed up pure bile, in great quantities; it was thick, unsufferably bitter, and dyed her tongue, mouth, and lips brown: Here the ulcer of the lungs communicated with the liver. When the bilious discharge ceased, she continued, for a long time, to spit matter, with portions of a cyst or bag. In this cure little regard was had to the remedies called pectoral, which, as often as tried, were found either useless, or hurtful. Such things as might repress the fever, and restrain the violence of the symptoms, were chiefly required, and serviceable; her food, for the most part, was butter-milk.

Pus

Pus in the lungs, unaccompanied with such signs as plainly intimate this part to be affected, is hardly to be discovered. Many die of this unknown cause, as dissections shew. In the two histories above related, the complaints were chiefly nervous, affecting mostly the stomach; and sometimes the latent evil is only to be detected by such symptoms. For obstruction or corruption of any of the organs or bowels, more especially of the lungs, frequently exhibits appearances of this kind. A consumption is often ushered in by a lowness of spirits. I have seen a numbness, and resolution of all the extremities, in the first stage of it. In a history to be afterwards given, we shall find it attended with a tormenting hiccup. I once found it preceded by a simple mania, and once by a canine appetite, so craving and insatiable that the patient became delirious.

One thing to be attended to is, whether or no the abscess be contained in

a cyftis or bag. When an extravafation is made into the cellular fubftance of the lungs, the matter of it, fpredding and corrupting, becomes acrid, inflames the parts, and brings on a speedy fuppuration. But, if the humour be confined in a cyft, it affects the lungs only by its weight or prefure; and, as it produces no irritation, being fhut up in an infenfible membrane, it may lie long concealed, before it caufe any great labour, or inflammation of the parts; and in fome we fee it gives them no fenfible difturbance at all. A cure cannot be obtained till the cyft is entirely diffolved, or in a courfe of time coughed up piecemeal. The fmalleft portion of it remaining is an extraneous body, which, like the pea put into an iffue, or a tent indifcreetly ufed, will occafion more or lefs irritation and fluxion, and hinder the re-union of the veffels. Balfams, or other ftimulating detergents, are here of little ufe, if they be not hurtful; for they cannot affect the

part to which the cyst adheres; and, when too freely used, may, by their acrimony, cause heat, fever, and inflammation, as well as provoke coughing. Perseverance in a proper diet keeps the parts cool and supple; exercise and repeated vomits will help to separate the cyst, part of which is sometimes brought up in vomiting; while, by other methods, as they are indicated, the general state of the health is secured, till all impediments are removed, and the part again becomes sound.

I shall here add a few more histories which, being attended with peculiar circumstances, may give occasion to farther remarks. During the intense frost in 1739-40, a gentleman, after a pleurisy with inflammation of the lungs, had an imposthume in them. For many days he threw up a vast deal of matter, and became highly œdematous. Yet, notwithstanding the long severity of the season, he recovered next summer. To facilitate the discharge of

so much matter, I made him lie daily, at stated times, when it was most accumulated, in a horizontal position, with his head lowest on the side that most favoured the issue of the matter. By this means much of it was evacuated in a short time; the lungs were relieved from the great weight upon them; and a respite was procured from incessant vehement coughing. Blisters on the ancles, and gentle purgatives, prevented a surcharge of dropfical humours on the lungs.

Matter remaining long in the lungs oppresses and distends them, acquires bad qualities, and farther corrupts the parts. A certain degree of coughing is therefore necessary to discharge it; but an incessant cough teazes, heats, and exhausts the patient to such a degree of weakness, that he is not able to cough; and on the other hand, opiates, though for a time they suspend the cough, yet, by retaining the matter, they increase the oppression, and so do equal mischief. Between these

two

two the physician is much embarrassed. Anodynes, such as diacodium, given frequently and freely, restrain the fever, and moderate the cough, without entirely suppressing it, as full doses of opium are apt to do. This expedient therefore I have, on several occasions, employed with advantage: but a little caution is necessary; because the matter sometimes flows so fast, that the patient complains of being almost choaked with it.

A person of a thin delicate habit contracted a cough, which continued long, and increased daily, with great wasting. Through mere weakness he was confined to his bed, became quite emaciated, and, with a constant fever, had profuse sweats, and a highly hectic look. From these appearances, and his having little or no expectoration, I suspected an abscess. A vomit was given to hasten its breaking. This, no doubt, may be dangerous, but his safety depended on a speedy rupture, which happened in a day or two; af-

ter which, by an easy method, he recovered.

Miss L. ten years of age, and very delicate, after a continual fever, had a suppuration of the lungs, with large protrusion of the ribs. The violence of the pain made her always lean to one side, which caused a considerable distortion of the spine, and threatened the entire loss of her shape. By proper methods this was corrected. From the disease of her lungs she likewise recovered; but without the use of medicine, for she would take none.

A gentleman of sixty, subject to the gout, had no fit for some years. Two summers successively he fell into languor and palpitation, with a feeble intermitting pulse, loss of appetite, and wasting of his flesh. Next season a slow fever seized him, which, after continuing a month or more, could not be carried off by the usual means. For several days he had now stated fits of trembling, succeeded by heat and sweating, which altogether lasted about

bout four hours. The bark was urged, but for good reasons declined, and the appearance that seemed to indicate its use ceasing of itself, the disease returned to its former type, and went on uniformly four months; the patient's strength daily, though slowly, declining. All this time there was no sensible disorder of the breast. When he appeared to be sinking fast, his legs being now swelled and his appetite almost gone, a decoction of the bark was given, purely with a view to support him; and he used it for some days. A fit of coughing then came upon him, and he brought up ash-coloured matter in good quantity, which continued to come away freely for some time, and then gradually dried up. He recovered, and enjoyed great health for a long time.

The lungs being a soft, passive, indolent part, are often found in a highly morbid state without giving any, or but very equivocal, signs of their being affected. Hence an obscurity of symptoms,

symptoms, and uncertainty in the diagnostic. However, a constant, flow, lingering fever, not yielding to remedies, nor altering its shape, is frequently observed to end in suppuration somewhere; and as the lungs are, equally with other parts, liable to obstruction and to injury from the impetus of the blood in fevers, it is right to have always a regard to them, especially if no other bowel appears to be affected. It might be mentioned likewise, that, in certain circumstances, shiverings are a pretty sure sign that pus is forming, though pus is often met with where no shivering hath been perceived. In the present case, the formation of it may be dated from those tremblings which were felt in the beginning. The matter, at first crude and thin, would be easily drawn into the circulation, and cause the appearances of an intermittent; but acquiring greater consistence, it could not be so easily absorbed; and consequently the appearances of an intermittent

mittent would cease. These, and other circumstances which occur in the preceding histories and remarks, will, in some measure, serve to explain symptoms, and better ascertain the diagnostic. And when, from their concurrence, it is suspected that an abscess is formed, and that the matter therein is fairly accumulated, but nature, in a reduced state, unable speedily to break it, the bark, seasonably administered, may be a good means to hasten its rupture.

A young gentleman, at school, bathed in the river, when warm at play. A fever came on, with a stitch in one side, and severe rheumatic pains in all his limbs. About the eleventh day the disease seemed to terminate; and he was for some time pretty easy, though not without fever. He grew more feverish than before; had great oppression in breathing, and could not lie but on that side in which he had felt the stitch. A broad, thick, doughy swelling came upon the part, which
 appearing

appearing in one place to point, it was determined to open it. Mean while the abscess burst into the lungs. The fever, however, continued and increased; for which two or three small bleedings were directed. He likewise used the mercurial pill, and recovered.

Many more instances might be given of the same kind, with the like event; as well as of patients who, at times, have spit up imposthumes for years, so that a mortal consumption seemed unavoidable, and yet have done well. But the histories now related are sufficient to shew the nature, causes, different appearances, and most usual termination of this species of ulcer; which, to place it in a due opposition to another species, it was necessary to describe in a variety of cases and circumstances.

It is in such cases only, I presume, that consumptions are so often said to be cured; but here a great distinction must be made. This is not the consumption that prevails most, that is
most

most fatal: many illnesses have much the appearance of a consumption, that are very different from it. Though in such apostemations of the lungs the issue is for the most part fortunate, and the usual remedies have the desired effect, we must not flatter ourselves with equal success, and by the same remedies, when a consumption depends upon a number of glandular swellings arising from constitutional or other causes, in a slow way, or by congestion, as it is termed, and afterwards ulcerating. The symptoms, in their rise and progress, are often so slow and so unperceived, or so little regarded, that the danger is not always apprehended in time; and therefore relief is too seldom sought, or the necessity of it imagined, till the disease has deeply fixed itself in the badness of the habit, or firmness of the obstruction; so that the favourable opportunity of curing it is lost.

A consumption is justly reckoned a malady of the scrophulous kind; and
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as that disposition is very prevalent, though often unsuspected, the prevalence of a consumption seems to be a necessary consequence. This plainly shews the cause of its great obstinacy; accounts best for appearances; and points out a method of cure; different indeed from that commonly adopted, but not unsupported; having both reason and authority on its side; experience at the same time confirming its success.

In practice we discover a remarkable variety in both these diseases; and, at the same time, a plain analogy between them. In a scrofula, there is a material difference according as the tumors are more or less benign, and accompanied with more or less inflammation. Some are so mild that they readily admit of resolution, or may be brought to a pretty laudable suppuration, and so easily go off. Others are more unkindly, resolve or suppurate with difficulty, and hardly yield to any method. They are frequently

quently altogether untractable. In like manner, in a consumption we see milder suppurations of the lungs healing with small care and pains; at times a cure seems to be obtained, and some do perfectly recover: so that even in a true glandular consumption we are not without examples of cures. But if the habit degenerate, and accidents concur, other glands come to be affected, and in a higher degree, those parts that have been healed, remaining callous, are more liable to injury, and to apostemation; and thus the disease, acquiring new strength from accumulated causes, becomes highly aggravated, and in the end fatal. The unobserved attack of the disease, its slow progress, the latent fever, and long continuance of the cough, without any appearance of pus; these, and the like circumstances, shew the glands to be of a more indurated kind. Sometimes indeed, as in a bad scrofula, they are quite scirrhus, or almost cancerous, and

either never come to an abscess, or if they do, when the abscess breaks, they give an ill-conditioned matter, or foul sanious discharge; causing a malignant erosive consumption, very easily communicable; melancholy instances of which are too often seen.

Anxious to give relief in an obstruction of this sort, and too readily adopting the sentiments of others, I attempted long ago to resolve it by the cautious use of calomel. The effects which one of greater experience would easily have foreseen, did not at all correspond with the notions I had formed; far less would they have justified any farther experiments of the kind. However, when crude mercury came to be better known, and the use of it more familiar, it promised to be more safe and more effectual than calomel; and indeed experience shews it to have very good effects, when given at a proper time, and in a proper manner.

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A gentleman, by catching cold in the spring, contracted a hard, dry, frequent cough, attended with constant fever, night-sweats, great wasting, and a meagre lurid countenance, which before was plump and ruddy. He received but little benefit, with regard to his cough, from what was done for him at this time. In summer he drank goat's whey; and when his fever was pretty much abated, he was allowed a glass of sweet wine twice or thrice a day, by way of a little indulgence to habit. By this means he got flesh, strength, and a better look. But as the year declined he declined also. The apparent danger he was in from the ensuing winter, his cough being still severe, called for speedy assistance, and he took the mercurial pill. The effect was greater than I intended; for in a few days it made him spit a good deal. However, his cough presently went off, and he soon recovered a fine complexion, and good health. Next year, in the decline of

the season, his cough and other symptoms returned; not indeed to such a degree as before, but so as to give fresh apprehensions of danger. The pill was repeated, with more caution, but with equal success; and he has had no return of the disease, though many years are since elapsed.

A young lady was, in autumn, seized with a dry cough and hiccup, which alternately teased and exhausted her. To these were joined pain of the side, slow fever, thirst, foul tongue, clammy night-sweats, with loss of strength and appetite, and a degree of looseness. She had grown very fast, and was just coming to her full height. Several of her family had died of consumptions about the same age. Small bleedings, issues, musk, and the mercurial pill, which had a sensible effect, recovered her from this threatening illness. Many years after, in the course of child-bearing, she fell into a true purulent consumption, and died. Other instances, not a few, might be added,

added, in which formed obstructions of the lungs were, by a similar method, happily removed.

But when the obstruction will not resolve, but terminates in an ulcer, a new malady then takes place, entirely different in its nature and circumstances, as well as in its cure. In such cases I have with much patience, and often with expectation of success, tried all the usual remedies ; but with so little benefit, that it is long since I had any dependence upon them ; and some truly specious methods have in experience yielded no greater satisfaction. Many, it is presumed, are ready to acknowledge a like want of success in the use of them. This, at the same time that it persuades me of their inefficacy, shews likewise the great difference between the ulceration in the present case and that formerly considered, as frequently cured by a simple method, and very few remedies. The difficulty, therefore, of consolidating the lungs when thus broken,

must not, as it commonly is, be imputed to the constant motion of the part ; for that is the same in all cases ; but to a more appropriated cause, the bad disposition of the ulcers themselves. The gentle action of the lungs in respiration, instead of being hurtful, is of real use to press out the matter from the ulcerated glands.

So many are the contra-indications in a consumption, that in no other disease are we so much perplexed, and pressed on all sides with difficulties. Opiates allay the cough ; but besides retaining the acrid matter, and causing greater infarction, they debilitate mightily, destroy the appetite, dispose to sweat, produce costiveness, heat, and inflammation ; and, for the most part, are a hurtful and temporary relief only. Those live as long, and are, upon the whole, as easy, who do not use them at all, as those who use them daily. I do not here speak of cough and consumption from a catarrh, or erosion. The remissions of the fever,
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for there is never a total absence of it, seem to indicate the bark ; the bark again, in a constantly feverish state, may multiply or confirm the obstructions ; and, if the sweats be checked, cause an increase of cough, looseness, or hydropic swelling. If pectorals, so named, render the cough and expectoration somewhat easier, many of them generate phlegm, colliquate the blood, injure the stomach, and a flux of the belly is frequently the consequence. Those things, on the other hand, which dry the ulcers, do likewise stop the expectoration, and augment the fever and wasting. The fever and wasting require humectants ; but these relax too much, make the ulcers sordid, and add to the matter of colliquation. In every kind and stage, and for every symptom, a different method, or medicine, would appear to be necessary. What remedy indeed singly, or what combination of remedies, in common use, can satisfy so many indications as present themselves in a

consumption; when the glands of the lungs are found in so many different states, crude, inflamed, suppurated, broken; and when, in consequence of these, a violent complication of inflammatory, hectic, and putrid fevers, prevails in the body? A consumption in the advanced stage, so variously and very oppositely circumstanced, so peculiarly complicated, and suggesting such a diversity of intentions, exhibits a most singular character of disease.

In mere tendencies to a consumption, perhaps in the very beginning of it, and in the convalescent state, riding may sometimes be of great use. In many cases, however, it is plainly forbidden; nor can the sick always bear it. The pain I often observed them to undergo in riding, as well as the little benefit they derived from it, made me early wish for another exercise, more safe, easy, and effectual, in all cases, if possible. Indeed, the frequent disappointment of my expectations from riding is more than enough
to

to convince me that it comes far short of the high opinion many entertain of it. I am not ignorant that some, whose case was thought absolutely desperate, are said to have been restored by it. But, beside that there may be some doubts with regard to the disease and its period, a few extraordinary instances of cure, perhaps one in a thousand, are not sufficient to establish a general estimate of the advantages thereof, far less to be urged as an infallible rule. If it be really such a specific as hath been affirmed, how comes it that almost all the patients die, even after full trial of it? Such in general is the inefficacy of riding, and such is frequently the impropriety of it in particular circumstances, that it will rarely prove a cure. As most people have it in their power, and really use it, not a great many can be supposed to perish merely through the want or neglect of this exercise, so much recommended in a consumption. It is to be feared rather that
numbers

numbers have been, and daily are, injured by it. The disease, considered in every point of view, certainly demands the most gentle exercise; and forbids the use of such as may cause too quick, or too forcible, a circulation through the lungs; which, in their weak and diseased state, they can by no means sustain, without endangering a rupture of the vessels, or a suppuration of the parts *.

Milk has at all times been so highly celebrated in a consumption, that it is no wonder many are persuaded to believe it a sovereign remedy, and alone sufficient to work a cure. The notion of its great excellence, transmitted from age to age, from author to author, stands hitherto uncontroverted, being every where implicitly admit-

* To all this a mutilated passage of Aretæus seems to have a reference. He had before, we may suppose, been speaking of the exercise most proper in a phthisis; which, from what remains, it is probable he meant should be of the least troublesome kind, and such as requires no muscular exertion; * * * *quemadmodum in navi et tranquillitate*, cap. de curatione phthisis.

ted. Whoever, therefore, attempts in the least to discredit a practice so long and so universally established, must expect to be accused of presumption or affectation; and perhaps, on an occasion like this, of want of candour. But a little attention to facts and their consequences will obviate all such misapprehensions. While we willingly allow the use of milk all the merit to which it is justly intitled, we cannot, in mere deference to custom and authority, suppress one thing; to wit, that it fails in almost every instance. Of this scarce any man who has the least turn to observation can seriously doubt, seeing it is evinced by daily experience. When there is no fever, thirst, or head-ach, and when the stomach is able to digest it into perfect nourishment, milk has been always found an excellent food; and even an excellent remedy, especially in thinness, tending to a consumption. In former times it was drunk in the quantity of some quarts a day; and,
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it is said, with success proportionable to the quantity. Less indeed is not adequate to the intention, nor can effect such a total change of the humours as is wanted, and supposed to be produced by the use of it. In any quantity, however, it naturally disagrees with many; and even in moderate quantities, though the utmost pains have been taken to make it agree, it frequently aggravates symptoms, or induces new ones. Few, I am satisfied, can boast a thorough cure by it. Even when it is thought to have succeeded, it is not certain that the case was always a consumption, as here understood. Might it not have been owing to imposthumes of a milder kind? or to some other affection resembling a consumption, in which the nourishing, strengthening, restoring virtues of milk are acknowledged? Particular circumstances may, no doubt, sometimes concur, as at Stabiae, to increase its virtues, or dispose the body to a more salutary effect from

from them; but these do not take place with equal advantage in our climate. In a real phthisis I have never observed considerable benefit from any milk, butter-milk excepted.

While a consumption was supposed to be yet curable, (and every consumption at a certain period has always been reckoned so) I have often, with regret, seen a fit opportunity for obtaining a cure, lost, by an unprofitable spending of time in the use of milk, sometimes tediously protracted; as if nothing else could be done, or was needful to be done, and there wanted only perseverance to ensure the desired effect. But the success by no means corresponds with such a confident expectation. The utmost benefit that usually accrues from it, is only a small degree of better health and spirits, and a slight abatement of the symptoms; so far, perhaps, as barely to bring them to a stand; just enough to deceive the patient into higher hopes, and

and a farther waste of precious time, never to be retrieved.

Surely it must appear very strange to every impartial observer, that, contrary to the daily evidence of facts, the superior virtues of milk in a consumption should be so constantly asserted; that it should be so unvariably prescribed by the physician, and so entirely confided in by the patient, who, neglecting other more salutary means, at last finds himself miserably disappointed, and the disease advanced to a state that admits of no possible cure.

It was observed that mild suppurations happening from time to time in the lungs, have been healed with small care and pains. Little or no fever attended, except during the suppuration; the matter was well-conditioned, bloody at times, and equally mixed; and the ulcers probably were few, if more than one, and small. In this case they approach nearly to the nature of a boil or common abscess, to which the lungs are subject as well as
other

other parts; and the morbid glands, partaking but little of a scrofula, are more disposed, as in a simple phlegmon, to be melted down into kindly pus. Hence milder symptoms, and the facility of a cure. The detergent balsams are of real service here; provided their bad effects, from heating and stimulating too much, be corrected or prevented by repeated small bleedings, when the pulse will bear letting blood, together with the assistance of a cooling, lenient, vegetable, antiseptic diet.

But I seldom find any good effect from them, and very often a bad one, when the tumors are of a more indurated, or a more highly scrofulous nature, and when there is much heat, or what there is feels biting, or of the hectic kind. The matter indeed may decrease, but it grows thinner and less digested; the breast becomes tight, the cough hard, and the breathing more difficult; which are all signs of the dry inflamed state of the ulcers.

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At other times they may, by their stimulus, occasion an increased secretion, and immediate expectoration, of the purulent matter, so as to leave the ulcers bare and highly irritable. Just as, by frequently dressing and wiping an external sore, the natural covering is taken off, and healing retarded. For pus is the balsam provided for the cure, as well as for the defence of ulcers; and to remove it in this manner, is evidently to counteract the most obvious intentions of nature. Nor is this all; for as the morbid glands are found in very different states, the detergent balsams, while they are intended to cleanse and digest, may, at the same time, increase the fever and inflammation; and dispose to suppuration such glands as are still crude, or only inflamed, and yet capable of resolution; which ought by all means to be attempted, in order to prevent greater purulence, and consequently greater consumption. From the vast numbers that die consump-

tive,

tive, after a long and liberal use of balsamics of all kinds, we have a mortifying proof that remedies of this sort are of small consequence towards a cure.

Let it suffice here just to observe that any of the balsams in use may be employed indifferently, when any of them can be properly exhibited, provided they do not offend the stomach, or produce an increased intestinal discharge, which they are frequently apt to do. The most celebrated of them do not appear to excel those of smaller cost and character, that lie within every one's reach. Tar, and the artificial balsam of sulphur, with oil of turpentine, will, perhaps, be found to possess all the virtues requisite. The former, which may be more liberally used, is well suited to the case of purulence from simple apostematation. The latter, in small quantity, has been of service in consumptions from glandular ulceration, but of a more tractable kind. In order to distinguish

tinguish the nature of the ulceration, and in what cases the balsams can be given with propriety, it may not be amiss to observe, that matter discharged from a glandular suppuration, or erosion of the lungs, has commonly a sweetish taste; if from a cyst, it is fetid and disagreeable.

In milder cases of glandular suppuration the bark may also be used in small quantities, as it keeps up the appetite and digestion, strengthens the habit, and helps to consolidate. The less there is of fever however, with so much the more safety and benefit may we use this remedy, so hurtful in other circumstances.

In cold consumptions, whether glandular or pituitous, bleeding is evidently improper. But if there be any considerable degree of inflammation, with siziness, and a pretty full pulse, bleeding not only abates the general inflammation, and that of the particular part affected, but, by drawing off so much of the old, heated, distem-

per'd

per'd fluids, makes room for new, cool, and sounder juices. It also agrees well when the pulse is good, though there should be no inflammatory disposition, or fever to require it. For the lips of all ulcers are constantly more or less tumid or inflamed; and, if great pains be not taken to extenuate them in time, by bleeding, and other fit methods, they will, by remaining long in this state, grow callous, and bring on an incurable consumption. Yet if the habit be not bad, the ulcers may, without impairing the health much, or proving soon fatal, continue to perform the office of a real issue in the lungs for life, and with advantage. Nor is it to be doubted that nature may sometimes by this means, as she often does by ulcers in other parts, throw out some noxious humours from the body, which would otherwise affect it more grievously, and sooner put an end to life. Some have lived many years in a consumption, with little uneasiness. To at-

tempt a thorough cure here would be equally improper and ineffectual.

In case of tubercles, with the blood and pulse conditioned as abovementioned, bleeding is of still greater benefit, being notably helpful to diminish the fever, and resolve the obstructed inflamed glands when tending fast to suppuration. But few, comparatively speaking, will be found proper subjects of this operation; which in most cases should be employed with great caution and judgement. I do not consider it at present, as merely palliative, but rather with a view to a cure. Bleeding to a certain pitch, will prevent suppuration; beyond that it may be the cause of abscess. If, on trying it, the pulse grows quicker, and more contracted or thready, as it commonly is in a consumption; if the blood be florid, or loose in its texture, and the strength appears to decrease, no good is to be expected from this method; which, if persisted in, will increase the danger, by exhausting
the

the patient too much, and disposing his juices to colliquation. The consumptive, for the most part, do not abound with blood; therefore little is to be taken away at once: and at a certain time, even when the strength and spirits do not seem to be greatly impaired, every drop of vital fluid is precious, and the loss of it irreparable; as all the assimilating powers are weak, and no more blood remains than is just sufficient to maintain a feeble circulation. An officious concern to give relief by bleeding at such a time, has caused sudden coldness, depression, and irrecoverable weakness. Nay, I have, oftener than once, known speedy death to be the consequence.

Opiates in general have been condemned, as they frequently do hurt, never cure, and seldom are palliative; for if they give as much uneasiness one way, as relief another, they are not properly palliatives. An exception however, must be made here. When from any cause undigested matter is

too quickly spit up, the ulcers, being thus stript of the lenient pus, become exceeding tender; and a long train of troublesome symptoms ensues. Increase of fever, cough, and crude expectoration, inflammation and rawness of the throat, with hoarseness, and all the distressful circumstances which necessarily attend these, are the consequences. Opium, as in the case of erosion, now becomes necessary; and not only lessens the secretion, but allows the secreted humour time to thicken, and, by resting on the parts to defend them, and promote a better digestion. By this means flighter ulcerations may sometimes be healed; and the bad effects of a constant expectoration of the purulent balsam prevented. But when the matter is thick, opiates render it still thicker; causing oppression in breathing, and difficult expectoration; which we may, in some measure, prevent by the proper correctives.

There

There is no single remedy usually advised in this disease, of more certain benefit than issues; but they are best suited to the circumstances of a beginning consumption. Though the good effects of them were not so evident from practice, reason pleads for their use in this state. An issue is an artificial weak part, and consequently lessens the impulse upon the parts affected by the disease, which, without such a precaution, might come sooner to suppuration; and this is what we are now solicitous to prevent. When bleeding cannot be so freely admitted, issues will slowly diminish the quantity of the fluids without impairing the strength. They are very effectual in rheums, particularly of the head, breast, and jaws, which have some relation to a consumption, which is often caused by a cold, and frequently a cough and tooth-ach succeed each other alternately. Many have grown fat by means of an issue. It must be owned indeed, that they are not so

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certainly useful in the more advanced stages of a consumption. Yet, unless the body be much emaciated, they can do no harm, and it is possible may do good ; for, though not possessed of any elective power, they undoubtedly draw off a portion of the putrid humours, in the constant discharge of heated, acrimonious lymph which they procure ; and thus, in some degree, abate the fever and its consequences. There are also particular circumstances of the constitution, or of the disease, that may render them more necessary. Issues made by blistering are fittest in cold constitutions ; but when there is heat and inflammation, they irritate and keep up the fever. Pea issues are easily borne ; and a seton in the side has done remarkable service ; especially when pain and weight of the part, or a sense of matter coming from that part in coughing, pointed it out as the proper place for a drain *.

In

* Nature sometimes finds a resource against a consumption, by forming an issue of her own accord, and thereby

In a disease that hath so often baffled every attempt, and in which all the ordinary assistances are found so inadequate to a cure, the utmost that art seems able to perform, or indeed commonly aims at, is to restrain its violence; and, by procuring a respite make the devoted patient live as easily and as long as possible. This end much to be desired, no doubt, though but a subordinate one, is best attained

thereby points out the necessity and advantage of a constant drain, both as a cure, and a preventive. A young man, going down into a lead mine, was struck with a sudden chillness. A degree of peripneumony came on, succeeded by a hard dry cough, and wasting, which continuing a long while, he was judged to be in a real consumption. Warm bathing and diaphoretics were directed. A foul eruption, with blotches, broke out over all his body, and saved him. The fourth history in chapter third, affords an example of the same kind. Those affected with an ulcerated external scrophula seldom fall into a consumption; because the discharge outwardly diverts the humors from the inward parts, and prevents infarction in the lungs. It is observed likewise that some grievous internal disorders, depending on a latent scrophula, and threatening a consumption, have been sensibly relieved by an external glandular suppuration.

by

by a steady adherence to a diet the most simple, and lightly nourishing, that supplies no matter to the disease, nor causes any labour to the digestive powers, whether of the stomach, or the subsequent concoctions. Of this sort is the diet of people in the lower stations of life, whose condition affords them only a moderate provision of homely sustenance, wholesome indeed, but not too rich and nourishing; which, though they may reckon it their misfortune in health, is now, under the pressure of such a malady, their peculiar happiness. It retards the progress and increase of symptoms, and so prevents greater wasting.

But, to be more particular, an early and constant use of butter-milk, so as not to cause a distaste of it, and more or less soured, according to circumstances, will be found most effectual to alleviate the symptoms, fever, thirst, sweating, and looseness; and render life supportable under them.

them. When it agrees, it seldom fails to do good. It is sufficiently nourishing, rarely gives uneasiness to the stomach, serves both for food and drink, so that scarce any other liquid is necessary. If the thirst be great, diluted with tepid water, it makes a grateful cooling refreshing beverage. Besides, it is opposite to the putrid, inflammatory nature of the disease. And as the vehemence of the cough depends much on the degree of fever, by restraining this, it will give great relief in that also.

When butter-milk is disliked, or disagrees, and a more elegant variety of food is required, the sick may have recourse to sago, salop, vermicelli, barley, or rice, gruel, panada, and the like, all made rich with juice of oranges or lemons, syrup of these juices, or some pleasant fruit jelly, such as that of raspberries, plumbs, and currants. Flummery of oatmeal, and barley-meal porridge, eaten with milk, will make an agreeable change; as will likewise roots, herbs, and fruit,
if

if they do not occasion gripes, wind, or looseness. In low, cold cases might not shell-fish, when they can be had, or the broth of them, be a proper aliment, and sallads of the marine esculent plants?

In case of lowness from such meagre diet, I would rather, when great heat does not forbid it, gratify the sick with a little wine to support them, than allow them even a small pittance of animal food, though usually reckoned, but very injudiciously, more nutritive and strengthening. The richer the food, the less able are the concoc-tive powers, now greatly impaired, to subdue and assimilate it. Hence an increase of fever, irregular discharges, and all those ills that arise from the want of a due digestion. It is remarkable that those who went to sea in a consumption scarce ever observed any rule as to diet, but ate of every thing indifferently; and some did not confine themselves within the bounds even of temperance, yet received a
cure.

cure. The same indulgence would soon have proved fatal at land.

Bleeding, issues, a prudent use of crude mercury, and of the natural balsams, accommodated to the kind, stage, and degree of the distemper, proper diet, and living at sea, seem to comprehend every thing essential to the cure of a glandular consumption of the lungs. Almost all other things are of small value. They may be occasionally and accidentally good, but their virtues are in no degree proportioned to the greatness of the malady; nor are they suited to its various contra-indicating symptoms. As their effects, therefore, are very limited and uncertain, they can at most be only palliative, and are not to be depended upon in any intention of consequence.

As sailing, from its peculiar nature and circumstances was early accounted a remedy in sundry cases, so, from its special conformity to the disease, it has been long held of principal use in a consumption, by those of greatest
name,

name, Physicians and Philosophers, in different ages and nations. Thus Cælius ; Gestation in a ship, and a long sea voyage, are of the greatest use. And Aretæus ; If nothing forbid, let the sick be carried to sea, and there let him live. Celsus likewise ; If it be a real phthisis, a long sea voyage is necessary, when the strength will bear it. If through great weakness that cannot be undertaken, it is yet best to go some way by sea, though not far. Pliny observes that riding is of the greatest use in diseases of the stomach ; sailing in a phthisis. In all kinds of consumption, says Dr. Mead, change of air is generally good, sometimes a long sea voyage. Nor has Boerhaave omitted sailing, as a proper means to break the abscesses of the lungs, and deterge them when broken *

In

* Et propterea utilis navalis gestatio, atque longa navigatio. Cælius Aurel. lib. ii. cap. 14. *de phthisica passione.*

Nam si recte habuerit ægrotans, in mari gestatio fieri poterit,

In this simple method of sailing, a strong alterative virtue in sea air, an air duly qualified, so as to render it a fit application to the lungs externally; and a singularly adapted exercise; all concur toward the cure of a consumption.

Though a pituitous consumption does not fall within the limits of this undertaking, let it be observed that the immediate cause of it is an increase of the ordinary secretion of the lungs, depending on a less compacted, or acrimonious state of the fluids, and a weak state of the glands. The curative intentions then will be to divert the matter of secretion from the lungs; to give the juices a more

poterit, atque ibi vitam deget. Aretæus de curatione phthisis.

Quod si vero phthisis est opus est, si vires patiuntur, longa navigatione. Si id imbecillitas non finit mare tamen, sed non longe, vectari commodissimum est.

Cels. lib. iii. cap. 23.

Plin. hist. lib. xxviii. cap. 4.

Mead monita et præcepta medica. cap. de febris lentis.

Boerhaavii aphor. sect. 857, 858.

balmy

balmy consistence; and to strengthen the orifices of the excretory ducts. How far sailing is fitted to answer these intentions, experience must determine. In the mean time a conjecture may be formed from what has been said concerning the nature and effects of the the sea air, exercise, and sickness.

Spitting of blood.

Spitting of blood is both the forerunner, and the cause, of a consumption, as well as a symptom of it. It is frequently a disease of itself, when it happens in the way of transfusion; and some are habitually subject to it for a great part of their lives, from this cause, without much danger, or any consequent disease. Tumefied glands compressing the vessels, may occasion their bursting. If a crust happens to form on the rupture, pus is generated. And when the blood falls into remoter branches of the windpipe, and is not coughed up, it corrupts,

corrupts, becomes acrid, and brings on erosion. In these cases the exercise and vomiting at sea will tighten the relaxed orifices of the vessels, make a strong revulsion, and discharge what is extraneous in the lungs. Besides, the sea air is a healing application. Pliny in his history informs us that Anneus Gallio failed for the cure of a consumption, and spitting of blood. And the younger Pliny relates that Zo- zimus, his freedman, was cured of the latter by sailing to Ægypt, and staying a long time there. In this complaint Celsus advises living in maritime places during winter*.

A wo-

* *Præterea est alius usus multiplex (aquæ marinæ) principalis vero navigandi phthisi affectis, aut sanguinem egerentibus; sicut proxime Anneum Gallionem fecisse post consulatum meminimus. Neque enim Egyptus propter se petitur, sed propter longinquitatem navigandi. Plin. hist. nat. lib. xxxi. cap. 6. This is the Gallio mentioned Acts 18. proconsul of Achaia, and brother of Seneca the philosopher.*

— frangeret me tamen infirmitas liberti mei Zo- zimi, nam ante aliquot annos dum intentè instanterque

L

pronunciat,

A woman, ill of an immoderate flux of the menses, found the discharge almost wholly restrained, whenever she went to sea *.

Difficult recovery.

By the long continuance or severity of a malady, the digestive and assimilating powers are impaired; and the fluids, being heated and deprived of their balmy spirituous parts, or acquiring vicious qualities, become unfit for nutrition and animal uses. Hence that depravation of humors known by the name of a bad habit, and taken notice of as the consequence, as well as the cause, of diseases. Perhaps, through an imperfect termination, some lurking remains of the disease may still be left, more or less apparent, which nature in its de-

pronunciat, sanguinem rejecit; atque ob id in Egyptum missus a me post longam peregrinationem confirmatus rediit nuper. Plin. epist. 19. lib. ix.

* Cels. lib. iv. cap. 4. sect. 5.

* Speed comment. de aqua marina.

pressed

pressed state is not able fully to expel or subdue.

Exercise and change of air have always been chiefly trusted to in a slow doubtful recovery, and found effectual, when other methods failed, to prevent a relapse. A greater change of air cannot well be imagined than what is made by going from land to sea. The air of Great-Britain is, in many respects, highly unfavourable to those who continue to languish after a disease, or have their constitution impaired by it. How much exercise, and the air at sea, contribute to enliven and meliorate the vital fluid, is evident from the histories above given. In most of them a greater degree of recovery was obtained by living a short time at sea, than could have been expected in a much longer time at land, if at all, in our climate. The effects almost constantly were, good appetite, better spirits, an abatement of symptoms, and increase of strength;

a few days usually making a surprising change, both as to the general health, and the disease in particular.

Sailing was directed in atrophy, as well as cachexy; and, according to Aëtius, the alternate motion and rest one undergoes in it, if any thing can, will dispose the body to be nourished. I am informed it has long been a common remedy in the nervous atrophy particularly, succeeding the dry belly-ach, which is so frequent in the West-Indies. Upon the abatement of symptoms, says Dr. Towne, and recovery of the patient, Sydenham very justly recommends riding, as a prevailing means to prevent the return of the fit, invigorate the bowels, and strengthen the concoctive powers. I have frequently experienced the good effects of this advice. But there is still another exercise, which I have observed to be of more speedy, more lasting, and more effectual benefit; and that is, being carried round the island in a ship or sloop, which is a convenience
few

few need want in Barbadoes. I have seen those who were reduced to the most calamitous appearance, and even upon the verge of the grave, from a long-continued cholic, in a week's time recruited to a degree beyond expression, only by this method of sailing, when they were incapable of undergoing any other kind of carriage*.

* Towne on the diseases of the West-Indies, chap. of the bilious colic.

C H A P. VI.

Of the right use of sea voyages.

IN all the circumstances that related to navigation as a remedy, the ancients were curiously particular, and made many distinctions; as, whether it should be performed on the sea, or in rivers; whether near the shore or in the open ocean; whether in larger or in smaller vessels; in ships or in barges; with sails or with oars; in a vehement wind, or in a moderate gale. Sailing in a harbour, and on a lake, are likewise mentioned. To some a long voyage, or living at sea, was prescribed; to others a shorter. So exact were they, and so cautious, that Herodotus directed to begin with sixty stadia, about seven miles, and by degrees to double that distance. I shall offer on this head what has occurred to me from observation, or appears reasonable in the way of conjecture.

An early recourse to remedies has been constantly enjoined in all medical
cal

cal advices. But as sailing is attended with such seeming inconvenience and hazard, that few undertake it without fear and reluctance, it should never be proposed unless it be truly proper, and the degree of the malady require it. But in some cases it is so plainly indicated, that I never hesitate to advise it from the very beginning. In a consumption, how many die daily by having despised or neglected the distemper at first, and by trusting afterwards to ordinary methods and remedies. It is no uncommon thing to see such flying their country to breathe a foreign and a finer air, when, alas! they have not lungs wherewith to breathe at all. That so few recover by such a practice is not to be wondered at; for both the circumstances and the event shew the impropriety of it. When a cough first begins to be attended with a hectic, sweating or wasting, and loss of appetite, and to cause troublesome nights, the danger is too apparent. No reme-

dy of efficacy is now to be left untried, either by itself, or in conjunction with others; because, if we mean to attempt a radical cure, or if that be possible, every assistance will be required, and, after the most diligent use thereof, all may still prove ineffectual. At no later period can any thing be done with so much probability of success; and therefore, though sailing has had great effect, even in the purulent state, no reasoning can justify its being postponed to that period, in which a cure is still more uncertain and difficult.

Indeed when the tubercles are numerous, seated deep, and of an unconquerable hardness, as they often are, it would be in vain to expect a cure; especially if there be a narrow chest, great adhesion, or an hereditary disposition to a phthisis. Yet even in this case, where we can only palliate, some have received wonderful relief by living at sea, and the inevitable event hath been long retarded. Nothing

thing seems to be so fit or effectual in such a state, as the kindly vapour bath of sea water, to soften the indurated glands, and, for a time at least, preserve the lungs in some measure pliant and pervious.

I have generally found sailing safe and successful, with respect to health, in good and in bad weather, in winter and in summer, and in very different climates. In directing it therefore, a nice attention to these in general is not requisite; and the necessity of the case prescribes the rule as to the time: the quick progress of the disease does not admit of any delay. In certain cases, however, a regard to circumstances will be necessary. The asthmatic, for instance, should be sent to sea, when the vapour is most impregnated with the saline humidity, or when the weather is fair and serene, according to the cause of the asthma, and the experience of what does good or ill to the patient. A dry warm climate

mate is the most suitable to rheums and dropfies, as it increases perspiration and dissipates the stagnant or superfluous humors. Sometimes foul and stormy weather may do most good; for then the exercise is higher, and all the aërial influences are more strongly impressed on the body. Therefore it promises to be of greatest use in diseases arising from a gross habit, and a degenerate state of the glands, particularly in a consumption. See history the first, fourth, and fifteenth. During such weather they inspire, in full draughts, a spirituous saline air, or rich balmy humidity, cooling and deobstruent, and fit to deterge or heal the lungs, according as they are found to be differently affected in the different stages of a consumption. And that they may lose none of the benefit, the sick ought to keep on deck as much as they can with safety, and expose themselves to the immediate free influence of this truly sanative air and powerful exercise. This I have constantly

stantly enjoined, and my patients have always faithfully complied therewith. It may be farther observed, that a temperate climate, where the weather is constant, seems to be fittest in a consumption. Cold occasions a constriction of the lungs, and checks their perspiration. Heat causes feverishness, and greater impulse upon the diseased part. In summer let them sail northward, in colder seasons to the south. But it is only from observation that we can judge what climate is best in mere obstruction, and what in an open ulcer, of the lungs.

I have still less difficulty in advising a voyage by sea, even in the less favourable seasons, because the patient is thereby moved into a warmer and more kindly atmosphere. These circumstances being carefully attended to, will naturally determine us to send the diseased to a southern climate; nothing being more dreaded by them, or more hurtful to them, than the frequent sudden changes and extremes
of

of weather, to which, in our insular situation, we are very much exposed through a long winter.

Those of greater delicacy, and liable to nervous spasmodic affections, should sail at first in smooth water, in a port or bay, when the air and season are mild. Such are easily overcome, or apt to have their spirits put into irregular motions; and therefore, cannot bear any high degree of exercise without disturbance, or disagreeable accidents, and the danger of having their disorder increased. See history twelfth.

If, from doubtfulness of the case, or the patient's weakness, his fear, or aversion to the sea, it be not thought proper to advise, or if the sick do not chuse to try a voyage, the next expedient is to live on some small island, or on a coast duly exposed, close upon the shore, where the vapour from the sea exceeds the exhalations from the land, so that the kindly influences of the former prevail. Here they may sail
more

more or less every day, in order to observe how they bear it, what effect it has, and so gradually accustom themselves to the unusual motion, till they become able to bear a longer voyage to sea.

Thus sailing may be adapted to all cases and circumstances. By sailing in a larger or smaller vessel, at a greater or less distance from the shore, in a smoother or rougher sea, we can give more or less exercise and sea-sickness, exciting only a simple nausea, or increasing it to vomiting, and continuing it a longer or shorter time, as the nature of the disease may require, or the condition of the sick allow. It is probable that the ancients had a view to these several circumstances, when they were so particular in their directions about sailing; which, however, in some things appear to be rather too refined, than of any real importance or necessity. In various cases I recommend going out frequently in a boat an hour or two in the tide, for the sake
of

of a sea vomit; which is the safest, at least the most effectual of any, having all the good, and none of the bad, effects of artificial vomits.

But to regulate the exercise, so as to give the patient a just degree of commotion suited to his particular circumstances, it should be farther attended to, that the highest exercise is when the ship, to speak somewhat in terms, pitches, as she does when going upon a wind, that is, within six points of it. It is most felt at stem and stern; for a very obvious reason, therefore, the agitation must be least at the middle. So that if one lies along athwart the ship, the motion will be much the same as rocking in a cradle. But when the ship goes right before the wind, there is a rolling motion, so violent sometimes as to give great disturbance, which may be rendered easier by lying along the ship. Sailing with a brisk gale, and the wind on the beam, as it is called, the ship heeling to one side, is kept steady, and running parallel
with

with the surge, neither pitches nor rolls, and consequently the motion is not so violent. The smaller the vessel, the more one may be said to live at sea, being more immediately on the water, and the motion must evidently be more quick, vehement, and sickening, than in a larger vessel.

In order as much as possible to remove all cause of uneasiness and danger from the commotion, and dispose the body to receive the sea influences with advantage, some preparation may be necessary before the voyage; such as bleeding, and cleansing the first passages, if such evacuations be indicated. Nor is the sickness to be depended on for this latter purpose, because some are never sick at sea, and others grow costive. Proper methods should likewise be used at sea, to prevent excessive vomiting, striction, and looseness. Sometimes a course of deobstruents, alteratives, or balsamics, according to the nature of the disease, might be directed to assist in the cure; but hitherto

to I have trusted entirely to sailing. When a milk diet is necessary and agrees, those of condition may have goats, an afs, or a cow on board. The animals should be kept in an airy part of the ship, and combed or curried every day, both for the sake of health, and to improve their milk.

Some diseases are peculiar to a certain period of life ; which being happily got over, there is seldom much danger afterwards, when a right manner of living is strictly observed : this is particularly true of a consumption. Perhaps it would not be an useless precaution for those of families in which these diseases have been remarkably fatal, to pursue a sea life at a proper time, and thereby, if possible, prevent the like catastrophe.

A consumption rarely invades any under fourteen years of age. From this time the state of the health should be carefully attended to. If the subject, not to mention other particulars, is thin or florid ; liable to coughs, rheums,

rheums, and fits of loofeness; and discovers uncommon sprightliness or genius, the most powerful methods of prevention are required to avert the danger. Sea air bids fairest to mend the habit, and procure that soundness of lungs which preserves from phthifical disorders*.

A like observation I have made on a dry rocky coast, where the inhabitants live in a fresh sea air, are often in the sea, and eat shell-fish; among them a consumption is rare. In an inland country, not many miles distant, the disease is frequent, though the soil is generally dry.

Even before the period of fourteen, a great deal ought to be done, if from circumstances of constitution, or a fa-

* Inter innumeras mulieres quæ victum quotidie erudendis conchis ad littora quæritant, vix unam invenies cujus putridi sunt dentes; contra autem firmæ sunt plerumque gingivæ, pulmones sani, tussique scorbutica liberi. Idque præcipue ipsis inde contigit, quod aër salinis undique particulis, a maris superficie effluentibus, vel potius ab undarum flictu elisis, abundat. *Russel de usu aquæ marinæ*, p. 76.

mily taint, there be reason to suspect a tendency to consumption. The things that promise to be of greatest use are issues, milk, light steel waters, the bark; frequent changes of air, especially of land air for sea air; riding long journies; frictions, and warm clothing during the cold seasons; drinking sea water at proper times, and bathing in the sea in warm seasons; and sometimes crude mercury. These, judiciously accommodated to the particular condition of each subject, will strengthen the whole frame, remove acrimony, give such a due consistence to the fluids, that they may circulate freely in the extreme vessels, and so prevent cohesions and stagnation in the glandular system. A preventive method timely undertaken, and carefully pursued, would save many who now perish.

As the terror of dying at sea is a great discouragement, I have always so contrived the voyage that, if a sea life should not agree, or death be apprehended,

prehended, the sick may go to land, or have time to return, before a bad accident or a bad event can take place, in the ordinary course of the disease.

It is almost needless to say how long the sick should live at sea. Regard to their own safety certainly will, or should determine them to continue till the disease is cured, and a confirmed state of health regained. In this, however, the nature of the malady, its degree, its duration, the danger that attends it, and other circumstances, must direct. Some, as appears from the histories, recover in two or three weeks or months. In others, sea-sickness for a few hours or days has been sufficient. Sometimes years may be required to complete the cure, and secure against a relapse. Not that patients need, in all cases, to be constantly at sea, they should only now and then go a voyage; which, from the benefit received, several have been encouraged to do. This, it is believed, would prove more effectual than send-

ing the sick to drink spaws or milk, or, as is very often done, to make fruitless peregrinations by land: at least, when all these have availed little, and tedious courses of medicine have proved ineffectual, sailing has been tried with success.

But a farther illustration will be necessary here, and with particular respect to the disease principally in view. In a scrofula the tumors commonly begin to appear toward the winter solstice, and continue to increase, till summer, for a time, puts a stop to their progress, and perhaps, in some measure, dissipates them. But the decline of the year produces new appearances, or increases the obstructions, not wholly resolved; and, if a proper method be not then pursued to resolve them entirely, the tumors increasing, come at length to inflame, suppurate, and break. In like manner a cough, from glandular swellings in the lungs, frequently comes on in winter; continues and increases during the spring: the

the symptoms may cease in summer; but in autumn they all return; and sooner or later the disease ends in purulence.

While tubercles of the lungs are yet in a resolvable state, and the body is not much emaciated, nor the hectic heat great, the warm kindly air and seasons of spring and summer relax the obstructed glands, constricted before by the cold of winter; and, allowing a greater freedom of circulation, promote a resolution. Indeed the symptoms have sometimes abated so remarkably that, in any other distemper, appearances equally promising would have authorized our predicting a thorough amendment. But if the obstruction be so fixed, as not to admit of resolution, or pus is already formed, the summer's heat will increase the fever, and impulse on the obstructed glands, of consequence bring them sooner to suppuration, and, by the breaking of the abscesses, hurry on all the aggravated symptoms of a deep

consumption. For now the sick being kept almost sleepless, and exhausted by a perpetual cough, are alternately parched with heat, and melted down in sweat; a dropfical swelling comes on; they are waisted away by a draining looseness; and still farther consumed by a constant and daily increasing purulent expectoration. Thus it frequently happens, contrary to a general notion and expectation, that the weather and seasons, seemingly most favourable to the consumptive, instead of being salutary, prove in reality the reverse, and every way the most distressful and the most dangerous.

To apply all this to the purpose in hand, such hath sometimes been the effect of living at sea in a beginning consumption, that all the symptoms have disappeared, and a cure seemed to be perfected, as was just now observed. By this the sick, no longer perceiving the necessity of a sea life, have suffered themselves to be deluded into a fatal security; but were
convinced

convinced of their error when too late, by a return of the distemper, now more obstinate and quicker in its progress. In short, the most hopeful appearances are not to be suddenly trusted. An advantage gained should be steadily pursued, and the happy occasion of securing success seized and improved, so that the disease, or a tendency to it, may, if possible, be quite overcome. One voyage, and not a very long one, hath, in some instances, proved a complete cure, when undertaken in time; and in most cases it may so far resolve and reduce the tumefied glands, that they shall lie harmless in the soft substance of the lungs, without being an impediment to their motion, or other uses in the animal œconomy. But while the smallest obstruction remains, or even a disposition to obstruction, changes of seasons, accidents, and an incautious manner of living, will renew the growth of the tumors, or produce others, which are neither to be pre-

vented nor removed, but by repeated failing, or something else no way inferior to it in efficacy. This however, notwithstanding the researches of so many ages, art has not yet been able to discover.

The foregoing observations supported by facts and appearances in the course of the distemper, clear up the obscurity as to its nature in some material points, and give a plain reason for the good and bad effects of warmth and warmer seasons, on different subjects, and even on the same subject at different times, according to the different degrees of obstruction.

From them we also perceive why opposite seasons are equally productive of bad effects; autumn and spring being alike unfriendly, though in a different manner, to the consumptive.

At the same time they shew the necessity of a speedy and effectual remedy, to prevent the hurtful consequences of hot and cold seasons. This indeed is no other than a timely resolution,

tion, in part at least, of the obstructed glands; which, from the growing heat, are so apt to run into inflammation and abscess; or to be constricted by cold, which, joined to the moisture of the declining year, increases the old obstructions, or lays the foundation of new ones.

They afford likewise some necessary hints, as to the expediency or in expediency of living in a warm climate, the place to be chosen, and the particular period of the disease in which a cure may be expected.

And they will be still farther of use to assist us in the right choice and application of remedies, commonly directed in a consumption, and the several stages of it, by shewing the inutility of some, the impropriety of others, and the danger of many, either in themselves, or from an undistinguishing administration of them.

Beside repeated failing, those who would effectually provide for their safety should, for a great part of life,
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or till the most dangerous period is over, observe all those rules and cautions which art hath suggested, as of use to perfect recovery, and prevent a relapse. The chief of these are a strict regard to diet and manner of living; issues; bleeding at proper seasons, if requisite, and carefully avoiding every thing that may impair the habit, or create a disease, especially a fever. From either of these the danger is great. But the injury done to the lungs, in a weak phthical disposition, by the impulse of an acute illness, is for the most part irreparable: and, but for this accident, numbers might have escaped, or for a long time retarded their fate. See history eighth. By neglecting the necessary precautions, or indulging themselves in irregularities, many have defeated all the good effects of a sea voyage, when, from every circumstance, there was reason to expect a lasting cure.

Many remedies taken from the sea were in use among the ancients; failing;

ing; salt and sea water in different forms, and for divers purposes; bathing and swimming in the sea; rolling in the sea-sand, sweating in it; living in maritime places, and feeding on such things as the sea produces. The consumptive were directed to go from a moist situation to a dry, and from a dry one to a moist one; though the patient's native soil was often preferred. Whatever may be their effects in a lower degree, the usual changes of air with us do very little toward a cure. Humidity and dryness are qualities too simple and disproportionate, unless accompanied with others of greater energy, to render such changes more effectual than experience has yet proved them to be. If any benefit is expected from them at land in our island and climate, and a long voyage is declined, I would advise the patient to live on a dry and somewhat elevated shore, with a southerly exposition; to ride a great deal, and close by the sea, especially during
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the flowing tide; to be frequently among the rocks that have been overflowed by the sea, and to sail every day, in order to breathe as much as possible in the vapour or spray, that the lungs may be therewith frequently moistened. Or let him live on board, riding in a bay, more or less open; from which some have received a cure, see history third; and with others, as they informed me, it has agreed better than sailing. Something more than mere moisture will thus be communicated to the lungs; something truly medicated, and happily suited to their nature, function, and present morbid state. In such an air they will at least live as safe and easy as in dry inland places, which are commonly made choice of, and where, instead of recovering, almost all the sick die.

In such a method, long and steadily pursued, a milk diet, if it agrees, will properly take place. This too was a great practice among the ancients,

cients, and attended with more success than in our age and climate. Equally attentive to circumstances of the constitution and of the lungs, they endeavoured to cure the ulcers by remedies both external and internal. In which intention milk was highly esteemed, especially that of Stabiæ, where the luxuriance of the pasture abounding with many plants of healing virtues, was an additional recommendation of its use, and gave it greatly the pre-eminence. Hither the consumptive were sent, not only on account of the excellency of the milk, but likewise of the vapour and exhalations arising from the sea on one hand, and from Vesuvius on the other*.

To

* The mons lactarius of Cassiodorus is thought to have been here; a place in former times of much resort, and celebrated, in very different periods, for the salubrity of its air, and abundance of rich milk; which, from the nature of the pasture, was found very medicinal and restorative. On occasion of one Davus going thither in a consumption, he thus writes: *Huic ferocissimæ passioni beneficium montis illius divina tribuerunt:*

ubi

To practise with success, we ought to know distinctly what is truly indicated in the disease, and to attend with special care to every indication, or, in all

ubi aëris salubritas, cum pinguis arvi fecunditate consentiens, herbas producit dulcissima qualitate conditas; quarum pastu vaccarum turba saginata lac tanta salubritate conficit, ut quibus medicorum tot concilia nesciunt prodesse, solus videatur potus ille præstare; reddens pristino ordini resolutam passionibus vim naturæ. Replet membra vacuata, vires effœtas instaurat, et fomento quodam reparabili ægris ita subvenit quemadmodum somnus labore fatigatis. Cassiod. lib. ii. *variar.* epist. 10.

Neopolitani medici pro ultimo refugio ægros phthificos, et qui sanguinem expuunt, vel ejusmodi thoracis ulcera, et alia vitia patiuntur, ad Tabeas mittunt, cum successu adeo salubri ut sint qui totam in iis degant vitam. Baccius *de thermis*, lib. iv.

Ante aliquot annos illuc (Tabias) nobilem nostratem nomine Cotton, phthificum confirmatum, misi, pus cum sanguine spuentem, ac sceleton membrana pergamena vestitum præ macie referentem; qui a reditu plane restitutus nuptias contraxit, sanissimus in familia degens, plurimorum liberorum parens. Mayerene.

Milk is often drunk with us under great disadvantages; either where there is no real fitness of air, or in moorish mountainous places, where the frequent fogs, and natural wetness of the grounds, cause, even in summer, a cold and moist atmosphere, than which nothing can

all probability, we shall fall short of a cure. In a true glandular pulmonary phthisis, with purulence, the ulceration of the lungs, and a dyscrasy of humors, immediately present themselves as the chief indications; and, according to reason as well as good practice, the healing of the one, and amendment of the other, ought to be jointly pursued. When we endeavour therefore to cure a consumption by remedies that respect only the ha-

can be more hurtful to the lungs. Fit places in all respects opposite to these, and of consequence more friendly to the lungs, may be found on sea coasts, as Stabiae was. Might not something greatly to the emolument of the sick, be formed upon the plan of Stabiae, in different parts of Britain. The air, climate, soil, pasture, and situation conspired to render it a most healthful retreat for the consumptive; and the necessity of such a retreat with us will appear, when we consider that, from the usual resorts, few, if any, ever return cured of a true phthisis. I have been the more particular on this head, in order to shew, as a matter of curiosity at least, the conditions of a place concerning which I find so much said; and likewise because the practice in consumptions has, at all times, turned so much upon the proper use of milk, and the right choice of air.

bit, we labour in vain, because we satisfy only one indication, while another, no less important, equally demands our care. We might as well attempt to cure a finous, fordid, or other bad ulcer, by a general or pretended specific method, without the assistance of the hand, or a suitable local application. An ulcer is the same every where, and the same topical remedies, adapted to the nature and situation of the part, must be every where equally useful and necessary. All the most appropriated internal methods are daily employed, with little or no advantage, to correct that vice of the fluids which so much opposes our intention of healing. The diseased state of the lungs, weak and wasted, broken or eroded, inflamed or obstructed, is totally neglected, as to any application that might be made to them externally. May not the want of attention to such a material circumstance, be a chief cause of the want of success

success so frequently in a consumption.

But however reasonable and necessary external applications to the lungs may be, when rightly contrived, the disadvantages that attend their use are obvious, and not easily remedied. From the great delicacy of the parts concerned; their present morbid state; and the particular qualities of the substances employed; they will, to many, be too heating and irritating, too constipating and too relaxing; and those of greatest energy are plainly dangerous. Besides, few will readily comply with such a long and constant use of them as may be required; which is the chief reason I apprehend, why they have been, and are still likely to remain, so much in disuse. Happily all that can be proposed by using them, hath, if I am not deceived in the observation, been provided by nature, in the spray and vapour of the sea; the virtues of which are heightened, or more effectually communicated, by
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the co-operation of the exercise in failing; and thus the benefit that accrues from them is obtained, without the least uneasiness to the patient, hazard in the application, or the necessity of a troublesome apparatus.

C H A P.

C H A P. VII.

Objections.

THE following objections having frequently been urged, it was thought proper to answer them here, in order to render more complete the theory of sailing and sea air, as they respect medicine.

The first and most obvious objection against going to sea is the danger of it.

On due enquiry it will, perhaps, be found that, out of an equal number, as many die of epidemical and other distempers, and by accidents, at land as at sea; where the air and exercise, by giving a strong appetite, good spirits, and higher health, are great preservatives from disease. A sea life is rarely the cause of chronical ills*. Most sea-faring people perish

* Navis non est locus ad alendos chronicos morbos.
Ramazzini *de morbis Artificum*, cap. 10. *supplement*.

through their own indiscretion, habitual intemperance, violent and often unnecessary labour, exposing themselves incautiously to heat and cold, and the like hurtful practices; which, added to the frequent changes of climate, and the unavoidable occupations of a sea life, are, no doubt, the causes of acute diseases, as well as of other maladies, and consequently shorten the lives of many. But few die, who have resolution to preserve themselves from excess and irregularity; and from these such as go to sea on account of health, are necessarily restrained.

But even that terror which arises from the apprehension of danger, is often a principal means of cure. In any illness, all emotions whatever ought, in general, to be suppressed, and cautiously avoided, as every day's experience shews their bad consequences. But the great alterations produced in the body, sometimes instantaneously, by sudden affections of the mind, shew

shew likewise that, when excited with judgment and address, they may be employed to the most salutary purposes. They cause wonderful revolutions, and will remove, for a season at least, the most painful bodily affections. I have seen an intermittent cured by a fright, and one recovered by it from a mania. Two patients of whom I almost despaired, were at once freed from tedious, obstinate diarrhœas, by accidents causing fear and concern. In times of public danger and confusion, of personal or family distress, many have been roused, or somehow recovered, from great and habitual ailments, that could not be overcome by other methods. Whatever it is owing to, whether to the change of air, the sickness and high exercise, dread of danger, or amusement, giving a different turn to the mind or spirits, this is certain, that the sick soon find an alleviation of their distemper at sea, the symptoms entirely, or in a great measure ceasing.

Another and very plausible objection against sailing is that the weak, sickly, and delicate, are not able to undergo the hardships of a sea life.

Prepossessed at first as much as others, I was long deterred by the same prejudice from advising to sail in particular cases; and might still have continued so, had not repeated experience fully satisfied me, that people under great debility, will bear this exercise with ease, when they can bear no other, and be much cheered and strengthened by it. Nay, it is neither useless nor dangerous for the sick to expose themselves with caution to some moderate hardships, such as arise from the weather and the motion of the ship. For they sometimes receive most benefit in the worst seasons and weather. See histories first, fourth, and sixteenth. Besides, it was observed that sailing might be so regulated as to give more or less sickness, or in a great measure to prevent any ;
and

and several, the most reduced by their distemper, were not sick at all *.

Going to sea is still more suspected in a spitting of blood; lest, from the violence of the sickness or exercise, the rupture of the vessel, and consequently the hemorrhage, should be increased, which might render the disease suddenly mortal.

The greatest danger in this disease does not proceed from the simple rupture of a small blood-vessel, which, for the most part, very soon heals of itself; nor does spitting of blood always proceed from a rupture. Without farther reasoning upon it, it is enough that vomiting is often practised in this formidable appearance, and with advantage. From my own experience of it in the case, I have no

* Multum enim virium adjicit hæc navigatio (cymba molli et delicata) et corpora implet. *Foresti Obs.* liii. lib. xvi.

Navi autem vehi conducit debilibus, si placido navis feratur motu miram alacritatem, perspiratione aucta, solet excitare, famem augere, ingestorum digestionem promovere. *Van Swieten Comment.* tom. i. p. 34.

doubt either as to the safety of going to sea, or the benefit that will accrue from it. I never observed a spitting of blood caused by it, even when the sickness was severe. It seems always to cease on going to sea; but has been known to return on coming ashore.

Sailing is judged still very improper on account of a supposed unwholesomeness in the sea air; it being frequently observed that people in desperate circumstances at sea recover surprisingly, and in a short time, on being carried to land, whence the greater wholesomeness of the air at land is inferred, and the necessity of it in order to a cure.

The same effect is likewise observed on the sick at land going to sea. It is not the pure natural air, but the corruption of it in certain circumstances that occasions worse health and higher maladies at sea than ashore, else the condition of sea-faring men would be very miserable indeed. This is evident from the good effect of the machines

chines invented to draw out the foul air. By the use of ventilators numerous crews have been preserved in exceeding good health during long voyages. Sailors on board our merchant ships are generally free from the distempers incident to such as live in a more crowded and less cleanly way at sea; particularly from the scurvy; which may be effectually cured any where, by the common specifics, with fresh air and proper diet.

The scurvy is the grand disease of sea-faring people, and is frequently imputed to their living so much in a saline atmosphere; nor has any opinion obtained more universally than that it is the effect of sea salt.

There are many diseases, in their nature quite opposite to the scurvy, that may, with more reason, be attributed to an immoderate use of marine salt; or to its effects on the body externally; such as fevers, inflammation, costiveness, eruptions of various kinds, blotches, rigidity of the solids, and a particular

particular kind of marasmus. But the acid of salt and sea water are familiarly used in the scurvy ; the general causes of which are now more certainly known to be bad air, bad diet, especially moisture, when joined to heat or cold, and want of fresh vegetables. Now these are not peculiar to the sea, nor do they every where equally and constantly prevail there ; but are accidental, and may be easily prevented or avoided. In camps and garrisons, where the disease often rages in all its malignity, as well as in fleets, those of condition are seldom, or never, to a high degree, affected with it. Better diet and lodging, warmer clothing, and the being less exposed to hard duty, preserve them from it.

The circumstance of trees not growing or not thriving near the sea, has given occasion to conclude that the sea air is unwholesome.

Lord Bacon takes particular notice of the bending of trees on the shore, *maris auras quasi averfantes* ; but im-

putes it to the ponderosity of the air, not to any malignant quality in it. The like bending, and a stunted growth, may be observed in trees very remote from all marine influences; for they will not thrive in any exposed situation. In order to raise trees successfully, the soil, air, or extraordinary culture, are not so much to be considered as good shelter; and with this they will grow any where: hence the reason and necessity of planting in clumps, thickets, and forest ways, in our boisterous climate.

It is farther alleged against the wholesomeness of sea air, that the inhabitants of sea coasts are sometimes remarkably subject to the scurvy, rheums, consumption, watery affections, and the like distempers.

However true the observation may be, it respects chiefly those in northern climates, or on a low, bleak, boggy shore, where the air is cold and moist, and liable to fogs and foul exhalations; or too much exposed to piercing

ing winds. By all which the kindly nature of the sea air, so conducive to health, is wholly altered and destroyed. Here also it is probable the people live much on salted or dried fish, and other foods of grosser nourishment, and drink bad water; which is highly pernicious, though in a slow imperceptible way. Such causes will naturally produce such diseases everywhere. On a moderately elevated, dry, rocky coast, exposed to the warmer points, they seldom or never prevail.

To support the notion of malignity in the sea air, recourse has been had to certain hurtful effluvia, or a noxious quality in marine salt, which, we are told, renders both the sea air and its waters unwholesome; and upon this principle the sea is represented as a continual source of poisonous exhalations, and salt unfriendly to the human constitution.

That sea salt may be used in great quantities, without harm, no one in
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the least acquainted with the manner in which the greatest part of mankind live can be ignorant. The lower kinds of people, who eat mostly salted meats, are remarkably strong, healthy, and prolific. Cattle thrive wonderfully, and are cured of their distempers, by feeding in salt marshes. In many places the water of the country is so brackish that it becomes purgative to strangers; yet the country people who always use it, and from custom like it, enjoy good health, and are subject to no peculiar ailments from this cause. Indeed the constant use of it in all ages and nations is an unanswerable argument against its unwholesomeness.

While nothing more hurtful concurs therewith, salt in common use is, for many good purposes, not only a safe, but a necessary principle. The bad effects which it sometimes occasions, are not owing to any unwholesomeness in itself, but to the abuse of it in quantity, or in particular constitutions.

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I shall here take notice of a practical observation of great use to valetudinarians, and such as studiously observe too scrupulous an exactness in diet. This is a manifest error ; and we may add to it the enjoining of habitual low living to young subjects, which in many has produced singular delicacy, and even premature death. Experience, sayeth a judicious author, shews that those who abstain from bread, which contains a subtle acid ; from eating salt in their victuals ; from acids, pickles and wine ; living wholly on insipid nutrients, are subject to continual ailments ; and more liable to scurvy, costiveness, colds, rheumatism, many chronical diseases, and obstructions of the bowels, than even those who were accustomed to use them in excess. Salt is the balsam of the body, and not only gives a relish to our food, but preserves the blood and humors from corruption *.

* Hoffman *dissert. de salium morbosorum generatione in corpore humano.*

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Whether sea air be really infalubrious, and disposes to particular distempers, is best known by its usual effects on animal and other bodies; for by these alone can its wholesomeness or unwholesomeness be justly determined. A well chosen situation, near the sea, has not greater advantages in point of pleasure and convenience, than it is found to have in point of health and spirits: so that many of those places that have been the most noted in ancient and in modern times, for the salubrity of their air, are on the sea coasts. Amongst these, besides Stabiæ already mentioned, Croto, Baiæ, and Naples were chiefly distinguished. *Crotone salubrius* was proverbial. Venice, though standing in the sea, and surrounded by it to a considerable distance, is exceeding healthy according to Testi; who farther observes that the effluvia from the waters, though almost stagnant in such a number of canals, is rendered innoxious by a volatile acid spirit arising from the sea.

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But the kindly cherishing influence of the sea air is most sensibly perceived in vegetation, which is mightily promoted by southerly winds from the sea, which prevent or remove those evils that are hurtful and destructive to it. On the contrary, south winds from the land frequently produce dreadful maladies, and, in some regions, are considered as the certain cause and presage of unhealthy and mortal seasons.

Aristotle's observation is no less true than obvious, that the inhabitants of marshy countries are of a sleepy disposition, and have a pale aspect; while those who live at sea, are well coloured, though amidst the waters. No where indeed is there to be found more health, activity, or vigour, than among sea-faring people. In all cases wherein I have recommended living at sea, if the disease was not cured by it, the sick always returned with more health, and greatly improved in flesh, strength, and complexion. It has
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been only in chronical cases that I have had opportunities of observing the effects of this method: time may perhaps extend its use to acute diseases also *.

* Dr. Cleghorn in his observations on the epidemical diseases in Minorca, speaking of the difficulty of preventing relapses in the tertian fever, says page 212. "I always advised those who were attacked in the beginning of the season to leave the island, if their circumstances would permit, and not to return until the spring: and there are many instances of persons being greatly recovered by the change of air, even in the first two or three days of their being at sea." Dr. Lind likewise observes, that in all hot and unhealthy countries the sea air affords an asylum to the sick; and he gives many instances of mortal epidemics raging at land, while ships crews in harbours were quite free from the disease. Those who left the ships were infected; those who came on board quickly recovered. But the most striking instance of the effects of sea air in fevers, is the malignant epidemic at Naples in 1764, an account of which was communicated to him by Dr. Elliot. This fever raged for a considerable time with such unremitting violence, that of two millions of people, which the kingdom contained, and who mostly crowded to the capital, the state was supposed to have lost one-fifth by it. At length it was happily observed, that the sick who were moved into the hospitals which stood near the sea

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recovered

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recovered much sooner than those in other places, and that few of them died. Houses were immediately fitted up hard by the sea, for the reception of the sick; and in these, even when very full, the progress of the contagion was entirely stopped. See Lind on *diseases incidental to Europeans in hot climates*.

S U P-

S U P P L E M E N T.

WHAT I formerly published, with regard to the use of sea voyages in medicine, was, I thought, sufficient to recommend to the attention of others, a practice which to me appeared of no small importance. But it has been hinted that I might, with great propriety, have enlarged on the matters treated of, in many places, where I have barely mentioned some things, of which an explication would not be unacceptable. I have therefore ventured, in hopes of giving some satisfaction to the reader, by farther illustrating the subject, to throw together a few more considerations relating to it. And I do this with the greater assurance, that I have

been furnished with new and more remarkable instances of the success of sailing, which serve to confirm, though at the same time they render needless, those conjectural reasonings that were sometimes indulged, purely to gratify the inquisitive. The more candid and experienced will judge of these things according to their use and tendency; and though they should not in all points approve of them, will give the well-meant attempt a favourable reception.

Objections have been made to a few things in the philosophical part; but as they do not affect the general argument, a formal answer to them does not seem necessary. Order required that I should set out with some principles. From different authors, as well as my own observation, I collected all those circumstances respecting the air and exercise at sea, that plainly distinguish them from the air and exercise at land: From these, considered in a pure scientific view, it seemed reasonable

reasonable to conclude that failing and living at sea might be a proper remedy in certain cases. The great point was to evince this from experience, without which, all endeavours to recommend it would be equally vain and impertinent. A pretty large experience of its success, in a variety of cases, has enabled me to do this, to the satisfaction, it is hoped, of every one. Without producing any new ones, the histories already given of cures by failing are of themselves incontestable proofs of its efficacy; and these not in slight ailments, for which it would have been ridiculous to advise it; but in diseases obstinate in their nature, often mortal, and in which other remedies were of no effect as to a cure.

The greatest experience I have had of failing has been in consumptions. A consumption is the endemic of Great-Britain; a disease scarce more frequent than fatal, especially to those of the finest spirit, and the most delicate make; who from their frame seem

destined as early victims to the unrelenting cruelty of a flow, but surely mortal distemper. As I have always had this principally in view, I shall in the present remarks confine myself chiefly to it, and endeavour to shew farther the exact conformity between the remedy and the disease, which may obviate some difficulties, and direct to a more successful application of it.

Life and health consist in the free, equable, uninterrupted circulation of the blood and juices, and in the excretion, in due quantity, of what is superfluous. This supposeth a right constitution of the fluids, and a proper action of the solids. The blood is so constituted, that it acts on the containing vessels as a necessary stimulus, to instigate their motions, and quicken their propelling powers. The vessels again re-acting upon the fluids give them their consistence, as well as a greater degree of motion; and thus these principal agents mutually assist each

each other in the great business of circulation.

The blood, though a glutinous fluid, easily pervades the smallest vessels: and in such a state of fluidity it should always be preserved, in order to maintain a proper degree of vigorous health. It is likewise a fluid of a saline sulphureous nature, inflammable when dried. From the uniform mixture of its several principles, in due proportion, ariseth that soundness of the humors which is the true foundation of a healthy state; and whenever it deviates from this just proportion on either side, there a disease commences. If the saline sulphureous principles prevail, diseases of the acute, ardent, inflammatory kind ensue. But when, from a deficiency of the more active parts, the blood becomes poor and sluggish, those diseases that depend on a languid motion and obstruction will be the consequence. In order to supply the defect we endeavour, by a variety of well-known remedies, to

store the blood with warm balsamic strengthening parts; by which the vessels are excited to greater action, and a brisker circulation is promoted; and we have a proof of their fitness in the happy effects which they produce: but these effects are more remarkably felt at sea. If the constitution of the blood is such as hath been described; if there is a constant discharge by the pores of what is redundant; and if air, under a particular modification, acts with all its qualities on the body, at sea there will be a continual accession to the blood of parts similar to those of greatest energy in its composition; for these abound in the sea air; the vigorating power of which must be communicated to all the fluids, and the whole system will soon partake of it. Without admitting a conjecture of this kind, we shall be at a loss to account for the sudden return of appetite, spirits, flesh, strength; and indeed of lasting health, commonly observed on living at sea, though only for a short while.

while. But leaving these as matters of a speculative nature, yet proper to be taken notice of in a history of the air at sea, one thing is obvious, that this air being, in its general constitution, warmer in winter, and agreeably ventilated in summer, it must therefore, in every season, as well as in certain diseases, be exceeding safe and healthful.

A consumption is more generally fatal than any other malady, and yet more generally neglected, at a time when a cure may be attempted with advantage. The slow unsuspected manner in which it commonly makes its attack, seldom gives immediate apprehension of danger; and being attended with little pain or sickness, still flattering, and still deceiving, the hopes of recovery are often entertained through all its lingering stages. A spitting of blood sometimes gives the alarm, and an early warning of its approach. This appearance has been always, and justly dreaded; and, except

cept when it happens in the way of mere tranfudation, or is brought on by accident, in habits otherwise found, is ufually the forerunner of a confumption, or fhews a ftrong tendency to it.

It was alleged that tumefied glands, by compreffing the blood-veffels, moft frequently caufed their rupture; which, in moft cafes, may be prefumed to happen long before the difeafe puts on the formal type of a confumption; even though there fhould be no certain figns that tubercles are yet formed. Thefe may exift a great while in the lungs, without caufing any impediment to their motion, or greatly affecting the health. Such a length of time fometimes intervenes between a fpitting of blood and the certain appearances of a confumption, that we cannot imagine ulceration to be, fo frequently as it is thought, the confequence of a ruptured blood-veffel not agglutinating; feeing it would difcover itfelf much

sooner by the circumstances of cough, fever, and purulent expectoration: for if the rupture does not immediately heal, matter will soon be formed. A Baker, of a thin habit, smooth skin, and fine complexion, in the beginning of summer, threw up a good deal of florid frothy blood. The hemorrhage stopped. By proper diet and management he recovered; and continued seemingly in perfect health for some months. In autumn a cough came on, attended with a fever; he wasted, and at length, without any return of the hemorrhage, he spit matter and died. The same progress may be often observed. It was necessary to take particular notice of it here, as the cause of a consumption is most commonly to be sought for somewhere else than in the ulceration of a ruptured vessel; and in a consumption the circumstance of tubercles is always to be kept in view. Though they may not always exist at its first appearance, yet we may be sure they are about to form;

form ; for upon dissection they are always found in consumptive persons.

A frequent dry cough, attended with fever, sweating, and wasting, gives just suspicion of tubercles ; and perhaps some small attempts may be made, often by very inadequate means to resolve the obstruction, and prevent suppuration : here the diagnostic is plain. But on a spitting of blood, ulceration being supposed, in some manner the consequence of the hemorrhage, it is believed that every indication is fully satisfied, when we endeavour to heal the ruptured part, and provide against any farther hemorrhage ; and these views engross our attention so much, that the main point, to wit the resolution of the tubercles, is overlooked, or perhaps is never thought of. Besides, the bleeding and cooling methods practised in the hemorrhage, for a time suspend the growth of the tubercles, so that their existence may not be greatly apprehended. We are not, however, to
conclude

conclude that the danger is over, even when there has been no appearance of blood for a considerable time. The latent obstruction from which danger chiefly ariseth, increasing by slow degrees into a confirmed state, terminates in an abscess, and shews itself at last the genuine, though least suspected, cause of a mortal purulent consumption.

In no class of diseases hath a certain set of remedies been more indiscriminately used than in a cough and consumption. A cough proceeds from various causes, which require very different methods of cure. A consumption is either glandular, pituitous, or produced by a catarrh; and the same treatment would but ill agree with them all. It will in many cases admit of a doubt whether a practice, which is recommended indeed, and which some go into, is always the most proper and justifiable; I mean the use of warm balsamics in a spitting of blood, or after it. They are directed with a
view

view to consolidate, and upon a presumption that suppuration always does, or may succeed the rupture of a vessel, though it happens perhaps but rarely. The simple rupture of a blood-vessel emptying itself into the branches of the windpipe, for the most part soon agglutinates, if a due motion and temperature of the fluids be preserved; and the more readily, as the mild mucus which lines the lungs will answer the purpose of a kindly healing application. But when the blood is shed into the cellular interstices of the lungs, we have a different distemper to deal with; different indications arise; and a particular method is necessary to discharge the extravasated coagulated blood, oppose its putrefaction, and dispose the part that may be corrupted to heal. In this case the patient spits matter very soon after the hemorrhage; and from this circumstance the notion that suppuration generally happens in the ruptured part, seems to be derived, as well as the practice that takes

takes place in consequence of it. Pus is the natural effect of inflammation, when advanced to a certain height. Now, if the hotter stimulating balsams are exhibited in such quantities as to produce any effect at all, they must excite a proportionable degree of fever, which will increase the inflammation; and what was intended to prevent purulence, may rather, in the issue, dispose to it. It is not meant however, by any thing that has been said, absolutely to decry all remedies of this kind, but only to caution against a too general and precipitate use of them. The end chiefly proposed is so often obtained without them, that I am inclined to think they are seldom requisite. Indeed they should be very plainly indicated before they are admitted into use.

Styptics, though frequently met with in prescription, have been likewise condemned, as being apt to cause heat, hardness, and inflammation, with a general constriction, or increased

creased action of all the vessels, and so may endanger suppuration.

But the dread of an ulcer from a hemorrhage of the lungs, in a great measure vanishes, when we reflect that spitting of blood may proceed from other causes besides the rupture of a vessel. Let us imagine a tubercle compressing a small artery at its extremity, a distension of its sides must ensue; the mouths of the exhaling branches will of consequence be more dilated; red globules, which naturally they do not receive, will now be admitted into them; and the blood, obstructed in its former route, is forced off into the air-vessels. Thus, without any solution of continuity, a hemorrhage is brought on, by transudation only. Nor is it of importance to stop it suddenly, unless it be excessive, or there be plain signs of plethora, fizy blood, or preternatural heat. By this means nature endeavours to disburden herself of any small redundancy that may occasion greater impulse on the
obstructed

obstructed glands ; or accumulation in the extreme vessels by compression ; and when the excess is removed the hemorrhage ceases of itself. Of all this daily experience affords examples in numbers habitually subject to spitting of blood from this cause. A great deal therefore of what is done, with a view to agglutinate or consolidate, will appear to be improper or ill directed, and in many cases altogether unnecessary. The rupture of a vessel is frequently supposed to have been cured, when in reality there was none.

The danger from a spitting of blood, it was said, is not over, even though all appearance of blood may have ceased for a considerable time. It was observed also, that growing tubercles, compressing the small arteries, are the most frequent causes of a hemorrhage. The blood may likewise be in a fizy inflammatory state, or disposed to febrile effervescence ; and sometimes the vessels may be only weak. With regard to all these, I would propose

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that, after the hemorrhage, crude mercury should be given in small quantities, to resolve the obstruction, and correct the vice of the fluids, whether inflammatory or acrimonious; in both which states it is well known to be of singular use. Three or four grains every night, in any form that is most agreeable, may be sufficient; and if it should produce an ill taste in the mouth, its effect will be the more certain. By this means a powerful remedy is directed against the very cause of the hemorrhage, namely the tubercles; which would sooner or later cause death, with or without any hemorrhage. Spitting of blood in this case is merely accidental, and sometimes may, but much oftner does not, happen. Should a mercurial remedy be objected to, in a tender state of the vessels, experience has not yet shewn that any danger attends the use of it; and I have often tried it. When the obstruction is thought to be in a good measure resolved, a decoction of
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the bark, or a simple infusion of it in cold water, may be used to strengthen the vessels, and extinguish the remains of feverish heat, that might endanger a relapse. The same rules and cautions that are judged necessary upon recovery from a consumption, ought to be observed here, with no less care.

To determine precisely, whether a consumption, consequent upon a spitting of blood, proceeds from the rupture of a vessel not healing, or from blood corrupting in the smaller branches of the windpipe, or from the suppuration of tubercles, is sometimes difficult, and in the present view quite unnecessary. For in any case I shall believe it always right, and most conducive to health and life, to go to sea immediately; as no method that has occurred to me seems, in any respect, to promise equal security. I had a notable instance of its success in the case of a young gentleman. He was of a slender make, small stature, and of the most delicate constitution that

can be imagined ; so that it was with the utmost difficulty he was reared up to manhood. In winter he caught cold ; a severe cough came on, with night-sweats, and great loss of flesh, strength, and appetite. No fever could be discovered by the pulse, which was rather flaccid and slow, though his tongue was very white. After some time the cough went off almost entirely, chiefly by means of the mercurial pill, which gave a sensible turn to the disease, and he recovered to a good degree, but continued all the spring pale, languid, and emaciated. Perhaps the pill was not long enough continued, or ought to have been repeated. In April, while drinking milk in the country, he twice spit blood, in considerable quantity, from which time he grew worse, and became so weak that, in walking, the smallest ascent was too much for him. In June he went to sea, where his appetite became in a manner voracious. After some days the ship put into harbour,

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and he lived one week ashore. A few days more at sea carried him to the end of his voyage out. He lived again ashore for some weeks, in a country place ; washed every day in the tide ; drank milk, and rode frequently. The ship was only three or four days in coming home. By thus sailing, and living on shore, interchangeably, but still in the sea air, a surprising alteration was made upon him for the better. He returned without any complaint ; and, having recruited his flesh and spirits, had now a strong hale look, with a ruddy complexion, and could walk some miles with ease ; though, while absent, he had used much more freedom in eating, and even in drinking, than was consistent with his natural delicacy, or the doubtful condition of his lungs. Being now too confident of his good state of health, which continued a full year, and impatient of restraint, he indulged himself in every excess, and relapsed. He would fain have repeated his

voyage to sea; but the quick progress of his disease rendered a cure by that or any other remedy quite impossible; and in a short time he died.

The resolving power of sea air can hardly be doubted, when we consider the peculiar composition of sea water, saturated with a variety of substances of a volatile penetrating nature. Impregnated with these, the vapour becomes an active application; the power of which is still farther improved by its moisture and temperate warmth. The efficacy of sea water in resolving glandular tumors, when externally used, is sufficiently known. Sea air therefore, partaking of the same virtues, must be equally suitable to the lungs in the same intention; and where it can be procured, and a sea life is not complied with, ought always to be preferred to common air, as better adapted to the nature of the disease, the variety of its symptoms, and the morbid state of the part affected.

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Willing to know what breathing sea air would do without failing, I made trial of living near the sea, and with the desired effect; unless you will attribute the success to other means that were used in conjunction with it. A gentleman, naturally delicate, was, for a good while, subject to coughs. His wife died in the winter, of a pulmonary disorder, but without any signs of purulence. His cough increasing, he was deeply impressed with a notion of his having been infected by his wife. This fear and concern for his loss exceedingly depressed his spirits; which, together with the continuance of his cough, during the winter and spring, gave apprehensions of danger. Proper remedies were not neglected; but I depended on a warmer season for his recovery: and accordingly, as the summer approached, he grew somewhat better. His affairs would not permit a long journey, or a voyage to sea. I therefore advised sea air, and the use of milk. Every

morning he rode out fasting three or four miles, close by the sea, drank asses milk, and, after spending the day in the country, and drinking some more milk in the evening, returned the same way. The sea air, he said, was highly refreshing to him; he got a keen appetite and great spirits, and always finished his ride with a strong taste of salt from the spray. Having spent a month or more in this manner, the cough left him, and he regained his former health; to confirm which, a course of light steel water was advised.

Another affection in which the vapour and spray of the sea, on account of their moistening resolving qualities, may be of singular benefit, is callosity of the lungs. Of this we have instances in the second and fourth histories of the preceding treatise; where, if I do not err in the diagnostic, a constant quick laborious breathing characterised the distemper. When the numerous small glands of the membrane
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which lines the air-vessels are obstructed, from cold inflammation, noxious fumes and exhalations, or any other cause, and continue long in this state, they acquire a scirrhus disposition; and the air-vessels, hardened through more or less of their extent, become dry, stiff, and unyielding. This must evidently affect respiration much more and sooner than even the case of tubercles. For these at first, lying only scattered here and there in the spongy substance of the lungs, obstruct their motion but very little, and consequently cause no great difficulty of breathing. The effect of failing, in both cases, far surpassed any expectations I had formed of it; and, in such a degree of the distemper, answered the intention more effectually, and more speedily, than I imagine any other remedy could have done. To this affection some kinds of asthma seem to have a resemblance.

The chief intentions in a consumption, as they respect the lungs particularly,

larly, are to resolve the hardneſſes, and heal the ulcers. Diſſections of thoſe that die conſumptive ſhew the lungs filled with tubercles of various ſizes, and in various ſtates; their whole ſubſtance being ſometimes nothing but a confuſed maſs of glandular ſwellings, abſceſſes, and ulcerations. By theſe circumſtances we diſtinguiſh the ſeveral periods and ſymptoms of the diſeaſe, in the courſe of its progreſs; which, being thus complicated, afford a very complex indication of the method of a cure. If we may judge from the modes of preſcription, and the rules of ſystems, the general current of modern practice ſeems wholly directed to the cleaning of the ulcers, the ſweetening of the juices, and the alleviation of the ſymptoms. The reſolution of the obſtructions, which ſtill continue forming to the laſt, is not attended to in the advanced ſtages. And yet it is obvious that this intention ought to be no leſs earneſtly purſued now, than in the ſtate of mere tubercles,

tubercles, without ulceration. For what ground do we gain, while busied in deterging and healing the glands already ulcerated, if we suffer the growing obstructions daily to form new abscesses, by which the ulcerations are continually multiplied, till the lungs come to be intirely occupied by them? Hence constantly spring new sources of ulceration, an increase of purulence, and greater consumption, notwithstanding all our endeavours.

A similar distemper, the *evil*, may afford us some useful hints for the management of a consumption. Surely it could not be reckoned a proper treatment of the evil to employ all our care and pains in curing the ulcers, without regarding the obstructions; and so leave the tumors still to increase, till they also apostemate, and become ulcers. This applies so exactly to what we know of the situation of the lungs in a consumption, that the idea ought to be carefully preserved and recurred to on every occasion,

sion, if we would rightly understand the disease, and attempt to cure it with any prospect of success. A resolvent course is equally adapted to, and necessary in, the state both of tubercles and ulceration.

Indeed, if we reflect ever so little, we shall find that the resolution of obstructions in every stage of a consumption, while any hopes remain, is so clearly indicated, and of so much importance, that, without a constant attention to it, the disease will continually gain ground. By what means other than a proper resolutive method, external or internal, is it possible to remove the different indurations to which the lungs are liable; such as tubercles, callosity of the air-vessels, and the hardness and tumefaction of ulcers? And how is a cure to be effected, but by first removing these? The main obstacle to a cure, both here and in a scrofula, arises from the hardnesses peculiar to the malady; which being once subdued, the great source
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purulence, the suppuration of the tubercles, is cut off; at the same time the ulcers are reduced to a milder state; and Nature, with little assistance, will soon completely heal them.

What are the proper deobstruents in the ulcerated state of a glandular consumption, authors do not at all inform us; and from common practice we can learn as little. In this stage the ulcers seem to be the only object; so that instead of deobstruents, we are directed to use lubricants, detergents, healing remedies, and what are called febri-fuges; but with what propriety or success, the event, so seldom prosperous, abundantly testifies. A resolvent power has never been attributed to them, nor are they possessed of any; and for this reason they are found to be of so little service.

However, considering the delicate state of the lungs, and of the whole body, and the many contra-indicating symptoms in a consumption, forcible deobstruents are very cautiously, or rather

rather not at all to be used internally; and those of small efficacy are unavailing. From the success of crude mercury in a beginning phthisis, one is led to imagine that the same effects should follow in the after stage; which nevertheless does not hold good in fact. There is a wide difference of circumstances at different periods. In the state of mere tubercles, we have to do with obstructions only, and a simple hectic depending thereon; nor can the juices be yet greatly vitiated. Here the remedy has succeeded; and timely administered, upon the appearance of a suspicious cough, will often give an early check to the disease, and in many instances will perhaps cure it. But when any of the glands suppurate, the malady becomes strangely complicated. A fever from purulence more especially prevails, with colliquation, both which are increased by mercury; and upon trial it is observed to hasten a fatal issue. After an impartial examination of every thing that

that hath any claim to be regarded in the present intention, the vapour and spray of the sea, externally applied, appear to be, in all respects, preferable, and free from those objections to which almost every thing else is liable. Without any danger, or uneasiness, from being applied to the lungs immediately, they both resolve obstructions, and dry the ulcers ; while, by their alterative powers, the habit is greatly mended. Such, at least, was the opinion of physicians in former times, who considered sailing as a cure for the consumptive ; and experience assents to it. I shall presume to add that the sea vapour is antiseptic, and will correct the purulent disposition of the matter in the lungs, so as to prevent the violence of a putrid fever, on its being reformed.

Without doubt the difficulty of conveying remedies of a balsamic nature directly into the lungs, first suggested the internal use of them ; by which it was supposed that the blood being impregnated

pregnated therewith would, in the course of circulation, communicate all their virtues to the part affected, and answer the purposes both of detarging and healing them. But if experience too fatally proves that, when thus administered, they rarely answer the intention, there is reason to suspect that they are either improper in themselves, or improperly applied, or not of adequate virtues.

To throw greater light upon this matter, let us again observe what is the practice in a scrofula. It would argue little knowledge, or little attention, to treat scrofulous ulcers, to which we can have access by the hand, with such things as long use hath discovered to be altogether fit and effectual in ordinary ulcers. Applications of a particular nature and operation, even those of the saline and aqueous kind, are found to do most good here. Therefore sea water, urine, and some medicated waters of a nitro-sulphureous nature, are often, with much benefit,

nefit, made choice of. While these powerfully deterge they are at the fame time refolvent; and, by their drying ftimulating qualities, prevent an undue relaxation of the flefhy fibres, from which arifeth that luxuri-
 ancy, or fponginefs, which is fo frequently the chief impediment to a cure. As experience leads us thus far, we naturally infer the fitnefs and ne-
 ceffity of a fimilar remedy, properly directed to the lungs, when fimilarly affected; and fuch a remedy will be found, with every advantage, in the fpray and vapour at fea. When all this is applied to a confumption, and the ufe of detergent balfamics in that difeafe, perhaps we fhall not difcern fuch a propriety in them as hath al-
 ways been fupposed. Indeed practice fhews that their ufe is very much cir-
 cumfcribed; altogether, it would feem, to common impofthumes, and ulceration from tubercles of a milder or lefs indurated kind. If from a more judicious application of thefe

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and some other remedies, on which the greatest stress is laid in a consumption, any have been so happy as to assure themselves of their good effects in general, a full relation of the circumstances and success would be a valuable addition to our stock of medical knowledge and experience.

But in every necessary intention remedies may, by inspiration, be conveyed in sufficient quantities, immediately to the lungs themselves, in the form of vapour or fume; unaltered by any change they might undergo in the course of circulation; and without exciting those hurtful commotions, which, if there be any tendency to fever and inflammation, will more or less attend the internal use of them.

The method of fumigation was early introduced into medicine; and it is matter of regret that it hath not more generally obtained. Great judgment in the choice, and much caution in the application of remedies in this way are certainly requisite, to render
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them at once safe, easy, and of due efficacy to answer the several intentions of cure, according to the different conditions of the ulcers. Decoctions of the healing plants, the detergent balsams, drying gums, antiseptics, sulphur, and orpiment, are all recommended, and have at times been employed. This last, as it contains a very acid salt, and a small portion of mercury, is most effectual, no doubt, to remove the foulness, resolve the hardness, and promote a laudable digestion of the ulcers; and has been successfully applied for these purposes.

But though we are not without instances of cures performed by this sort of remedy, sufficient to convince us of its great power, yet these will by no means warrant the free use of it in a general practice, unless a way could be found to curb its violence, and render its effects more mild and safe. Even in its most corrected state, there will often be found bodies so weak or so

wasted, or under such peculiar circumstances, that they cannot bear such a vehement operation as this, in some cases, appears to have had *.

The more moderate deterfives are the natural balsams and their productions. From what has been said concerning

* Quidam Catalaunus phthificus factus est. Per triennium excreato sanguine simul cum pure, tantus eum marcor obsessit ut ossa (uti vulgo dicitur) cutim transmiserent. Tussis eum adeo inquietabat ut vel modicum somnum capere haud potis esset, præ copia purulentæ materiæ in gutture ferventis, et liberam respirationem impredientis. Cum vero vitæ suæ tæderet, fumum trochiscorum ex auripigmento cœpit haurire. Ille vero se nolle in posterum iis uti protestatus est, quia se respiratione privatum iri persuaserat, si iterum id auxilii genus tentaret. Ego autem instare non destiti, donec iterum trochiscos ut paulo ante experiretur. Nocte sequenti, post haustum vaporem, tantus eum rigor invasit, ut non solum lectus, sed etiam tabulatum cubiculi, quodam veluti terræ motu concuti videretur. Ego vero deprehenso undoso pulsu, cum vitalium virium robore, prædixi brevi futurum ut copioso diffunderet sudore, qui tantus quidem paulo post emanavit ut culcitra et lintea tota permaduerint proinde ac si in fluvium demersa fuissent; exinde somnus et quies, nulla tussis, nullus excreatus, in summa sanitate frui illi licuit plus quindecim abhinc annis. *Obs. incerti auctoris apud Riverium.*

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their internal use, a conjecture may be formed as to the propriety of employing them in fumigation. Wherever they can be safely administered internally, there they may be useful externally; and, on this principle, they are proper only in milder suppurations, where the knots or tumors approach so much to the nature of a simple phlegmon that they may be easily dissolved into laudable pus. But though here, as well as in some other cases of purulence, which do not belong to this place, they are allowed to be a fit application, yet in general they are not so highly beneficial, unless aided, and indeed qualified, by other matters of different parts and character. For when the glands are much indurated, or of a scirrhus disposition, the hotter balsams, if we may judge from their effects in an ulcerated external scrofula, cannot be reckoned proper digestives; as in such hardnesses they have a tendency to raise heat, to check the generation of matter, to

inflammation, and consequently indurate more. Besides, in the form of a dry fume, they seem to be ill suited to the diseased state of the lungs, under the various circumstances of glandular obstruction, inflammation, abscess, and ulceration, from which many different indications arise, to each of which every application should, if possible, have a due respect.

If a quantity of tar, or turpentine, or its oil, or balsam of sulphur made with oil of turpentine, be put upon hot water, dropping into it, from time to time, a quantity of spirit of salt, a balsamic, saline, aqueous vapour will arise; cooling, resolvent, antiseptic and detergent; in short, resembling in its several virtues the marine vapour, as much as any such composition can do. This is easily procured every where; and an earthen vessel of a convenient size, with a large belly and a strait mouth, is all the apparatus required. In milder suppurations I have used a vapour of this kind, when there
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was an ill-conditioned discharge, which soon acquired a better consistence and colour; or the matter was gradually dried up. A mineral fume too, when expedient, might, by an easy contrivance, be communicated along with the vapour. The obtunding quality of the former would restrain the too great activity of the latter, while the latter gives energy to the former; and, thus combined, the operation of both together is rendered more safe and more effectual. In this we should act conformably to the practice of surgeons, who, to their other applications, add a portion of a mercurial remedy, in the foul, hard, undigested state of ulcers. And that the ulcers of the lungs are in such a state we may readily conclude, when the matter spit up is too gross, thin, scanty, or ill coloured. But the propriety and success of such an united fume and vapour is not yet vouched by experience.

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With a view to establish a more certain method of cure, it might be of use to consider likewise the several internal remedies appropriated to a scrofula, in their virtues, correspondence, and effects. To enter into a critical examination of these, as applicable in a consumption, and compare them with those now used, would be an undertaking, however pertinent, too much beyond the limits here prescribed. The transition in such a comparison is so easy, that every one will be able, from his own reflection, to form a proper judgment. If there be a plain analogy between the diseases, the method of cure, one would think, should also be analogous; so far at least as the nature and situation of the part affected, and the constitution of the patient, will allow.

A consumption, in the view all along given of it, and according to the general acceptation of the term, supposeth an ulcer of the lungs. Sometimes indeed it is observed to make a formidable

dable progress, even into the colliquative state, before a suppuration is effected, or any pus appears by expectoration; and, if this be not adverted to, a wrong diagnostic may be formed, and possibly a wrong intention pursued. When the morbid glands are of a scirrhus hardness, which frequently happens, they suppurate very slowly, if at all. If they be really suppurated, and the abscesses lie remote from the larger branches of the wind-pipe, the force of inspiration may not be sufficient to break them, as the obstructed lungs must be very weakly inflated. The investing membrane also is, in some cases, so thick and strong, as not to be easily broken by the pressure of the included matter, especially when it is of a very gross and inactive kind. For these reasons an ulcer may never be produced, or not till the disease is too far advanced to admit of a cure. To treat it, at such a time, with remedies respecting the lungs as actually ulcerated, while the part is

yet in the state of abscess, or perhaps of tubercles only, will, to every one but moderately acquainted with medicine, appear equally injudicious and hurtful. In this case the sick labour under constant fever, severe cough, mostly dry, and all the symptoms of colliquation, from a resorption of matter, or the impaired action of the lungs. Nature must now be prudently assisted, as safety depends upon evacuating the matter as soon as the symptoms shew it to be formed. The rupture therefore of the abscesses is by all fit methods to be promoted; and what method more likely to promote it, with less pain and fatigue to the sick, or greater prospect of relief, than the motion and vomiting which attend failing. See history eighteenth.

In fundry parts of the preceding essay it was just observed, that several affections have much the appearance of a consumption, though really of a different nature, as the event hath frequently

frequently shewn. To illustrate this more particularly, it may not be improper to produce here a few instances of such distempers, under various appearances, and arising from different causes.

From what was said in chapter fifth, it is plain that a common imposthume of the lungs does not fall under the denomination of a consumption. This malady, contrary to what happens in a consumption, is generally cured by a simple method, and very few remedies. But, by a concurrence of unfavourable causes, it may sometimes degenerate into an incurable phthisis; the more speedily fatal as the ulceration is larger. And when the continuance of fever, an ill-conditioned matter, and other corresponding circumstances, shew a bad state of the ulcer, and of the juices; crude mercury, and small bleedings, will be of the greatest use to subdue the fever and inflammation, correct the vice of the fluids, resolve hardneſſes, and dispose the part

to be healed. Here, if the disease be not advanced into the colliquative state, crude mercury is safe, which it is not in a true glandular ulceration. See page 110.

After a severe catarrh, or a bad cold, a thick, yellow, ill-tasted pus like matter, is often expectorated in great quantities. The sick cough a good deal, lose their appetite, languish, and waste, perhaps with a little slow fever. But this matter is only the usual secretion, which was thin and acrid at first, but has now, by undergoing a particular digestion, acquired a better consistence, and, for the most part, is a favourable sign. Vomits, the detergent healing balsams and drying gums, will dissipate the superfluous lymph, and scour, as well as strengthen, the overcharged glands of the membrane which lines the windpipe, and which seems to be the principal seat of the disorder. It is not difficult to cure, when taken in time, and some imagine that in curing it they have cured
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a purulent consumption: but it is a quite different malady. Neglected however, or ill-treated, and falling in with a bad habit or season, the membrane grows spongy and inflamed; the excretory ducts of the glands become foul and eroded; and the disease extending itself, may, either in this form, or attended with ulceration, mortally affect the lungs themselves.

From large discharges of pus, likewise, high phthical symptoms are sometimes produced, as was the case of a young man, occasioned by a stroke on the side of his belly. The consequence was a tumor of the whole side; which, gradually increasing for above five years, at last became troublesome. An opening was made through the teguments and muscles. A vast quantity, first of a very fetid sanies, afterwards of pus, came away. The sinus received a probe of fifteen or sixteen inches. Though the patient was before healthy and strong, and made uneasy only by the weight of the tumor, especially

especially in riding, a constant fever now came on, with severe cough, looseness, and profuse sweating. Under these he struggled three months in winter, as if in the last stage of a consumption; but there was no purulent spitting. The sinus began now to contract, and the quantity of the discharge from it to decrease; in proportion to which the other symptoms abated, and he recovered.

A healthy strong woman was taken with a smart fever, great heat, and incessant cough, which brought up only a thin frothy matter. She had a highly inflamed look, and sweated profusely. All the symptoms indeed were in excess, and seemed to threaten a speedy consumption. Bleeding, anodynes, and the mineral acids carried them off. This, it would appear, was no more than a simple heat, or effervescence of the blood, affecting more particularly the lungs, as it naturally would do. For the whole mass of blood is thrown out hot from the
right

right ventricle of the heart, immediately into the lungs, where it circulates with increased velocity; and so frequently occasions a return or increase of cough, in the paroxysms and exacerbations of the fever. The success of the method of cure used in the present case, strengthens our conjecture as to the cause.

The Lady first-mentioned, under the article Consumption, in chapter fifth, as having an abscess of the lungs, began many years after, without any great cough, to spit a short, thinnish kind of matter, not altogether free of taste and smell. There was a small quickness of the pulse, with heat and wasting. The disorder had continued a good while. She used tar pills, with other detergents, and the steam of tar dropped upon hot water. By these, and proper decoctions, and the bark, the symptoms were removed. Was this only an affection of the membrane which lines the windpipe, and its larger branches? for she had no labour
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in breathing: Or was it a suppuration of the part where the abscess had formerly been?

A young lady, inclining to be fat, had a short, dry cough, which continued all the spring and summer, and became uneasy to her in the night. She lost her flesh and appetite, had a languid look, and sometimes breathed quick. There was no fever however, nor sweating. The popular remedies for a cough, advised by every body, proving of no use, something more regular was attempted. A little blood being taken away, it appeared thin and bluish at top. After a vomit she was blistered, took squill pills, and rode, but would not submit to issues. The cough continued. In autumn she drank a light steel water, which did her so much good, that for some time she was pretty well. The cough increasing again, and the winter coming on, gave apprehensions of danger. She used the mercurial pill; her complaint went off and never returned, so
as

as to be any injury to her health. It was suspected that the glands about the head of the windpipe were in some manner affected; for at times she has still something of the same kind of cough.

A lady of small stature, and slender make, subject to the rheumatism, was advised at a noted spaw to bathe, and sweat after bathing; which greatly fatigued and exhausted her. In a few weeks she lost her voice; a frequent cough came on, with constant quick pulse, sweating, and a discharge of phlegm, mixed with small dots of greenish matter. She also lost the use of her lower extremities. After a long time, a cure was effected by means of issues, strengtheners, open air, exercise, and at last the cold bath.

These and the like instances show how difficult it may sometimes be to ascertain the distemper; and that we should not too hastily pronounce some illnesses to be a consumption; which, though resembling it in appearance,

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are,

are different in their nature, and rarely, but from accident or an improper treatment, terminate in it.

Whether or no a consumption be curable need hardly be disputed, seeing a little observation will easily reconcile the differing sentiments on this head. That some do recover there is no doubt; and, if I may do it without being thought too sanguine, I would venture to say farther, that numbers might be preserved, or at least enabled to live much longer than they do. Not indeed by means of the remedies most commonly used: daily experience gives too certain and melancholy proofs of their inefficacy: but by such, and such only perhaps, as, through a groundless timidity, neglect, or an useless refinement in practice, are suspected by many, despised by others, and so suffered to fall into disuse; whilst remedies of no real virtues, if not hurtful, have been extravagantly multiplied. All who have attended to it must know that
many

many of these, far from affording the expected relief, commonly load the stomach, destroy the appetite, supply fresh matter of fever, and either augment or suppress the morbid discharges, sweat, looseness, and expectoration; which, preposterously checked or promoted, increase the waste and disorder, and either way render the disease more desperate.

When the lungs become corrupted, relief and safety are chiefly to be obtained from a right use of the non-naturals. The common people, who have little attendance, less medicine, and barely the means of a scanty subsistence, are not observed to suffer more, or die sooner; nay they often suffer less, and live longer, than those who enjoy all the helps that art or affluence can procure. Almost every attempt to preserve the lives of the consumptive by the usual means, serves only to convince us of their inability to do it. May it not then, without presumption, be asked, to what pur-

pose such a multitude of remedies? Will it be said, that at least they alleviate the symptoms? Experience contradicts this, and proves, on the contrary, that, in much the greatest number, they are not even palliatives. Conscious of their small importance, the most eminent in practice have, in a great measure, laid them aside; and the consumptive are now intreated not to put any confidence in them.

If this be a just representation of the case in a consumption, every one who duly considers it, and is not entirely led away by custom and prejudice, must in time be convinced that a reformation of the practice in this disease is absolutely necessary. And if any alteration be supposed to take place, the practice derived from antiquity, which gave occasion to the preceding treatise and to these remarks, seems in a particular manner to deserve our attention; not merely because it is derived from antiquity, a reason too partial to be of weight in
this

this matter ; but on account of the many experimental proofs which we have had of its efficacy. Should it in future trials be found unequal to the intention, the great knowledge, industry, and sagacity of the present age will be able, it is hoped, either to improve the methods now in use into greater certainty, or to devise others that may be relied on and recommended with greater assurance of success. However, when the utmost has been done, a consumption will still remain a very fatal malady. The obstinate nature of the disease, which, it may be remembered, is of a scrofulous nature, and its being seated in a bowel delicately framed, and immediately necessary to life, forbid us to entertain any confident hopes of general success by any means whatever. Yet, as the disease exists in different degrees, in habits differently constituted, and is variously conditioned, we are in certain favourable circumstances encouraged to attempt a cure, and not al

ways without some reasonable hopes of succeeding. If a few only of the many thousands who must otherwise perish, can be rescued from their fate, or even obtain a reprieve of any duration, this disease will no longer be reckoned, at least so justly as it has been, the reproach of the medical art.

From the doctrines all along laid down, the many facts that have been brought in support of them, and a general want of success, it would appear that there must be some material defects in our present practice, particularly with regard to the great articles of air, diet, and exercise, on which the cure of a consumption depends greatly, if not altogether. In order therefore to remedy these as much as possible, I shall presume to suggest a few particulars, which, though not without a foundation in practice, are submitted to those whose abilities and opportunities better enable them to judge how far, all circumstances considered,

sidered, they may be proper and practicable.

A great part of the southern coast of Wales is advantageously exposed to the meridian sun, and the sea air from the ocean. Let a place be chosen thereon, moderately elevated, defended from the north and east winds, and where the soil is dry. The grounds to be laid out in larger and smaller inclosures, with a sufficient range for cattle of different kinds; let the pasture be enriched with the finest grasses, such as the cattle delight in, and still farther improved by propagating, in plenty, the whole tribe of healing plants, according to a hint given for this purpose by Galen. Commodious houses, with airy apartments, should be built so near the shore as to be freely perfused from the sea; and, for the sake of greater cleanliness and retirement, detached from each other in the manner of separate villas. Gardens between them and the sea, stocked with balsamic odoriferous shrubs

shrubs and plants, with here and there a refreshing shade of trees of the same nature, would be necessary for ornament and convenience, as well as health. At proper distances, but not toward the sea, let groves, thickets, and forests of pine be planted, especially where most wanted for shelter from the colder points. By the effluvia of all these, and the vapour from the sea, the air would be truly medicated, and fit for the consumptive to breathe in. To embellish the landscape, and finish it in the true stile of nature, so as to give taste and propriety to the whole, a great deal of fancy and judgment might, not unusefully, be employed. It must be owned that it would require no small time and pains to complete the plan, and render it fit for those whose necessities might oblige them to go thither. Yet not so much but that, under proper management, half the ordinary period of a man's life might see it brought to perfection. The most material part indeed,

deed, and what is immediately necessary, would soon be accomplished. In the vicinity of so many trading towns, vessels of all sorts for sailing could not be wanting; and some should be kept moored in an adjoining bay, for the accommodation of those who may choose to take the benefit of sea air and exercise by means thereof.

Such a place imagination has often represented to me, as a healthful resort, in some future time, for the consumptive; a place fitly accommodated for them by a nice choice and disposition of every thing subservient to the general purposes of health and pleasure: and though not cherished, as in southern climes, by the more constant and kindly influence of a warmer sun, may this, in resemblance to that of Italy, be the no less fortunate Stabiæ of Great-Britain.

With the concurrence of so many favourable circumstances, milk might perhaps be drunk here with greater advantage than any where else; regard

gard being had to the kind and quantity, the manner of drinking it, and the particular stage of the disease. Cows milk is seldom directed, because of its thickness; yet with due precaution it might often be of good use. Asses milk is commonly used; though that of goats in the season is no less to be esteemed; and mares milk may not improperly supply the want of either. When milk does not agree, goats whey is to be tried, and indeed is very often to be preferred. Should all these disagree, butter milk promises most advantage. And if none of them answer, the hot-well water of Bristol is proper, and will serve likewise to dilute milk, when the stomach can hardly bear it, or refuses it unmixed. One reason why it usually avails so little may be, that the quantity drunk is inadequate to the end. In order to receive certain benefit from it, the sick ought to make it their principal food. However, by a long and plentiful use of it, the stomach is apt to grow foul, which

which defeats its salutary effects, causing thirst, fever, head-ach, and loss of appetite. A trip to sea, therefore, should now and then be interposed; which will cleanse and strengthen the stomach, restore the appetite, promote digestion, and dispose the body to be nourished. Thus more certainly than by any other way, may the bad effects of a milk diet be prevented or removed. Nor should we wait till appearances show that the first passages are vitiated. Here it is best to anticipate. If two or three weeks, just as it agrees, are spent in the use of milk, a proportionable time should be devoted to sailing; and these alternately pursued till a cure is obtained. By this method a milk diet has been rendered highly serviceable; when otherwise it might have been, as it generally is, either hurtful, or of no service at all. Living at sea is often a cure of itself; milk is rarely, if ever so. But, if judiciously combined, they may hasten and secure recovery

recovery to those who dislike, or cannot undertake a longer sea voyage.

However safe in itself milk may appear, it requires not a little caution to be observed in the use of it. When it is drunk too fast, or the body is too quickly nourished by it, there is danger. An increased quantity of fluid passing through the lungs with increased velocity, causes greater labour to the part, distends the vessels, and may occasion their bursting. A gentleman, in a consumption, being anxious to live, and to be soon well, drank an English quart of goats whey in the morning, ate barley-meal porridge and butter-milk for breakfast; drank freely between meals, of a highly sweetened decoction, and then dined on milk and vegetables. In the space of seven or eight hours he took as many pounds of food and drink, the greatest part of which passed into his blood. He grew florid; a large hemorrhage from the lungs ensued. The like accident, in a less degree, has

has happened to others from the same cause. Milk ought therefore to be drunk so slowly as never to load either the stomach or the lungs.

Thus have I, with much plainness and freedom, offered a few hints and considerations, regarding the care of a distemper, which is exceeding frequent among us, and causes every where such mortal havoc, as calls aloud for the physician's utmost skill and attention*.

After long reflection, and what, I hope, will be thought sufficient experience of it, I am fully satisfied that sea air is, in all respects, fitly constituted, and therefore most proper for the consumptive to live in. If to this be joined the exercise at sea, medicine perhaps cannot furnish a more apt and powerful assistant in the different

* In the London bills of mortality, the article Consumption is about four thousand yearly, exclusive of those not buried in church-yards. If the number is so large in this one city, a very great one indeed, what must it be through the whole united kingdom.

kinds, circumstances, and degrees of a pulmonary consumption: not only as it has all the effects of an internal alterative remedy, but as it answers all the purposes of an external application; both of which should, with equal care, be attended to in the cure of it.

There is nothing more wanted, and nothing could be of greater use, than a rule by which we might certainly judge, in most cases, to what a cure is owing. It is the more necessary, as a very vague maxim has been sometimes adopted; to wit, that if a disease be cured, 'tis no matter how it is cured. If this principle be admitted, it will introduce a general obscurity and uncertainty into practice; it will too often tend to establish a method on very slight grounds; and will justify the use and continuance of every method and remedy proposed by every author, if no better evidence of its utility be required than this, that patients may have recovered while they
used

used it. Mere empiricism inquires no farther than into present effects and appearances. That the greatest advantage has been derived from a careful study of the *juvantia* and *ledentia* will be readily owned; but it must at the same time be acknowledged that, amidst a variety of remedies, it is impossible to determine what does good, or what does hurt. To reduce medicine to a true simplicity, is to bring it to a greater certainty; to the utmost certainty of which an art merely conjectural is capable. Many remedies are recommended with such assurances, and even asseverations of their virtues, that so strong a prepossession in their favour must be imputed to credulity, to a want of due examination, or the vanity of passing for the author. For few of them discover, either to reason or experience, any such excellencies as have been attributed to them. While remedies of obscure virtues, and small intrinsic worth, are every day multiplied and imposed, ac-

according to custom and fancy, or upon the authority of a name; while through mere indolence, indifference, or a dread of singularity, we suffer them to usurp the place of such as are of real efficacy; and while many of them hold their rank by prescription only: while this is the case, medicine, as to the choice of remedies, must remain in a perplexing uncertainty. Every addition, far from being an useful acquisition, will but increase the number without increasing the value, and leave us to fluctuate, still more uncertain and perplexed, in endless confusion.

It is greatly to be wished therefore, that accurate histories of the operation and effects of medicines were always handed down to us in a number of experiments, sufficient to ascertain their use and efficacy, and to shew what is chiefly to be depended on in particular distempers. And here their good and bad effects ought to be faithfully related with the event in every case;

case ; from which alone we can estimate the true worth of a remedy. A few successful cases, selected from a much greater number of unsuccessful ones, will not long support the credit of a relation, or of a remedy ; how confident soever the one, or plausible the other, may be. Nothing is to be suppressed, nor should any thing be exaggerated. Every partial relation propagates an error, and leads into mistakes of a dangerous tendency, that will assuredly prove hurtful one time or other to the sick, as well as a discredit to the art. Not to insist farther on this matter, a vain consumption of time in the use of remedies no ways adequate, so much retards the cure ; which, by the loss of a favourable opportunity, may be entirely defeated.

To enable us to judge more certainly by what means the cure is effected, it is not only necessary that we should have a thorough knowledge of the virtues and efficacies of remedies, but

it also interests us greatly to be well acquainted with all the different ways in which a disease may be cured. This, besides shewing us what share every remedy ought to have in the merit of the cure, will often direct us to a better method; and serve to abate the too general presumption of arrogating to ourselves the honour of a recovery, to which, it may be, we have contributed very little, if any thing, by our administrations. Nature, it is commonly said, cures the distemper: art only removes the impediments. But how often is it cured by nature without the least intervention of art? by time, chance, change of air, seasons, climate, or some great alteration in life, affecting either body or mind; and sometimes merely by avoiding the causes of the disease.

Having mentioned chance, I shall give an instance of a cure in a very obstinate illness, as singular and agreeable as it was unexpected. A lady, near the end of her pregnancy, had a
severe

severe fit of the cholic, succeeded by a jaundice. This went off while she lay in, but soon returned, and continued four months ; her health, in other respects, being but little affected. There was no pain, no fulness, hardness, or weight in the region of the liver. Her stools were always white, and she was costive. Nothing seemed of any effect to remove the disease, and the colour of her skin was changing fast to a deeper yellow. Riding one day, her horse stumbled. An acute pain immediately seized her in the right side of the belly, which crept slowly along, still lessening, toward the navel, and in a few days ceased altogether. From this time her jaundice gradually abated, without the use of remedies, and she recovered. The cause seems to have been a gallstone obstructing the common duct, the position of which was so altered by the sudden shock, and the compression of the muscles, in straining to recover herself,

herself, that it could be easily pushed forward into the intestine, by the exercise and ordinary action of the parts. Without such a violent accident, the disease might have proved insuperable.

Hereafter I shall not scruple, in such a case, to advise sailing, agreeably to reason and to the practice of the ancients, who have recommended it in the jaundice, and diseases of the kidneys. The motion of the ship, and the retching from sea-sickness, are well adapted to promote the expulsion of stones, gravel, and other matters obstructing the liver, gall-bladder, or kidneys, and their excretory passages. By following this method we should imitate nature; as the spontaneous vomitings which attend icteric and nephritic cases, are the efforts she usually employs for expelling extraneous offending substances.

I shall finish what was intended by these remarks on sailing, as a remedy, with some farther instances of cases, success-

successfully and unsuccessfully treated, that have fallen under my own observation, or been communicated by others.

A gentlewoman, after a slow fever, fell into anomalous shakings, which increased to a highly convulsive disorder. The motions were so violent, so various, and so universal, that, in times of greater ignorance, she must have been considered as a subject of exorcism, not of medicine. By proper methods they were removed; and for a year or more, she was entirely free from them. A return of the fever caused a return of the disorder; which was again carried off by the same method. But on a third attack of the fever, it became habitual, and would yield to no remedy. Bath was proposed, and she chose to go by sea. By a train of misfortunes she was driven from place to place, and experienced sufficiently the hardships of a sea life; the disease still continuing or growing worse. While at Bath, it

grew to a greater height than ever. Having drunk the waters for some weeks, without any appearance of amendment; as riding had formerly done her great service, she was advised to go home by land. Though there have been long intervals, the disease has, for many years, returned from time to time, and sometimes with violence.

A black, when about fourteen, had a depression still remaining, made in his skull by a fall, which rendered him for a good while insensible. Not long after, he was attacked with fits of the epilepsy, which continued some years. The fits, at first, came monthly, without impairing his mind; but as they grew more frequent, he became listless, sickly, and somewhat stupid. His master being informed that when the slaves in Jamaica had fits, a voyage was observed to do them good, sent him to sea. After nine months he returned from Virginia, and continued upwards of eighteen months

months free from his distemper; but he has lately had a slight fit; though at present he is a strong, active, sensible fellow.

A young man had a severe cough for six months, with constant fever, night-sweats, large purulent spitting, of a grosser kind, and a hectic look. He was weak, and a good deal emaciated. His pulse, however, was pretty full and strong, and not greatly accelerated. Two or three small bleedings were directed, a vegetable diet, but especially butter-milk, mineral acids, and balsam of sulphur with oil of turpentine. On the use of these the feverish symptoms abated, he got flesh, and a better state of health. This passed in summer. But the cough and spitting continued much the same. He went a voyage to Virginia. Nine months after that I met him fat, hale, and strong. He informed me that, when he had been three weeks at sea, the cough and spitting entirely left him, and he has continued

in perfect health these six or seven years.

A middle-aged man was so much reduced by a severe cough and night-sweats, that he could hardly walk. His pulse was almost gone; and an extremely small quick breathing shewed the lungs to be very partially inflated. He had not the smallest appetite. I should not have been surprised if he had died instantly. However, by proper cordials and diet, with some stomachic remedies, he was a little restored, or rather kept alive for a fortnight; when he had the courage to undertake a voyage of ten leagues, and performed it without any harm. The exercise made him sick and vomit bile. Two more trips to sea cured him. Not long after he came to me in good health, but had not quite recovered his strength. A sister nearly of the same age, died just before of a consumption, as had several of his family at different times.

A young

A young gentleman, very tall, was called up in the night when sweating, on account of a fire, and stood a good while in water. A cough came on, under which he languished a long time, and grew hoarse. He made a voyage of six weeks, all which time he enjoyed good health, and was better, both as to his cough and his hoarseness. On his return he rode a whole day in the rain, and was wet to the skin. He had got flesh and a good complexion, and was sensibly taller; but continued hoarse. The cough was not very troublesome. It soon increased however, as well as the hoarseness; he lost his appetite; a hectic fever with sweating came on, and at last he spit matter and died.

A young man, who usually slept in a damp place, gradually contracted universal pains, with constant fever, quick breathing, and a disposition to sweat, and had a very sickly hectic look. When he was considerably better as to these, a spitting of blood came on,
which

which continued more or less, sometimes in good quantity, for three weeks, and then left him exceeding weak. In February he went a voyage, which kept him seven days at sea; it blew hard, and he was sick the whole time, vomiting frequently. He returned free from all complaints, and had recovered his flesh, and a hale look. The pains which before made him so uneasy that he could hardly turn himself in bed, were entirely removed; and he has enjoyed good health for these two years past.

One who had been ill of a jaundice for four months, after trying many empirical remedies, was persuaded to pursue a regular method. He was very feverish, and complained of great pain and inflation of the epigastric region, especially on the right side. When the fever was carried off, he took vomits, and aperient solutive remedies, by which the yellowness began to decrease, but in other respects he did not grow better. A voyage of
two

two days brought no relief, as it did not cause any sickness. In coming home he was eighteen hours at sea, vomited most of the time, and brought up various matters. The pain and inflation, which nothing hitherto could remove, went off, and troubled him no more. Riding after this restored him to health.

Mrs. M. for some time complained of a cough and pain of her breast, which went off in her voyage to Antigua. There she lived two years in perfect health, till she caught cold from wet feet. This caused a return of the cough and pain, which for six weeks still increased, notwithstanding all that could be done. A short voyage was proposed. During eight days sailing she found herself considerably relieved; but, on coming ashore again, the disease became so much worse, that in eight days she was scarce able to get out of her bed. Her physicians declared that if she did not immediately undertake a long voyage she had no chance

chance of living above a fortnight. She was therefore carried on board. Being now very weak and much wasted, no alteration could be perceived in her for some days. But after that she found herself every day easier, so that by the time she had been three or four weeks at sea, she scarcely felt any remains of her cough or pain, and had recovered her strength and appetite. What gave her most uneasiness was, the coldness of the air on approaching the northern climate. The voyage lasted near six weeks. She landed in Britain in August 1766, and has continued well ever since, now four years. But having seen her yourself you will be able to judge. This relation is from the lady's father, who gives me the following account of his own case.

When I was about fifteen, I began to be troubled with indigestion, so that all I ate turning sour, caused heart-burn and acid belchings. This continued, with few intermissions, till I was
twenty;

twenty; notwithstanding all the means I had used, by the advice of physicians in different places. My affairs carried me to sea. I had been but a few days on board, when I found myself quite free from the disorder, my appetite restored, and my digestion greatly mended; nor have I had the least complaint from my stomach since that time, which was many years ago.

A French-horn, belonging to the twenty-fifth regiment, complained for almost three years of a constant pain in his breast, especially on one side, attended with a violent cough, copious gross expectoration, sometimes bloody, fever greatly increasing in the night, profuse night-sweats, and frequent fits of looseness. His legs were swelled. He had drunk goats whey one season, and lived mostly on milk; but could eat very little of any thing at a time. In this condition he was sent hither by sea, with the baggage from Fort William, in June 1767. The

voyage lasted nine days. He was a little sick at first and vomited, which a good deal relieved him. His appetite mended every day, the cough abated, and the matter dried up. When he landed, his complaints were gone; though, while at sea, he drank, and lived irregularly. Such a disease it was thought would render him unable to perform any more on the French-horn, and he was discharged. Mr. Rhode, surgeon of the regiment, saw him two months after this at Edinburgh, in good health; and in October he still continued free from any complaint, and played the French-horn at public places.

A serjeant of the same regiment, in the second stage of a consumption, made the same voyage, but was not so fortunate. He received no benefit, and died in two or three months.

A young man, by sitting frequently with his feet wet, contracted a cough in November, which increased; and in December he spit sweetish matter,
mixed

mixed with blood. He had a fever, heat, violent thirst, and night-sweats. In January he grew somewhat better; but catching cold during the use of a mercurial remedy, which by some advice had been given him, the symptoms increased so much, with great wasting, that he was confined to his bed for some weeks. The symptoms again abated, which gave him an opportunity of going to sea, towards the end of February, in a very weak state. He was about seven days at sea, and vomited much bile; but found no immediate benefit. However, after recovering from the fatigue of the voyage, he gradually mended during the spring and summer; when he was grown fat and ruddy, and seemed to have no complaint.

A gentleman, long subject to sweating, from living in too warm a room, had at last signs of tubercles. A voyage was advised, but he chose rather to ride, and used resolvent pills for a considerable time, but without success.

success. In autumn he began to spit
 ill-tasted matter. The cough and spit-
 ting increased when he lay on his left
 side. He declined so fast, that it was
 doubtful whether or no he could get
 over the winter. A voyage was again
 advised and complied with; and he
 endured seven days of stormy wea-
 ther at sea in October, which obliged
 the crew to put into the first port they
 could make. In his way home he
 rode a long journey; and by getting
 wet to the skin, caught a severe cold;
 notwithstanding which he was great-
 ly mended, and enjoyed pretty good
 health all winter and spring, though
 the cough and expectoration continu-
 ed much the same. In April he de-
 clined again. A sea voyage was incon-
 venient. He therefore lived all sum-
 mer upon a dry flat shore, almost
 within flood-mark, and rode every
 day close by the sea. The cough was
 always more troublesome when he
 went to a town, and the matter be-
 came ill-tasted, which it was not when
 he

he breathed the sea air. Even then the eating of meat, or rich milk, would give it the bad taste. It was very remarkable, that, whenever he came under the shade of trees, he had a sensible oppression in breathing. His smelling was very acute. In September the cough, sweating, and expectoration were gone; and he could lie with equal ease on either side. At last he allowed a seton to be put between two of his ribs. During the winter he enjoyed a pretty good state of health; but the spring, as formerly, caused a return of all his complaints, and he died in the winter.

A lady, in the advanced stage of a consumption, rode a journey of fifty or sixty miles. The weather proved bad, and she came to this place in March, much fatigued and exhausted. A severe looseness came on, and she was confined to her bed. Her cough was not violent; but there was some appearance of pus in what she spit. All the spring, and a great part of

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summer,

summer, it was doubtful whether she would ever get abroad again. Growing somewhat better, however, in July, she was carried, in a very weak state, to live on the sea coast. Though the weather was all the time most unfavourable, after a month she returned so much better as could hardly have been imagined possible. The cough was almost gone. She dressed, visited, and looked like one in perfect health. But this amendment was only temporary. From so short a trial of the sea air no lasting effect could be expected. The decline of the season caused a return of all her complaints, and she died in winter.

Four years, says a gentleman who resides here, I laboured under a fever and ague. The fever was constant, attended with great thirst, sweating, loss of appetite, and want of sleep. I could scarcely walk twenty yards without danger of falling, and my legs were swelled. Expecting benefit from change of air, I left the West-Indies

Indies in 1761, and found the salutary effects of it. After being a few days at sea, the ague fits altered their periods, my appetite returned, and I could walk on deck with ease and pleasure. In a short time the fever went off entirely, and the swelling of my legs was almost gone. I daily recovered, and before I landed in Britain, ate, and digested as well as any man on board. Some days after I came ashore, a severe cold seized me, and gave me a nervous pain of the stomach, which was carried off by drinking the waters at Bath. I continued in pretty good health till 1762, when I returned to the West-Indies, where I had not been above two days when I was attacked with all my former complaints. My old remedies gave no relief. Short trips among the islands did me good from time to time; but I could never shake off the disorder, till I made a second voyage to Britain. I daily recovered at sea, and have enjoyed perfect health ever since.

A surgeon of this place was seized with a diarrhœa last February, 1770, which continued all spring and summer, and reduced him so much that in the beginning of September he made a trip to sea, almost in despair. He was twelve hours in the passage out, and as many in coming home. From the time he went on board, the number of his stools gradually decreased; so that in three weeks or a month, he went to stool only once a day, or once in two days, and now in November he sometimes is costive. He has got flesh and strength, and a pretty good complexion and appetite. It will be questioned, perhaps, whether or not this cure should be attributed to sailing. The patient suffered no sickness nor fear, nor any sensible compression of the bowels, from the greater action of the abdominal muscles, occasioned sometimes by the pitching of the ship; and he was but a short time at sea. On the other hand he used no kind of medicine; he

made no alteration in his diet; the season of the year, and the weather, which was cold and flabby, were unfavourable to him, and nothing ever gave him any relief for above a day or two, till he went to sea.

With pleasure I acknowledge my obligations to the learned and ingenious gentlemen, who have so readily communicated the histories and observations which follow.

Dr. Gregory, professor of medicine at Edinburgh, has favoured me with some useful observations on this subject. I have seen several instances, says he, of the utility of sea voyages, in a variety of chronical disorders; particularly, in a consumption, hypochondriac complaints, and where there was reason to suspect infarctions of the abdominal viscera. I knew two people cured of a phthisis pulmonalis when in the last stage, with true purulent expectoration, hectic fever, and constant night-sweats, by sailing to the West-Indies; but I have no journal of

any of these cases. The effects might, in these two instances, have been owing to the warmth of the climate; but, from the good consequences which I have seen result from sailing up the Baltic, where the weather is colder than in Scotland, I am inclined to believe that the principal benefit arose from sailing.

Many people bear the incessant nausea, and frequent vomiting at sea for several weeks together, not only without danger, but without any considerable diminution of their strength. We cannot produce such a constant stimulus by medicine, without the greatest risk. I apprehend indeed, that no physician would prescribe such a course, nor could any patient submit to it. Yet we have reason *a priori* to expect that such a constant nausea, where it can be easily sustained as at sea, must have a great influence on the system, particularly by promoting a diaphoresis, and resolving obstructions in the viscera.

For

For the two following cases I am indebted to Dr. Stevenson, professor of medicine at Glasgow. Mr. G. of Jamaica, when about thirty, in riding hard, struck his breast against a tree. Though he felt much pain, it was not till after some days that he would allow himself to be bled. A troublesome cough came on, and he often spit blood, sometimes to the quantity of two pounds. He was reduced to the lowest extremity, with every bad phthical symptom, so that his physicians did not think he could live ten days. Dr. Douglas, who knew your sentiments about sailing, insisted on his coming along with him to Britain. In less than a fortnight after he began the voyage, he recovered flesh, strength, and appetite, and his pulmonary complaints abated apace. He never was sea-sick, but had a smart fit of the gout, which reduced him again before he landed. The ship, he said, was a very stinking one, and

his diet chiefly salted pork. He had now little uneasiness in his breast; his pulse was not much above the natural; and he expectorated a tough mucus stuff, with no great difficulty. I urged him, as soon as possible, to get to sea again, and continue there till his health was more confirmed, as our winter might be hard upon one who had never lived in a cold climate. Business, however, and curiosity, induced him to go to London by land, in November. The journey fatigued him. He got repeated colds, and was seized with severe pleuritic pains. By these, and the necessary evacuations, he was brought so low, that he wrote me his situation in absolute despair. As soon as he was able to move he sailed for Jamaica, and recovered in some measure; but continued thin and sickly, as a gentleman who saw him several times informed me, and at last he died.

Mr. C. aged thirty-four, was for some years subject to returns of cough
and

and asthma. In July 1766, being at Boston, these complaints recurred with more violence. He became very feverish, but had less cough; and as the fever abated, the cough increased again. He was greatly wasted by profuse night-sweats, and coughed incessantly, but brought up nothing gross or ill-coloured. In this state he sailed for Britain, and in ten days found a wonderful change for the better. When he arrived at Cork he thought himself in good health, and walked about every where through wet streets, by which means he caught cold, and was still bad when he came here in the end of December. I could not prevail upon him to go to sea again; and now, after six months, notwithstanding the use of every common remedy, he is almost as bad as when he left Boston.

Dr. Welsh of Winchester informs me, that a gentleman, being taken by the French during the war, lay several
nights

nights on a cold wet deck, and was afterwards thrown into prison. Here he contracted a violent cold, with great cough, fever, and wasting, which continued several months, with all the appearances of a consumption; till on going a voyage to Jamaica, he recovered entirely at sea.

- Dr. Raymond of Marseilles writes me thus: Je suis du meme sentiment que vous sur cette doctrine. Le hazard m'engagea a l'examiner il y a une dizaine d'années: je traitois un phthistique que etoit deja au second periode du mal, dans la suppuration; je le crus perdu; je ne fus pas peu surpris quand un matin que je fus le voir, il m'annonça la resolution ou il etoit de partir dans un vaisseau qui etoit pret pour l'Espagne; je fus etourdi de cette hardiesse; neanmoins j'y consentis, parceque dans un etat que je crus desesperé, je pensai qu'il etoit indifferent qu'il perit sur mer comme sur terre. Il part: huit mois apres

après je le revois de retour parfaitement guéri, et ayant repris des chairs et de l'embonpoint: je crus voir un mort reffuscité. Depuis je m'appliquai à approfondir les effets de l'air maritime, et de l'exercice de la navigation; je composai une traité sur ce sujet qui est fini depuis quelques années; j'y fais l'histoire de cette doctrine; mais comme je manque d'un certain nombre d'observations, j'ai différé de le publier. Si vous aviez fait quelques nouvelles observations sur cette matière, je vous serois infiniment obligé de me les communiquer. Je vous dirai que les seuls remèdes qui m'aient réussi dans la phthisie, cette maladie aussi commune que pernicieuse, sont les decoctions vulneraires, la diète herbecée ou végétale, et l'air maritime. J'observe, que l'usage ou l'on est dans le pays d'envoyer les phthisiques changer d'air dans les lieux aquatiques du continent est funeste; le mal y est bientôt aggravé; aussi la phthisie seroit principalement

dans

dans les lieux aquatiques, et exposés au vents de Nord, dans cette province comme ailleurs.

Dr. Macbride of Dublin has supplied me with two cases, both under the inspection of Mr. Sempill of Donaghadee, who gives the following account of them. In autumn last, a young man arrived at this place from America, who informed me that, when he left that country, he was in the last stage of a consumption. His legs were much swelled, he coughed incessantly, had totally lost his appetite, and was so weak that they were obliged to carry him on board. After severe sea-sickness for a few days, he recovered his appetite, grew gradually stronger, and landed here greatly recruited. He continued in this neighbourhood through the winter, and enjoyed pretty good health; but at times was somewhat hoarse, and liable to colds. He set out early in the spring for America, in hopes of a perfect recovery.

A young

A young lady about sixteen, whose brother and sister had died of a consumption before they arrived at that age, was from her infancy subject to a cough. She grew very fast, so as to be remarkably tall; had a long neck, a narrow chest, and frequently complained of pains in her sides, breast, and arms. In spring the cough became more violent, attended with continual fever, flushing of the cheeks, profuse night-sweats, swelled ancles, and an entire loss of appetite. The spitting was purulent. In a few weeks she became so weak and emaciated, that those who attended her had not the smallest hopes of her recovery. Nothing was to be done by medicines, the stomach nauseating not only these, but every sort of nourishment. In this situation she was ordered to sea, and happily received from sailing almost immediate relief. She brought up great quantities of bile, and purulent stuff. Upon her return from the voyage, which was but short, she had
got

got an appetite, which increased by pursuing the same exercise, in which she had no return of sea sickness. In a short time she recovered strength and spirits, and has now, for more than twelve months, enjoyed as good health as can be expected in one of such a delicate constitution. Her recovery, it is plain, was owing to a few sea jaunts, without the aid of medicines, or paying much regard to the regimen prescribed her.

Extract from some practical observations sent to Dr. Hunter of London by Dr. Makittrick, formerly of Antigua, now of Andover in Hampshire.

Consumptive disorders, whether arising from a fault in the lungs, or in the other viscera, are as fatal, and as speedily so, in the West-Indies as in Europe. The advantages which the equality and temperature of our atmosphere afford such patients are, I am afraid, more than counteracted by the debility which the climate occasions, and by which our viscera are more injured.

injured. To this we may add that disposition to acrimony and putrescency, very generally caused by heat and moisture. A treatise on the use of sea voyages in medicine induced me to try the effect of sea air on my phthical patients.

A gentleman of this island, aged forty-three, by frequently riding in the night, through a part of the country much subject to lodgments of water, contracted a cough, and neglecting it for some time, gradually declined in his health. But in the year 1760 his disease advanced so rapidly as to alarm him. As he was of a sanguine habit, he had blood taken from his arm in small quantities, and often; and, together with a dietetic regimen, used a few palliatives occasionally. In June he began to complain of hectic heats, febrile exacerbations at night, and profuse sweats in the morning. His cough became almost incessant; and what he expectorated was, to appearance, purulent,

rulent, with a degree of *fætor*. He had bad nights, and lost his strength and appetite. I had repeatedly, though without success, recommended an issue or perpetual blister, and going to sea, as means which promised more advantage than all the rest of the materia medica united. I now called to my assistance two gentlemen deservedly eminent in their profession. A milk diet, a decoction of sarsaparilla with the bark, and an anodyne occasionally, were used for a considerable time, without any marks of amendment. As our patient was tired of a course of medicine, which did not avail, he consented to the application of a blister between his shoulders, and went to sea in October, in a ship of war bound to Barbadoes. From the time he went on board until he landed, his cough gradually abated, and indeed entirely left him; his appetite and strength amended in the same proportion. At this island, though sufficiently regular, he experienced

rienced a return of his former complaints, in a flighter degree, which speedily left him on his going to sea again. In short, such was the efficacy of sea air, unaided by any other means but a temperate regimen, that in seven weeks he returned to his friends perfectly recovered; and now enjoys a better state of health than for five years before, and is free from all complaints, in August 1765.

I do not recollect another instance of the sea air being so completely effectual as in this gentleman's case; but that, I am persuaded, must be wholly imputed to the impatience of some to whom I recommended it; or to the avocations of others, which would not permit their continuing at sea a sufficient time to reap the usual advantages from it. As I frequently accompanied my patients to sea for a few hours, I always observed with pleasure that, after recovering from the fatigue and sickness, they were remarkably easier; the hectic

heat was less, their appetite grew better, and their strength increased. Indeed these marks of amendment did not always continue long; as I lost some of my patients, notwithstanding these short airings. But there are others now alive who experience such advantage from sea air and exercise, taken in this partial manner, that, though they cannot boast of established health, yet their phthifical symptoms have ever since been upon the decrease.

Now I am upon the subject, it may not be improper to observe that having, for some years, adhered to the palliative methods of treating this disease, I had the mortification to lose almost all my patients. Although I was not ignorant of the methods proposed by writers for the radical cure thereof, yet I seldom attempted it till I had seen the treatise abovementioned, which determined me to adopt the author's practice in this instance. In a few cases, where there was room

for suspecting the existence of tubercles in the lungs, and obstructions of some of the other viscera, I have succeeded by small doses of the *pilula mercuriales laxantes*, together with the bark in water, and the *tartarus solubilis* in remissions of the hectic heats. But after this fever was formed, and the tubercles imposthumated, these means seemed in general to precipitate the death of the patient. Perpetual blisters and issues, where we cannot use repeated bleedings, are, I am persuaded, highly beneficial. Perhaps that period which succeeds an exacerbation of symptoms, from a fresh obstruction and inflammation of the tubercles, is the precise time when we may expect the greatest benefit from these applications.

In a subsequent letter, Dr. Makittrick writes, that the gentleman, whose recovery by a sea voyage evinced the great utility of that remedy, continued in a good state of health, till he went as Attorney-General to the island

of Grenada; when, by allowing a blister to dry up, which had been kept open some years, and by living in the neighbourhood of a stagnant marsh, perhaps by repeated colds, together with the fatigue of his employment, he relapsed into his former state. His business not permitting him to go to sea, so soon as the bad state of his health required, he declined so fast, that, when he went to sea, he was obliged, after a few days, to land again at Antigua, where he died three days after his arrival.

The same gentleman adds: Two hours ago I had with me the father of one of my patients, who is in a deplorable way. I earnestly solicited him to give his daughter a chance for life, by going to sea. He told me her mother would not consent to it; but that a letter he had received from a brother in Virginia, had given him the best opinion of that remedy. The young man, as I found from the letter, and his brother's information, having a hereditary

tary consumptive disposition, embarked a few months ago for Virginia. His condition, which is very expressively described, was a phthisis pulmonalis in an advanced stage; but such was the effect of his voyage, that, at the time he wrote, he was fat, and entirely relieved from his complaints. His brother had sagacity enough to attribute the cure to the voyage solely; and it is, on the whole, as striking an instance of the efficacy of that remedy as any I ever met with.

A pretty curious history has been communicated to me by Dr. David Skene of Aberdeen, and is as follows: In 1767 a young man had, for some time, laboured under the lues venerea. I put him upon a mercurial course, which was not intended to produce a salivation; and as I could not see him often, I gave him very particular directions as to management, which were not sufficiently attended to. He caught cold, and I was informed that a spitting had come
U 3 on.

on. On visiting him I found his situation really alarming. The spitting was indeed moderate, but he had an incessant cough, with a thick, yellow, concocted expectoration. His pulse was frequent, and his breathing difficult, upon the least motion. He sweated every night, wasted, and grew weak; and had the clear blue eye so common to phthifical patients. In a word, he had all the symptoms of a phthisis pulmonalis. As the disease had come on, and increased so quickly, no time was to be lost. The mercurial course was stopped; and circumstances favouring much a sea voyage, I was willing to give it a trial. He went on board about the end of September, and continued coasting (lying only now and then a night ashore) near a month; at the end of which he returned greatly restored in flesh and strength; his pulse was natural; the sweating, difficulty of breathing, and cough, entirely gone. The venereal symptoms remaining, he was again
 put

put upon a mercurial course, which he went through without any salivation, or return of his pulmonary complaints, and was perfectly cured.

A gentleman, well acquainted with the particulars, gives me this case. A young lady, ill formed in the chest, of a puny habit, which was not mended by the soft manner in which she had always lived; of weak bowels, and subject to severe colics and looseness; fond to excess of warm bathing, which, no doubt, had contributed to forward such complaints as might naturally have been expected in such a constitution; was, about three years ago, seized with a cough, stuffing, and pains about the breast and sides. These, in spite of the most approved remedies, continued sometimes better, sometimes worse, till May last. She was now much reduced in flesh and strength; had totally lost her appetite; the smallest error in diet brought on a colic and looseness; there was a constant hectic, with night-sweats; she

spit a great deal of purulent matter; and her feet began to swell. The case appearing desperate, she was advised to try the effects of issues, and a sea voyage. A seton was put in her back, and some blood taken away, in order to guard against accidents from the sea-sickness; which however she hoped, from some trials she had already made, would not be severe. The blood was very fizy.

She sailed for Madeira the beginning of June; but, contrary to expectation, was so severely sea-sick that it was judged necessary to give her a little respite, by putting into port the third day. She sailed again on the tenth, was as severely sick as before, and continued so above a fortnight. She had now got so far to the westward, that she could not soon reach any port; and, notwithstanding her present distress, she had the fortitude to proceed in her voyage. All this time no medicines were used, her stomach would retain nothing, not even
food

food or drink. Through want of nourishment she daily grew weaker, but coughed less; her hectic went off, she slept better, breathed easily, had a keen appetite, and ate frequently, though she immediately threw all up again. The expectoration diminished greatly, and there was no complaint from pains of the side or breast.

On the first of July she landed at Madeira; and though she had then been for some days free from sickness, and eaten heartily, she was still so weak that she could not walk without being supported. However, she recruited so fast that by the fifteenth, when she left the island, there was such a change for the better as none, even the most sanguine, could have expected. On sailing again, she was pretty severely sick for two or three days; after which she recovered wonderfully; so that before she got to Lisbon, which was on the tenth of August, she was able to be almost constantly upon deck in the day-time,

1

though

though in very indifferent weather. She got flesh, slept well, had no difficulty of breathing, nor coughed, but in the morning; after which, and bringing up a little of the same matter that she had all along expectorated, she continued easy all day and night. At Lisbon she caught a severe cold, by exposing herself to the night air, after being at a crowded opera, in hot weather: but by bleeding, and the proper remedies, she was brought to expectorate freely, and grew better. Going to sea again on the twenty-sixth of August, she mended daily; so that by the end of September, being at Barcelona, she seemed to have regained, in a good measure, what she had lost at Lisbon. But here also, forgetting her situation, she caught a violent cold, in the same way as before; which, though it yielded a little to the former remedies, yet was far from being quite removed when she got to Montpelier. From thence she went to Nice,

Nice, where, in little more than a year, she died.

As this patient used no medicines, except a trifling quantity of bark and lime water, in her way from Madeira to Lisbon, her amendment to so great a degree must be attributed to the sea air and exercise, and perhaps to her sickness at sea.

I am obliged to Dr. Young of Edinburgh, for the case of a gentleman thus related by himself. " Ever since I remember I have bled very much at the nose. About four years ago, and a few days before I sailed for London, I bled a surprising quantity in forty-eight hours, and was so much reduced as to be hawled on board. It is remarkable, that I never stained my handkerchief after I went on board. We were tossed about off Portfoy for some days; and, though I never was sick, I chose to land, and wait at Aberdeen till the ship came round. No sooner had I set foot on shore than the bleeding returned, and continued,
often

often to a great degree, till I went on board again; where I remained ten days without bleeding a drop. The moment we cast anchor at Gravefend my nose began to bleed a little, and did so all the way to London, and for a week or ten days after. I put myself under the care of Dr. Armstrong, who completed what I imagine the sea air would soon have done. So much am I convinced of this, that, should I be again attacked, I would immediately go to sea, at whatever season. When I left London, I posted home night and day, and since that time have scarcely had any return of my complaint. After coming home I bathed in the sea."

Extract of a letter from a gentleman in the East-Indies. "In October 1767 I was seized with a cough, which I thought too trifling a complaint to need any assistance, and suffered it to go on till a train of the most alarming symptoms convinced me of my mistake. I had excruciating pains in my
breast

breast and sides, with constant difficulty of breathing. The quantity of blood I coughed up was amazing. I was reduced to a mere skeleton, and became so weak that I could not rise from my bed without help. My weakness, at times, brought on a delirium, which was generally succeeded by fainting fits, of so long continuance that every one of them threatened immediate death. Those I consulted had little or no hopes of my recovery. The only remaining chance, they told me, was a sea-voyage, which is advised here in various cases. I was carried on board, expecting that every moment would be my last, or that the first fit of sea-sickness would carry me off; but I was happily disappointed. Two days after we sailed, the violent retching broke an imposthume of the lungs, the matter of which I had just strength enough to bring up. From this time I recovered surprisingly; so that before we reached Bombay, which was near three months, all my complaints were gone;

gone; I grew fat, and acquired a better state of health than I had ever enjoyed."

The following relation from the physician, who accompanied the patient, contains several particulars that may be of use to those who undertake long voyages for the sake of health.

"A young nobleman of our country being at Aix in Provence, was, on Christmas day 1764, seized with a spitting of blood from the lungs, which reduced him to the greatest extremity. In this situation, however, four weeks after the first attack, he was transported to Marseilles, where I joined him on the seventh of February 1765. As the case seemed to me a very bad one, I did not hesitate a moment in advising his going to sea with all possible expedition. His pulse was never below ninety when at rest, and it rose to a hundred or upwards after eating or moving. His cough and expectoration were considerable; but I could perceive no purulent matter in what he spit, which did not sink in water, or give any bad smell, when
put

put upon live coals. Streaks of blood indeed were often observed, and sometimes small quantities of pure blood were brought up. He was frequently let blood, and his blood was fizy. He had no pain of the breast or sides, and could lie with equal ease on either. The face flushed after eating, but there was little or no thirst or night-sweats; he was costive, much emaciated, and it was with difficulty he could walk across his bed-chamber; his spirits were nevertheless good.

The fifteenth of February we sailed from Marfeilles, and the second of March arrived at Malta. During this short navigation we had fresh gales of wind, which almost daily produced sickness, and vomiting of bile in large quantities. The pulse came down to eighty, and never rose to ninety; he gained strength, his appetite grew sharp, and his sleep sound and refreshing. In a word, never was a voyage attended with more remarkable success. At Malta, being invited by the
Grand

Grand Master to his palace, the patient had between forty and fifty steps of a stair-case to walk up, which he did with ease, and conversed with that Prince a quarter of an hour at least, standing. Besides, he rode over the island in a chaise, though the roads were rough; and in the evening he commonly took the diversion of angling. The blood was now less inflamed, having little or no size upon it, and his other bad symptoms became less formidable. All this gave me great hopes.

We left Malta the fourteenth of March, and sailed for Sicily; from thence to Sardinia and Minorca, where we landed the sixteenth of April. During this period the patient, though he lost nothing, did not gain much in point of health. We remained at Mahon almost three weeks, where he had a return of his spitting of blood, but in no considerable quantity; owing, I believe, to his having walked too long on the ramparts of St. Philip. This accident
made

made me wish to get to sea again as soon as our ship could be repaired; and we embarked the second of May for Britain, with a view at the same time, to be there soon enough for the season of goats whey. In this voyage I was greatly disappointed; for the spitting of blood returned twice, notwithstanding the frequent use of the lancet, and a low diet. I was the more surpris'd on account of its being the first appearance of this kind at sea. The cough, expectoration, and other symptoms increased; and he was much reduced when we arrived. From that time, till we embarked at Bristol, it will be needless to say any thing, but that he reaped no advantage from drinking the hot-well water.

On the eighth of November we sail'd from Bristol, and anchored in the Tagus the thirty-first of the same month, without any remarkable change. And that he now received no benefit, was owing perhaps to this

circumstance, that now blowing weather did not cause any sickness, which never had failed before to produce some good. We were six weeks at Lisbon, and had the misfortune to meet with weather uncommonly cold for that climate, by which the patient was hurt.

From Lisbon, we sailed in five days to Madeira, where we staid a week; and the appearances were better than at Lisbon. I believe it to be one of the steadiest climates in the world, and consequently proper for weak constitutions. Dr. Heberden assured me that, in fourteen years observation, he had never known the thermometer in the shade to rise higher than seventy-four, or to fall below fifty-four.

We were thirty-one days in our passage from Madeira to Barbadoes; where, and in the other islands within the tropics, we passed six weeks. Here the patient was in all respects remarkably better; and had he taken my opinion, would not soon have left that climate. There was no indication

tion for bleeding; the pulse was commonly at eighty; the cough and expectoration were trifling; his appetite and spirits good; the heat was not uneasy to him, and he slept well. I dreaded the variable weather of the continent; but unluckily he never thought himself in danger; and so strong was his desire to know the state of our colonies, that nothing could prevail on him to remain in the islands.

No sooner had we got to the continent, than all the bad symptoms returned, particularly in South-Carolina, where we passed the winter; and no wonder indeed, for he had to combat with a climate the most variable that can be imagined, the thermometer sometimes differing thirty degrees in six hours. Bermudas or Barbadoes would have been the proper wintering places.

When we left Charlestown, to return to Britain, he was reduced to skin and bone: his spirits, however, were good,

till ten days after we failed, which was on the third of May. He was then seized with a violent disorder in his stomach, which continued more or less during the voyage, and was frequently attended with a looseness; so that I scarcely expected to have got him to England, and where he only lived five days. Ten days before we landed, he brought up a small tea-cup full of pus, the first I had ever observed.

On opening the body there was little or no loss of substance perceived in the lungs. This confirmed me in an opinion, which was likewise Sir John Pringle's, who was consulted before we left England, that there was no ulcer in the lungs at that time; and I believe that the suppuration did not come on till very late in the disease. The right lobe was full of tubercles. A few of them had suppurated, which produced the small quantity of pus just mentioned. The left lobe adhered so firmly to the pleura that it could hardly be separated.

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