

Familiar instructions in medicine and surgery : with observations on the means of maintaining the health of men on ship board, or when employed in unhealthy localities. ... / By F.F. Sankey, M.D.

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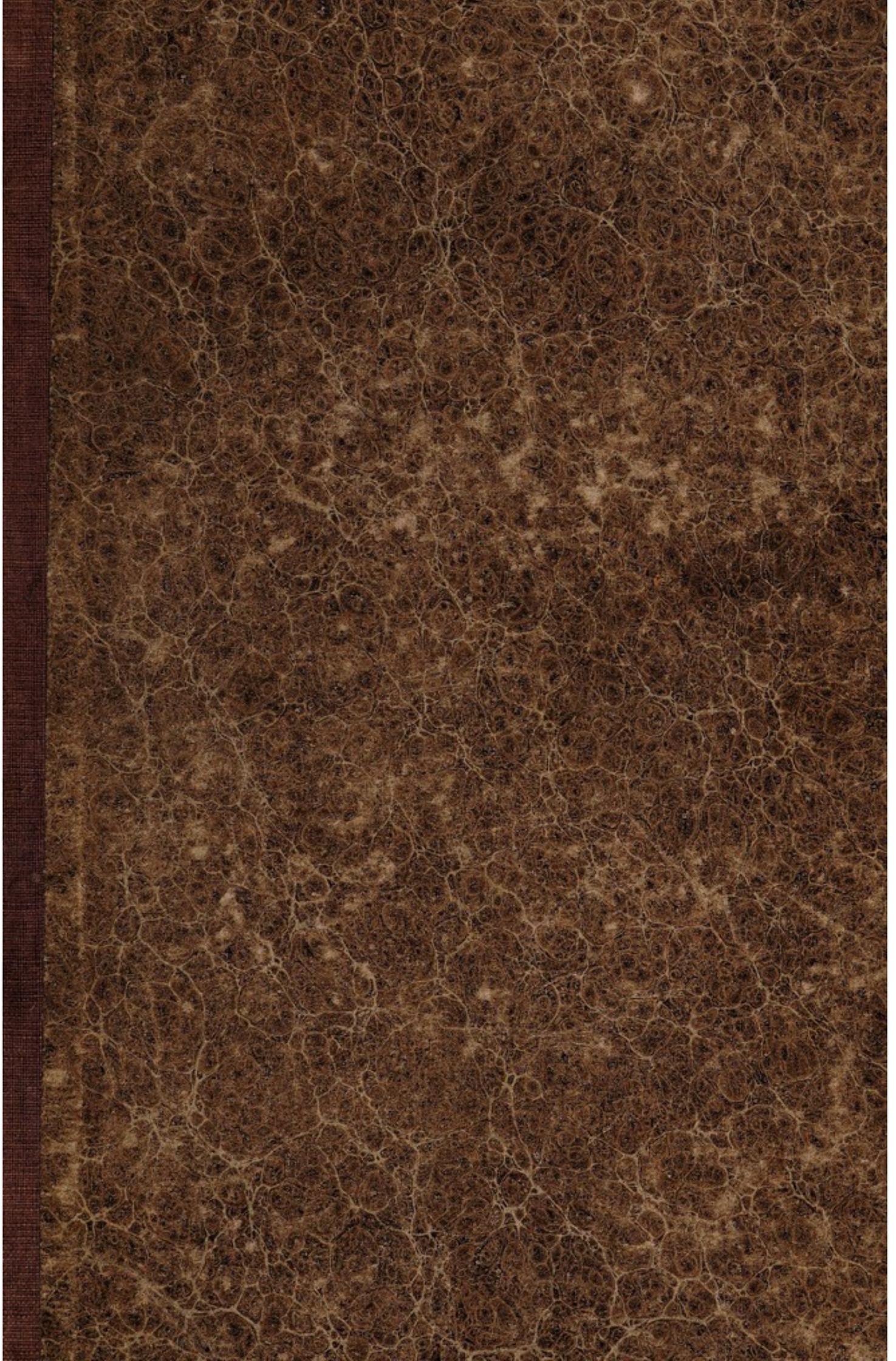
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FAMILIAR INSTRUCTIONS

MEDICINE AND SURGERY,

Printed in Malta

WITH OBSERVATIONS ON THE MODES
OF MAINTAINING THE

HEALTH OF MEN ON SHIP BOARD,

OR WHEN EMPLOYED IN

UNHEALTHY LOCALITIES.

BY THE AUTHOR OF THE

ESSENTIALS OF THE MEDICINE OF YACHTS,

AND ALL PERSONS WHO MAY BE AWAY FROM HOME.

BY F. F. SANKEY, M.D.

RESIDENT MEDICAL OFFICER

LONDON:

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1881.



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FAMILIAR INSTRUCTIONS
IN
MEDICINE AND SURGERY,
WITH OBSERVATIONS ON THE MEANS
OF MAINTAINING THE
HEALTH OF MEN ON SHIP BOARD,
OR WHEN EMPLOYED IN
UNHEALTHY LOCALITIES.

INTENDED FOR THE USE OF THE
MERCHANT NAVY, COMMANDERS OF YACHTS,
TRAVELLERS,
AND ALL PERSONS WHO MAY BE AWAY FROM MEDICAL AID.

BY F. F. SANKEY, M.D.,
SURGEON, ROYAL NAVY.

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Introduction.

As there is nothing up to the present time before the public, which contains sufficiently explicit and intelligible rules on medical subjects, for the guidance of those who are away from professional aid. The writer of the following pages, has attempted to supply the deficiency; and to convey his information in plain and familiar language. If therefore his periods are defective in polish, and his expressions homely; it must be recollected, that they are intended for the uninitiated in medicine, and the unlearned in books. He has endeavoured to consider himself as conversing with men possessed of common understanding, fully capable of comprehending plain descriptions; such as the author wishes his to be, and hopes they are.

The practice recommended, is founded on a long experience in the treatment of disease in various climates. No remedy is proposed, the efficacy of which has not been subjected to proof. If any opinions advanced in the book may seem too bold, it is affirmed in reply: that they are not crude notions derived from hypothetical views of the subject, but the result of much observation and reflection. The arrangement is alphabetical; and the complaints are named according to their popular acceptation. Such measures only are proposed, which seem best suited to the persons for whom the work is chiefly intended, and to the circumstances under which they may be placed.

Accidents, and such complaints which are more likely to occur on a voyage or journey; form, with but few exceptions, the subjects treated of. Under the head of 'Childrens complaints' some general directions are offered for their management; it being presumed, that children may occasionally require medical treatment while travelling, or on a voyage: no separate mention is made of females, who must be considered medically, as men of a weaker frame.

An appendix is added; where, in the first part, the writer has attempted to give a very general outline, of a few of the more important parts of the human body, the circulation of the blood—directions for blood letting &c.—information which may tend to enable the reader, to comprehend the explanations given in the course of the work. The second part of the appendix, contains direction for maintaining the health, and increasing the comforts of men on ship-board. Part the third, is a scale of medicines necessary for sea practice, with directions for their use; together with a few formulæ or recipes, which are referred to occasionally in the book.

The fourth part contains—a paper on consumption; intended for such invalids with pulmonary complaints as may be seeking health in travel—Remarks on some new modes of curing diseases—And a paper, containing useful directions for persons travelling in southern and tropical climates.

The description of any disease, must be more or less defective; no two cases being exactly alike, having only some general resemblance. The great difficulty experienced in practice, is to discover the nature of the complaint, by the symptoms, and the feelings described by the patient. Medical men of experience, are frequently at a loss to make out a disease, and it is only by combining such feelings with other signs and symptoms, that a tolerably correct judgment can be formed. We must not expect to find all the signs present in any individual case, that may be set down in books: some may be wanting, and others will occasionally be present, which are not mentioned.—Pain itself, which is usually the first thing to lead us to the seat of the complaint, may mislead; as arising from a source, far removed from the part complained of. Much then, must be left for the exercise of our judgment and sagacity.—When, after due consideration of the case, a plan of treatment has been determined on; it will be proper to shew the patient, that we feel confident as to the nature of the disease, that we have no doubt as to the result, nor of the success of what is prescribed: always maintaining a cheerful countenance: for however much cause there may be for alarm, it should never be shewn in the face or actions of the attendant.

In administering medicines of the most known properties, we shall frequently be disappointed in their effects: for the operation of a drug depends upon the state of the body at the time of taking it: as for instance, a purgative, which

under common circumstances, is known to produce a sufficient effect; under other circumstances, has little or no power; the dose in such case must be greatly increased, to enable the medicine to overcome the resistance offered by the complaint. No instructions therefore can be so minute, but that something will be left for the exercise of your discretion in carrying out the treatment.

Medicines, when they fail to arrest disease, after a sufficient trial, must be discontinued; as they will either increase the disturbance in the constitution, or cause another complaint in addition to the one they were given to cure. Drugs may be looked upon as poisons, which are given to kill other poisons, that are producing changes in the body, tending to destroy life. Thus Mercury, when it ceases to influence for good; will aggravate the commotion in the system, producing most serious mischief.

A Purgative given to remove the cause of feverish uneasiness, arising from a collection of foul matters in the bowels; will, if repeated after those matters are discharged, reproduce the original disturbance. By this means, a simple disorder is frequently urged into a serious illness. Changes may take place in many organs of the body, the consequence of repeated attacks of disease, unnoticed or unremedied. In such cases, nothing but a creative power can restore the lost healthy condition of the part. It belongs to the science of Medicine to prevent these changes taking place—to cure them is impossible: yet nature is so fertile in means for alleviating the consequences of such alterations, that, although a portion of a very vital part may be destroyed or rendered useless; yet the remaining portion, may be enabled with care, to do the duty of the whole for the remainder of a long life.

As we must be guided in our administration of drugs, by the age and strength of the patient ; a table is annexed, shewing the relative proportion for an adult or full grown man, down to that for an infant.

This rule can only be general : for we must perceive, from the different constitutions of men, that much must depend on our judgment, in adapting the remedies to circumstances.

But few medicines are required for sea practice : these should be of the best quality : kept in a chest, placed in some dry and convenient part of the ship. They should be inspected occasionally, to see that nothing is damp or spoiling ; that the several articles are properly marked ; and that the instruments are free from rust and fit for immediate use. What is here recommended as a necessary supply, together with the case ; can be furnished by a respectable druggist for a few pounds. A plain deal case, with divisions and strong green bottles, well labelled, with good corks, is all that can be required for service. A ship proceeding to any particular station, can always be provided with an additional quantity of such drugs, as may be required to combat the diseases of that station or climate.

Commanders of ships during a voyage, have sufficient time to study and practise the operations explained, and to acquire considerable dexterity in performing many very essential things : such as bleeding, giving injections, putting on dressings, bandaging &c. knowledge, which no sensible man will feel degraded by acquiring.

In order to practise in any case of sickness or accident ; it is requisite to know something of the pulse, the breathing, the appearances of the tongue, the feel of the skin, the excretions of the body in a state of health : so as to be able

to judge of any departure from that state. A man of common sense and observation, may easily obtain a competent acquaintance with these things, quite sufficient for all useful purposes.

The writer, hopes to inspire those who have the charge of men, with a due sense of the importance of the matters treated of: and to fix on their minds, a conviction of the necessity of giving serious attention to a subject, which has for its object, the alleviation of human misery, and the well being of their own caste.

N O T E .

The following papers were written, in consequence of the frequent applications made by Travellers and Commanders of merchant ships, for instructions how to manage in cases of sickness or accident. The manuscript was forwarded to a friend for revision, as early as the year 1842, previous to its intended publication. The papers were unfortunately lost, in consequence of the individual to whom they were consigned, having suddenly left England. This untoward circumstance, left the author little inclination, and his professional avocations, little leisure to re-write them; until the opportunity of printing the M. S. in Malta, induced him to make the present attempt to produce a book; which, with all its imperfections of manner, and colonial getting up, he ventures to hope will be a useful and acceptable work.

Malta 1846.

ABSCESS.

An abscess or gathering, is a swelling filled with matter or pus. It may be external, or in some inward part; and is the consequence of inflammation in that part.—See skin inflammation of.

AGUE.

See Intermittent Fever.

APOPLEXY.

A person falls down suddenly; perhaps without having complained before of being ill: or he may have had pain in the head with drowsiness, which he did not think worth noticing. He is insensible, neither hearing nor seeing: unconscious of every thing around.—The suddenness of the attack, the loss of sense and motion, with a hard and snoring breathing, declares the nature of the fit.

Proceed to loosen every thing that may be tight about the neck and chest; place warm bottles to the feet; and if the man is strong, of a full habit of body, and young; you must bleed very freely, until he becomes pale, and the pulse begins to get weak.—Apply cold water over the head, and renew it constantly. If you have reason to suppose that the stomach is oppressed with any undigested food, give an emetic, and repeat the dose until you produce vomiting. Open the bowels by a very strong glyster of salt and warm water, with oil, and a tablespoonful of spirits of turpentine: or with six or eight drops of croton oil in a pint

of water. If you suspect the bowels to be loaded, a drop of croton oil may be given in a little water by the mouth, every two hours until it operates. But if the man be pale, and his frame be weak: do not bleed him:—but open the bowels, or give an emetic as above directed, and a stimulating glyster. After you have done this, and have placed the patient in as cool and quiet a berth as possible; keeping his feet warm, and his head supported, you have little more left to do. You can apply mustard poultices to the pit of the stomach, and to the back of the neck. As sensation and motion return, you may continue your measures, omitting the cold applications and give broth and light nourishment a little at a time. Any partial loss of sense or motion, may be relieved by blistering the back of the head and neck.

Drunken sleep may be mistaken for Apoplexy: but in this state, the man may be roused to answer questions, or to make use of some of his limbs; which in apoplexy, he could not do.—It may be mistaken for epilepsy; but recollect, that epilepsy is a convulsion; where there is distortion of the features, and violent action of the limbs. Apoplexy may arise from the breaking of a blood vessel in the head; when the blood flows out from it, upon the brain: in this case, no treatment can be of any service.

Any impediment, however caused, to the current of the blood through the brain,—which thus becomes unduly pressed upon—destroys all feeling, and takes away all power to move the limbs.

See drunkenness. Stroke of the Sun.

ASTHMA.

In a fit of Asthma, open the bowels freely; cover the skin up very warm; put the feet in hot water, with some

flour of mustard stirred in it ; give ten grains of nitre every three or four hours, in a little water or gruel, until relieved. Very strong coffee is of use during a fit, and the steam of hot water may be breathed with advantage.

BILIOUS ATTACK.

The word bilious, is not a proper, but a very common term ; to express a train of uncomfortable feelings, arising from an oppressed and disordered state of several parts, concerned in the proper preparation of the blood from the food.

A person says that he is bilious, when his appetite fails, his head aches or feels heavy, he is unwilling to exert himself, and every little exertion becomes a great effort ; he is drowsy, and falls asleep after eating ; the skin is hot and dry, or unusually chilly ; the tongue is loaded, there is a bad taste in the mouth, with a dusky appearance of the skin, and a discolored eye. These symptoms, with other uneasy sensations ; such as pain in the limbs, or other parts ; point out what is termed a bilious attack.

The parts concerned in the digestion of the food, are disordered. The food imperfectly digested, not only acts poisonously on the stomach and intestinal canal, and is itself a cause of many of the feelings named above ; but, as the blood which maintains the whole body, and gives it all its vigor, is derived from the food : if the digestion be imperfect, and the several organs concerned in it, out of order ; the blood cannot be properly prepared and weakness and disease will follow sooner or later.

From too little exercise, from positive idleness, and from indulgence in food and drink, the system becomes oppressed and overcharged. An over quantity of nourishment is

floating in the blood: and in this state of repletion, it suffers some change. At such a time, the body is liable to be attacked with many complaints; of which colds, coughs, rheumatisms, and bilious feelings, are the most common.

A bilious attack appears to be the effort of nature, to get rid of something too much for the body. It is a hint at least, to abstain from oppressing it still more, and to allow it time to recover its impaired powers.

Abstain therefore, from a great portion of your daily food, take stimulating fluids very sparingly, and have recourse to a little calomel at night, followed by a senna or jalap draught in the morning. Do not live upon sloppy or bulky food; but, as the appetite returns, take a small portion of tender meat once a day. Do not indulge in any kind of drink; merely taking a very little of that sort you have been accustomed to, with your dinner.

Should any unpleasant symptoms remain, or any tenderness exist in the right side, on pressing under the ribs with your fingers; a few grains of blue pill, for two or three nights with a little rhubarb powder and ginger twice a week, in the morning, may be taken with advantage. The weakness remaining, may be relieved by a grain of quinine and a little ginger, in a pill, three times a day, for a few days.— See Liver complaint

BLADDER INFLAMMATION OF.

This disease is not of frequent occurrence, but it may arise from medicines taken for the cure of other complaints: as from large doses of Balsam, of Spanish fly, &c: or an inflammation in the passage of urine, may suddenly shift to the neck of the bladder.

The symptoms, besides general feverishness, are a pain

in the situation of the bladder, and towards the fundament: the pain is also felt at the end of the penis, and down the thighs; there is great difficulty and pain in passing the urine, which either comes by drops mixed with blood, or it is entirely stopped.

The full bladder, can both be felt and seen, as a round swelling at the lower part of the belly, immediately above the bone: there is a frequent pulse, with thirst, restlessness, and anxiety. After a full bleeding, give two grains of opium, and eight of calomel; and, waiting for two hours, you may give a dose of castor oil, and repeat it if necessary in three or four hours more—assisting the action of the physic by glysters. Apply hot fomentations of water to the lower belly, and between the thighs; and then, a large water or meal poultice. After the bowels are opened and no relief follows; give a glyster of a little warm water, with sixty or eighty drops of laudanum in it.

If after two or three hours more, there be no relief, and the bladder is much swelled with the urine; you must attempt to pass the flexible catheter.—(See Catheter.) This operation will be attended with some smarting; yet you must persevere, without using any violence; for the relief will be immediate, on drawing off the water. If the patient should be asleep, or perfectly free from pain; there will be no occasion for using an instrument. You may also give glysters of warm water and oil, which, if they do not come away, act as fomentations to the inflamed part. When the bowels are freely opened, you may give the antimony mixture to reduce the fever. Your patient must be kept quiet in his bed, and not suffered to take any food but gruel or something of that nature; and no drink but water, until the inflammation is gone off.

The complaint is most frequently confined to the neck of the bladder; and it is seldom that the symptoms are so severe as described above. You may do good by putting on a large poultice between the thighs, and sitting the patient in a tub of water, as hot as he can bear it; and this, in many cases, may be all that is required after opening the bowels.

Do not give stimulating, heating substances, which are said to cause a flow of urine; they may encrease the fever and distress.—(See Stoppage of the Water.)

BLEEDING AT THE NOSE.

When the bleeding is moderate, no notice need be taken of it; but when the bleeding is excessive, the face and lips bloodless, and the patient faint with the loss; it requires serious attention.

Apply cold water over the nose and face, cold to the back of the neck, taking the person into the cold air, yet keeping the feet and hands warm by artificial means; such as by rubbing, by bottles of hot water &c. Inject a solution of ten drops of creosote in a pint of water, through the nostrils; and get the patient to take a little in his mouth, and try to force it up through the nostrils from the opening in the throat. Raise the hand and keep it raised above the head. In case you do not succeed by these simple means, you must next try to put a plug into the nose. The blood comes only from one nostril: you make a long hard roll of lint, that will reach along the floor of the nose, and back to where the opening is into the throat; the floor of the nose and the roof of the mouth are upon the same level, so you must pass your plug in this direction, not upwards towards the forehead. You may conduct your plug backward, to

the end of the passage, by means of a probe. Any attempt to pass lint or linen, will be in vain and only fill the opening into the nose. If you dip a hard roll of linen in melted wax, when cold, it may be stiff enough to pass along to the back of the nostril. You must allow the plug to remain in three days, or more; and you must take care not to permit the patient to do any work; which may tend to cause the vessels to open afresh. Keep him on rather a dry and spare diet.

BLEEDING FROM WOUNDS.

It would be in vain, to attempt to stop the bleeding from a large artery by covering the wound with lint, or rags, and binders: they will quickly get wetted through. No spirits nor salves will be of any use. If any thing be bound tight round the limb above the wound; the limb will swell, and the pain be insupportable; and if long continued, the limb would mortify. You must put your finger in the hole; and then look out for the artery above, and apply a firm pad upon it. While the finger is upon the cut mouth of the artery, no more blood will flow out, and for the moment the man's life is safe: but this pressure cannot long be kept up, and you must look up your anatomy.

To obtain a competent acquaintance with the situation of some of the larger arteries, is not difficult; and after a little instruction, you must practise on yourself and others, so as to become conversant with the positions of blood vessels, both in fat and in lean subjects.

Consider what a great satisfaction it is, to be able to save the life of a brave fellow, which is fast ebbing away before you, along with his blood.

The artery that carries the blood to the upper extremity;

is first to be felt in the little hollow beneath the collar bone, close to the shoulder, on the rib. Here, before it dives into the armpit, you may press it against the rib, and stop the flow of blood. Now get some one to feel your pulse at the wrist, while you practise pressing upon this spot firmly with your thumb, or with a pad and piece of wood. While you press, the pulse will be stopped: when you cease to press, it will be felt again at the wrist. Try this upon yourself and others, until you get expert in the operation. It is not easy to fix any instrument here; it is all very well while you can keep up the pressure with the hand. You will next find the vessel beating on the inside of the arm; just on the inner part of the large muscle or flesh, which swells so much when you bend your forearm. There, about half way down, you find it beating against the bone; which at this place is very little covered, so that here, your pressure can be made with great effect.

There are instruments invented for the purpose called Tourniquets: one or more should be in every ship; and the manner of using it should be practised. (a)

Suppose a case of severe bleeding from a wound in the hand or arm: after placing the finger in the wound, on the opening into the artery; feel for the vessel as it runs over the rib; or in its course along the inside of the arm, from the armpit to the bend of the fore arm. Having found it; take a piece of wood, a knifehandle; any hard substance of about two inches long and one wide; roll it up in a piece of linen, and place it on the artery at the part described: take your handkerchief, or a piece of strong and wide tape,

(a) There is one which presses only on two points—on the pad, and outside the limb: this is the best instrument of the kind.

carry it round the arm over the pad, tying it on the outside of the arm; pass a stick through the loop, and twist it round, so as to bring a strong pressure on the pad, just sufficient to command the flow of blood through the vessel and no more; fasten down the two ends of the stick, so that the tape may not untwist, and you are safe from further bleeding, at present and have time to look round for a more lasting mode of pressure.

The object is, to press effectually upon the artery, and not upon any other part if possible. This is very difficult to manage. A good-sized firm pad you can make, and you may place stiff leather on the outside of the arm, so as to protect the flesh when you twist round the tape; and you may contrive something, to make the situation of your patient as comfortable as it can be under the circumstances.

The pressure on the pad may, be kept up with the finger from time to time; loosening the twist, to allow the blood to pass through the veins, and thus relieve the distressing feeling of tightness.

If you can manage to see the vessel the blood comes out of, by now and then loosening the pressure above, to shew you the bleeding opening; you may attempt to lay hold of it with a pair of tweezers, or the forceps; and pass a strong thread round it with a curved-needle, drawing the knot very tight. If you succeed, as in some descriptions of wounds you may; the tourniquet or twist may be loosened, and only kept in readiness to be tightened, if bleeding should return.

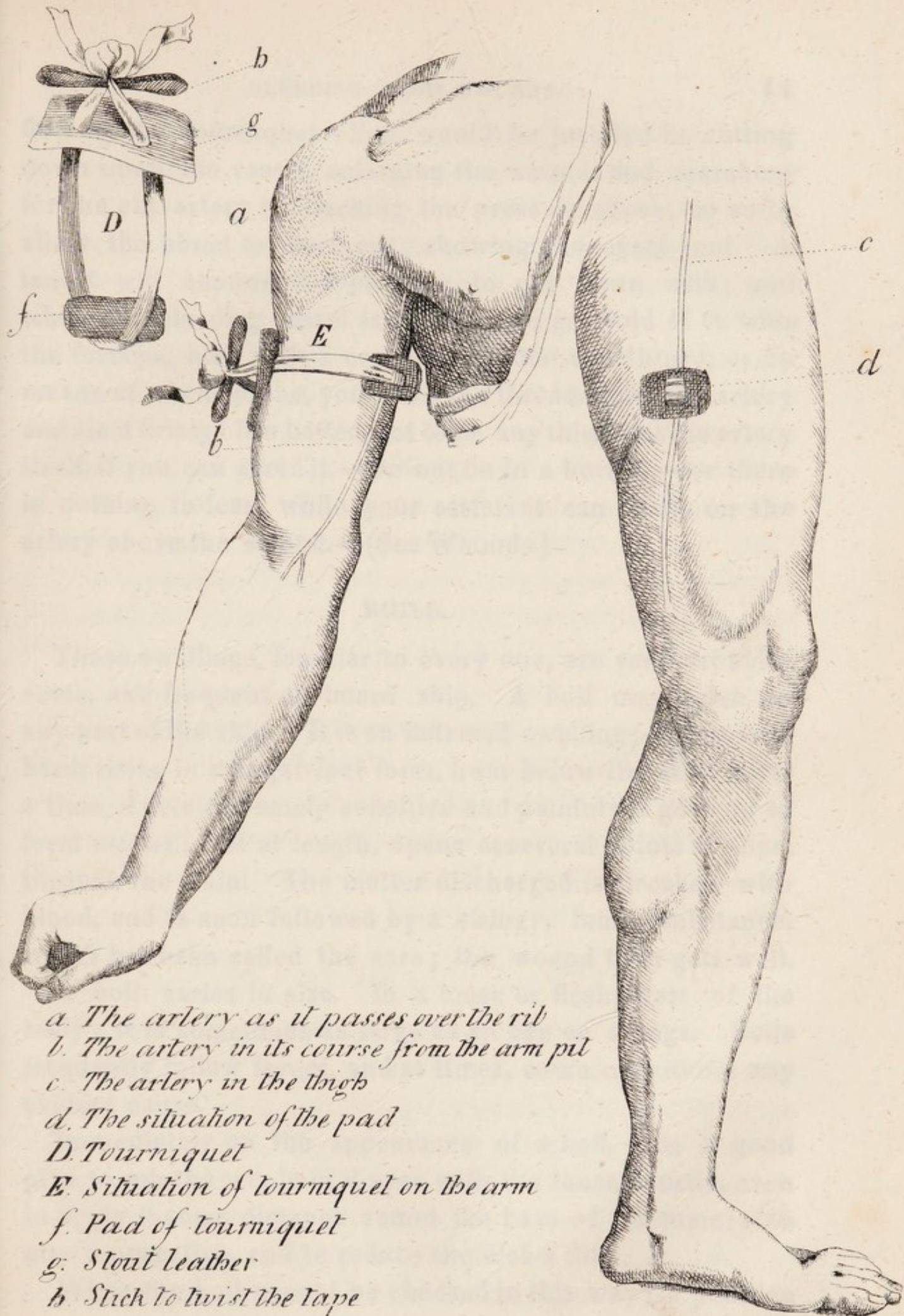
The rush of blood from an artery, is always very embarrassing and alarming: it prevents any accurate searching. If you cannot catch the spot from whence the blood jerks out, at the moment, you will not afterwards succeed;

for the vessel, if quite cut through, shrinks up amongst the flesh. Sometimes a curved needle, armed with thread, may be passed under the vessel and a portion of the flesh; when, by tying flesh and all together, you stop the bleeding for a time; or the success may be permanent.

In the lower extremity, the main artery passes from the body along the groin. You will feel it beating, about the middle space between the prominent hip bone, and the bone in front, over the genitals, called the pubis. In fat subjects, it is difficult to be felt. Here, press with a pad; or what is a good instrument and always at hand, is a large key, with some linen wound tightly round the ring. This pressure may serve, until you get the tourniquet on; and as you cannot put this on high up the limb; you must search for the artery as it runs down the inside of the thigh, slantingly, until it gets to the ham. You will find it against the bone, in the hollow between the masses of flesh, about the upper third of the thigh; from thence, slantingly, to half way down the limb the pulsation can be easily distinguished. A little practice will make you expert at finding the vessel. Having found it, you do here as you did in the arm. You must have a large and firm pad, to insure the command of the flow of the blood, and a stiff bit of hide on the outside, to prevent the pressure becoming insupportable. All bleeding from the leg and foot, will be commanded by pressure on the artery of the thigh.

A little blood makes a great show, but you must not be daunted by this. The man may faint from the loss, and this is the best time to proceed with your remedies; for while faint, the action of the heart and arteries is suspended or nearly so.

If from the situation of the wound you cannot stop the



a. The artery as it passes over the rib
b. The artery in its course from the arm pit
c. The artery in the thigh
d. The situation of the pad
D. Tourniquet
E. Situation of tourniquet on the arm
f. Pad of tourniquet
g. Stout leather
h. Stick to twist the tape

flow by the tourniquet: You would be justified in cutting down upon the vessel, enlarging the wound, and searching for the cut artery by slacking the pressure above, so as to allow the blood to start out, showing the exact spot. A lancet will answer the purpose to cut down with; and when the bleeding vessel is found, you get hold of it with the forceps, and with a crooked needle and thread, or by means of a bent probe, you pass the thread under the artery and tie it firmly: it is better, not to tie any thing but the artery itself, if you can avoid it.—Do not be in a hurry;—for there is nothing to fear, while your assistant can press on the artery above the wound.—(See Wounds.)

BOILS.

These swellings, familiar to every one, are very troublesome, and frequent on board ship. A boil may arise in any part of the skin. It is an inflamed swelling; at first very hard; rising in a sugar-loaf form, from below the skin. After a time, it gets extremely sensitive and painful; it goes on to form matter; and at length, opens at several points at once, through the skin. The matter discharged is streaked with blood, and is soon followed by a stringy, lumpy substance, which has been called the core; the wound then gets well.

A boil varies in size. In a loose or fleshy part of the body; it is sometimes as large as an egg or orange. Boils frequently follow fevers, and at times, come on without any evident cause.

Immediately on the appearance of a boil, it is a good plan to rub the whole of it over with the lunar caustic, even to apply it some distance round the base of the tumor: to give a purgative, and to reduce the diet a little.

When the boil cannot be checked in this way; a poultice

should be kept on the tumor ; encouraging it to come forward. The best poultice for this purpose, is, folds of wet linen, covered with a piece of oil skin or flannel.

When the boil opens, it may be gently pressed all round, to get the matter out ; and when the core is sufficiently separated, it may be drawn out with a pair of tweezers ; which operation, will forward the cure. When the inflammation has passed away ; any simple dressing, such as ointment of wax, or lard, may be used, and be daily changed until the sore heals. Rolling a bandage, with slight pressure, round a boil on a limb, when a bandage can be applied, is likely to be of service. On board-ship, the caustic will be found to save much pain and a long confinement.

It is not true that the humors are carried off from the blood by boils, and that it is therefore wrong to check them. You will do well to check them as much as you can ; and do not omit to give a little purging physic, if the man be robust ; but if the patient be a weak, unhealthy creature ; the quinine and better living, will be more useful to him than the lowering plan. Exercise to sweating, is a preventative of these tumors. They seem to prevail on changes of diet ; and in the bathing season, more particularly.

BOWELS INFLAMMATION OF.

The whole, or any portion of the bowels may be the seat of inflammation. The pain varies according to the situation of the inflammation ; whether it be the stomach, or any part along the whole course of the intestines ; or whether the lining skin or membrane of the bowels, or the covering membrane of them be the seat of the complaint.

Great variety of disturbance to the general health, is produced by irritation, and inflammation, mild or severe, of the

lining membrane of the bowels, called the mucous membrane. It is this disease, which is said to be so general a cause of fever in large cities.—See Dysentery. Bowel complaint.

The symptoms of inflamed bowels, differ greatly, according to the part which is affected. In inflammation of the outward covering of the gut, the pain is intensely burning and cutting, with great sensibility on pressure ; a catching in of the breath, and pain on the least effort to move the body. This inflammation is a disease requiring the most powerful, prompt, and active means to subdue it.

As general symptoms in this inflammation, you will find great tenderness and soreness of the belly on being pressed by the hand ; there is usually vomiting, great thirst, a frequent and weak pulse, confinement of the bowels, rarely a looseness of them, heat of the skin, dry tongue reddened at the edges ; the bowels are distended with wind, and there is a restlessness, and indescribable uneasiness about the patient.

In active inflammation with great tenderness, the general practice is to bleed largely, and observe how the patient bears it, and if the pulse beats more fully and freely, it has given a marked relief. On any return of pain, bleed again, and give two grains of opium ; which you may repeat in two hours, if the first dose do not produce a complete state of repose : join with it six to ten grains of calomel ; apply a blister all over the belly—or the turpentine fomentation.—(See formulæ.) After a time, give injections of oil and warm water ; and repeat them until the bowels are relieved.—When the stomach will retain it, you will find that two teaspoonfuls of oil of turpentine, with three of castor oil, given in a little warm sugar and water, of great use in inflammation of the covering membrane of the bowels: it not only

carries off what may be in the bowels ; but it brings on perspiration, and generally soothes rather than irritates. If there be a purging, you may inject a little thin arrowroot, with twenty drops of laudanum. Any remaining pain may be relieved by smaller doses of Opium, of a quarter of a grain at intervals. The thirst may be calmed by toast-water; and where ice can be got, by ice-water; or by common water. Of course, eating is out of the question; and when food is allowed, it must be given in the most sparing and cautious manner.

You will have to distinguish this disease from colic. In the last, the pain comes and goes; is of a wringing, twisting description, and is relieved by warmth, and by pressure of the hand.—(See Colic.)

Frequently, inflammation succeeds an attack of colic or of obstinate costiveness: so that the complaints run imperceptibly one into another. When the pain is continual, and the tenderness over the belly very great, and increased by pressure, with heat, and other symptoms of fever; treat the case as for inflammation. The water poultice all over the belly, kept on with a binder from the first, may, if persevered in, be the best outward application.

BRAIN, INFLAMMATION OF, OR BRAIN FEVER.

Is a fever attended with inflammation of the coverings of the brain, or of the brain itself. Delirium of a violent kind usually accompanies it. There is a great dislike to light and sound; there is a sensation of tightness and weight in the head, as if the brain were bound round with a cord. The eyes are blood-shotten, there is a ringing in the ears, with a hard pulse; a starting of the muscles, and frequently, convulsions.

There are several forms of brain inflammation; according to what part within the skull is attacked: the symptoms differing whether the brain itself or its coverings be the seat of disease.

The violent stage of inflammation of the brain does not continue long, but goes on to the second stage, when instead of delirium, there is insensibility: the pulse becomes weak, and irregular; the face is pale, the eyes sunken.

If you expect to do any good in this complaint, it must be done in the first few hours. You attack the disease with a great deal of vigor; you must take away blood to fainting: you must shave the head, and apply cold water to it, keeping the linen continually wet. Give ten grains of calomel; and in a few hours after, give purging physic, as a drop of croton oil, and repeat it every two hours until it works freely. The only drink to be allowed is water.

If the inflammation still continues, give the tartar emetic mixture, or five grains of tartar emetic in two ounces of water by way of glyster; repeating the dose with the view of lowering the pulse.

The patient must be kept perfectly still; not the smallest portion of any thing of a heating nature should be given; and when he is convalescent; the greatest caution must be used, to keep away any thing that may rouse or excite him; giving food most sparingly. You must watch closely between the stage of fever, and that of sinking; for you will now do harm in carrying your active measures any further, and must give opium to quiet the nervous system. A quarter grain of opium, given at shorter or longer intervals, according to the benefit derived from the drug. You may, if there is much insensibility, apply a blister to the feet, and keep the body and feet very warm, by wrapping them up in blankets and hot water, frequently changed.

This complaint must be distinguished from the delirium with trembling, of hard drinkers.—(See article, Drunken Delirium, and Drinking.) It is of the utmost importance to discriminate between these two complaints: for the practice that is proper for one, would destroy life in the other. Inflammation of the brain is a rare complaint, delirium from drink, is a very common one.

Enquire into the habits of the man, and how the disease came on. See if there be any trembling of the hands, or tongue; coldness in the extremities, or wet clammy sweats.

In inflammation of the brain, there is pain in the head, and hot skin. When the disease is established, the patient cannot be roused to give a rational answer to any question. In the delirium of drunkards, there is no pain, no complaining of the head. The extremities are not cold, but sweaty. The delirium is occupied about trifling affairs. The patient is easily put away from his intentions; and is to be managed without difficulty. Occasionally he will answer questions rationally. There is restlessness; and always a trembling of the hands, and a faltering of the tongue. You must enquire about the history of the case before the approach of the disease. A man may have been drinking hard before an attack of brain fever; but by a little reflexion, and by enquiring into the patients conduct and manner, for some time before the attack, you may generally gain a proper understanding of the nature of the case.

BROKEN BELLY.

See Rupture.

A BRUISE.

A blow with a blunt instrument, or a fall, produces a bruise. The blood escapes out of the little torn arteries,

and gets into the cells under the skin, giving to it the appearance of blueness or blackness.

The force may have been so great, as nearly to kill the flesh, which may be long before it recovers its power and color. If much heat and swelling come on; apply rags wetted in water, wetting them frequently; or cover many folds of wet cloth with a piece of oil skin, as a poultice. When the inflammation and heat have gone off; you may apply your liniments to strengthen the weakened part: as apodeldoc, oil and hartshorn, &c. you may roll up in a bandage as described for sprains, with much benefit. Of course, the part must be kept at perfect rest.—(See Sprains.)

A BUBO.

A swelling of some of the glands or kernels in the groin, is generally known under the name of a bubo. Many causes may produce a swelling here: any sore, or broken skin on the lower extremities, or on the buttock, will sometimes be followed by such a swelling. A gonorrhœa will produce one; so will any common sore of the penis: but it is only to be considered as venereal, when it arises from a real venereal sore existing on the penis, or in parts adjacent.

A swelling in the groin, will subside most generally, on the removal of the cause of irritation; if it depend on clap; cure that: if on a sore; heal it, whether a venereal one or not.

From whatever cause it may arise, you must treat it as you would a swelling with pain and inflammation in any other part. Of course you keep the limb at rest; for the continual motion of an inflamed part, cannot be for its advantage. You give physic, to clear out the bowels; you lower the diet and drink to one half the usual quantity; and you keep a fold of wet linen continually on the inflamed or

enlarged gland, which you wet frequently, so as to keep down any heat there may be in the part. If the swelling arise from gonorrhœal heat and irritation, the means you employ for the cure of that affection, will probably remove the swelling.

Now any description of sore such as piles, chilblains, scratches or ulcers on the leg, are occasional causes of a swelling of the glands in the groin. In persons of a bad habit of body, as in scrofulous subjects; the swellings become obstinate, break, ulcerate, and require long and judicious management.

If, in spite of your attention, you find that the swelling goes on towards forming matter in it, looking red, and getting soft; you must apply the water poultice covered with oiled-silk, or one of linseed meal; which you may change, or warm up from time to time, every four or six hours. The skin will get thinner and thinner; it will open at length, and you will press out the matter; apply your poultice, or carefully cover it with a piece of cotton wool, kept on with a soft handkerchief round the thigh and waist. Keep your man from work, and on one third diet.

If the sore at the groin does not heal readily, dress with the strong precipitate ointment, and set your man to work and sweat, and increase his food.

If you are satisfied of the venereal origin of the first sore; you should give mercury, and continue it, while the wound in the groin is doing well: but if it look ill conditioned, and do not fill up from the bottom with new fleshy points; nor begin to close its edges and get less: you must leave your mercury, purge the patient, and look strictly to his diet. If he is pale and flabby, order him some strengthening medicine or a little more stimulating food and drink; amuse

him with light work, and encourage him to be cheerful. The blood in this case is badly made, and has no power to repair the loss: weakening physic will do harm. You may try a little quinine as medicine, and the solution of hydriodate of potass according to the formula No. 17.

In case that any eruption on the skin, any sore throat, with an ulcerated state of it, arise after a venereal sore; it will be proper to touch the sore in the throat freely with caustic, and to give the hydriodate of potass, three grains three times a day. A very moderate diet is to be allowed; and the man should be set to work, and his skin be kept very warm.

If these measures fail, give a blue pill in addition, night and morning, until the symptoms yield. Neither wine, nor spirits to be allowed, and very little fluids of any kind.

BURNS AND SCALDS.

These are alarming accidents, and require a good deal of presence of mind. They only differ as to the extent of mischief done. The burn may be very extensive, but confined to the skin, or it may be of very little extent, yet deeply destroying the part to which the heat is applied.

A scald extending over a great portion of the body, is more serious than a burn which is of less superficial extent, yet deeper.

The following plan in deep or severe burns, is recommended. On ship-board, you have always a pitch-pot at hand; which place on the fire, and when melted, not to be scalding hot, dip a bunch of feathers in it, or a piece of oakum; and smear it over all the burnt surface of the skin, and thus keep putting on layer after layer of pitch, or of tar and wax, until you have a thick coating on the burnt part. The pain

will quickly subside. Wax and oil of turpentine is also a good remedy; and may be applied the same way. The proportions of the ingredients are not of consequence. Rosin and turpentine, or tar, and any stiff mixture of this kind. Also a thick soap lather, laid on with a shaving brush, layer upon layer; seeing at every time, that all the affected part is completely covered with the soap. In very slight scalds, cotton-wool is a good covering.

The patient should be put on low diet; and you must open the bowels by some cooling purgative. The wounds are to remain covered in the manner described; and if the covering fall off in any place, it is to be renewed. The intention of covering completely, is to defend the wound from the action of the air; and the substance that best effects this object, is the most proper application. With many healthy persons, this one application is sufficient, and the skin heals underneath without any further dressing; the cover coming off like a natural scab, and the new skin appearing below. Generally, however, matter forms under the covering, and oozes out, or loosens the artificial scab, and it comes off; in which case, perhaps the best dressing is diachylon plaster, spread on a broad slip of linen; or common wax ointment, secured by a fold of linen and a bandage; when one can be applied.

The bowels must be kept moderately open during a cure, and when the pain and inflammation have subsided, the patient may be allowed a better diet.

There is sometimes so great a shock given to the system on meeting with an accident of this description; that it may be necessary to give a cordial, such as a glass of spirits immediately, or a dose of laudanum; but this must not be repeated.

There is a great liability in the skin to contract and pucker up, so as to produce a deformity, by drawing up the two extremities of the burnt part towards each other. For instance, if the burn happen to be on the fore-arm, the hand and fingers may be contracted: if on the neck, the chin may be drawn down upon the breast. These are frightful deformities, and may generally be prevented by a little attention in the management of the case. The patient should not be allowed to give way to any one position; the burnt part should be gently exercised, and drawn out; and even confined with some mechanical contrivance and a bandage, in order to overcome the tendency to contract.

When the wounds are deep and discharge a great deal; you will be obliged to keep up the strength by a pretty good diet; and a little wine or spirits should be allowed.

The wounds in severe cases, where there has been great destruction of flesh; are to be dressed with lint spread with wax or tar ointment, and changed twice a day; using a little pressure over the dressings. Any cores or dead skin should be removed with a pair of scissors. If the new flesh look pale and flabby, rising above the level of the surrounding skin; it is to be rubbed with caustic, or dressed with a little red precipitate ointment; or more tightly pressed to keep down the unhealthy fleshy points. Wounds from deep burns, are usually very tedious to cure, when the constitution is unhealthy.

CHILBLAINS.

The boys on board in the winter, may be unfit for duty from chilblains. The toes or fingers are swelled, hot, and itching. In this state, slips of linen, wet with cold water, or vinegar and water, should be bound round each finger or

toe that is inflamed, and continued during the period that the heat is more than natural. At night, the application is still more useful. Do not fear giving cold. While the itching, and heat or redness are there, cold applications may be continually used.

When the heat and itching go off; wrap the foot or hand in some cotton wool, which is a sort of dry poultice, and will be very soothing and pleasant.

Should the chilblain break, dress it with a little wax ointment, and cover well with cotton wool and a bandage. Warmth is the only thing necessary to cure a broken chilblain; cover it closely from the air, and keep it always warm. It will heal immediately, whereas by wet, cold, and neglect; it may spread, and become most tedious to cure. When the heat is more than natural you apply cold; and when lower than natural, you apply warmth.

CHILDREN'S COMPLAINTS.

The greater part of the complaints of children, arises from bad management. Some very robust children nothing will kill. However indulgence may tend to destroy them, their vigorous life resists the attempt. When children teethe, and have not a good breast of milk, they are very apt to be ill. The food does not digest well, a feverish irritation in their system is begun, the appetite fails, or is irregular; they are factious and cry, do not rest calmly at night, they become thin, and flabby, and the bowels are disordered.

Food at all times and of the most varied description, loads the stomach, and passes half digested into the first passages: here it frets and distends the intestines, which hurry it off, and at length, it is expelled from the body; but not before having been the cause of much uneasiness and fever.

No sooner has nature succeeded in getting rid of one mischief, than she has to exert herself to get rid of another: another mass of food is to be expelled in the same way. At length after repeated abuse; the strength of these organs is lessened, and a continual low fever, is followed by emaciation, and constant looseness of the bowels; the lining of which is in a state of low inflammation, tending to produce various settled diseases.

Much nourishment is necessary for children: their bodies are in a state of continual growth; the food is rapidly made into blood, from which all parts are formed. This fluid in children being full of nutritious matters, is exceedingly apt to be acted upon by the causes of disease: as we see, how very liable children are to take those complaints which occur only once during life.

The stomach becomes so impaired by bad food, or over indulgence; that instead of nourishment being the result of feeding, emaciation is often the consequence.

Learn to distinguish between an abundant supply at proper intervals, of good wholesome food; and cramming and stuffing a child at all hours. The meals should be taken at regular periods: nothing whatever being allowed between them. Very young children require food every four hours, others about three times a day. Children that are pampered require a great deal of clothing; for they are cold and chilly, so are those whose food is bad and too scanty.

When a child is ill, you can rarely do wrong to clear out the inside. A little emetic, will frequently reduce the fever and distress. If the skin is burning hot, calomel at night will be an excellent medicine.—(See Calomel.) Rhubarb and magnesia is a good physic. So is castor oil or senna with manna.

Children are kept well by cleanliness, full exercise, and regular feeding; and by nothing else.

Almost all the inflammatory complaints of children, may be treated with the antimony mixture, to reduce the pulse. Do not go on with it after the child is pale and cool, it is a medicine to be closely watched.

Be careful how you give opiates to young children; they produce greater effects in proportion, than on grown people. Blisters should remain on but a short time, two or three hours only. It is well to apply a piece of thin muslin between the blister and skin.

To sum up all: the treatment of children's complaints in the early stage; may consist, in the judicious administering of a few simple remedies. Such as—A gentle emetic.—A dose of calomel with some other purgative.—The antimonial mixture, with occasional doses of the carminative mixture. A blister.—The warm bath.—Lancing swelled and inflamed gums while teething.

The operation of lancing the gums, is very simple. When you perceive the gum to be swollen; make a cut in it down to the tooth, which you will find your instrument come upon; and then make a second cut, at right angles with the first, so as to form a cross: you may do this with a very sharp pen-knife, placing the child's head upon your lap, and guarding the child's lips or tongue with your fingers, from being wounded by the instrument. It is an operation without any pain; the child cries from apprehension only.

Colicky pains and wind in the bowels are relieved with the carminative mixture, or a few grains of rhubarb and magnesia, followed by the carminative: and looseness, by clearing out the bowels, and afterwards giving a carminative, with one drop of laudanum occasionally.

Children generally enjoy good health during a voyage. They risk an occasional indigestion from the indulgence of all hands; who pet and give them all sorts of things to eat and drink which are improper for them; but the continual motion, together with the bracing air, are very salutary to young persons.

CONVULSIONS.

Is one of the most alarming complaints to which young children are subject. The insensibility, the spasmodic twitching, stiffness or contraction of the limbs, the staring or rolling of the eyes, &c., point out the disease. The immediate cause, is some irritation of the brain and nerves, arising either from difficult teething, bad breast-milk, or indigested or improper food.

The child should not be bled, as is too frequently the case, unless it is very robust and full:—nor is the hot bath of much consequence. Give an emetic if it can be got down, and a glyster with oil, salt and some assafœtida, if any be ready; if not, add a drachm of spirits of turpentine to the glyster: chafe the body and limbs with the hands: apply cold water to the head: and wring a large flannel out of hot water and apply it all over the body and limbs; renewing it from time to time as it gets too cool. This is the best kind of warm bath. A blanket will preserve the heat for a long while. Get the bowels open by a proper dose of physic, and look to the future food and management of the child. If there is any continued head affection, it is more likely to be the result of, rather than the cause of convulsions.

Some affection of the head is very liable to follow any lengthened disorder in children: and you must be always on the look out for any thing strange in the manner of a child

that is not quite well. Any fever that comes and goes off, and leaves the child feeble. Any drowsiness or hanging of the head; unusual screaming, or starting; sighing, and appearing at times as if quite lost. Immediately in such a case, proceed to clear out the bowels; and be extremely cautious to give only a little nourishment at regular periods. Bathe the feet, and keep the head cool.

HOOPING COUGH.

Hooping cough comes on at first like a common cough, but at length it is attended by a whooping sound in drawing in the breath: the cough is frequently followed by vomiting: after the cough the child feeling quite well. The danger consists, in the air passages becoming inflamed and loaded with mucous or slime; preventing the play of the lungs, and the entrance of the air into them.

In the first stage of hooping cough the child should be kept warm, and a few grains of ipecacuanha given as an emetic, and a dose of calomel at night. The antimonial mixture may be also given and repeated at intervals, if there are inflammatory symptoms present; such as great difficulty of breathing, hard cough and pain in the chest, with great heat of skin. A warm bath also may be used, and one, two, or three drops of laudanum, according to the age, given occasionally at night. A blister may be put on over the chest: or what is better, on the back, high up between the shoulders, remaining on for two hours.

After the inflammatory stage, keep the child upon a regulated diet; rub the back with some strong liniment, night and morning; and let it breathe the open air, clothing very warmly. In mild cases, little is required to be done. Hooping cough differs from croup, by coming on in fits; and the noise occurs only during the coughing.

CROUP.

Croup is an inflammatory complaint, attacking the lining of the wind pipe, and air passages. You must not lose the first few hours, or your efforts will be of no avail; so rapid is the progress of this disease.

A hoarseness is followed by a hardness of breathing; in which, the noise is likened to a sort of crowing; the cough has a brassy sound. Push the antimonial mixture to any extent, giving a dose every ten minutes: the object is to lower the pulse, reducing the inflammation in the air pipes. Rub the throat outside with six drachms of soap liniment, and half a drachm of croton oil mixed together, give a large dose of calomel, and then purging glysters. This is a complaint which creeps on stealthily. When a child has a rough cough and some hoarseness, at a time when the complaint is general; treat him as if he was going to have the disease, keep him confined from cold air, take away his food, give a gentle emetic, and clear out the bowels with a dose of calomel.

It would seem scarcely necessary in every case of cough and hoarseness, to do all this; but when this disease is very prevalent, it is a safe plan to consider the illness as likely to turn out a case of croup. When the child becomes cold, pale, and apparently sinking; you may give a little warm wine sweetened, you can do no more. If the child dies, it is suffocated by the choking up of the air passages. This complaint is most common in cold and damp situations.

CHOLERA.

Violent cramps in the bowels, with vomiting and purging, is a very common complaint; particularly in hot weather; and may arise from various causes.

The skin may be cold, the purging loose and bilious, the thirst excessive, the pulse weak, the urine stopped or very little in quantity; cramps in the extremities, the face is shrunk, and the look distressed.

As nothing that that is bulky will remain on the stomach, you must give your medicine as a powder or pill; and the best medicine is calomel in a large dose. Large doses, act by quieting the stomach; and stop, rather than increase the purging in cholera. Join with ten or fifteen grains of calomel, one of opium; and if the thirst continue intense; give cold water freely, and the soda effervescing draught occasionally. If the first dose of calomel and opium does not succeed in relieving the pain and purging, you may repeat the dose of 10 grains of calomel and one of opium. Apply hot turpentine fomentations all over the belly, and rub the cramped extremities with warm oil.

THE EPIDEMIC CHOLERA.

The Indian or epidemic cholera, from its prevailing as a sort of pestilence, is a disease of a most fearful description in its more severe forms.

In general, the Indian cholera is proceeded by a loose or uneasy state of the bowels, for some time previous to the attack. When the disease is prevailing, it is this looseness that you must consider as the disease; for every looseness of the bowels at such a time, may suddenly become cholera. A dose of purging physic has often brought on an attack. No one during the prevalence of this disease, should

take purging physic; as you know not how far the purging may go. A little rhubarb and magnesia with a few drops of laudanum, is the only medicine of an opening nature that should be ventured upon.

At times, cholera comes on instantaneously; without any warning. A man shall be furling sails, apparently well; and he will be obliged to be lowered down from the top, and in a few hours may be lifeless.

The disease begins, by the vomiting of a large quantity of watery fluid from the stomach, and a looseness of the bowels, as if the whole of the inside was about to be discharged into the bucket. These discharges are likened to rice water, and consist chiefly of the serum, or whey, or watery part of the blood. Crampy pains in the calves of the legs and hands come on; the face is shrunken, and becomes of a dark or bluish tinge; the fingers are cold, and look as if they had been soaked in warm water: the skin is cold and clammy, the breath and tongue cold, the pulse frequent, very weak, and at last scarcely to be felt: there is an excessive thirst, a feeling of inward burning, although the body is cold to the touch. The voice is hollow or feeble, and no urine is discharged.

In the treatment of this rapid and formidable disease, you must be bold; and if calomel is of use in any disease, it is wonderfully so in this. No dose less than twenty grains should be given; and this may be repeated every half hour for several times, if the vomiting and purging continue. Now it is of no use to do anything when your patient is cold and without a pulse, his countenance slate colored, and his eyes sunk in their sockets. Medicine to a man in this state, is quite inactive. Of twenty patients in this state, more will recover, if left quite alone and abso-

lutely quiet and motionless with cold water to drink; than of twenty treated in any other manner. Hot applications, rubbings, blisterings, baths, are all useless if not harmful.

In these desperate disease opium may be given at *first* with advantage. Give thirty drops of laudanum with the two first doses of calomel; and then go on with the calomel without the laudanum. As the vomiting ceases, and the pulse and warmth of skin become more natural, you may cease giving the calomel, or only give an occasional dose.

The patient may be allowed to drink freely of water, and as cold as it can be procured; or salt water, while the vomiting or stomach sickness continues. The sick in this disease, complain of heat, although the surface of the body feels cold: there is sometimes a copious cold perspiration.

The calomel rarely produces any salivation, and delicate persons can bear the largest doses, without it producing those effects, which it would, at any other time. The vomiting and purging may cease as the blue stage approaches; and it may be useful to arouse the patient by an emetic. The very best for this purpose is flour of mustard, a tablespoonful or more in a little water. If a state of stupor and drowsiness exist, with a pulse scarcely to be perceived; try the effect of brandy and water—a wine glassful of hot brandy or rum and water; see how the man bears it, if it appears to relieve him, give more, as long as it appears to do good.

A very dangerous state often succeeds an attack of cholera. Fever, with an inflamed state of the lining of the stomach and bowels: the skin is hot, the tongue brown, furred, or deeply red at the edge; there is great tenderness at the pit of the stomach, with other symptoms of stomach fever.

In this case, you will have much difficulty to save your patient: you must give nothing heating or violent; a little sugar water or weak lemonade: no food but gruel or arrow root: when better, weak broth; and these in very small quantities. If any drowsiness exist, apply a large blister to the back of the neck and down between the shoulders: a little orange juice may be taken, or any other ripe and juicy fruit. Poultices to be applied all over the belly: of simple water covered up; or a turpentine fomentation; or a blister. The treatment must be, as if the lining membrane of the bowels was severely inflamed.—(See Bowels, inflammation of.) The fever and inflammation may gradually give way; but the termination of a fever which follows cholera, is generally fatal.

Remember, that nothing but what is very light, in the way of food is to be ordered; such as sago, arrow root, or rice boiled to a jelly; and after some days, weak broth with a little pearl barley or rice in it, seasoned with salt. By slow degrees, giving what the stomach will bear, your man may return to appetite and health. The symptoms of cholera, are so like those from poison; that it has been a popular notion in many states, that poison has been purposely mixed in the people's food or water, for their destruction. In poisoning, the vomiting is of a different kind, it is bloody and frothy, with the mere contents of the stomach or a little mucous and phlegm: in cholera, the vomiting and purging is of a light watery substance, like rice or barley water, with a fetid faint smell. Cold water to drink is all you need give to a man in the blue stage; and do not apply heat to such a patient. Cholera patients abhor heat, all they cry for is cold; ice cold drink. Here nature seems to point the way, do not oppose her. In this complaint the whey,

or watery part of the blood, is poured out from the blood-vessels into the stomach and bowels ; the thicker part of the blood only remaining, which looks very dark colored, and is of a treacle like consistence. (a) Bleeding has been recommended in this disease ; but it is clear, that taking away blood, will not make that which remains any thinner, or fitter to support life. It would be far more reasonable to put blood into, rather than to take it from the body. Try pint injections of salt and water frequently : and give cold water only, or salt and water to drink. By this plan, you give nature an opportunity of taking up, what may thin and dilute the thickened blood, and enable it to flow through the veins. Brandy, and stimulating spices, and things of that description, have been given in large quantities ; and at times, have appeared to succeed : but after the long experience we have now had ; calomel, in a very early stage of the complaint, and in large doses, is pronounced to be the best remedy known.

If cholera break out, go to sea immediately, and change both your latitude and longitude. Or if on shore, remove to elevated ground, and avoid the ground floors of dwellings. When cholera prevails, do not change your ordinary diet in any particular ; but lessen it considerably : nor should you leave off entirely, any habit to which you have been accustomed. Exercise and employ your people, amusing them with games ; and sleep them under cover.

(a) It is the return of this altered blood into the circulation, which is the cause of the bad character of the fever after Cholera.

COLD OF TEMPERATURE.

Men may be exposed to severe cold, and be frost-bitten. If on shore and surrounded by snow, you must protect yourselves from the wind, by constructing a hut of snow.

A snow building is comparatively warm, and with furs, or boards, or matting, placed upon the floor, so that the body may be kept from touching the snow, you will be more secure from cold than you would expect.

In intense cold, great drowsiness comes over you; an almost irresistible desire to sleep; but beware of giving way to this, for if you do, the probability is] that you will never again awake.

A limb or extremity, such as the nose, the fingers, or toes, may be frozen, and as the feeling of the part is gone, the sufferer is not aware of it, and may lose the member, if great caution be not observed. The method to be taken, is to rub the frost bitten part with snow, or to pour cold water on it; thus gradually thawing it. If you use heat, or fire in any shape, the death of the part is almost sure to follow. When a deep redness is observed in the line between the frozen and the sound parts, and the pain becomes very great; a mortification, or death of the frozen place is the consequence. When mortification has taken place, all that you can be expected to do, is to dress the sound part with lint or linen twice a day; until you can have proper medical assistance, to separate the dead flesh from the sound; or if necessary, to remove the limb.

A COLD.

Is a train of unpleasant feelings; supposed to arise from exposure to cold when warm; to a draught of air; to any cause which suddenly, and for a long time, lowers the heat of the body.

Catching a cold, is followed by chilliness, sneezing, a sense of fulness over the eyes, a running at the nose, a sensation of cold down the back: towards night some feverishness comes on. This is the common cold in the head, which every body is familiar with.

Generally, when a cold be caught; if the person would lower his food, and almost abstain from any sort of drink; increasing his exercise into labour; nine times out of ten he would be quickly well.

All the inside of the nose, and some cavities above it, on the forehead, are lined with a membrane which is very full of blood vessels and nerves. The same membrane is continued down the throat, through the windpipe, and into the lungs: so it is easy to see, how any complaint in one part of this membrane or skin, may extend throughout its whole length. The mouth, stomach and bowels, are also covered inside, with the same sort of lining membrane; and there is the most intimate connexion between all these parts; so that any disorder in one part, is communicated to the other more distant part, very easily.

Probably, most colds and coughs, depend upon some inward cause; a disordered or overcharged state of the blood. On the closure of the pores of the skin by cold; the fluids or humors which escaped by this outlet, are turned from their course, and thrown suddenly on the mucous, or lining membrane of the nose or throat: fretting these, and giving rise to the complaint called a cold. The same causes may produce fever, rheumatism, or bowel complaints: whenever a weakness exist in any part, that part will be more likely to suffer.

The cold or disagreeable feeling in the nose and head, creeps down the throat and into the windpipe; then there

is a cough, a hoarseness, or a sore throat; the sense of taste and smell are lost, or imperfect. Frequently there is some deafness, caused by the inner passage to the ear being stopped up by the swelled lining membrane.

If the irritation be not checked: the wind-passages, and cells of the lungs become affected; and then we have an inflammation, of more or less of the inner lining of the large and small branches of the air pipes: with this, there is difficulty of breathing, a stuffed feeling in the chest, and a painful cough.

When arrived at this length, it is in vain to think of forcing the complaint away by exertion; you must use remedies, and these must be pretty active ones.

If there is head ache, and much fullness of pulse, blood taken away, according to the strength of the patient, will generally do good. Give a dose of eight grains of dovers powder, with four or five of calomel at night; put the feet into hot water with mustard in it, and cover up close in bed. In the morning, give a dose of opening physic: after the operation of which, you may continue to give dovers powder, three grains; and ipecacuan powder, one grain; every four or six hours, according to circumstances: or you have a powerful medicine in tartar emetic, one and a half or two grains of this, to be dissolved in half a pint of water: of this solution, one table spoonful, (half an ounce) is to be given every hour, until it relieves the tightness in the chest and the cough. In some cases, you may be obliged to give the medicine in very large doses before it takes effect, but this is rare. You will lessen the dose, as sickness comes on; still continuing it, as the stomach may bear it. When the symptoms of inflammation and fever pass off; you may allow a little more food, and procure sleep by giving an opiate at

bedtime; such as a dose of dovers powder of six or eight grains, or twenty drops of laudanum. Any pain remaining, may be removed by a blister over the seat of pain; or a warm pitch plaster, on which a little tartar emetic has been sprinkled.—(See Influenza. Lungs Inflammation of.)

COLIC OR CRAMP IN THE BOWELS.

Generally arises from something which has disagreed with the stomach, and has passed into the bowels undigested: or from obstinate costiveness: or from bad bile formed by the liver.

The pain comes on at intervals, and is of a crampy character; the bowels are twisted, as it were, into knots; and the agony, during each crampy attack, is extreme. Frequently, vomiting accompanies the pain.

The first thing to do, is to allay the cramp or spasm; before which, all efforts to remove the offending substance from the bowels, will be in vain. This also must be removed sooner or later, as it is evident, that the cure must mainly depend on getting rid of the offending cause.

First then apply heat to the bowels; hot water with flannels, bottles of hot water or hot salt, or any thing at hand; then give a dose of laudanum, together with a dose of calomel. The laudanum may be given thus: twenty drops every hour on sugar, or in a little water, until the pain is allayed: and you may give with the first dose, six or eight grains of calomel; when the laudanum has quieted the cramp, the calomel will be acting; and after a time, the stomach will bear some other purgative, as colocynth pills, or tincture of rhubarb.

Purgatives without opium, will frequently increase the complaint. Bleeding, if the man be very strong, and the

cramp violent, may be necessary; as taking away blood will allow the medicines a better chance of acting on the body, and tend to prevent inflammation coming on; which is liable to follow severe colic.

In case the bowels and stomach are distended with wind, you will do no good by applying heat to them; for the effect would be to increase the swelling and distress. You may easily find out if the pain is from wind; for you have only to strike with your finger on the belly, and the sound it gives, combined with the size of it, will inform you of the nature of the colic.

If the cramp continue, apply over the bowels, a flannel wrung out of hot water, and on this pour spirits of turpentine to wet the flannel, covering all up close. The effect of this will be, to cause a general heat and burning over the whole surface of the belly, and to take off the cramp within. In case the pain continue after the remedies here prescribed, you may give injections with assafœtida or spirits of turpentine, repeating them occasionally. Thus opium, purgatives at intervals, in not too strong doses; glysters, and oil of turpentine fomentations to the bowels; will be your principal means of conquering an attack of colic. Popular remedies, such as brandy, or rum and pepper; and articles of this description, are dangerous; they will do much harm, if they do not do good, and if the complaint should be inflammatory, they will certainly increase it.

You must learn to distinguish this complaint from pain arising from a rupture or broken belly as it is called.

In rupture, if a very recent one, you will observe a swelling, just where the seed vessels called the cord, go out from the belly to the testicles. You may trace this cord up to the opening, with your finger and thumb, on either

side of the bone that lies above the genitals. If you feel the vessels entering quite freely through the passage for them, and no fullness on one side more than on the other, nor any pain from your pressure or handling; you may be pretty sure that there is no rupture. If a rupture, be of long standing and large, there will be no difficulty in distinguishing it. In rupture; the pain is of a deadly sickening description, and continual: whereas in colic, it is violent; and if it does not go away entirely at any time, yet the fits of pain recur at intervals with greater force. You also distinguish it from the pain of inflammation; because colic is more sudden in its attack; because it comes on in fits; and also when you press on the belly, in colic you give ease; but in inflammation pressure causes great pain.

CONSUMPTION.

See Appendix.

CONVULSIONS.

See Epilepsy. Fits.

COSTIVENESS OR CONFINEMENT OF BOWELS.

With some persons the usual state of the body is a confined one: particularly so with those who lead an inactive life. Such people should live more upon a vegetable diet, and be very regular in their food.

This habit of body should be remedied in time, otherwise, the bowels become so sluggish, that they never act without the assistance of drugs or glysters. Persons should make a point of going to evacuate the intestines daily, at a certain time:—by this means, regularity is often brought about. Strong doses of purgative physic relieve for a time, but the body is always more confined afterwards, and you are obliged to increase the dose to produce an effect; until at

length, opening medicine has little or no power upon you. It is much better to suffer a considerable inconvenience from costiveness, rather than be continually taking drugs.

A very successful mode of encouraging the bowels to act, is a few grains of Rhubarb just before dinner; which does not purge or weaken the intestines, and may be taken daily.

When the food is reduced in bulk or quantity you must not expect a call from the bowels as before: for as they have been accustomed to be distended to a certain degree before they act; the reduced diet prevents this distention, and the intestine is not urged by bulk to push forward its contents. In this case, confinement should not be noticed.

It is better not to eat food that contains a great deal of nourishment in a very small compass; but rather, let it be mingled with substances not nutritious.

Persons who have been long habitually and exceedingly costive, may take steel medicines twice a day, and a little rhubarb with it occasionally. Steel appears to brace up the bowels, and give them strength to push forward their contents. Steel and bark in this way, sometimes have a purgative, or rather regulating effect. Glysters had better not be used except in cases of real sickness.

COUGH.

No complaint is more common than a cough; few persons pass through life without a severe one. With some they are yearly companions.

Cough is not a disease but a symptom of several very different affections; each requiring different treatment. Nine times out of ten, some simple remedy will be sufficient.

It has been explained in the article cold; how cough ori-

ginates from any irritation or fretting of the lining membrane of the windpipe. You know, when any thing goes the wrong way, as it is called, that immediately a violent cough comes on, which lasts until the offending substance is got rid of. This is an example of irritation in the windpipe.

While the complaint remains in that portion of the membrane which lines the nose, throat and parts around; we call it a cold in the head: but the moment the irritation spreads to the windpipe, the cough begins, and the lower that it extends into the air passages and lungs; the more severe the complaint becomes; until a swelling and redness of the lining membrane and air cells, constitute one description of what is called 'inflammation of the lungs.'

Coughs, you see, may vary from the simplest tickling of the upper part of the windpipe, to one accompanied by inflammation deeply seated: each degree requiring very different remedies.

The common cough will usually go off without any remedy, or by a little opening physic, and a dose of dovers powder at night. It may be got rid of, by exciting perspiration; for this purpose people take, possets, hot brandy and water, and a host of recipes, of which, every one possesses several. One of the best, because the most harmless is a burgundy pitch, or common pitch plaster, placed up and down the back bone, between the shoulders.

An obstinate cough, may arise from the state of the stomach and bowels, which requires opening physic, and a wholesome and spare diet with but little drink, and good air.

Cough may be a symptom, attendant on a disordered state of the liver; curable by blue pill, or small doses of calomel, and an antimony plaster on the side where the

liver is placed.—(See liver complaint.) It is always an attendant on consumption: wherever there are any substances, such as mucous or matter formed in the air passages, or air cells of the lungs; it must be coughed up to prevent suffocation.

Recollect then, that cough is the symptom, which must lead you to enquire into the cause, upon which it depends.

Let the cause be what it may you can do no wrong by lowering the diet, and opening the bowels: and by giving an opiate at bedtime for one or two nights: and by avoiding any exposure of the skin in severe weather, unless sufficiently covered up to feel warm—and upon any increase of inflammatory symptoms, giving repeated doses of the antimonial mixture.

Consult the articles. Cold. Indigestion. Liver complaint. Inflammation of Lungs. &c.

DELIRIUM TREMENS.

See Drunken Delirium.

DIARRHOEA OR BOWEL COMPLAINT.

This complaint is a purging without any severe pain: the pain is of a griping kind, just before a motion.

If there be any foulness of the tongue, it will be a safe plan to give a few grains of calomel at bedtime, and a rhubarb draught the following morning; by which, the bowels will be cleared from any thing which may be keeping up the irritation.

If after this, the looseness continue; you will be obliged to give some thing binding, with an opiate; as, a table spoonful every four hours of the bowel mixture. (See Formulæ.) When the looseness is lessened; you may reduce the dose, or take it less frequently.

The diet must be mild, and easy of digestion; such as a little broth with rice, or barley; a little toasted bread, some sago, or arrow root: and when the man is well, he must be cautioned not to fill his stomach with any sort of food; but to eat sparingly, and not to indulge in large draughts of water, or any other fluid.

When in port, the men eat trashy and bad fruit; and drink much of all sorts of things; so that you will have them bringing on bowel complaints every now and then; and you will often require to give the rhubarb to clear them out, and opium in some form afterwards, to quiet the disturbance that has been set up.

What in the north, may be a mere looseness of the bowels; in southern latitudes, may become dysentery, if neglected. Food that is strange to the bowels, a great mixture of many things, or any unwholesome fish, meat, &c. &c., may bring on a looseness.—Generally speaking, a few drops of laudanum, or the bowel mixture will stop the complaint.

DISLOCATIONS OR BONES OUT OF PLACE.

In any accident that may happen, you must not hastily set about doing any thing; but first, deliberately examine into the nature of the injury; and take time to study and reflect on the most proper mode of treatment.

Dislocations are amongst the commonest severe accidents that occur. The bones forming those joints which allow of very free motion, are most readily put out of their place. The shoulder is one of these; and this is the commonest dislocation met with. A man may have a blow directly upon the shoulder, or he may fall upon his fore-arm, and the weight of the body forces the ball of the shoulder from the socket. It is

sometimes dislocated upwards, when a piece of the shoulder bone above the socket is broken; this however rarely happens. When the arm has been once dislocated, a very small force may throw it out again. When a man is stript of his clothing, and stands upright before you, you see evidently, that the roundness of one of his shoulders is lost; and pressing where it ought to be, you will find a hollow. The man cannot put his elbow to his side, nor raise the arm. In handling the upper arm you do not find a crackling as when the bone is broken; caused by the broken ends rubbing against each other. The case being clearly made out by you; as not being a broken collar bone; nor a fracture of the round head or neck of the shoulder; you must immediately set about putting the joint to rights: for if you leave it for days, the reduction will become more and more difficult and at length impossible.

The head of the bone is pulled up generally, under the arm-pit, by the flesh or muscles, which contract with great force, and you have to get it out by greater force. This force must be gently and gradually applied. It must be force without violence or haste.

You must lash the man, sitting, to a stanchion; by passing a sheet round the breast under the arm, and round the stanchion or post: two or three men take hold of the patient's arm, or rather hold of a towel made damp, and tied round the arm above the elbow, which should be bent: they then gently, but with a steady drag, pull horizontally, until the muscles yield: yourself, at the same time, standing behind the man with both your arms round him, and your hands grasping the bone; by which, you will be able to tell when it is drawn out; and when you think that the head is brought out on a level with the socket; you stand-

ing over him, raise the bone; desiring the men, suddenly to let go all, when you will find it return to its proper place.

More is done by a knack, than by downright force. By long holding the arm, with very little pulling, the patient's muscles become so tired, that they cease to pull against you, and very little exertion may be necessary. So if you keep the man in talk, asking him to tell you exactly how and when the accident happened, so as to draw off his attention from what is going on: at the moment, when he is trying to recollect some circumstance of the accident, you raise the bone, and get your men to let go, all at once, at a signal which you must agree upon beforehand; desiring them to keep their eyes upon you, and promptly obey your signal.

When a dislocation has been overlooked for some days, the reduction becomes very difficult, particularly in stout lusty men. You must lower such by starving them a little, and giving doses of tartar emetic. When the man becomes sick and pale with the drug, it is the moment for trying to put in the arm.

Every thing ought to be prepared ready, the place, the seat, the towels &c. Round his arm should be bound a towel, and to this a small boat-tackle should be hooked, the other end of which must be made fast to another stanchion or ring bolt. Your men can then haul upon this, which will prevent their being tired: they can keep up a much steadier drag, and tire the muscles of the man's shoulder so much, that they will at length cease to resist. When you feel the bone has started from the hollow of the arm, and all is ready; let go as before directed, and you will have the satisfaction of succeeding. It is a great point to make your preparations very perfectly; for the giving way

of any of the fastenings during the operation is very embarrassing and gives unnecessary pain to the sufferer. You know when an arm is in its place, by the return of roundness in the shoulder; by the power of putting the elbow close to the side; and by the man's own feelings. The arm should then be placed in a sling, and a bandage should be put round the body, to keep the limb from moving. If much force has been used, a large poultice should cover the shoulder. After two or three days, the shoulder may be rubbed night and morning with camphor and oil, or with soap liniment.

There is always a tearing, or great stretching of the ligaments around the joint from the accident; and much care is necessary long after the reduction, to allow the injured parts to recover their strength.

OF THE THIGH.

It must be great violence that can throw the head of the thigh bone from its socket. It is difficult to discover the exact nature of this accident: to know if the bone be broken close up at the joint, or be out of place.

A broken limb is easily moved about in all directions, and you may hear the grating sound made by the broken ends of the bone when moved: while in dislocations, you find the limb more or less difficult to move; it is fixed in some unnatural position. In this accident, the head of the bone is thrown quite out of its deep socket, and generally upwards, on the flat hip bone. Sometimes the head is thrown downwards, or on either side of the socket.

In the greatest number of cases, the leg is shortened; the knee turned in, and the toes touch the instep of the other foot. When dislocated downwards the leg is longer

than the other, and the toes point downwards, and the limb is separated from the other. When the case is made out, every effort must be used to replace the bone, or the man remains crippled for life. Place him upon a table or bed, lying on his back; passing a large sheet between the thighs, and taking care not to injure the parts near, by the pressure; the sheet is then made fast to a ringbolt, or post. Proceed to roll a bandage round the thigh, and make fast a towel or something of the sort, also round the thigh, just above the knee, which is to be kept bent. By means of small pulleys or tackle; let two men gently, and gradually, but firmly pull out the bone, pulling on nearly the same line with the limb. You standing on one side, with a towel round the thigh near the head of the bone, and when the limb appears to be sufficiently on the full stretch, you raise it, pulling outwards, so as to conduct or lift the head of the bone over the edge of the cavity it came out of. An assistant, must at the same time, push the bent knee towards the other leg. The muscles of stout men give so much resistance to all your efforts, even with pulleys; that probably you will not succeed without bleeding, or giving doses of tartar emetic, to make them feel sick and faint; by which much of the resistance is taken off; you may then be able to accomplish the reduction. When the head of the bone is below the cavity it came out of, extending or pulling out, does not require so much force; but you have to lift the thigh outward spirally while the extension is making.

I repeat, that having clearly made out the dislocation, from the position of the limb, its fixed state, and other signs; you must not soon give up your efforts to replace it, but having made the best preparation to insure success, persevere until you effect your object.

It will be necessary to keep the patient in bed, and on low diet, for a time to prevent inflammation.

DISLOCATION OF THE LOWER JAW.

This part of the face; may have slipped out of its place, and although an accident very unlikely to occur on ship board; yet it may happen, and the management of it is simple. The mouth at the time must have been wide open: a blow on the chin may produce the accident; but it usually happens while yawning.

The reduction is easy. First, covering both your thumbs with a handkerchief or piece of linen wrapped round them; you then put the thumbs inside the mouth, on the top of the grinder teeth on each side, as far back as you can reach; and hold the remainder of the jaw and chin with the rest of your hands and fingers: then you forcibly press down the jaw with your thumbs on the teeth, and at the same time, raise the chin with your fingers and palms. The bones will slip in, and the jaws come together with a force, which would hurt your thumbs, if they were not protected with something round them. You bind up the jaw with a handkerchief, and all will be right. One side only may be out, and then the chin is slewed to the opposite side. You act in the same manner as with the other case.

DISLOCATION OF THE ELBOW.

A man falls down upon his hand, the elbow point is forced backward, and the bone of the upper arm forward. The forearm is shorter from the bend to the wrist than the other: attempts to straiten the limb give much pain. The point of the elbow from the bone of the upper arm, is much longer than the other. This is the most usual dislocation

of this joint. You lash the upper arm to something firm, near the joint, and you pull upon the forearm till it returns to its place.—It may be difficult to distinguish if there be a fracture or displacement of the bones: but in a fracture, something moves about freely under your hand, and gives a grating sound.

If dislocated forward; the elbow bone is always broken. Swelling soon comes on, and then it is not easy to make out the nature of the mischief. When with the dislocation, any part of the bone is fractured, the joint is easily reduced; but the case will require much attention to keep off inflammation. You will have much inflammation; and you must keep it down by cold applications, by bleeding or antimony, and by opening physic. After many days, gentle movement of the joint should be practised.

OF THE WRIST.

The displacement of the bones in the wrist, can be readily discovered and easily reduced by forcibly extending the limb.

DISLOCATION OF THE KNEE PAN.

If thrown out to either side; you straighten the leg, and with the hand, push the bone up to its proper position. The operation is very easily effected; and a bandage, with rest, and other means to prevent inflammation, must be thought of. When, once displaced, it is liable to be put out again very easily.

OF THE KNEE.

The knee may be dislocated; that is, the bones of the leg may be forced from the thigh bone various ways. The force used to cause this displacement, is of course very great;

so that the ligaments must be torn away, and the danger from inflammation considerable.

The bones are easily reduced: a piece of tarpauling should be placed under the joint upon the bed; a soft cushion on each side, and a bandage. You must bleed from the arm, keep on very low diet, and apply cold water constantly to the knee, while any heat exists in it above the natural: when the danger of inflammation is passed; and time given for the uniting of the torn ligaments; you must begin to try to move the joint. From the nature of the joint, and the force necessary to displace it, this accident is always one of a most serious nature.

OF THE FOOT.

The foot is liable to a severe dislocation. The small bone of the leg is broken a few inches from the outer angle, and the foot is dislocated outwards, the inside of the foot coming on the ground. Sometimes the inner angle is forced through the skin. To replace this joint, you bend the leg on the thigh; and while an assistant firmly grasps the leg; you lay hold of the foot by the heel and the instep with both hands, and return the displaced joint; which it does not require much force to do. You will find it useless attempting to reduce it if you keep the leg straight. You must lay your patient on his side, the leg bent, the parts supported by a soft pillow; and a splint with a foot piece well padded, should be placed under the leg and foot. Slips of linen passed under all, and lapped over each other, called a many tailed bandage, should be applied, and the whole be kept wet: the patient be put on low diet. Bleeding will be necessary, if the patient be full and robust. This dislocation is frequently joined with fracture of the great bone, and a wound in the

skin, with a part of the bone sticking out. After bending the knee; endeavour to place the joint in a natural position: observe always the natural position of the great toe in the sound limb; and let this be your guide in adjusting the fracture.

OF THE FINGERS.

Dislocation of the thumb and fingers can easily be discovered. It requires steady, strong pulling, by means of a broad tape, fastened by a hitch-knot round the finger, and near to the dislocated part. The joint must be kept in its place by a pasteboard splint, wetted and bound on with a bandage. When any joint has been thrown out and reduced again; it is necessary to bind it up moderately tight, to keep it wet for a time, to prevent excessive heat in the part, and when the danger of inflammation is passed; the limb should be very gently moved, now and then, to prevent a stiff joint. In all severe injuries of the joints, the swelling is so considerable and sudden, that the exact state of the parts is not easily made out. A bleeding, confinement to bed, the constant application of cold, to reduce the size of the injured part,—must be the practice adopted, until you are satisfied as to the nature of the hurt.

DROWNING.

Persons picked up from the water, insensible; must be immediately stripped and dried; be brought near a fire, or to the sun; the head must be raised, and not bent forward on the breast; he must be wrapped in warm blankets: warmth being applied to the feet, hands, and stomach: by means of hot bottles of water, hot bricks, or hot salt. The body should be rubbed, and the action of breathing imitated.

A person leaning over the body, should press on the ribs on each side, with the palms of the hands, and force out the air; then suddenly cease from pressing; and in this way the inspiration and expiration, or rising and falling of the chest, is imitated.

A pair of bellows must be got, and the beak introduced into the nostril of one side; the other side and the mouth being closed, with the help of an assistant: some one puts back the wind pipe, by pressing on the projecting part of it called, Adams apple; this action closes the opening into the stomach, and opens the passage of the air; a blast of wind from the bellows, is to be blown through the nostrils; which, if properly done, will pass into and inflate the lungs; then force out the air again, by pressing on the chest as described. Continue this operation, alternately blowing in fresh air and pressing it out, removing the bellows each time, and thus copying nature in the number of breathings in a minute. While this is going on, some stimulating fluid should be introduced into the stomach, or the lower bowels: such as a spoonful or two of brandy, or warm wine: but to do this, as there is no power of swallowing, you must pass it into the stomach by a tube; such as the tube of the stomach pump; but this requires practice to do it properly: proceed to give one or two stimulating glysters, of warm water and turpentine; or brandy, or rum and water. Apply heat to the pit of the stomach, or a mustard poultice: thus doing all that you can, to arouse any remaining spark of life. Do not give up your efforts for three or four hours; for persons have been recovered by perseverance, when from all appearances dead: after being long under water.

The brain soon becomes insensible from want of the circulation of the blood through it; the lungs are stuffed

with blood, which cannot be changed by the air, and is unfit to support life. Your object, is to act on the blood in the lungs, by the air; and to get it to move on in its proper current.

Forcing your own breath into the patients lungs, is of little use; as it has lost the stimulating power. It is a common practice to hold drowned persons up by the heels, or to roll them over a cask, with the view of getting the water out of them, which is supposed to have got in. Now no water gets in, or extremely little; and you could not do any thing, more likely than this to destroy any remains of life. Warmth externally—stimulants internally—and imitation of the natural breathing is the practice to be adopted.

DRUNKEN DELIRIUM.

When a man has been drinking hard for many days; his brain and nerves become highly excited and irritable. There must be some end to the continuance of drinking ardent spirits; otherwise, the person must at length fall down dead, but the sudden abstinence from drink is often equally fatal. If a man who had been drunk night and day for a week; was suddenly to swallow a quantity of water to quench thirst, or remove any uneasy sensation in his stomach, he would probably die immediately. Very commonly, during a continuance of drunkenness; the poor wretch is seized with a wandering in his mind; he fancies he sees objects in the air, or that people are approaching to murder him; his limbs tremble, and the whole frame is agitated; he is sleepless, or if he sleep, he dreams of falling down a precipice or some scene of horror: the madness and trembling sometimes cease; but come on again; or are so violent, that the man falls down in a fit of Epilepsy;

he is convulsed, his eyes are fixed, his limbs stiffened with the violent efforts of the muscles; and in this state, death frequently ensues: but he may recover from this entirely, or he may have repeated attacks of Epilepsy till he dies.

This drunken or trembling delirium is a most fatal disease in our merchant navy; and many are the masters of ships every year, who become victims to drink. Whenever you see a man that has been drinking, with any thing odd in his manner; restless, impatient, easily alarmed, or what is called nervous; you must keep a look out upon him.

When any one is threatened with this disease; where the body is full, the face flushed with blood; when the pulse is full and hard, and the subject young and robust; you may draw a little blood. It takes off the high pressure on the system: but bleeding must be rarely practised for drunken delirium: it is a disease of weakness, not of inflammation. You may cover the head with cold water, and keep it bathed. You may proceed to act upon the bowels; by giving a dose of calomel with opium; say four or five grains of calomel with one grain of opium; and follow this up in two hours, by a dose of active purgative medicine, made warm with ginger; such as a strong infusion of senna with ginger. Two or three ounces of this senna tea, may be given every three hours, until it operates freely. You must continue to give the patient, after this, a very little of the liquor which he has been accustomed to: and you will do right, to give him half a grain to a grain of solid opium three or four times a day. In giving this, you must be guided by its effects: if it calms and soothes, you are right; and you must continue to give it until it produces sleep. Sleep is what you have to try to procure; and when your patient sleeps, he is pretty safe. But you must continue a little of

his drink, reducing it gradually; also lessen the dose of opium until you can do without it. Many old drunkards require the opium immediately; and you must begin by giving from one to four grains; and repeat it according to its effects. After obtaining sleep, the opium is to be gradually omitted. The diet must be light.

Usually, before the setting in of delirium, there is much debility, with great lowness of spirits; and it is clear that the person is not altogether right. His manner is unsettled; he sleeps little or none; has alarming dreams; there is a trembling of the hands, or of the body generally, with cold perspiration. On putting out his tongue it trembles. He is anxious to appear well, by doing something; and is continually making mistakes: he is exceedingly eager about some one particular business; is very forgetful of what has just passed; and fancies people are about to injure him: he makes violent exertions as if to avoid a blow, or escape from those whom he fancies are looking for him.

You have to distinguish this complaint from brain fever, (See Inflammation of Brain) and this you cannot have much difficulty in doing; yet it may be joined to an inflamed state of brain. In brain fever you have head ache, a sensation as if a cord was bound round the brain; increased heat; a great dislike to noise or light. At first, the man is quite rational; and perhaps has not been drinking. The fever also is rapid in its advance; whereas in the other affection, there is rarely any fever.

DYSENTERY OR BLOODY FLUX,

Is a bowel complaint, accompanied by fever; either of a mild or severe form. The disease is one of inflammation of the inner surface of the intestines; and has its seat more

particularly, in the larger bowels. This complaint is more common, and more severe in hot countries, than in northern latitudes. The causes which produce bilious and marsh fevers; will also produce dysentery. Sudden changes of temperature, exposure to night air, in unwholesome districts; bad food or water; excesses in drink or diet; unaccustomed food &c. Many are the causes, which combined, produce this complaint.

You have pain, more or less severe, in some part of the large intestines; and in the loins: a heat and burning sensation along the gut, about the fundament. There is heat of skin, and great thirst: the pulse is quick; the tongue white; and sometimes reddened at the edge, or crusted and brown, in the center; the motions from the bowels are frequent, and rarely have a natural appearance; the discharge being small in quantity, consisting of mucous, mixed with blood and watery fluid. The pain, at the time of evacuating the bowels, is very great; and there is a continual desire to go to stool; often, without the ability to pass any thing; accompanied with violent, painful straining.

You proceed to treat the complaint, as an inflammation of the inner lining of the bowels: and do all you can to soothe this membrane. Of course, you see how exceedingly imprudent it would be, to put any strong or irritating food, physic, or drink, into the inside of such a person. In strong subjects, the loss of blood from the arm, is a very safe practice to begin with: it enables your remedies to have a better effect. You may take away a pound of blood at first; but it is to be remarked, that the diseases which attack the mucous surfaces of the bowels, or of other parts; do not bear violent bleedings. It reduces the strength, without conquering the disease. Leeches, when you can get them,

should be applied over that part of the belly, where the greatest tenderness is felt on pressure. Twenty or thirty at a time, instead of bleeding from the arm. Over the belly; apply a water dressing or poultice, kept on by a bandage or swathe. As there may be matters collected from the food, in the course of the intestines; you must endeavour to dislodge these matters, with as little injury as possible to the bowels: but the purgatives made use of for this purpose, must be mild; and always joined to some opiate. Give at first, eight or ten grains of calomel, (which is indeed mild as a purgative) and one grain of opium, in a pill; and in two hours after this; a dose of castor oil, and wait for the operation of your medicines. The oil may be repeated in three or four hours, if the first dose has not taken effect. You should now proceed to give five grains of dovers powder, and one of ipecacuanha, every four hours; or less, according to the severity of the symptoms: gradually extending the time between the doses, as the pain and desire to go to stool cease. A perseverance in this treatment, will generally succeed; but you may be baffled by the conduct of the patient himself.

Patients with this complaint; must be kept as calm and quiet as possible. The berth should be well aired and cleansed; without chilling the patient. All food must be forbidden, but what is of the lightest description: such as arrow root, or gruel, or rice boiled to a jelly. For you will only increase the complaint, by giving the stomach work to do. No stimulating drink whatever, to be allowed; nothing but water, toast water, barley water, or the weakest lemonade, and these, in very small quantities at a time.

No efforts of yours can be successful; unless the man himself, and his mess mates, will second you in your plan

of cure. For in no complaint, is there a greater necessity than in this, of paying attention to matters that may appear trifling. Dysentery is very apt to return when nearly cured; and each relapse, will be found more difficult to master than the former.

After a time, you may give fowl broth, without any vegetables in it: made more soothing by some scotch barley, or rice boiled in it to a jelly:—no large quantity even of these, should be taken at a time: a small tea cupful will be sufficient. In the course of the complaint, great relief is experienced from Glysters, of three or four ounces of thin arrow root, with thirty drops of laudanum, and ten of creosote. These may be given, as often as there is severe distress in going to stool.

The proof that a patient is getting better; will be the absence of pain; the stools becoming more natural; the fever lessening; with some return of a desire for food.

Strict attention to the above directions, will, in the great majority of cases, be attended with success; but after a trial of the means above recommended, and no advantage following; the pain, the discharges, and the fever, continuing unabated, or increased: proceed to give calomel in the way to be pointed out: for frequently, the dysentery is kept up by an unhealthy bile formed by the liver; and mercury is known to improve the condition of most disordered functions, if heat and fever be present. Calomel, in this case, becomes an important remedy. Four grains of calomel, and four of dovers powder, with one of ipecacuanha; may be given every four or six hours: and pushed, until the symptoms yield. Generally, it will effect the mouth; you will know this, by a peculiar smell of the breath, and a slight tenderness of the gums. If you give calomel after this, you

may be doing harm. During its use, the skin must be kept warm: particularly the belly and feet.

While you are giving the calomel and dovers powder; the laudanum injections may also be continued, if there is still pain and straining at stool. In giving these, be sure to pass the instrument in most gently: for the bowel is in such a sore and sensitive state; that any roughness will give great pain. The pain when intense, may be alleviated by hot poultices, placed over the belly; especially by a turpentine fomentation (see formulæ): or by a large blister kept on for three or four hours. These applications, are to be made chiefly, over the spot most tender and painful: for one part of the bowel only, is often the seat of the mischief.

Moisture, coming on over the skin; freedom from pain; stools less frequent, and more natural, without straining; sleep; and a more cheerful expression of countenance; are to be considered as approaching signs of health.

In unhealthy coasts, many of your men may be attacked at the same time; and the fever may be of a very severe character. In that case, keep the people separated; and the ship ventilated; removing if possible, from the influence of the land wind. Treat the sick steadily, as recommended above: and be sure to appear confident and cheerful; whatever may be your own feelings.

In these situations, more success is likely to attend the calomel, and opium practice, than any other: and where malaria is supposed to be a cause;—and the attendant fever, is of the description of jungle fever; you may join quinine with the calomel and dovers powder, in doses of five grains; watching its effects. (See malaria fever).

Those men who are not attacked; should be cautioned

as to their conduct: they should not be allowed on shore; and they may take a grain of quinine three times a day, with advantage as a protection from the influence of the climate. Once for all, watch closely your people under cure; and see that no improper food or drink be taken. On the perfect absence of pain; a piece of fowl, or very tender meat, may be given, should the appetite be really keen. (See Climate. Bowel complaint. Malaria.)

EAR ACHE.

Do not put your finger into, nor touch the ear in any way, when it begins to ache. After covering it up with a little raw cotton, and putting on a handkerchief round the jaws and ears; tying it on the top of the head; take a dose of opening physic. If it continue to ache after the physic has worked off; twenty or thirty drops of laudanum at bedtime, may give relief. Continue the dry poultice of cotton wool; even although the ear inflame and form matter, you can put nothing to it more soothing, if lightly applied. You may try the plan of dropping very sweet oil and laudanum, just warm, into the ear, from a tea-spoon; and then covering up with wool. In ear-ache, like the tooth-ache, you will find intervals of perfect ease: if during this interval, you give two grain doses of quinine, and repeat it as often as you have a period free from pain; you will be likely to cut short this painful affection.

There is a much more serious complaint; which is an inflammation of the parts contained within the bony case, called the internal ear. A most intensely painful affection it is: for there is no vent for matter that may form; no room for the swelling of the inflamed parts, in this bony case: and unless speedily conquered, some serious mis-

chief must follow ; such as a bursting of the drum of the ear, and the escape of matter through the passage, with the destruction of the little bones of the ear, and a total or partial loss of the hearing on that side. The inflammation has been known occasionally, to be communicated to the brain ; and has been followed by death in a few hours after. The pain or shooting in the head is violent. The noise is like the clanging of metallic substances ; delirium, or wandering comes on, and the patient dies worn out with the severity of the pain. Bleed freely, apply leeches in numbers if you can get them ; give a powerful dose of calomel with opium ; say eight or ten grains of calomel, and two of opium. Purge with senna or jalap, and prescribe large doses of the antimonial solution ; cover the ear with a poultice ; also give laudanum from time to time, if the pain continue.

EPILEPSY, OR FALLING SICKNESS.

The person is suddenly seized, and falls down. Sometimes there is no warning whatever of the approach of a fit : the attack may come on in his sleep ; frequently, a shrill cry or scream attends it, the person falls, and is found in violent convulsions : the eyes being distorted, the thumbs turned into the palm of the hands, the limbs are stiff with the spasms, the teeth are fast fixed together, and often the tongue is bitten by the closing of the teeth upon it ; the wound in which, makes the froth, which almost always flows from the mouth bloody ; the breathing is quick or hissing. The convulsions sometimes agitate the body violently ; sometimes the disease, is shewn only by stiffness of the limbs. After a time ; from five minutes to half an hour ; the convulsions subside, the patient is quiet, and at length gives a sigh, opens his eyes, and appears to be aroused from a deep

drowsiness, and is utterly unconscious of all that has passed. He may feel weak for some time, and be forgetful; but by degrees, he goes on as usual; feeling no ill effects from the attack.

Having such a man on board; you must never employ him aloft; nor in any way, in which he can meet with danger. Keep him as steady as you can; prevent him from committing excesses; as they will tend to encrease the violence and frequency of the fits. You would do well to enquire into the state of his health from time to time, and give a dose of strong physic; such as a few grains of calomel at nights, and a strong infusion of senna in the morning.

These fits are occasionally caused by worms, in young persons: in which case, you give a good purgative dose, repeated at intervals of three days, which will most likely expel them. In such patients regulate the diet and order a course of steel medicine. During a fit apply nearly scalding water to the feet; and constantly apply cold water all over the head.

ERUPTIVE COMPLAINTS.

An eruption is a rash or any breaking out upon the skin: eruptions being very numerous. With the greater portion, you can have nothing to do. Most of them give way to persevering labour; and a wholesome, but not full diet.

Those eruptions which follow, or which are attended with fever; are spoken of under their several names: such as small pox, measles erysipelas, &c.—(See Itch.)

ERYSIPELAS.

There is a sort of inflammation of the skin called erysipelas. This complaint occurs when the health is much out of order.

It is a rosy redness and puffiness of the skin: more generally attacking the head and neck or legs. It often comes on after wounds or accidents, when the sick are confined in impure air. It is apt to spread, and is attended with fever; but not with much pain. There is a fiery burning feeling in the skin, which rises in blisters. The fever is rarely what is called high. It is accompanied by drowsiness and lowness; with aching pains in the head and down the back; difficulty of breathing &c. The feverish state, exists for some time before the redness with swelling come on, which encreases or shifts its place; beginning at the ear or nose, and extending over the eyes and scalp.

At first, your treatment must be active, proportioned to the strength and age of your patient. If the person be strong, and the erysipelas attended with full and hard pulse; you must bleed, purge, and keep for a time on very low diet. Cover all the inflamed part with cotton wool or water dressing. If the inflammation attack a limb, moisten the skin and rub it over with caustic; beginning beyond the edge of the inflamed skin, on to the sound; and cover up all with cotton wool or the water poultice. When any insensibility or drowsiness comes on; and the pulse becomes weaker; you must support the patient with proper food and a little wine: always feeling your way in this; increasing the quantity if it do good; give also a little of the quinine mixture in the formula. When the inflammation spreads below the skin, matter forms; and when felt, must be let out, by cutting deeply down upon it; making a long and deep wound: even if you find no matter, the bleeding from the wound does good. The making a sort of broad boundary line between the inflamed and sound skin, with the caustic; appears to check the spreading of the disease.

In the latter stage you will always be required to give support; with food, wine, and quinine, in small doses. Erysipelas sometimes prevails among a ships company, with very low symptoms; in which case, quinine from the first must be given.

EYES INFLAMMATION OF.

See Ophthalmia.

FAINTING.

Whatever may be the cause, whether from weakness of nerves, fear, extreme pain, or loss of blood; the treatment will consist in arousing the patient by some stimulant.

He should be placed on his back with the head very low; cold water should be dashed over the face; hartshorn or strong smelling salts, should be held to the nose.

Fainting is alarming to the by-standers; nothing so nearly resembles death. The blood leaves the face and lips; a slight convulsion at first moves the face and eyes; and the pulse ceases to beat. After excessive loss of blood, the patient may not recover from the fainting. It is often fatal in a debilitated frame: as after severe fevers &c.

A stimulating turpentine injection may be tried, where the fainting continues alarmingly long. In the latter stage of fever, where the patients life hangs as it were, by a thread; lifting up such a patient, has caused fatal fainting. Be sure always to keep the head low, in order that the blood may flow readily to the brain. A little spirits might be put into the mouth by a feather: if not swallowed, it might rouse the person by exciting cough: or the spirits may be given mixed with water as a glyster. This can only be necessary when life is at a very low ebb.

FEVER.

Fever may be considered a general disordered state of the body ; known by the symptoms of heat after chilliness, head ache, wandering pains, a feeling of general uneasiness, quick pulse, dry and hot skin, thirst, loss of appetite, sleeplessness, hurried breathing, weakness &c. &c. when these signs, or a greater part of them are present; this state is called Fever.

To give precise instructions how to manage persons in fever is impossible : the character of each complaint differing ; as the constitutions of people, their state of mind and body at the time, the age and strength, the climate and season, differ : each individual case requiring some change in the mode of conducting it. For example, fever in one who is well fed and cared for ; is a very different disease from the same fever in the toil-worn and half-starved poor-man : one will require bleeding and lowering ; while the other will be best treated, by keeping up the strength almost from the beginning : in one case, the skin is burning hot and the pulse full and hard ; in the other, the apparent disturbance is insufficient to account for the fatal tendency of the complaint. Thus diseases alike in name ; and essentially the same in nature ; may differ widely in attendant circumstances. Fever may be mild, severe, or malignant : there being every variety, from the simplest increased heat to the most deadly typhus. It may be accompanied by symptoms, which point out that one part of the body is more disturbed than another : and this often gives a name to the disease : thus we have brain fever, nervous fever, gastric or stomach fever, spotted fever &c. names which merely imply, that these several organs, are more particularly affected by the disturbing cause, whatever that may

be. Seeing this, it is easily understood how fever may be joined with destructive disease in any vital part of the frame; requiring your especial care in the treatment.

Severe wounds and accidents are accompanied with fever;—and inflammations of particular parts, are attended generally, with fever; which indicates by its character, the greater or less severity of the disease.

In almost all fevers, there is more disturbance in one function or office of a part than in others. 1st. In the circulation and distribution of the blood generally: as shewn by the state of the pulse; the flushings of heat and cold; the stuffing and oppression of any particular organ; as the brain, the lungs, the liver.—2nd. In the office of preparing and digesting the food: as seen in the loss of appetite; the sickness at stomach; the wasting away of the flesh and strength.—3rd. In the functions which throw off from the body the various humors in health: as that of the skin, the kidneys, the bowels, the lining of the mouth and air passages: shewn by the harsh and dry state of the skin; the scanty and high color of, and unusual appearances in the urine; the costiveness of the bowels, or the unhealthy discharges from them; by the various coatings and changes observed in the tongue. 4th. In the nervous system; shewn by some departure from a perfect state of the faculties of thought and perception: the imperfection of the senses of feeling, hearing, and taste.

Some feverish attacks, may be managed by the mildest means: repose, some opening physic, a glass of weak warm lemonade or other simple fluid; the abstaining from the usual stimulating food and drink; will be sufficient, in very many instances: for often, a slight disturbance has been bled and purged into a settled fever: the restoring powers of nature being too little heeded.

When the feverish symptoms are decided, and appear to set in with severity; give an emetic: and when its operation is over; give ten grains of calomel and ten of dovers powder, and cover up close in bed: after some hours, give a dose of castor oil; and assist its operation with a large glyster of warm water, salt, and oil: to open the bowels freely. This plan in most common cases of fever, will either cut short the attack; which may not return, if proper precautions be taken as regards food, air, warmth, and quiet: or it will tend to render the future management of the complaint more easy.

Should the heat be very great, and the pulse full and hard; the face flushed; and the head ache intense; you will determine on taking blood away: which appears a ready, and in most cases, not a very dangerous means of lowering that pulse, and removing the high pressure on the human machinery: it will have the advantage of allowing other remedies to take more effect; besides tending to prevent any vital part suffering from inflammation in the course of the fever. After the bleeding, if the bowels have not been acted upon freely before; give the calomel and other remedies as recommended above.

By this means, we make an impression on the disorder; and we clear away any source of heat and mischief that may be in bowels. Provided the discharges be satisfactory, the purgatives need not be repeated: nor, should the purging be allowed to go beyond three or four discharges; but be checked at once, by giving about ten drops of laudanum, or five grains of dovers powder; to be repeated, if pain and griping continue: or a glyster of a little warm water and twenty drops of laudanum, may be taken instead. After a due portion of rest and care; if the patient be not very

much relieved; and the heat of the skin be great: practice the cold sponging; by stripping the patient, and when out of bed; sponging and throwing cool water, of the temperature of the air over the body; rubbing the skin at the same time most perseveringly, with the hands: and when the heat of the skin is lowered by this means; wipe the body dry, and place the man in bed; covering the head with a wet cloth. The patient usually feels greatly refreshed; and you may repeat this operation, as often as the burning heat returns; watching its effects, and administering any proper remedy in the periods before the return of heat. The object is, to obtain a gentle and equal moisture on the surface of the body. The cold sponging alone, will often procure this; after which, a dose of fifteen grains of the dover's powder at bed-time, will frequently be followed by sleep, and the entire absence of fever.

The cold remedy is applicable when the head aches and the skin is burning hot: but do not use it when the patient is pale, and chilly; or when in a perspiration: as the latter is a desirable state in fever, which you should moderately encourage: nor should the cold bathing be used if there is any inflammation of an internal part. Give plentifully of cold water, ice water, or any simple beverage: and exhibit occasionally the saline draught of the formula, if agreeable to the patient. These measures may bring on the healthy play of the functions.

If notwithstanding these means, the fever runs on: you must be content to pilot it along, as it were; seeing that your efforts to cut it short have failed. You give cooling drinks; water in preference to any other: keep folds of wet linen to any part heated, or in pain; refresh the air, and change frequently the linen and bed clothes; remove any

thing that may be offensive from about the sick. Watch the appetite ; if the tongue begins to get clean, and a desire for food comes on ; indulge it sparingly : cautioning your patient against any indiscretion, which may bring back all the symptoms.

If any particular organ be attacked in the course of the complaint : you must direct your attention to it. If the lungs ; which is known by pain, cough, an increased difficulty of breathing : give the antimonial mixture, and put a blister or antimonial plaster on the chest. If it be the liver : known by pain on the right side, tenderness on pressure, a bilious look, short cough ; give a grain of calomel every hour for twelve hours ; attend to the bowels ; by giving castor oil, or a senna draught, now and then ; and keep a water poultice bandaged on the seat of the pain or tenderness ; or apply a blister. If it be the brain that is attacked with symptoms of inflammation ; apply cold water to the head ; blisters to the back of the neck, or to the feet : and if you can get them, leeches to the head : give the antimonial mixture freely, even to quarter grain doses, at short intervals ; adding a quarter grain of opium to each dose if it purge, or if the fever is far advanced. The treatment of fever, which is joined with any inflammation of an internal part, requires great judgment : and you can only be advised how to proceed, in a very general way. As the continuance of fever is apt to involve some part in disease : the bowels more frequently than any other part ; inflammation and ulcerations of the lining membrane being a very frequent consequence of fevers ; you will, on the coming on of pain or tenderness in any part of the belly, with purging and griping ; give occasional small injections of thin gruel, with five or six drops of creosote and fifteen of laudanum.

Remember that in conducting these complaints, your success will very much depend on paying attention to many apparently trifling things ; as pure air; the removal of any thing offensive from the berth ; severe draughts of cold air ; the frequent change of clothes and bedding ; and to perfect quietness.

REMARKS ON SOME OF THE CHIEF REMEDIES EMPLOYED IN FEVERS.

BLEEDING.

This remedy, should be employed very early on the attack ; and not when the complaint has existed many days. A decided impression should be made on the disease by the quantity removed ; and the pulse should be reduced in force and frequency by the loss. Bleeding appears to do good, by unloading the over pressed system ; and enabling your other remedies to take effect. Leeches when they can be procured, or cupping, are most excellent modes of relieving any part which appears to suffer from the effects of the fever. Leeches should be applied in considerable numbers.

EMETICS.

These are at times, useful remedies on the first attack of fever : but they should not be prescribed when there is continued sickness at stomach : for when this organ rejects all that is taken ; neither food, nor physic, should be given by the mouth for some time.

PURGATIVES.

You must not seek to cure fevers by purging. You clear away in the first instance, any thing locked up in the bowels, which may be a source of irritation tending to keep up the fever: after this is effected, any continuation of strong physic, will encrease the general disturbance. Now and then, some mild aperient may be given, with the view of carrying off what is continually flowing out into the intestines; but this generally is better effected by Glysters which are most useful remedies, throughout the course of these complaints: either occasional purgative ones, or soothing ones, to allay pain, and a fretty state of the bowels; or strengthening ones, to convey nourishment for the support of the sick in the latter stage of the disease; or as a means of giving medicines, which the stomach will not retain or bear.

CALOMEL.

In one or two large doses, is generally very serviceable at the commencement: but it should not be continued in severe fevers, with the view of bringing on its peculiar influence on the body, and by this means to overcome the fever: which, if the disease be severe, the drug will have no effect upon; and if mild, will not require its use. But, when joined in small doses with other substances, calomel may be made to exert very salutary actions. Thus with opium, with quinine, with wine, with nitre, with antimony, it becomes a most excellent remedy, according to the effect you wish to produce; either to bring on the proper action of the stomach, the skin, the kidneys, the brain, the circulation of the blood, or of any deranged or suspended function.

ANTIMONY.

Is of great utility; particularly where there is a tendency to any internal inflammation. It ought not to continue to excite vomiting; and when it purges and gives pain; it must be omitted or joined with small doses of opium. This combination with opium, given at regular intervals, soothes and brings on perspiration. It is particularly efficacious in those cases, where the brain or lungs are suffering.

QUININE.

Is the most powerful remedy we possess to put a stop to fever, where there is a decided interval between the fits: as in aguish fevers.

In Malaria fevers of every description, it should be given: choosing a time of comparative freedom from heat, to give it. This moment you may often look for in vain: nevertheless, the drug must be given, and in large doses: combining it with the practice of cold sponging, bleeding, or opium, as may be necessary. And when, from the state of the stomach it cannot be kept down; still it may be given by glyster. At the same time that you give quinine; the muriatic or sulphuric acid, made into an agreeable lemonade, may be drunk; which will assist the action of the quinine.

COLD WATER.

As a drink should be freely permitted. Sponging and dashing of cold water over the sick; has a wonderful effect is reducing the heat and frequency of the pulse, and bringing on perspiration.—If judiciously managed, it bids fair to become our most powerful assistant in the treatment of febrile complaints.

OPIUM.

Is invaluable in some cases where there is great exhaustion; or when combined, so as to soothe, and to act on the skin. It should not be repeated if the first doses have not been beneficial. In cases of insensibility and deep drowsiness; the patient being roused with difficulty; opiates cannot be allowed. They should not be given where there is any fulness or feeling of tightness about the head. The opiate called Dovers powder, is a good preparation, being a combination of opium and ipecacuanha.

WINE.

Wine and other stimulants, require much circumspection in their employment. In the latter stage of fevers, when the powers of life are at a very low ebb; the pulse getting indistinct and fluttering; the power of the brain and nervous system exhausted; the patient lying utterly relaxed; in a state, when if raised up, he might expire from the very effort: life, in this state, may be saved by giving wine or spirits liberally. In some fevers, there is such extreme depression from the beginning, that wine may be very early resorted to for the support of the powers of life. If the delirium is increased, and the tongue continues dry, and the skin becomes harsher and hotter after its use; it is doing harm.

BLISTERS.

Mustard plasters; turpentine fomentations; and all this class of remedies; are applied externally with a view of drawing to the surface, and relieving any deep seated mischief; or of rousing a patient from a state of insensibility. If the fever attack any particular organ, these remedies do great service; particularly after bleeding, or the operation of other medicines.

FOOD.

Food should not be too long kept from the sick. Hunger will increase fever; nay, it will produce it; it being often kept up from mere want. The substances selected for food should be well chosen; they should not oppress by their quantity the weakened powers of the stomach. A little good broth is, in general, the best food, if delicately made; some barley, rice, or bread, may be well boiled in it to give it more consistency.

AIR.

Should be freely admitted into the berth; as it disperses any foul vapours, and supplies the lungs with the means of acting properly on the blood. A fever patient, should not be exposed to a draught of cold air: nor should he feel chilly, but be kept agreeably warm.

INTERMITTENT FEVER OR AGUE.

Is a fever which comes on at regular periods; the person feeling nearly well and free from complaint between the attacks. The interval between fever and fever, may be longer or shorter; names being invented to shew the length of time between each fit. This division, is not of much consequence in the treatment; nor is it of any moment how the fever was caught: most likely from an exhalation or vapour arising from the earth. Fevers of this kind, are very common in some places: as along the banks of rivers, marshy and low coasts, jungles, &c. The symptoms, are a great feeling of coldness; the features are shrunk; there is a sensation of weight and oppression about the pit of the stomach; the person yawns, and shivers violently: this state, is followed after a time by a burning heat, which at

length ends in a profuse sweat. When this passes off, the person appears free from complaint, until the next period of cold shivering. The duration of a fit of ague, is from six to twelve hours. During the cold fit as it is called, cover the body up warmly, and give warm drink; such as hot weak lemonade, or weak tea; and when the hot fit comes on; reduce the covering; continue the warm drink; and cover the forehead with cold water. When the sweating stage is on, do not increase it by heat or more bed clothes; but rather try and moderate it. This is the management during the attack. The chief object is to prevent a return: and it is right to begin by clearing out the bowels by a dose of castor oil, or other mild laxative medicine; an occasional repetition of which during the cure; will in all probability be of much service: but all strong purges ought to be avoided. After the opening medicine has operated, try to cut off the complaint; which is usually done by giving quinine at intervals. Two grains of which may be given every two hours in the interval between the attacks; taking care that it be left off during the fit itself. About an hour before the shivering fit is expected, let the dose of quinine be increased to five grains; and join with it, eight or ten of dovers powder. This will probably arrest the complaint; or if it return, the attack will be weaker. You will then begin again with the treatment as above recommended.— After a fair trial of the quinine, when it is found not to command the disease, you must try small doses of calomel or of blue pill, once or twice a day, and give a dose of opium before the next fit. It may be necessary, when an ague resists common means; to push the calomel, so as to affect the mouth gently: for the fever may be kept up by some stuffed or altered state of the liver or spleen; which is very

often the case: for in ague fevers, the blood in the cold fit leaves the surface and extremities, and accumulates about the heart, liver and inward parts; which are apt to suffer permanently from the pressure of blood: the spleen more particularly. This organ lies behind the stomach on the left side: when you press upon this part during the fit, it is tender, and may even be felt larger at this time. In cases where there is permanent pain and tenderness over the liver or stomach; put on a number of leeches, when procurable, and a water poultice. Joining two grains of the hydriodate of potass with small doses of quinine, three times a day, and a blue pill every night; may be of great service when the complaint does not give way. When the disease is so obstinate as to resist all the remedies employed; going out to sea, or a change of climate must be tried.

Intermittent fevers are very liable to return on a future exposure to cold and wet. A very distressing pain across the forehead just over the eyes, coming on at some regular hour of the day; attended with uneasy feelings and lowness of spirits, is a very common complaint; and is called a "Brow Ague." It is generally removeable by small doses of quinine; or a few leeches may sometimes be necessary.

MALARIA FEVERS.

Malaria fever in hot climates, is but a severer kind of ague: it is a disease arising from some unknown poisonous vapour, given out from the earth in many parts of the world; varying in its symptoms, and in its severity: depending much on the season or the climate: still, it is the same fever; and to be treated by similar, but more active measures. Besides the common signs of fever, there is more intense head ache; generally, sickness and vomiting; pains in the loins and limbs; there is usually great lowness of

spirits—the mind soon breaks down, and there is what is called delirium, or wandering of the ideas; either violent or in low muttering. You may begin by giving the patient not less than twenty grains of calomel; and give a good dose of castor oil, if the stomach will bear it, some hours after the calomel: or a large glyster of warm water, oil, and salt, repeating it until the bowels are purged. If the fever be not lessened materially; the skin hot and dry; and the head aching. Sponge the body all over with water, of the common temperature of the air, continuing until the skin be cool and the pulse lower. The patient will probably feel much refreshed; and now, you can begin to give the quinine: at any rate do not wait long, expecting a period free from fever; you will probably not be able to distinguish any mitigation of the symptoms: give the best remedy we know of, quinine, in a dose of ten grains, joined with two grains of opium. The dose may be repeated without the opium in a few hours; and you will be encouraged to go on with the remedy, as it may produce relief and lessen the fever; giving it at a longer or shorter interval as it appears to do good or be borne. If the head becomes oppressed again, and heat returns; continue to use the sponge bath. Keep water cloths to the head, repeating the affusion as often as the heat returns. Combine the quinine with some red pepper, and act on the bowels by glysters occasionally. If pain is complained of at the pit of the stomach, which rejects the medicine; give it in the form of a small glyster, with a very little water or gruel, increasing the dose to twenty grains of the quinine. It will thus act on the fever without offending the stomach. Give besides, moderately, effervescing draughts; cold water to drink; and simple glysters of warm salt and water, frequently.

Blood letting is not generally a safe practice, but if from the fulness of the pulse and robustness of the subject, you bleed ; it must be done in the early part of the attack : taking away enough to materially affect the pulse ; but follow it up by the quinine and opium immediately, for while you draw blood away with one hand, you must give the remedy to keep up the strength with the other. It is observed, that the blood drawn is darker than natural ; the clot is easily broken up, and has a slimy buff covering.—See Malaria, Climate, Quinine.

The blood in this disease is the first to suffer ; and as the whole of the frame depends on it for its health and well being ; through it, the various organs of the body, are involved in disease. The object then is to support ; and strengthen the principle of life, so as to enable it to prevent the changes going on. When from the continuance of the disease the patient appears to be sinking, and the weakness excessive ; with feeble pulse, delirium, and insensibility ; you will do well to try wine or spirits. Give a table spoonful of good wine every hour : if it calm and refresh the patient ; without increasing heat or exciting delirium ; you will be encouraged to go on, and push it regularly. Rum and water, with sugar, may be used instead of wine. It may be necessary to give it largely to arouse the sinking faculties, and also by way of glyster. Drinks made slightly acid by sulphuric or muriatic acid, as a sort of lemonade, may be freely used.—See Plague, Yellow Fever.

FEVER WITH JAUNDICE CALLED YELLOW FEVER.

This is a form of Malaria fever, and is so called, from the yellow color of the skin ; it is the same disease as the bilious or remittent fever of unhealthy places, accompanied

with jaundice. It arises from the formation of a foul air, either on shore, or in ships. On shore, it appears at particular seasons of the year: some years, the fever rages with unusual violence: or it visits a place only once in many years, as a severe disease.

It is not a fever that one man catches from another, both must be exposed to the same causes: and it may be many days after exposure to the cause, before the fever breaks out. It is a malaria fever, and like others of its class quickly changes the whole mass of the blood into a dark diseased stream. When it rages in sickly seasons, it resists during its height, every kind of treatment: that is, when the poison which causes it, is in its full strength. Besides the symptoms described in other fevers; in this, there is greater restlessness; with continual sickness at stomach; which throws up whatever is taken. The vomitings are not bilious, but towards the last, consist of a dark fluid, like the lees of coffee. This state of the stomach, is often the only symptom complained of: it resists, too often, every means to settle it. The head ache is confined chiefly to the brow and eye balls.

The treatment will be the same as that described in malaria fever; by cold or tepid affusion of water, as often as the burning skin allows of it: after which, give twenty grains of calomel, two of opium and ten of quinine; choosing a moment when the stomach is comparatively quiet. If the medicine is thrown up, it may be given again in a glyster; but then, the quantities must be doubled. After a few hours the medicine may be repeated without the opium or calomel. Go on occasionally with the cold sponging; apply water to the head; water poultices to the stomach and belly, constantly kept on. The quinine to be continued or omitted as it may or may not be doing good.

Your great object is to cut short the fever in the first few hours: for the changes produced on the blood are so rapid, that after a short time, the less you do in the way of medicine the better.

A mixture consisting of lemon juice, sweet oil, and salt, a large glass-ful; has often succeeded, strange as it may seem, in settling the stomach; being retained when nothing else would remain down. This may be repeated; and at the same time give occasional injections of a pint of warm salt and water: which tends to cause a glow over the surface of the skin, and to bring on general perspiration.

Saline effervescing draughts may be given if agreeable; and drinks, containing muriatic acid as a sort of lemonade. These saline glysters and weak solutions of salt, have been recommended by medical men in the West Indies, from the experience of their advantages: supposing that the fluid is taken up into the blood, to which it seems to restore the color and consistency.

These means failing; be content to supply water, ice, acids, or any thing for which there appears to be a craving desire. Wine and spirits may be necessary; and may be given very freely when the pulse is getting indistinct, and the patient insensible or muttering incoherently, but not raving.

Although blood letting is not generally a successful practice; yet in new comers to hot climates, with full habits of body; a little blood drawn away at the outset of the disease, may lighten the system, and enable your other remedies to take effect. Blood had better be taken away by leeches applied to the region of the liver or pit of the stomach, if they can be procured.

The sick are to be removed on deck if possible under an awning. If the ship is anchored near land, with the wind

blowing off shore, bringing with it the disease ; get under weight at all risks, on the first appearance of disease. Throw overboard all green wood that you may have taken in : never move your ballast in such places, on any account, but flood it entirely. Keep wind sails up, if you suspect the cause to be in the ship.

It is not because the ship smells sweet, that it must be healthy : bilge water, which is very offensive, does not produce fevers. The cause is not to be detected by the senses.

The invisible poison producing this fever, may be concealed some time before it declares itself : so that after the first case, you may have many others ; even should you take every precaution about berthing your men, flooding your ballast, or going to sea ; and it is this concealment that has given rise to the notion of contagion ; still do not omit doing what is proper. Remember, that if you go to unhealthy coasts ; such as that of Africa ; and up its rivers ; old men will be far more serviceable to you than young ones : as being much less liable to take fevers. Allow of no debauch ; keep the stomach free from trash, even from much water ; do not expose men on shore at night. If early in the morning, always let them first have their breakfast. When obliged to be on shore ; a grain of quinine two or three times a day, is a good preventive of malaria.

TYPHUS FEVER.

This is a fever where all the powers of life are sunk very low. From the first there may have been very little complaint ; the patient may have gone about for many days, merely complaining of uneasiness ; some head ache ; great failing of strength ; depression of spirits ; and loss of appetite. At length the fever declares itself : the weakness in-

creasing, the person takes to his bed. The head ache is now greater; the skin becomes harsh and dry; the countenance of a dusky leaden hue; the pulse is something quicker than natural, but so weak, as not to resist the pressure of the finger: the senses are blunted; there is usually watchfulness and low delirium, or a very drowsy state. At length, the tongue becomes dry and brown; unnatural and offensive discharges come from the bowels; a peculiar smell arises from the person of the sick; the breathing is hurried; and very little urine is formed, of a dark color: not unfrequently the body is covered with spots under the skin, owing to blood which has escaped out of the circulation, from the weakness of the extreme arteries.

This form of fever prevails in some districts more particularly; and is observed always to follow seasons of great want, where, with cold and damp, there is destitution of every kind. No one can fix on one particular origin for this fever, it appears sometimes to be contagious. It is in this complaint, where wine seems to be of use, nearly from the beginning: whenever the circulation of the blood is languid, with much general depression; wine, quinine, and very small doses of mercury, may be combined with the greatest advantage.

In this complaint you must not bleed, nor even purge violently. You must be on the watch for any signs, shewing that the brain is more particularly suffering; such as watchfulness, irritability, delirium, or excessive drowsiness: in which case, you will shave and blister the whole head; or what is better; rub in the antimony ointment: you will give antimony and nitre, and carry off any matters which may be in the bowels by a glyster or by castor oil. If the pulse is very feeble, give a little wine frequently; being guided by

the effects: if it do not increase the heat, nor cause more delirium, it is doing good.

Your remedies must be prescribed, according to what functions of the body are out of order. By giving quinine with calomel; you give support, at the same time that the mercury restores the powers which throw off the humors from the body: and thus, when the tongue is dry, small doses of calomel, a grain at intervals, will restore the moisture, and bring back the desire for fluids which may have been lost. Mercury combined with antimony, may restore the perspiration: joined with nitre, it may increase the flow of urine: at the same time, you may give wine and light nourishment to support the heart and circulation. The body should be sponged with tepid water; and all the general means recommended in the management of the sick, should be employed, with cleanliness and ventilation. If the medicines fret the bowels; very small doses of opium should be joined with them.

Very many fevers when they have existed for some time, put on the character of Typhus, and require similar treatment.

FITS.

Is a popular name for several diseases, differing greatly one from the other.

The name generally implies a sudden attack; where there is some loss of sense or voluntary motion. Thus we say a fit of apoplexy, of epilepsy, or of hysterics.

The word fit is applied in other ways; but it is sufficient here to consider it as a disease, accompanied with some sudden loss of power, and with insensibility. When a man is seized with, or falls down in what is called, "A Fit;" before

you think of any treatment; you must endeavour to distinguish what the complaint really is. You cannot do amiss to loosen any thing about him that may be tight, to bring him into the open air from below, and to dash cold water over the face and head. Referring to the articles apoplexy and epilepsy; you will see if the attack be either of these; and proceed to treat it accordingly.

A man may fall down suddenly by the bursting of a blood vessel inwardly. It need not be said, that any thing you can do, under these circumstances, will be useless.

Supposing that you have a man on board subject to "Fits," as it is termed. You must endeavour to make out, how long he has had them; whether they come on at pretty regular intervals; or at any particular season.

Fits will often be worse, when the person has been irregular in his habits; has indulged in drink; or has been eating freely of food that may be indigestible; or if he suffers mentally. With such a man, you must be on your guard; and keep him as much as possible from committing any folly in diet or drink.

Bodily exercise will be of use, but he cannot be trusted aloft; nor should he have any charge which requires great presence of mind; or where there is a demand for much mental exertion.—(See Epilepsy.)

FLUX.

See Dysentery.

FRACTURES.

On the subject of broken bones, it is very difficult to give any but very general directions.

Nothing can be more distressing, than for a commander of a ship to witness an accident of this kind among his men;

unprovided as he is with any means of relieving the sufferer; even if he had skill. Whatever the fracture may be; whether a simple division of the bone, or one accompanied with smashing or tearing of the flesh; one thing is essential, the most perfect quiet you can procure.

Cut away the clothes gently, to examine the limb. Sometimes the fracture is too evident to be mistaken; at times it is difficult to make it out. The limb may not be displaced; and until you begin to move the ends, you cannot always know, if a bone be broken: then probably by listening, you may hear a grating together of the broken ends; or by a sensation communicated to the hand, you may find this to be the case. Being satisfied of the fracture; if of the lower limb, you get a cot prepared, and slung free from being struck when the ship rolls or pitches: place a board over the netting or sacking of the cot, so that there will be no sinking of the body into a hollow: and over the board, a hair bed. After the man is cautiously stripped and the bed arranged, get him carefully put into it; and place him on his back, some one taking charge of the broken limb; endeavour, without any violent hauling or twisting, to reduce the limb into the position of the one that is sound. To do this, you must desire the man to make no resistance by pulling against you. Place a soft pillow or padding under the limb, of the whole length of it, and lay broad tapes under all at short distances: place also a similar pad against the limb, on each side; taking in the ankles and knee joint in the leg: and taking in the whole limb from the hip to the ankle, if the thigh be broken. Over these pads place thin slips, of wood, as broad as your hand, or rather broader, hollowed out, (see splints) and a piece of smooth folded linen on the top of the limb; you now bring up the ends of the tapes and tie

over all: drawing them so tight, as to give a feeling of security and firmness to the whole member.

So far you have done all you can; while the man is easy, the bone is doing well: but if he complain of great suffering, you must look after the position; and see that nothing presses irregularly, or has got loose. If the clothes press on the toes, place a sort of cradle over the foot. Put the man on low diet; and if the fractured part of the limb be painful, endeavour to arrange it from time to time, very gently; taking the sound limb as a guide. A good way to keep all together is to place a folded sheet under the limb, reaching the whole length from joint to joint, then roll up a flat piece of wood in each end of the sheet, until the wood and sheet come against the limb on each side of it and then tie it up, as you did the splints and pads. This contrivance will keep all the pads and splints together, and be of great use. You must now wait with patience until you can put your patient under the care of some medical person; looking frequently to arrange the limb, or tighten the tapes; for the dressings get slack soon, and should be braced up; but not so tight as to give pain. In case of great heat and swelling, keep all wet with water.

Splints should be long enough to take in the joint above and below the broken bone, they should be thin, and hollowed out, and about four or five inches wide.

In many fractures where the bones are not much displaced, without a wound in the flesh; there is an excellent method of keeping every thing firmly together. You roll a soft bandage, round the limb; and soak two long and strong pieces of pasteboard in starch, made with common starch and glue, or with arrow root and glue. These pasteboard splints, must be long enough to take in both joints of

the limb, and wide enough to nearly clasp the limb round. Clip the splints at the edges to make them sit to the form of the limb. Soak also a long bandage in the starch and glue. When all is ready, get the bones as straight as possible; put on the pasteboard splints on each side, and then roll round the starch bandage from one extremity of the limb to the other; with moderate firmness, and great regularity. When the bandage dries; this dressing will become hard, and all of a piece, as it were. The limb may also be steadied by a wooden splint. You will require a little judgment in putting on this dressing, so as to keep all steady and in its place until dry; after which, you do not move the limb, or disturb the dressing.

COLLAR BONE.

One of the most common fractures is that of the collar bone; it is also the most difficult to manage by art; but fortunately, nature generally makes as good a cure unassisted by art, as can be effected by the Surgeon. The collar bone, is the curved bone which runs from the top of the shoulder to the top of the breast bone, when broken, the shoulder falls forward a little; and one end of the broken bone rises above the other, forming a lump. By raising the arm by the elbow, and gently forcing the shoulder back, the broken bones return to their proper places; but the difficulty is to keep them there; for directly you let go the arm and shoulder; down will fall one end of the bone under the other broken end.

Invent some mechanical support: perhaps the best way for you is to put the naked arm in a sling: a large handkerchief put round the neck, answers the purpose well; and it should be slung short, so that the shoulder be kept

by it very high : the fore arm forming a right angle with the arm. Sew up the handkerchief behind the elbow and before it; so that there can be no chance of the arm slipping out of the sling; and confine it to the side, by rolling a bandage round and round the chest and arm, and putting a stay over the *sound* shoulder, to keep the bandage from slipping off the chest. You cannot pull this bandage tight, as it would prevent the free play of the ribs in breathing. After you have done this, you can do no more; and you have only to look from day to day, if the bandage and sling are in their proper places. The patient must be still, but not confined to bed : and after two or three weeks the bones will be united. The principle is, to keep the shoulder up by the elbow: and the arm confined to the side. The elbow should not be allowed to fall so low as the hip bone ; but be kept nearly a hands breadth above it, so that looking at the patient in front, you find both the shoulders on the same line or level.

FRACTURE OF THE ARM.

There is only one bone in the arm, extending from the shoulder to the elbow; when broken, it is easy to be known.

You bend the limb at the elbow joint, and with a large handkerchief sling the fore arm round the neck, desiring the man to keep himself upright, and to let the arm hang down, giving up all command of it. The arm being perfectly bare, you prepare your splints and pads ; you place one inside the limb from the arm pit to below the elbow, and another on the outside, taking in the joints of the shoulder and elbow : a fold of linen before with a small splint ; and a similar piece behind ,forms altogether a sort of box, which you proceed to tie up with broad tapes ;

three or four of which, may be enough to keep all the parts firmly together. Never bind up a broken bone without taking in both joints, above and below.

When you want to trim the pads, and tighten up the dressings ; it is best done when the man is sitting : who is to be told, not to allow himself to attempt any movement of the arm, but to abandon it as if it were dead. You will find these fractures do exceedingly well by this simple plan ; without confining the man to his bed. The binding and bracing up, must be firm enough to keep every thing from starting : yet not so tight as to check the circulation.

FORE ARM.

There are two bones in the fore arm ; If one is broken the limb does not appear displaced, but the movement are painful ; and upon close examination you discover the moving ends of the broken bone.

Two splints and pads with tapes, easily secure it ; and it must be slung by a large strong handkerchief round the neck. When both bones are broken, the case is more evident, and the cure the same.

A fortnight or three weeks, in young and healthy subject, will be sufficient to keep the limb bound up ; but do not leave it without some protection ; such as one splint underneath and a bandage, until a month or five weeks ; when you may put on a large diachylon plaster, and roll up the arm in a bandage.

THE FINGERS.

Require a similar treatment, apply a little wooden or pasteboard splint and bandage.

FRACTURED RIBS.

You place your hand on the naked side, and trace every rib with your finger, until you come upon the bone that is broken: it will grate under the pressure of your finger. Now when one or more ribs are broken; you will have great pain in drawing the breath, or in any attempt to turn the body, or move the arm of that side. If they are simply broken, without any excessive violence; you have only to pass a very broad flannel band, several times round the chest, this does good by preventing too great a movement of the chest. Keep the man low, and give a little physic.

The blow may have been so violent as to have driven the rib into the chest and wounded the lungs. If it do not wound the lungs it may produce inflammation by tearing the lining of the chest. The feeling is more piercing and pungent than when simply broken. You must bleed the patient freely; and perhaps again, if the pain be very great. Make him observe very low diet, and give no wine nor spirits. The case is now to be treated like pleurisy. When the lung itself is torn by the rib, the case is still more severe: the air escapes from the lung, and may find its way between the muscles, and under the skin, giving an appearance of puffiness to the skin, which crackles under the touch: or there may be blood poured into the chest. However, you can do little beyond guarding against inflammation, by the means mentioned under that head.

BACK BONE FRACTURE OF.

Any part of the back bone, from the head downwards may be broken by great violence. If above where the nerves that supply the organs of breathing rise; instant death is the consequence. If lower down, the person may

live for some days, even weeks; but the accident is always fatal.

There is palsy of all the parts below the fracture; no movement in the lower extremities: the bladder does not press out the urine, which you must draw off frequently. Give a little food, and after a few days a little wine, and make the patient as easy as can be under the unhappy circumstances. If the bowels are confined, operate with one or more glysters, and if pain and anxiety disturb the man, give some laudanum at night.

KNEE CAP. FRACTURE OF.

When this bone is broken it is usually across; one piece remains in its place, and the other is drawn several inches up the thigh. The patient is to be placed in bed upon his back, with the shoulders very much raised: the knee and leg are to be kept straight, and the heel raised considerably. A bandage is to be passed round the body, and gradually rolled down the thigh. The bone must be got down by degrees to as near the other half as possible; and the bandage should be very firmly applied, so as to keep the broken edges together.

That the patient may not bend the joint, a piece of hollow wood, padded, should be bound under the bend of the knee.

The union of the broken bone, is usually effected by means of a tendinous substance, and not by bone; for the edges can seldom be brought so completely together, as to join again by bone. The man should not be allowed to bend the knee for two months, and then very gradually.

THIGH FRACTURE OF.

From the great mass of flesh that covers the bone, this fracture is not so easy to detect as one in the leg or arm.

The limb is generally shortened; and you perceive a hard lump, where one end of the broken bone rides over the other. Draw or cut off the clothes gently; place the man in a bed prepared as before directed; and allow the limb to remain on a soft cushion; the man being on his back; until you can prepare your instruments, and direct your assistants, so that there shall be no confusion. At first, the muscles or flesh pull up the lower portion of the bone so forcibly; that it resists your efforts to place it right. You must get the patient to offer no resistance to your attempts, which must be very gradual and gentle. Your pads and splints, as long as the whole lower limb, are duly laid ready—tapes are passed under the thigh, and under the splint upon which the back of the thigh is to rest. Then, while an assistant grasps with both his hands, the thigh high up near the body; you gently draw down the lower part of the limb, until it is in its natural position. The man should endeavour to make no resistance.—You then, while another assistant keeps the limb straight, proceed to place the side pads and splints; also a narrow one on the top of the thigh; then you tie the tapes firmly, so as to secure and completely box up the limb. You must see that the great toe and knee, are in the natural position. You keep off the weight of the bed clothes by a sort of cradle over the foot; and you desire the man to be perfectly still.

After a few hours if uneasy; you will do well to untie the limb, and cast all loose again: your two assistants taking charge of the upper and lower portions of the fractured extremity. As the pads may have got slack; and probably, the bone has been pulled up again by the muscles. It will be easier now to reduce it: and your splints can be bound on firmer. When once well adjusted, leave it alone.

If easy, all is right; if not, look to it again: but as after a severe accident, there must be great tenderness and some inflammation, very little pulling about should be attempted for the first few days: after which, the fracture must be occasionally looked at and righted, always cautioning the patient, not to make the slightest efforts to raise himself.

Fractures are called compound when the broken bone is accompanied by a flesh wound: the bone being forced out through the skin, with greater or less injury and destruction of parts.

A man falls from aloft, and striking against something on deck, breaks his leg or arm, and the bones come out through the flesh and skin. This is frightful to look at, and you are at a loss for what is best to be done. You do in this case, just what you did in the case of a simple fracture; you put the man gently into a bed previously arranged, with a tarpaulin under the limb, to keep the bed from the blood and discharges. At first do not attempt to bind it up, just place it upon a soft pillow and in a bent position. To make up your mind what to do; and to prepare all your apparatus; and give instructions to your people how to assist you, will require some reflection: for when you have once placed the man in his cot; you cannot be changing his position, or taking him out again. You may find the bone cannot be pressed back to its situation: for perhaps the flesh and skin have got behind it; the lower part of the broken limb being drawn up by the force of the muscles; and for a time, it is actually shortened. Do your best to make it lay as naturally as you can, drawing the bent limb gently, and desire the patient not to resist you. You need make use of no violence: a gentle pulling to bring the bones end to end, or as nearly so as you can, is all that is required. Place over the wound,

a piece of wax-dressing and a fold of linen. Splints and pads as before, merely to guard against the motion. You must keep the limb as steady as circumstances will admit. The man is to be on low diet; and if any sharp fever come on, you may bleed. Look at the limb, and adjust the splints, pads and bed, as well as you can from day to day.

In managing these unfortunate cases; you must be satisfied to do nothing very wrong, and you must get the man under proper surgical treatment as soon as possible. If by cutting through a narrow band of skin, or sawing off the sharp end of a projecting bone, you could get the broken ends together, and place the limb in a more favourable position; do it boldly. It will make the patient himself more comfortable, and give him a far better chance of cure. Perhaps the best position to place a man with compound fracture of the leg, is upon the side, on a soft pad and splint; stretching the limb as much as you can, to get one end of the bone against the other, and then another pad and splint placed on the other side of the limb, and bound together by tapes passing under all; or rather by slips of linen one overlaying another up and down the limb, called the many tailed bandage. You must use splints and braces on board ship, to prevent the effects of the continual movement, by which, the fracture would otherwise suffer. Besides, in sleep, or without thought, the patient may suddenly move and disturb all the arrangement.

Do not hesitate to loosen the upper splint, and examine what is going on from time to time: change the dressing, sponge away any discharge etc. It will be well not to tie the fracture up tightly if there is no motion in the ship, or if the cot can be slung free from striking: apply slips of linen or calico two inches wide thus; you begin, we will

say, at the ankle; passing the first piece of linen under the limb, and allowing the ends to cross each other at top; the next covers a portion of the first, crossing also above; and thus with all the other pieces in succession, so as to enclose the whole limb. This is called the many tailed bandage. You can unfold this to dress the wound, without in the least disturbing the limb.

While heat, swelling, and pain exist; the patient must be kept low; but when the discharge is abundant, the man will require some more support; and you must in giving this, be guided by his habits. You must not expect fractures of this description to unite like simple ones. It will take many weeks to restore the limb; and the accident may be of that nature, as to destroy life; or to require immediate amputation. I need not say that you can do nothing more.

GLEET.

See Gonorrhœa.

GONORRHOEA OR CLAP.

Is a running, accompanied with more or less pain in passing the water. It comes on with a tingling or itching along the water passage, towards the end of the penis. As the urine passes along the inflamed lining of the passage, it causes a very sharp scalding sensation. The redness of the end increases, as does the quantity of discharge, and the pain in making water. Sometimes at night, a very troublesome symptom arises, called cordee, which is a painful bent state of the penis, during erection. The discharge which is at first a whitish sticky fluid, after a time becomes thicker, and of a yellowish color; at length it lessens in quantity, and gradually goes off.

Most runnings in good constitutions, would cure themselves by a little laying up, and by reducing the food and drink. When the violent symptoms of the complaint subside, a thin discharge often remains for many weeks or months afterwards. This is called "Gleet," unless there be some uneasiness in the passage, as aching, smarting, or an irregular escape of the water, you need not pay attention to it; nor is it likely to produce the disease in others. Among the very many ways of treating a clap, the following is perhaps one of the safest. Wrap a strip of wet linen round the penis, and continue from time to time, to renew the application, so that it may not get dry. Open the bowels with a smart purgative, or good dose of castor oil; then use the tartar emetic mixture in barley water four times a day, or oftener. Drink moderately of water, or barley water, and if possible, keep in bed for twenty four hours or two days. The food should be very spare at first.

If the inflammatory symptoms have gone off considerably; you may take Balsam of Copaiba; a small teaspoonful in any fluid, the dose to be repeated three times a day: the cold water still to be kept to the penis. As the discharge decreases, which it will generally do very rapidly; you may lessen the dose of balsam, but you are recommended to continue taking some of the medicine until all the symptoms are gone. The balsam may be given from the very beginning, before inflammation has advanced, and usually with perfect success. It may entirely prevent the heat and distress coming on: but, as in some peculiar constitutions it is attended with unpleasant effects, which you may not know how to remedy; the plan to be preferred is the one before mentioned. In the course of a week, you may expect either a cure, or a very great abatement in all the

symptoms. When Gonorrhœa is allowed to run on for a long time; the inflammation is liable suddenly to be transferred to the testicle; producing a most distressing and painful complaint. See Swelled Testicle.

Nothing can be more uncertain than the cure of a Gonorrhœa: under precisely the same treatment, one man will get well in a few days; while another will be many weeks. If a particular treatment does not appear to succeed, you had better change it soon. You may give Cubeb powder in teaspoonful doses three times a day: or you may try cold water to the part and rest; only recollect, always to keep the bowels open with physic, whatever treatment you pursue.

Large doses of balsam of copaiba, sometimes produce an irritation and inflammation at the neck of the bladder. See "bladder inflammation of" the complaint will gradually subside; but you must not give the balsam again to this man.

Mercury is not required for this complaint: and it is folly to use a medicine of such power, without a necessity. No doubt, mercury has often appeared to effect a cure; for the powerful action produced on the body by this drug, has killed, as it may be said, the less powerful one of inflammation in the water passage. Where there is cordee, rub in mercurial ointment and camphor under the penis, along the water course, every night; and take twenty drops of laudanum on going to bed, and some opening physic occasionally. In obstinate claps, when the running resists every remedy, and a great soreness remains along the water course: it has been relieved and cured, by gently rubbing the under part of the skin of the yard, all along the water course on the outside, with the caustic: the skin being previously

moistened. It may be repeated more than once if necessary. When a running continues for months try blistering the knee.

In the groin on either side, one or more of the glands may swell, and produce what is called a 'Bubo.' See this article.

When the foreskin cannot be drawn back, the discharge is apt to fret the tender skin underneath, and cause sores. You must inject a little weak goulard water under the skin, with considerable force. This washes out the discharge which lodges, and prevents swelling and sores.—It may be repeated several times a day.

The skin being back, cannot sometimes be brought forward: and it binds round the parts so tightly, as to be very painful and dangerous. In this case, keep the part constantly wet:—give the antimony mixture; and after the application of cold water for a time, squeeze the swelled end gradually, with your thumbs and fore fingers, so as to press out the blood gently, and at the same time draw forward the foreskin with the other fingers.—In this way, you will occasionally succeed.—But the skin is often so greatly swelled and hard, as to resist your efforts, which only give pain. An operation is performed in these cases, which I should not recommend you to attempt: it is very rarely necessary. You may bleed and lower the patient with antimony instead.

Young lads are apt to conceal these complaints, from shame, or out of fear of punishment or reproof. You should keep an eye upon your people on leaving port, and question them, for if the complaint be neglected at first, the man may be laid up, and be useless to you for the voyage. See Bubo, Venereal.

HEAD ACHE.

Is a symptom of several very different complaints. We have head ache from impeded circulation in the blood vessels of the head. In this head ache, there is a feeling of fulness and tightness; a giddiness on exertion; the face is flushed, and the eyes red; there is watchfulness; and when the patient sleeps, the sleep is disturbed. Purging and half diet, or the loss of a little blood, are the chief means of relief.

In Head ache of a rheumatic kind, the pain is on the outside of the head, which is painful to the touch; is increased by warmth, and usually worse at night: when the membrane that covers the bone under the scalp is affected, the pain is very severe and obstinate. The great tenderness to the touch, will enable you to distinguish the nature of the ache. The cure is by a dose of calomel and dovers powder at bedtime, and a purge with colchicum in the morning: (See formula) by great attention to the quantity of the food and drink, and by three grain doses of the salt, called 'Hydriodate of potass' three times a day in a little water, in case the dose of calomel and the purgative do not succeed. Give but little strong food; no spirituous drink; and increase the bodily exertions to labour.

There is an aguish head ache which comes on periodically: or if continual, is much worse at one particular time in the twenty four hours. This pain is over the eyes and along the forehead; or fixed in one spot. Its coming on at regular times will declare its nature.

After opening medicine, you had better give quinine in doses of one or two grains three times a day: and you may join with it, four or five grains of blue pill every other night; particularly if the motions from the bowels are not natural; at all events a few doses of the pill will do no harm.

There is a head ache which arises from fatigue, from anxiety of mind, or from hunger. It is an exhausted state of the brain.

Repose, a cup of broth, of weak tea, or hot weak lemonade will relieve this: a hearty meal may increase it; for although it may arise from fatigue and want; yet the stomach is not in a state to digest food, until by repose and coaxing, it has recovered some of its power. The brain seems to the sufferer, as if it were loose in the head; and motion increases the pain.

The head ache after drinking hard, arises from an exhaustion of the brain also; which has been over excited by the stimulus. This head ache resembles the last described, from fatigue; and is relieved by repose, an effervescing draught, or even by a little weak and hot spirits and water; if tea or lemonade fail.

Head ache arising from indigestion, called a bilious head ache, (See Bilious) is a most common form of the complaint; and is a symptom of some disordered condition of one, or the whole of the organs concerned in the digestion of the food. Thus, if what has been eaten and drank, has not been wholly digested; the crude portion as it passes along, irritates the nerves of the bowels, and the head sympathizes, If the food ferment, and acidity is formed; the same effect is produced. If too much or bad bile passes into the intestines from the liver, the same pain results. If any part of the bowels is stuffed or loaded, we have this pain also. There is depression of spirits, great heaviness, no power of fixing the attention on any thing; no clear perception, no steady reflexion. The brain is clouded as it were. This is the frequent state of those who feed luxuriously, and live idly; for it is written, that man is to "earn his

bread by the sweat of his brow," and if he transgress this law, the penalty is pain and suffering.

In case food is not yet out of the stomach, take an emetic, of the ipecacuanha powder. If after emptying the stomach, there is oppression and a foul tongue, the bowels not being moved; take physic, such as pills every two hours until they operate freely; hot lemonade for drink, and saline draughts as in the formula; or any hot weak drink.

The first object, is to get rid of the substance that has acted like a poison upon the body; and next, to restore the healthy state of the digestive tube, that is the stomach and intestines; which, after proper evacuation, frequently require a warm stomachic medicine; such as assafoetida and pepper, to which a little rhubarb may be added: or a light bitter infusion.

The head ache from confined bowels has the same symptoms, and requires the same treatment.

Then there is a head ache accompanying fever: but here, the primary malady is to be considered, the pain in the head being only one symptom of the disorder.

Several of the affections above named, are at times, called nervous head aches. But all pain is nervous; as the nerves, of which the brain is the centre, are the sources of all feeling. All may be called nervous head aches, that do not arise from fulness of the vessels, or inflammation. The term is chiefly confined to the head ache arising from over exhaustion, from fatigue, or long application.

There is a dreadfully painful affection which attacks the head or face, called 'Tic Douloureux' by the French. Sometimes suddenly, in an instant, an intense pain will attack a part of the head or face, of a shooting description; flying along the course of a particular distribution of nerves. It

may go off, leaving a benumbed feeling, or tingling sensation behind. Or it may come on very gradually, getting worse and worse; until it arrive at its full intensity. It frequently comes on at regular periods. The cure is difficult, when the complaint has existed any time. Large doses of quinine or steel powder, with open bowels, and an opiate occasionally, is what may be tried. Cover the part with cotton wool. This affection, although more frequent in the nerves of the head, may occur in any other nerves.

HEAD INJURIES OF.

Wounds and blows upon the head, should not be neglected, even if they appear at first of no importance. A person seems to recover from the immediate effects of a blow on the head; but a few days after, he may begin to complain of some uneasy feeling, which is the forerunner of more serious mischief.

A man falls down on his head; or a block, or a heavy body knocks him down; he is insensible; there is perhaps no wound, nor any outward sign of injury. This man may be either stunned, or his brain may have received so severe a shock, as not to be able to recover itself again; or some blood vessel within may have been broken, and the blood has flowed out; which, pressing on the brain, is causing apoplexy. You may not be able to feel a pulse, yet the man breathes.

You will do right to prop up the head and shoulders a little, to dash water in the face, and put only a tea spoonful of spirits and water into the mouth, or any thing which may arouse the man from his state of insensibility. He may gradually revive; when you must insist on his being quiet and give him a dose of opening physic; placing him on a

low diet. If after a time, heaviness and pain in the head come on, with a sensation of tightness round the brain, or a feeling of heavy pressure on it; with heat of skin, and any hardness of pulse; take away blood largely, and repeat the bleeding until the relief is evident; at the same time, give purgatives of calomel, jalap and cream of tartar, senna &c. making the man observe a very scanty diet, without any strong drink. The head may be shaved, and cold lotions of vinegar and water applied, if there be much heat on it: or you may put on a blister, to remove any remains of pain; for unless you get the better of the inflammation, matter forms and your patient dies apoplectic.

After a smart blow upon the head, a hard swelling rises almost immediately; this is blood, or a fluid poured out under the thick skin of the head: and when you feel with your fingers all around, the feeling is so exactly as if the bone was driven in, that even experienced surgeons have been deceived. This swelling goes away in a day or two. Apply a little vinegar and water to the part on linen.

Pain in the head is always a suspicious symptom after blows. Do not neglect the warning; particularly if accompanied with drowsiness and forgetfulness. Then bleed, shave the head, blister it and keep to low diet.

The scalp, or hairy covering, if torn or forced off, may shew the bone beneath only covered by a thin membrane or skin. You must remove every particle of dirt, or any hair that may be in the way, and place the torn parts together; taking as many stitches as may be requisite. Steady the flap with a fold of linen, and a bandage wound round the head and under the chin; secured with pins, and covered over all with a night cap. If much heat and swelling of the scalp be present, keep the cold water dressing constantly

on. You will find this wound do very well, frightful as it may seem; provided no material shock has been given to the parts within the skull. For fear of this, you must purge, put your man on diet; keeping a good look out for any untoward symptom that may come on, for many days after the injury. A violent blow on the head, may break the bone without displacing it; you cannot discover if it be broken or not; and if you could, it is of no practical importance: you must take exactly the same measures. If there is inward bleeding, causing a state like apoplexy; you can only await the event; there are no means in your power to give relief.

Mens skulls may be fractured with very little bad consequences at times; and at other times, an apparently trifling blow, will cause mischief enough to destroy life. When the bone is displaced and driven in upon the brain; a state of insensibility follows, resembling apoplexy. The man loses sense and motion; he breathes hard; his pulse is slower than usual, and compressed; the eye is motionless: there may be perfect loss of sensation and motion; or there may be partial loss. You feel the bone beaten in; one edge may be in its place while the other may be pressing heavily on the brain: or the bone may be broken into several pieces, some of them driven into the substance of the brain: or the injury may be so severe, as to destroy life instantly by the pressure.

In cases where bone is beaten down upon the brain, your man must die unless you raise the bone: and this is a surgical operation, requiring considerable skill, and instruments for the purpose. By keeping the patient low, he may be kept alive, until surgical aid can be found. Bleed largely to lessen the quantity of circulating blood, and allow but very little to eat: the drink to be water.

HEMORRHOIDS.

See Piles.

HERNIA.

See Rupture.

HUNGER.

It may happen to seafaring men, that they are wrecked ; or in boats without any provision for many days : and at length, they may be picked up, or taken from the wreck by some passing vessel. The people are in an extreme state of exhaustion ; some perhaps have died, others are nearly in the same condition. It would be very improper to give any strong food or drink to such men : you must begin by getting them to swallow a little water, or sugar and water, by means of a spoon. Then have prepared some weak broth, in which boil a little oatmeal ; or have some arrow root made, and give a little from time to time. Keep them warm and lying down ; by degrees give nourishment that is a little more strengthening. Life in these men is like an almost extinguished fire, which will be put out by heaping on fuel : but the spark if properly managed may be raised into a flame.

We find that nature cannot bear sudden changes, a long draught of very cold water when a person has been heated by exercise has produce death : so bringing an almost frozen body to the fire may destroy it. Older persons bear hunger better than young ones ; almost in the ration of their ages. In the young there is a great expenditure of nourishment, and a corresponding demand for more. The chances are in favor of the older hands of a crew surviving, in case they are deprived of food for a length of time. Hunger may be borne a much longer time where water can be procured, for thirst is the most distressing feeling of the two. In starved persons, fever comes on with delirium, and in this state they die.

INDIGESTION.

Fortunately, the class of men for whom these instructions are more particularly written, are but little acquainted with the worst forms of this complaint. The indigestions of seafaring men, are of short duration. The oppression of the debauch usually wears off, and no permanent inconvenience remains.

But you must learn, that the stomach which receives the food for its digestion; that is, for the separation of the nourishing parts of it from the rest; is a large muscular and membraneous bag, placed just under the chest, towards the left side; and is furnished with nerves, blood vessels, glands, and absorbents: that it is not to be considered as a mere receptacle, waste bucket, or vat; into which, any thing may be thrown to be digested or fermented at pleasure: but it is a living organ, that although of long suffering, will break down at last, and become enfeebled by your persevering to abuse its strength.

A fluid, called the gastric juice, is formed by the stomach; which juice, is the immediate cause of the solution of the food. On the health of this great organ of the body, all the rest depend. For in the stomach, and its appendages the bowels; is prepared the chyle or milky juice, which carried into the veins, becomes blood; and if this blood be not well prepared, how can all the rest of the machine, which depends upon it for nourishment, be strong.

The bowels may be considered as a continuation of the stomach; and a disease of one part of their length, will affect the whole.

Indigestion may depend on a great many causes; but the most common, is the excess committed daily in food and drink; as to its quantity.

Man eats much more than what is necessary to maintain him in health; and excess in food, may be considered more generally hurtful than in drink: for it is taken in too great a quantity every day; whereas strong drink, is only occasionally taken to excess. However it is not by strong vinous liquors alone, that injury is done; but excesses in water even are not harmless: it must undergo the process of absorption, be carried into the blood, through the lungs, and by other vessels to the skin or *kidnies*; giving all these parts more work than they can bear and yet be well: they must necessarily be weakened by long over-use.

The stomach is the great organ, with which the whole frame sympathises. Take a minute portion of some offensive substance into the stomach; and in a few minutes the whole body becomes troubled: some trifling article of diet, will at times produce the most terrible effects.

After eating something which the powers of the stomach cannot master; the person may be seized with an intense pain in some part of the body, far distant from the cause; perhaps in the foot, in a joint, in the testicles, the head, between the shoulders, in the breast. An emetic or any thing which can get rid of the offending substance, instantly removes the pain in the distant parts as if by a charm.

Frequent attacks of indigestion come on to caution us, but when the mischief is over, we return to our practices; until confirmed disease is established, or the organ is fairly worn out by hard use; and long emaciation of the body, is followed by a premature death.

Nine tenths of all the diseases which afflict mankind, arise from the abuse of this organ; and yet men get sick, and look round for a cause, wondering, how it is that they should be ill; ascribing it all to the wind, the sun, or some

influence as far off as the moon from the real one. If they know it, they are not honest enough to confess it. Upon nothing are people so sensitive and tetchy, as upon the business of eating and drinking.

You, or your men, will be sick at times from eating things you are unaccustomed to eat; or out of the usual time of eating. Nature may come to your assistance; and you may throw them up: or a looseness may carry the poisonous stuff downwards: the stomach remaining a little weakened for a day or two. But it may happen, that the indigested mass will occasion much more disturbance. You feel great bodily weakness, the bowels are constipated and filled with wind; the head aches, the tongue is loaded, and there is a tenderness on pressure at the pit of the stomach. This is the feeling to which the term bilious is often given.

A slight oppression from food may be relieved by drinking very hot water, or sugar water, or by the weak hot lemonade (formula). If not, it is better at once to clear out the bowels by some opening pills at bedtime; or if the oppression be very great, an emetic will bring up what may be in the stomach; and a purgative pill continued at regular intervals, will remove any thing that is left in the bowels. A mild effervescing draught now and then, will settle the stomach; or if much weakness and loss of appetite remain, take a little bitter infusion of camomiles; and avoid much fluid and sloppy food. Thus, a little management, will restore the proper tone or state of the organ. The assafœtida pill will assist, when there is a tendency to wind and costiveness.

INFLUENZA.

Colds are sometimes so general, as to be supposed infectious: and it is called an influenza; as arising from some

influence of the air. The influenzas that have prevailed at times, have been very fatal to the old and weak. It is observed, how soon the strength is reduced in these colds; so that patients with influenza, will generally be injured by bleeding or any continued lowering treatment.

The symptoms, when the lining of the air passages is inflamed, are, roughness and soreness along the throat; a feeling of tightness in the chest, difficult or hurried breathing; great loss of strength; the pulse is quick and weak; the urine becomes thick on standing. Give an emetic of ipecacuan powder; a blue pill with five grains of dovers powder at night, and a dose of castor oil in the morning. Then continue to give the antimony mixture with dovers powder at bedtime: confine the patient to bed, on a mild diet; you must not lower your patient by bleeding, even if the pulse appears to warrant the loss of blood, or if pain in the chest or cough seems to require it.

When the first feverish attack has a little subsided, give some dovers powder at bedtime; and if chilly and weak, a little quinine with ipecacuan powder, one grain of each three times a day; omitting the dose when the skin is hot and dry. Attend to the bowels also. When there is severe cough and pain in the chest; apply a blister to the pit of the stomach, or between the shoulders, and a few leeches to the hollow above the breast bone: four or five drops of muriatic acid in water, may be taken frequently when the throat is sore, either as a drink or a gargle.

ITCH.

If there be a specific for any thing; it is sulphur for the itch. If you are sure that a man has got the itch, you rub him with sulphur ointment thoroughly, over every part

where there is any eruption: and do this night and morning for a week: rubbing in the ointment with considerable force. At the end of this time, the man should be well washed and his things changed. Should any spot appear after this discipline; he should be made to attack it with a little of the ointment; rubbing it in on the spot with the finger. If you mistake any other eruption for itch; this treatment will do no harm. You will recollect, that there is no fever or inflammation with itch; and that it comes on by degrees; first on one part of the body, then on others parts.

Itch on its first appearance, is an eruption with a little watery head; which by scratching, you break, and it loses its character; but if you examine closely, you may perhaps find some pimples that are whole. It usually breaks out about the joints and between the fingers: and the itching is very distressing; not like a pricking or the crawling of ants or the tingling sensation which accompanies some eruptions: when it has existed for a long time, in men of dirty habits, it forms sores and scabs; and without a careful examination, you may not find out what it is; but if there be any itching, you can do no wrong by rubbing in the sulphur. The only fear is, that you will not persevere and make the men rub in until they have completely killed the disease; without which, you will be plagued for a long time. No part of the dress should be changed during the cure; and when you have finished with the rubbing in, a dose or two of purgative physic will be useful: such as senna and salts, taken in the morning. No attention need be paid to diet, except that it will be as well to avoid gross and full living, as well as very poor and meagre fare.

JUANDICE.

The Bile or Gall is a yellowish bitter fluid, formed by the liver, when prevented passing into the bowels, it is taken up by the blood vessels, and by them carried to every part of the body, giving its own yellow color to the white of the eye and the skin; thus forming the disease called jaundice, When not checked, some alteration in the consistency of the bile, causes the skin to assume a dark mahogany, or green hue; this is called black or green jaundice, which is then a serious, and often fatal disease. The Bile carried over the body acts as a poison; it produces some fever: the skin is hot and dry, there is more or less uneasiness about the pit of the stomach, a sensation of fulness there and a loss of appetite. With a great feeling of weakness, there is lowness of spirits, and no inclination to exertion, either of mind or body: there is also a general itching over the skin. The bowels are always confined, and the motions clay-colored, there is no bile in them. The water is deeply yellow, so as to stain a piece of linen dipped in it. If the habit be very full, and there is much pain on pressing on the right side, under the edge of the ribs, with retching; the pulse hard and frequent; take away some blood; apply leeches, if you can get them, to the pit of the stomach; Give two of the colocynth pills N^o 19 every two hours until the bowels are freely opened. Where the pain at the pit of the stomach or over the liver is considerable; join one eighth part of a grain of opium with each dose. When the pain is allayed, or when the jaundice is not attended with great tenderness about the liver from the first, give an emetic every other night; which will generally succeed in removing the complaint. Give also saline effervescing draughts with soda, as in the formula: The drink may be water.

If the bile do not flow by the right channel after this treatment, give about ten grains of blue pill every night. Take care not to go beyond the moment, when the mouth becomes gently affected by the mercury. The return to health, is known by the yellow color going off the skin ; by the stools becoming natural in their appearance; by the desire for food returning; and by the loss of all uneasy feelings. This complaint may depend on gall stones stopping up the passage for the bile : in which case, the symptoms of pain and the vomiting are very severe. You may be obliged to give a large dose of opium, and to bleed, to relieve the suffering; which will continue more or less, until the gall stone passes into the intestine.

JOINTS INFLAMMATION OF.

Sprains, bruises, and other injuries about the joints, must never be neglected. The inflammation which follows an injury of the joints; may lead to a long confinement, and the loss of some power or motion in the limb; and if the constitution be bad, even to more serious consequences.

The activity of your treatment, will of course depend on the severity of the case.

It is always well to insist upon perfect rest of the joint. Put the patient on a lower diet; allow of no heating drink; cover the part with a very large poultice; and purge with some smart physic. Leeches or cupping, are nearly always useful. You may not possess the means of taking away blood from the part; but if the man be strong, and the injury severe; bleed from the arm. Keep wet cloths round the part, as long as the heat of it is greater than natural: they may be kept on night and day. After the pain and inflammation have been warded off, or reduced by these

means; roll the limb with a bandage. When only stiffness or weakness remain; rub with opodeldoc, or oil liniment twice a day; continuing the bandage. A soap, or diachylon plaster, may give support and strength to the joint when the patient goes to duty.

KIDNEYS INFLAMMATION OF.

A sensation of heat and shooting pain in the loins, with a dead pain in the thigh; sickness and vomiting; uneasiness when attempting to walk, or stand upright; painful and often bloody urine. This complaint is likely to be brought on by the common causes of inflammation in other parts. On board ship, it may be produced by violent straining, or efforts at work; or by outward injury; as by a heavy blow on the loins; by taking injudiciously, highly stimulating drugs, as balsam, spanish fly, or turpentine.

The treatment consists in very low diet, bleeding, a full dose of calomel, with a castor oil purge; glysters made with gruel and oil, often repeated. When the pain continues after the clearing of the bowels and bleeding, give a small glyster of gruel with sixty drops of laudanum in it, and two or three grains of opium at night. As there is always sickness of stomach; medicines that are bulky will not remain on it. Try a warm bath, or sitting in a tub of hot water: or wrap round the body a blanket, half of which is dipped in hot water and wrung out: continuing this sort of bath for a considerable time. Give barley or rice water for drink. The inflammation may pass along the passages of the urine and attack the bladder; you will have then pain in this situation, and at the very end of the penis.

Inflammation of the kidney, must be distinguished from Lumbago, or a rheumatic pain in the loins; in which, the

least motion causes great agony. Lumbago is not usually attended with fever; and the patient is comparatively easy when quite motionless.

A LIVER COMPLAINT.

Is some change that has been produced in this organ chiefly from irregularities of life. It is common every where, but much more frequently found in those who have lived much in hot countries: in persons from Europe who have resided in climates within the tropics, and who have continued there, the habits and manner of life of a northern latitude.

In men who drink hard, and do not carry off the effects of drink by severe work: and in the very idle, who take little or no exercise, it is a common affection.

If hard drinkers do not die of some active sickness; the liver, sooner or later becomes diseased. The symptoms are, frequent attacks of pain in the right side and shoulder; tenderness on pressure in the situation of the liver; nausea and vomiting in the morning; a loss of strength and appetite; an irregular state of the bowels, which are either confined and the evacuations clay coloured, or they act frequently, evacuating very loose dark and offensive stools. The countenance is sallow and the skin dry; frequently there is cough. The patient complains of not being able to lie on his left side, so well as on the other, although the contrary to this occurs at times. All these symptoms arise from a low inflammation, or a stuffed and loaded state of this organ. Doses of blue pill should be taken every night; say five grains, for a week or ten days: sponge the body when the skin is hot, with vinegar and water, opening the bowels with a dose of castor oil; pay great attention to

the food, drink, and clothing; apply a blister, or antimony plaster on the side. With this plan you may obtain relief until you can get the assistance of some medical person. Great abstemiousness in drink and food is most essential, not only, as regards the quality, but the quantity of it; very little drink of any kind, and a diet chiefly vegetable is recommended: very warm clothing, is essential.

LIVER INFLAMMATION OF.

A pain in the right side, extending towards the back; occasionally a pain on the top of the right shoulder and side of the neck; tenderness, or severe pain on pressing under the edge of the ribs, on that side; frequent short cough; inability to lie on the left side without producing a dragging pain on the right; sickness of the stomach and vomiting; the skin is hot and dusky colored, the tongue white and coated, and the pulse frequent and hard. These symptoms are those of an inflamed state of the liver. The complaint may also begin, with symptoms of fever and irritation of the stomach and bowels; without any reference to the right side. Bleed once from the arm freely, and give a few grains of calomel, followed by a purge of senna, or jalap and cream of tartar, with a glyster. The bowels being cleared out, enjoin perfect stillness in bed with strict low diet; give saline draughts. Cover the side in pain with folds of linen wetted and kept on with a bandage; and give ten grains of dovers powder at bed time. Leeches, when they can be had should be applied to the side, and a warm poultice after them. Small doses of calomel and dovers powder, as one grain of the former, to two of the latter should be given every six hours, and an occasional dose of opening medicine or a glyster. Keep the patient on low diet, until there is

some return of desire for food, which then must be taken very sparingly.

You may mistake this complaint for pleurisy; but as the treatment is nearly similar, it will not be important. The liver without being inflamed, is very often nearly so, and in a high state of excitement. There is pain on the right side and loss of appetite, cough, and an unhealthy look. In this case ten grains of blue pill at night, avoiding all heating food and drink; will, with a dose of physic, generally put matters to rights.

When the liver has been once in this state, it is very liable to get disordered again; and requires that the patient should be very abstemious, and very regular in his habits; taking exercise, and keeping his skin warm. It is sometimes necessary to rub in repeated small doses of mercury ointment over the region of the liver, until the breath or gums shew the influence of the medicine. This practice is more particularly required when the disease is accompanied with dysentery.

LOCKED JAW.

This serious disease, comes on at times after a wound; It consists of violent cramps of the muscles: so violent, that the whole body may be bent backward, and sometimes forward, with frightful pain. The cramp or spasm, nearly ceases for a time, and returns again; until the patient is worn out with suffering: or the muscles of the heart and of breathing are seized with the cramp, and the man expires in one of the fits. The first approach of the disease, is known by a stiffness about the back of the neck, and then in the throat and jaws; which last at length, are so firmly fixed during the cramp, that no force can open them: a

sensation of tightness about the swallow, is followed by other cramps in the chest, back, and limbs. The most distressing feeling, is one of tightness at the pit of the stomach, through to the back. The difficulty of swallowing is such, that nothing will pass down during the fit: nearly the whole of the moving powers at length, partake of the cramp. This complaint will sometimes arise from exposure to cold; but then it is always a milder form of the disease. When the body is attacked with the cramp of locked-jaw, the most powerful drugs in the largest doses appear to make no impression on the disease; every sort of practice has failed.

You are recommended to rub croton oil liniment all up and down the back bone, from the back of the head downwards, and to continue to do this until a full crop of pimples appear; you may follow this up by the hot turpentine fomentation over the spine or back bone; and by way of drugs, you will have most chance of doing good, by giving purgatives and glysters: not in common doses, but in very large ones, repeated every hour. Two or three drops of croton oil in a little warm fluid, for a dose; and you must go on; for it is for life or death. Choose your time when your man can swallow; give strong injections at the same time, with aloes and turpentine, or any purgative substance you can command; never regard the dose, but go on to effect the object in view, that is to purge powerfully. Opium, which in almost all crampy disorders has great power, has little or none in this, even in the largest doses. Do not mistake a sore throat and common stiffness of the jaws for this complaint, and treat it roughly in consequence.

Locked jaw appears to be an affection directly or indirectly of the spinal marrow:—for this reason, the remedies are directed to be applied up and down the back bone.

Should these means fail to be of use; begin to treat the case by cold affusion: pouring over the patient buckets of cold water until the spasm is quieted—rubbing the whole body powerfully after it: continuing the practice as often as the cramps return.

LUMBAGO.

Is a very painful affection of the muscles, (that is the flesh) or nerves about the loins; coming on quite suddenly: as when stooping to draw on a boot, lift a weight, or any similar exertion: or it may arise gradually, without any such exertion.

When the attack is severe, draw blood by cupping or leeching the loins, or bleed from the arm: give a calomel pill with opium at night, and then a purgative draught with a dose of the colchicum wine in the morning. Apply a mustard poultice to the loins, or rub the back with camphor and oil.

A warm plaster; keeping the bowels open; passing a flannel roller several times round the loins; are means of relief in most mild cases.

THE LUNGS INFLAMMATION OF.

A man complains of cough, has pain in some part of the chest. It is either a general uneasiness; or it is confined to a particular spot of the chest. The breathing is painful; and on drawing the breath deeply, the pain is very sharp. The breathing is short, owing to the increase of pain, caused by taking a long breath. There is heat of the skin, with a frequent and hard pulse. The pain is sometimes not so sharp, but there is more of a stuffing, tight feel. This depends on the part inflamed. With these symptoms you

must take away blood while the man sits up; so as to produce relief, and a decided effect on the complaint. You then give a full dose of calomel, say ten grains, after the bleeding, with two grains of opium: and if this does not bring on a calm sleep, give two more grains of opium in an hour; and allow the patient if sleep comes on, to continue quiet as long as he can. When he awakes, if he complains, give the antimony mixture, pushing on the dose more and more frequently, as long as it can be borne without producing vomiting; then lower the dose. You must be guided in the use of the medicine by the pulse; and you must push it, until it has reduced this to a natural state.

When this effect has taken place, you must lessen the dose again; only giving some of the medicine occasionally. The diet must be very low; the drink, water, toast and water, or weak lemonade. Beware of giving food early, or in large quantities. If the bowels have not been opened, give colocynth and calomel pills every two hours, with glysters until the effect is produced. Any remaining pain may be removed by a large blister, or by a plaster sprinkled with antimony, applied over the chest.

MEASLES AND SCARLET FEVER.

Fevers which are followed by eruptions, are like other fevers in the beginning; and we cannot say before the breaking out appears, what the complaint will be. After two or three days of fever; attended with head ache, anxiety, restlessness, more or less sickness at the stomach, &c. an eruption breaks out upon the skin. In measles, there is some sneezing or running at the nose, or a redness and watering of the eye; a cough, with other symptoms of a common cold.

In scarlet fever, there is more or less sore throat: the eruption of scarlet fever comes out in patches, of very small red points, with a paler red around: this rash becomes deeper colored, and gets to its height on the fourth day, when the skin is of a scarlet color. The eruption appears first on the face and neck; then gradually passes all over the body, and goes off in scales.

The eruption of measles is in little spots, which run together in patches; appearing first, over the face neck and shoulders; going off in about four days. The eruption is very little raised above the skin; the redness is not so general nor so deep as in scarlet fever.

In measles there is running at the nose, sneezing, chills; and there is an itching and redness of the eyes. After the eruption, the face and eyelids are swollen. The eruption follows from the head to the feet in succession: fading in one place as it increases in another.

Measles, is at times so mild as to require no attention. But occasionally it is attended with much fever, pain in the head, and dislike to light, hard cough, pain in the chest, difficulty of breathing &c. These symptoms prove a beginning inflammation of the lining membrane of the air passages, spreading down into the chest; and the disease, requires to be treated as inflammation of these parts. (See influenza.) After opening the bowels well, the antimonial mixture should be used; with an opiate at bed time.

When the head is chiefly affected, there being severe pain, and a hard pulse; you must bleed.

In scarlet fever, the throat is more or less affected. Sometimes, the sore throat is the chief symptom; and becomes of a very severe character. What you have to do in scarlet fever, is to keep the patient cool; so that he

may not complain of cold, nor heat: to give him weak lemonade or water for drink; and to open the bowels with some mild purgative; such as senna and cream of tartar, or something of that kind. If the throat be very sore, mop it with equal parts of muriatic acid and water, by means of a piece of lint or sponge, at the end of a piece of cane or whalebone; the diet should be gruel, until some appetite return.

These fevers will generally run their course. You cannot be said to cure them: but your treatment may be so judicious, as to cause a very mild complaint; or it may be so bad, as to render, what would otherwise be a light attack, a very severe one.

In severe cases of scarlet fever, the dashing of cold water, or sponging the whole of the body with cold water is an excellent practice. The patient being naked, out of bed and well supported; you continue to bathe and sponge him, until the heat and pulse are reduced to the natural standard. It should only be practised when the skin is burning hot, and the pulse very quick: no fear need be entertained about driving in the eruption; it must be repeated every time the heat gets up. If the heat be not excessive, tepid water may be substituted for cold.

In the latter stage of a severe fever; when there is a putrid sore throat, as it is called; you must give quinine and sulphuric acid, (as in the Formula) and perhaps wine or spirits: and be very attentive to sponge the throat with an acid gargle made very strong of muriatic or sulphuric acid and water; of which, the patient may swallow a little occasionally.

Recollect, that you can always give your remedies by injection, if the patient is unable to swallow them: but in this case, the dose must be much greater.

The diet in measles and scarlet fever, should be the same as in small pox or common fever: such as gruel, barley water, arrow root, weak broth. (See small pox.)

OPHTHALMIA.

Ophthalmia is an inflammation of the eyes. There are several kinds of ophthalmia according to the part of the eye inflamed.

The membrane which covers the eye, and the inside surface of the eyelids, is the most usual seat of this complaint. The symptoms are, as if some dust or sharp gravel had got in; for occasionally, the attack is so sudden, that the person cannot be persuaded but that something has been blown into the eye. On examining it, the part appears blood shotten. The redness increases, with a sensation of heat; the whole of the white part of the ball becomes red; and at times, the membrane is so swelled by the inflammation, and stuffed out with blood, that it laps over the clear of the eye, and the lids are turned out by the swelled membrane.

There is more or less feverishness and head ache; shooting pains into the head, dislike to light, &c. The causes are those which produce inflammation in any other part. On the coming on of inflammation of the eyes; it is proper to give one or two smart purgatives, and apply warm fomentations; which seem to soothe much more than cold applications; and if the inflammation be mild, little else is necessary, joined to a regulated diet; removal from a damp air, or unwholesome close apartment, or from the ground floor; keeping the part quiet, and away from much light. On the pain increasing bleed from the arm, according to the strength of the patient; but I have not observed any benefit

from violent bleeding: rather give the antimony mixture as far as it can be borne. Lay over both eyes, flannel dipped in hot water; doing this carefully for hours. You may squeeze into the eye, warm water with a little gum dissolved in it, to prevent the discharge from collecting.

Pursue this plan, always keeping on the wet cloths, till the swelling, heat, and redness, subside. If the eye remain weak; a little Zinc water, a grain to an ounce of water, will make a good strengthening eye wash. Keep the bowels open during the cure, giving a dose of calomel and Jame's powder at night, and senna, and salts early in the morning, when you suspect any foul matters in the bowels; but do not purge frequently nor violently. Clear out any dirt in the berths, or apartment, and purify the ship by currents of fresh air; air the beds, and attend in every way to personal cleanliness. Inflammation continues in some constitutions a long time, in a low degree. You must avoid all causes that may fret the eye, and in such constitutions give something to strengthen the system; send them into a pure air; and order them to labour to perspiration.

Ophthalmia is not a very common complaint on ship-board. It is generally taken by those who sleep on shore; and often has some connection with malaria. As we find to be the case in places where the disease is most common, and destructive.

Eyelids, the edges of which have been a long time sore; are cured by five grains of red precipitate, finely powdered, mixed with one drachm of lard: a little of the ointment to be smeared on the edge of the lids every night. Another very successful remedy in this state of the eye; and also in inflammation of the lining of the lids, and covering of the eye, after the first stage of violence is over; is to moisten

the eyelids with water; and gently and lightly, rub over them on the *outside*, the caustic stick: some slight degree of smarting follows, but generally ease, and a lessening immediately of the discharge and weakness. The operation may be occasionally repeated. The whole of the skin touched by the caustic, is blackened.

When the inner part of the ball of the eye is the seat of inflammation, the pain is complained of as being deeply seated in the eye; it is a sensation of tightness, bursting, or pressure. The pain shoots along the forehead, the colored part of the eye looks of a pink cast, light produces extreme distress, the pupil contracts, and vision becomes indistinct, and lost for a while.

Your treatment, after bleeding; is to give calomel; a grain every two or three hours, until the gums become tender; open the bowels, apply a thin piece of linen over the eyes, wetted in very weak vinegar and water; and when you cease doing so, cover them over with light cotton wool: put blisters behind the ears. You must be very active in the treatment of this disease or you will lose the eye.

When the mouth is affected by the calomel, and no benefit is obtained; have recourse immediately to five grain doses of the hydriodate of Potass in water, three times a day; for frequently there is something wrong in the constitution, which this will remedy. Keep on low and middle diet during the cure.

When inflammation has continued on the surface of the eye any considerable time, there is frequently a little ulcerated spot on the bright part of the eye, which goes on to eat into the globe, and a part of the curtain of the eye comes out at the hole, and further mischief will follow. You should examine closely, if any little pit exist on the

eye, and touch it with the caustic scraped into a point, do this freely, and be sure to do it effectually. It is exceedingly painful for the moment, but it is a certain way of stopping the further progress of the disease. It need not be repeated if properly done, and it will check the ulcer and remove the inflammation.

When the membrane is swelled, with a discharge of matter so as to cover all the globe of the eye and there is great pain; rub the membrane covering the inside of the eyelids with the caustic; by steadily and lightly passing the stick along. It has the effect of destroying the inflammation; and although it causes considerable pain for the time, it is soon followed by ease. It should be repeated occasionally—but not over the globe.

PILES.

Piles are commonly known as tumors, or excrescences, around or within the fundament: formed gradually, from various causes. These may swell, inflame, and become exceedingly painful at times; arising perhaps from costiveness, a fretting of the parts by unusual exercise, or by too much physic, or from an inattention to cleanliness, where there exists an increased fulness of blood. When in this state, a few leeches to the part; opening the bowels by some very mild purgative, or a glyster; rest in bed; low diet; and applying cold water, or goulard water, constantly to the part; will quickly succeed in producing relief.

When any uneasiness threatens an attack of inflamed piles; a tea-spoonful of flower of sulphur should be taken every night for a few nights:—the food and drink should be lowered; and the parts frequently bathed with cold or tepid water. In a bad state of the blood, this inflammation

may extend up and around the gut; matter may form; and after great suffering, the abscess may break; and do much mischief to the parts around.

Bleeding from inward piles is occasionally very severe; with some persons, occurring at regular periods. Reduce the diet, and increase the labour of such subjects; and at the same time, restrain any severe discharge, by throwing up into the bowels five to ten drops of creosote in a little cold water. This injection may be repeated according to circumstances. In obstinate old cases of piles, a pill of five grains of pitch, taken night and morning, has been found of great use. It seems to regulate the bowels and relieve the uneasiness about the gut. The use of hot peppers also, in such cases is of advantage.

PLAGUE FEVER.

It may be your misfortune to be where the plague is raging; and you may chance to have some of your party ill. Of course, in any malady that is prevailing greatly; we may suspect, if any one be taken ill, it will turn out to be the same illness as that which is going about; so you will be prepared for the worst: for, like other fevers, it comes on with head ache, chills, flushings of heat, great and sudden loss of strength, irritable stomach, &c.

Plague is supposed to be a highly contagious disease: which means, that it is to be caught by touching the body of another that is ill with it; or by touching any thing that he has worn or handled. Now it certainly may be considered to be contagious under certain circumstances, without the presence of which, no disease will be communicated. The circumstances necessary to render a malignant plague fever contagious are.

Breathing the same air: being on the same spot where others have been affected: entering a close apartment, the air of which is loaded with the effluvia from the bodies of the sick: and this at a time, when there is some departure from a state of health of the person so exposed; who has perhaps been disordered by excesses of some kind; by fasting, or by care and anxiety; by excessive fear, or by whatever may weaken the power of resistance to the impression of a poison, such as that of plague fever.

Contagion, is not the right term to use for a malaria fever. If you are in places where plague fever is, you of course breathe the same air common to all; but you are better lodged, better fed, your apartments are well ventilated, and higher from the ground than the huts and damp unwholesome dens where the victims of this scourge dwell. Plague is a malaria fever, and malaria fevers are not (*a*) communicable from man to man, except under extraordinary circumstances.

(*a*) The following circumstance, may serve as one among many that have come under the writer's observation, to illustrate the truth of this opinion.

The Zebra Sloop of war, was wrecked on the coast of Syria, near the village of Caiffa, on the 2nd of December 1840. The ship's company remained on shore in houses until the 24th of Feby. 1841. The weather was wet and hot alternately. There was no plague fever known to exist in Caiffa at the time, although sought for. It was said to be in villages, at a distance of 6, to 12, and 20, miles off. The Castor frigate was sent, purposely to take away the Zebra's people, and any part of the stores. On her arrival, there were a number of sick men on shore, and it was proposed to send them on board at once; and house on shore the carpenters of the Castor, who might be employed about the wreck. This was done,—no suspicion at the time existing as the nature of the disease, nor until the morning of the

The air-poison, produces its effect on the individual; but does not communicate to him the power of reproducing the disease in another, removed from the poisonous source, or malaria.

Supposing that you are in a place where plague exists, and one of your party is taken ill; there is nothing to prove to you, or any one, that it is any thing beyond a common febrile attack; with heat of skin, head ache, quick pulse,

24th, when a lad died, on inspecting whose body, the unequivocal signs of plague were found; and then upon all the other sick examined.

The men were immediately embarked, and the *Castor* put to sea. Up to this time, the communication between both Ship's companies was uncontrolled. The *Zebra's* had been distributed among the several messes; and the sick were attended without any precaution to guard against infection. Of eighteen men who had the disease, fourteen died; and these were men who had all been living on shore—*Zebra's* men with one exception, a carpenter, who had slept on shore for seven days, one of the *Castor's* people. After the discovery of the nature of the disease; the sick were separated, and every precautionary measure used. The *Zebra's* men waiting upon their own sick; but more than ten days had elapsed ere this separation took place. The ventilation, cleanliness, and discipline of the ship were perfect: no dastardly fear existed; and when the frigate arrived in Malta harbour; she was as usual, subjected to the severe handling of the Quarantine office. Here then were eighteen cases of plague, beginning and ending with those men, who had breathed and imbibed the poison on shore: the disease was not communicated, under the most unrestrained mixing of the ship's companies, to any individual besides.

Before the arrival of the *Castor* at Caiffa, one officer of the *Zebra*, a Mr. Prior, had died of fever; but the cause, if plague, was not then suspected.

loss of appetite &c. But you will not do any harm to look upon the complaint with suspicion, and treat it as plague fever. When the patient is burning hot, apply the cold dash or sponge bath, long enough to reduce the pulse: this will cool the skin, allay the thirst, relieve the head ache, and remove delirium if any exists. Having obtained this interval of comparative quiet and freedom from fever; give a powerful dose of quinine, ten or twelve grains, with six of calomel; and follow up with the quinine in five grain doses every four hours, with ten grains of dovers powder at night. If the heat and delirium or head ache return, dash the cold water, or use the sponge bath again, and again give the quinine in lesser doses; always procure a freedom from heat and lower the pulse by the sponge bath, by the wet sheet, or by the affusion of water before you give the quinine or opiate; and if the stomach will not bear it, give a double quantity by glyster. You may have the happiness to conquer the fever by this plan. The practice of packing up in the wet sheet and sweating blankets, promises to be of much advantage, in the early stage of this fever.

No bleeding, no violent physicking will be successful. The after treatment will be, to give nourishment very cautiously; and to pay attention to the bowels and skin, and other functions as in a case of typhus fever.

After a fever more or less strong of many hours; the signs of plague are; swellings in some of the glands, particularly in the groin, the arm-pit, and neck; extreme depression of spirits, and loss of strength; spots on the skin, from the size of a flea bite to much larger; carbuncles, or inflamed and mortifying sores.

The poison of plague may be so virulent, as to destroy life in twentyfour hours; the fever generally goes on to a

much longer period, or the patient recovers. When the buboes form matter and break; the recovery from disease is more likely to be the result.—See Malaria.

PLEURISY.

An inflammation of the membrane, or skin covering the lungs, or of the lining membrane of the chest is called pleurisy. The pain increases on any movement of the ribs or in breathing. There is difficulty of lying on the pained side. The pain is of a cutting description, or a stich, confined to one point in the side; and the pulse is harder than when the substance of the lungs is inflamed. You will easily see that any one part of this membrane may be the seat of inflammation; and the pain will point out the particular spot affected; but the inflammation may gradually spread all over the lining of the chest. Bleeding in this complaint is of great utility; and so largely, as to produce ease and give freedom to the breathing. Give three or four grains of opium, with ten of calomel; the patient will probably sleep and the inflammation be checked. You can then give pills with colocynth every two hours, until the bowels are freely evacuated. After this, should pain, cough, and difficulty of breathing remain; give the tartar emetic, as recommended in inflammation of the lungs. Rub in the antimonial ointment over the part in pain, or put on a large blister for three or four hours. The drink should be water only. The food gruel.—See Inflammation of Lungs.

POISONING.

It is clear, that whenever any poisonous substance is taken into the stomach; it should if possible, be got out before it has had time to produce its destructive effects.

In cases where the strong acids, as aqua fortis, vitriol, and other powerful acids are swallowed; this is nearly, if not quite impossible; as these poisons immediately act on the substance of the stomach. When any other poisons are swallowed; a quickly acting emetic of Zinc, or even common mustard; followed, as soon as vomiting begins, by an abundance of warm water, so as thoroughly to wash out the stomach, will very often be the means of saving life. When the poisonous substance itself causes vomiting; it ought to be encouraged in the same way, by warm water, and the action be assisted with mustard if necessary.

A man by accident or design had swallowed poison, you know not what it is, but you proceed at once to get out what you can; and if there be vomiting, encourage it; if none; excite it if possible; and dilute the contents of the stomach with water. You begin now to enquire into more particulars, and find perhaps, that the man has taken a dose of arsenic. Arsenic produces dreadful sickness, and a severe burning sensation at the pit of the stomach, with agonizing pain in the bowels, cramp in the limbs, excessive thirst. There is no antidote, seek to expel the poison by emetics, and give white of eggs beat up, or linseed tea, or gruel, or a flask of sweet oil, or any thing of a thick, gummy, oily nature, to sheath the bowels against the arsenic. When you think you have got rid of the poison from the inside, you must try to remove the effects which it has produced: sometimes it is necessary to take blood away, and if you can, apply leeches to, or cup the belly over the part in pain, and treat it as inflammation of the lining of the bowels and stomach. Nothing but mild food; as sago gruel &c. is to be allowed for some time.

Any portion of the poison that has found its way through the stomach into the intestines, has a long course to go before it is discharged from the body; and it frets, injures, and inflames as it goes along. It also forms a union with the parts it touches, destroying the principle of life in them. The changes that are produced by any poison, you cannot remedy: but you can frequently render the remainder of the poison harmless by antidotes.

ACIDS.

Such as aqua fortis, oil of vitriol, and spirits of salts, produce their effect on the stomach so suddenly, that you have no time for remedies: they eat, or mortify the stomach and throat. You are to force down immediately, a quantity of water to dilute them, and then mix up chalk and water, or magnesia, or soda, or soap; for all these substances unite with the acid and destroy its power. Unfortunately, the remedy is generally too late in these quick acting poisons.

CAUSTIC.

The solution of lunar caustic may be taken by mistake: salt and water destroy its power immediately; fortunately, the salts and acids in the stomach, are generally sufficient to decompose this poison, except it is taken in very large doses.

CAUSTIC POTASS OR AMMONIA.

Should be treated by giving vinegar immediately which neutralizes or kills the potass, any other acid will do as well as vinegar. Always dilute with water, which weakens the effect of acid and alkaline poisons.

COPPER.

Food prepared in unclean copper vessels is dangerous. Nothing should be allowed to remain cold in any copper

vessel. You may boil acid fruits and vinegar itself in copper utensils; but if it remain in while cold, it will produce verdigris, which dissolves and is highly poisonous; although copper in its natural state is harmless.

With this poison, you have sickness; a copperish taste in the mouth; and after a time, a yellowness of the skin, as in jaundice. After washing out the inside by an emetic and warm water, give filings of iron. File some old iron, any that you can pick up at the moment, give to the amount of half an ounce: for iron has the power of acting in a particular manner on verdigris, destroying its virulence. You may after this, give gummy and oily substances, linseed tea &c. Sugar and honey are also antidotes for copper; so that you may give both iron filings and sugar.

CORROSIVE SUBLIMATE.

Corrosive sublimate is a frightful poison, producing extreme pain and agony. The symptoms, are much the same as those produced by other corroding mineral substance, as arsenic; and you proceed as directed for it. Iron filings have also been recommended in the case of poisoning by this mineral, and magnesia you may try both and give any gelatinous articles to cover the poison and defend the bowels; as white of egg, oil.

FISH AND TAINTED MEAT.

These things produce occasionally unpleasant and alarming symptoms: as head ache, sickness, swelling of the head and face, great uneasiness, and a small quick pulse. Give an emetic; and afterwards soda powders, effervescing with the tartaric acid. A few drops of laudanum should be given with the first effervescing draught, and at length, a dose of castor oil.

LEAD, SUGAR OF.

After the usual attempt to get out the poison, give glanber salts, or epsom salts dissolved in water. These salts render the lead harmless. Lead will produce very obstinate colic and constipation of the bowels; opium, combined with occasional doses of castor oil, will be the best means of easing pain and getting away the cause. A lemonade made with dilute sulphuric acid, sugar and water (See formula) is the very best drink to destroy the poison.

NITRE.

Nitre or salt petre has been taken for salts. In doses of half an ounce and upwards it is very poisonous. It produces vomiting, which you should encourage by warm water, to wash out the stomach; giving gruel, linseed tea, any mucilaginous fluid to sooth the stomach, which is inflamed by the nitre.

OPIUM AND SUBSTANCES OF THE SAME NATURE.

Those who take an overdose of laudanum, or any other preparation of opium, if the stomach does not throw it up, which it frequently will do; feel an irresistable desire to sleep. The pulse becomes first slow and full, then less frequent; the breathing is heavy, and the person is aroused with the greatest difficulty; the face is pale, and all the body seems unstrung.

If you are sure of the poison having been taken; give two table spoonfuls of flour of mustard; and repeat it, as soon as you think the first dose ought to operate and has not; then wash the stomach out; or if the mustard will not operate, give half a drachm of sulphate of Zinc or Copper, to procure vomiting; which is very difficult to do: for the stomach has lost its power from the influence of the drug

In case the poison has had time to take great effect, even though you succeed in causing vomiting; you will not save your patient, unless you keep him continually aroused. Dash water on his face, cause him to smell to strong ammonia from the medicine chest; keep him walking between two men for hours. Bleeding from the arm may greatly serve to take off the drowsiness; because when people have lost a great deal of blood, they bear large doses of opium exceedingly well. It should not be done until you have got rid of the drug from the stomach, but when you have done this, bleed and bleed freely. Give also a drachm of magnesia mixed in water.

If the breathing has nearly ceased, you must resort to every powerful means of stimulating the patient: as by pricking with a needle, pinching or any rough usage. Very strong coffee or tea, are recommended, from their known effect of producing watchfulness. Feel if the pulse increase in strength; and do not abandon hope, nor give up the patient, but let the plan be continued for a long period.

OXALIC ACID.

Oxalic acid or salt of sorrel, is a very dangerous poison. It resembles epsom salts in appearance, and has been mistaken for it. It produces a cold clammy skin, severe pain in the pit of the stomach, weak pulse, vomiting, and drowsiness. Proceed to discharge it if you can; give draughts of water to dilute it; and chalk, magnesia, or soda, mixed up in water, to render what may remain harmless. Recollect that it does its work rapidly, and your first operation should be to dilute with water, and magnesia &c. or water directly, and the mixture afterwards.

BY SERPENTS AND RABID ANIMALS.

The wound to be sucked and washed, cutting down along the course of the teeth, so as to lay the wound well open. If a small cupping glass can be got, apply it.

The bite of a mad dog must be cut out entirely, at every risk; cutting immediately down, far deeper than the bite. No drugs have any influence on the disease, which the bite produces: treat it as locked jaw.

SPIRITS.

Spirits taken to excess is a severe poison; producing a sort of apoplexy. The effect of a large dose, may be to destroy life at once. When deep sleep and insensibility follow drink, and there be any reason to suppose the man to be alarmingly drunk; the stomach should be emptied with the pump, or with an emetic: and attempts should be made and persevered in, to arouse him from the state of insensibility. Cold water should be poured upon the head, while the feet and hands be kept warm with rubbing and hot applications: two drachms of hartshorn with water, may be got down; and a large mustard plaster placed on the pit of the stomach.—See drunken delirium.

TOBACCO.

Tobacco, when swallowed is a powerful poison. The infusion of a small quantity, given as a glyster; has even destroyed life. It produces a sudden loss of power, great sickness and distress, cold clammy sweats, extreme paleness, trembling and twitching of the limbs, with an almost imperceptible pulse. If any portion remains on the stomach, a quick acting emetic, such as mustard, should be given; and afterwards, some spirits and water; or hartshorn and water. Apply heat externally; and rub the stomach with

a strong liniment of camphor, turpentine, &c. With those who first begin to use it, tobacco nearly always produces more or less poisonous effects, which they at length overcome by perseverance. Its abuse, produces permanent weakness, loss of flesh, nervousness, incapacity for any thought or application of the mind: effects similar to those brought on by the abuse of opium. Young men who have smoked excessively, have been seized with trembling of the limbs and weakness, followed by low fever; from which, if they recover; the use of the drug ever afterwards, beyond a very small quantity, always brings back the distressing symptoms. So, that from smoking perhaps twenty cigars daily; such a one in future, has not been able to take more than two or three. Tobacco smoking seduces by the pleasing dreamy state it brings on: causing the smoker to feel perfectly satisfied with himself, and disinclined to every exertion. The practice always has a more or less injurious tendency, particularly with the sedentary; amongst whom it is rare to see a very old and great smoker. To those whose occupations are laborious, and who live much in the open air; the ill effects of the weed are not so often seen. Tobacco certainly keeps off the feeling of hunger and thirst: men who use tobacco, are enabled to do without, or with less food for a longer time; but if deprived of their usual dose, these men would sink under the privation before their shipmates. There must be something very seductive in a custom so general among all nations as tobacco smoking. The calming and soothing effect above named; may account for this plant being so universally used. Smoking or chewing, is a very dangerous practice for lads or young men; and should be discountenanced by captain of ships, and all who have the care of youths.

PRICKLY HEAT.

This troublesome affection usually arises from excessive perspiration. Those suffer most, who are continually drinking; or who take great quantities of fruit. The means of relief are bathing, a cooling dose of physic, and leaving off large draughts of water and other fluids: all which, tend to distress the skin, and bring out this tormenting rash.

PURGING OR LOOSENESS.

See Diarrhœa.

QUINSEY.

See Sore Throat.

RASH.

See Eruption.

RHEUMATISM OR RHEUMATIC FEVER.

Is a most painful, and if ill treated, a most obstinate complaint. It comes on in certain states of the body, after exposure to cold and wet; or after the person has been violently heated; or on long exposure to a draught of wind. But these circumstances continually occur without producing rheumatism; therefore, there must be an inward cause existing: probably in the state of the blood: as most of our diseases arise from changes produced on this constantly changing fluid. Its life is feeble, and its power of resistance to noxious agents weak.

Chilliness and shivering are followed by fever; when after more or less time, severe pain comes on in some of the limbs, particularly in the joints; which swell, get red, and are extremely sensible if touched. This pain may suddenly leave a joint and attack another.

In a strongman, with a full pulse, who is suffering greatly, the treatment may begin by taking away blood, until some

sensible impression has been made upon the pulse ; then give a dose of six grains of calomel, with ten of dovers powder : after several hours, give a purgative draught of senna and salts, with two drachms of colchicum wine in it : waiting a reasonable time ; exhibit a strong glyster, if the bowels have not been moved. The pain will now be moderated, and you may continue to give the antimonial mixture, or the mixture N.° 21 of the formula with twenty drops of colchicum tincture in each dose, every four hours : and at bedtime a draught, consisting of Dovers powder, five grains ; Colchicum tincture, one drachm ; Soda ten grains ; Water a wineglassful.

This remedy, colchicum ; has often great success both in gout and rheumatism, if given in sufficient doses, as far as the stomach will bear it. After the pain and heat are gone, the colchicum should still be continued for some time in lesser quantity : any distress, arising from an over dose of this drug ; such as sickness and faintness ; may be relieved by a little spirits and water. Should this plan not influence the disease after a sufficient trial ; give two grains of calomel, and five of dovers powder, twice a day, until the complaint is subdued ; or the gums have become tender from the mercury.

Rheumatism may be attended with most profuse sweating ; and yet with little or no relief to the fever and pain, quinine will moderate this discharge, and prevent the chill which follows the sweating. Whenever there is any thing of an aguish chill, followed by fever, coming on regularly at a given time ; quinine appears to be a proper medicine, in addition to other means. You may give one or two grains with as much rhubarb, three times a day, and a dose of dovers powder at night. The diet must, at first be low, and the

drink only water, toast water, barley water &c. Keep a watch, on your patient, that he may not transgress in diet or drink: for the least irregularity may bring back all the mischief. The disease is sometimes what is called chronic; that is, it is of long standing and without fever. There is pain and swelling; and there may be increased heat of the part. A very moderate diet, and an occasional mild purgative, are proper here. Blisters may be applied, one or more along the course of the back bone; or rub in antimony ointment, or the croton oil liniment here: for an irritable state of the spinal marrow, produced by the fever-stage of the complaint, is frequently a source of the symptoms, for which, leeching, and cupping and blistering along the spine, are at times most successful. Continue the diuretic mixture with colchicum, in the formula, three times a day. In cases where rheumatism affects the joints, and there is no fever; the hydriodate of potass is an admirable remedy: give of this from three to five grains three times a day; paying attention to the bowels at the same time. When merely stiffness remains in the limbs; rub with oil and turpentine mixed, or oil and hartshorn, or opodeldoc, night and morning; and use frictions with the hand perseveringly. In lameness from want of force in the limb, you will find brisk rubbing of service; but more particularly a well applied bandage. Supposing it to be the leg and knee that is weak; begin by rolling an elastic bandage of flannel, from the toes quite up the thigh to the groin. The bandage ought to be put on with equal tightness all over the limb so that a pleasant feeling of support is given: it should be taken off and replaced, as often as any inconvenience is felt from its pressing irregularly, or getting into ridges.

It is not every case of rheumatism that requires active treatment, abstinence from food and drink, a moderate dose of James' powder and calomel at night, with a purgative in the morning, and then the saline diuretic mixture, is frequently all you need do in mild cases.

Rheumatic fever appears to be a fair case for the trial of the water cure, by means of the wet sheet, sweating, and bathing, as described at page 83 of appendix: also wrap the joints in wet bandages: this practice may be repeated as often as a burning and dry skin is present.

RUPTURE, BROKEN BELLY, OR HERNIA.

This is an accident very liable to occur on board ship. Many old sailors are ruptured, and yet continue doing their duty; which they can very well do, if they support the rupture with a proper truss. A rupture, is the coming down of a portion of the intestine, along the canal or passage, through which the cord or seed vessels pass down to the testicles. This cord you can trace with your finger, to where it enters the belly; and at this spot, you can pass in the point of your finger for a little way. This is the weakest part of the belly; and after violent and repeated exertions of straining, pulling, jumping &c.; the bowels being pushed by the effort against this opening, it begins to give way: from time to time the gut comes down a little and a little more; until it forms a small swelling on the outside; which at first, the man does not notice; although it may occasion him at times, much pain and aching: still he does not suspect the real cause of the uneasiness. The intestine, gets by degrees lower and lower, until it descends into the bag of the testicles: more would continue to come down, until the swelling might become enormously large, if neglected.

Hernia or rupture is dangerous ; as a man having one, is liable at any time to have the gut strangulated, as it is called ; that is, to have it griped round by the narrow part of the canal, which causes it to swell ; so that it is returned back again with great difficulty ; or it cannot be reduced without a serious operation. Therefore, when a piece of intestine becomes strangled in the passage, the man must die unless the gut can be returned : for the operation is one of the nicest in surgery, and requires a skilful hand to perform it.

Ruptures go up at first easily enough, and men who have them are in the habit of laying on their backs, and by pressing a little on the swelling, it slips back into the belly. But of course, from long neglect, the opening becomes larger, and makes the coming down of the intestine more easy.

When a man complains of a dragging pain in the small of his back and pit of his stomach, with sickness and vomiting ; the bowels being confined, and no other evident cause of the sickness to be traced : do not fail to examine the lower part of the belly ; see if both sides of the groin are alike ; ask the man if he ever had a broken belly or rupture ; feel the cord on each side ; and if you observe a swelling, small, or large, in the situation mentioned ; which is painful when handled, you may be sure the pain is caused by a strangled piece of gut.

Lose no time in trying to get it back : place the man upon his back on the deck, or rather with the head and shoulders a little raised, and the thighs bent ; then lay hold of the swelling if large, with both hands ; and with the fingers of one hand, push the part of the gut nearest the belly, backwards and a little upwards and outwards ; trying

to do it by degrees, for if you succeed in passing the part that is bound round, the remainder will easily be made to follow; it slides back giving a gurgling sound. Be sure not to try to force the whole of the swelling back together, but little by little. If you do not succeed in a few minutes, apply cold (ice if you can get it) on, and all about the parts: dissolve salt-petre in water, apply linen wetted in this cold solution; or put on a piece of linen kept wet with spirits, and blow constantly with a bellows or a fan on the part. The reason for doing this, is to make the part shrink, and lessen the quantity of blood in the strangled gut; so that it may be more readily passed through the ring of the belly: more success follows cold applied to the part, than any other application. Now try again to push the gut within the cavity of the belly; and persevere, as long as you do not give any very great pain: but failing, you have another remedy in reserve, and that is bleeding: now by bleeding very largely, you take away the blood with which the part is swelled, and you lessen the heat in the part, as well as the swelling. When the man is faint with the loss, perhaps of a very large quantity of blood; for you must bleed until you produce faintness, still continuing the cold application: you again, at this moment of fainting, endeavour to put back the gut. And it is very possible you will succeed; at all events you go on, until the attempt can be no longer borne by the sufferer. Give now a glyster with salts and oil, which may excite a movement along the whole gut. If still no success, there is but one thing to hope for, which is, that by the very lowest diet possible to keep a man alive; and by repeated bleedings; you may so deprive the strangled intestine of all blood, that it may fall back of its own accord, from want

of resistance. If it do not, you have no other resource. When once returned, all pain and sickness vanish directly. You must be cautious of giving food: for the gut must be in a very delicate state from the pressure it has suffered, and you may inflame it. Open the bowels by a large and warm glyster, with oil; and only give a few spoonfuls of nourishment at a time. Apply a large warm poultice all over the belly; if it is not too tender to bear it. If you do not get the bowels open by the glyster, give a dose of castor oil.

A man having escaped from the great danger of a strangled piece of intestine; he must, on the first opportunity, get a good truss, and wear it constantly.

Nothing will do but a spring truss well fitted; for pressure badly applied, is worse than no pressure at all: Cole's, or Salmon and Ody's trusses, are the best.

ST. ANTHONY'S FIRE.

See Erysipelas.

SCALDS.

See Burns.

SCALD HEAD, OR RINGWORM OF THE HEAD.

Cut the hair off round about the soreplace, poultice until the scab comes off, and then apply strong spirits of vinegar; (what is called strong acetic acid) by wetting the sore with it, once or twice: do this wherever there is a diseased part of the scalp.

SCURVY.

This complaint is very rare now; either in our Royal or Merchant Navy, since the introduction of a better food with vegetables, and the use of acid juice. Yet it may happen,

that you are placed in circumstances which will give rise to this disease. You may be on bad provisions, unprovided with any vegetable substances, even potatoes; exposed to cold and moisture; harrassed by severe duty, and unable to get to your port from bad weather, and the disabled state of your ship. The men become dispirited, and the symptoms of scurvy make their appearance, which are; a paleness of the flesh, great weakness, spots like flea bites, coming out over the body; there is a spongy state of the gums, the teeth become loose, the breath foul. There is a breaking down as it were, of all the structures of the body; ulcers long healed, appear again; and wounds long closed up, open afresh; in fact, all the symptoms of a loosening of the whole of the textures of the frame. The principle of life which held them together is fast slackening its hold.

There is a longing for acids, fruit, and vegetables. It is in your power to cheer up your people; to promote amusements among them; and keep up their hope of getting relief; and to cover them with warm clothing. Although it is out of your power to obtain what will be the chief means of cure. If you have vinegar on board and sugar, or treacle; you must serve out a portion of these; giving sugar and vinegar with whatever the people eat; slices of raw potatoes, which have been kept for a period in vinegar; acid fruits of all kinds, when to be procured.

Lemon juice is now carried in the royal navy, but if its bulk be an objection, you may substitute Citric acid in crystals; forty to fifty grains of which, is equal to one ounce of lime juice. Salt petre or nitre is highly useful in this complaint, you give ten or fifteen grains three times a day, in a little vinegar.

When you can procure fresh provisions with vegetables,

the scurvy will soon disappear. The blood is poor, and does not restore what is continually wasting. The eruptions, commonly called scorbutic, have nothing to do with real scurvy; they are the effects of gross living rather than of poor.

SEA SICKNESS.

From this distressing feeling many suffer severely; and there are old seamen, who never entirely conquer the effects produced by the violent motion of a ship at sea. Gentle stimulants, such as a little brandy on a piece of sugar; æther, or a drop or two of creosote; four or five drops of laudanum, repeated at intervals, each has been useful: also small saline draughts. Eating, will frequently cut off a threatening of sickness.

If the motion can no longer be resisted; a recumbent position, with the head placed exceedingly low, appears to be the least distressing one. Great quantities of stimulating drink, may seriously injure the stomach, and should not be too freely used.—A little fried fat bacon, seems to be borne better by the stomach than any other food; and it appears to ward off the nausea. A glass of sweet oil, lemon juice, and salt; will sometimes relieve the stomach when all else has failed.

SIMULATING DISEASES, OR SHAMMING SICKNESS.

The idle to avoid labour, men wishing to get out of the ship, or to put off punishment; may feign some disease. At times, you will have much difficulty to detect an imposition of this kind: and you should lean to the side of pity, until you have gained a sufficient proof of the imposture.

Men who attempt this, generally overact their part; they do too much. You see how very anxious they are to prove

themselves ill: they will be continually putting themselves in your way to draw your attention. If you enquire about the beginning of the illness; the man gives a very indistinct history of the complaint, making it easy for a medical man to detect the cheat; the tale told, differing so much from simple truth: describing symptoms quite at variance with each other. As the men are continually under your eye, if you have any suspicion that a man is pretending; you may succeed in catching him off his guard, by coming upon him when he least expects a visit.

It is a bad plan to tell a man at once, that he is a skulker and impostor: he will only be the more obstinate to persevere in supporting his imposition; and be more on his guard to avoid detection. Punishment will not force the truth from him: besides you would have some hesitation in punishing a man, without the fullest proof of his imposture.

The best plan certainly is, to pretend to feel for his sufferings, and to put him under some very severe diet, as if it were essential to his recovery. If you can; apply a course of blisters, give purging physic, and see that he takes doses of the tartar emetic mixture; (to keep him in a constant state of sickness at the stomach without retching;) urging all the time, the necessity of his taking the medicine; promising on his feeling better, to increase his allowance of food, and give him a little weak grog. He will hardly be able to hold out against this plan for any time; and his pride will not be hurt, as it would be, were you to declare publicly that he was a cheat; which would make him lose cast with, and be jeered at by his shipmates. By a little management of this kind, you may recover the services of a man, which otherwise may be lost to you for the whole voyage.

SKIN, INFLAMMATION OF.

The skin may be inflamed as the consequence of some injury; or from some humor in the body. The skin becomes red, swelled, and painful, hot and throbbing. The swelling goes on increasing or spreading; at length, matter forms, which gradually makes its way to the surface. The skin breaks, the matter discharges itself, the swelling subsides, and in healthy persons, the wound heals. This formation of matter, is called an abscess, or gathering.

When the inflammation is in a dependent situation; the matter is apt to burrow along under the skin and flesh; and injure the parts through which it makes its way. Or sometimes, the inflammation and abscess is deep in the flesh, and under the tough bands of flat tendons, that bind the flesh or muscles together. In this case, you should cut down upon it, where you feel the elastic spring of a fluid, on pressing with your finger. Cut down deeply, and make a long incision; for you will, at all events do good, if only by bleeding the part, and taking off the feeling of tightness in the inflamed and swollen skin.

However, whether you touch it or not; the matter will find its way out somewhere; and where it points, the skin becomes thinner at that place, and is more raised. It is a sign of matter being formed, when the pain subsides, and the swelling continues. Opening physic, lowering the diet, cold applications; such as keeping a rag wetted with water, constantly on will frequently cure the inflammation, and prevent the formation of an abscess. When matter is formed, there is no application so good as a poultice. Folds of linen, wetted with warm water, and covered with oiled silk, forms an excellent poultice, and is easily managed. After the matter comes away, use gentle pressure on the

part; by applying folds of linen, and a bandage, over some simple dressing; this may encourage the healing of the sides of the abscess: but the matter that continually oozes out of the opening, should be allowed to discharge itself, by not covering the hole except by a piece of lint lightly laid over it. If the opening gets clogged up, or is not large enough to allow of the free flowing out of the matter; swelling and pain will return: in which case, you must enlarge it with a lancet, and use gentle pressure over the hollow cavity that contained the matter; so that the sides being close together, may unite speedily.

If gatherings appear after fever, or long illness; you must support the strength by a nourishing diet; and give a grain of quinine three times a day.—See Erysipelas.

SMALL POX.

There is no means of knowing small pox, until the eruption appears. The fever may be slight or very severe. You have as usual head-ache, hot skin, white tongue, quick pulse, general uneasiness, pain in the loins, and in the pit of the stomach on pressure, and sickness; the last two symptoms are very generally present.

Within the third day from the beginning of the fever, an eruption appears on the skin, in small elevations about the size of a pin's head; which gradually increase in size, until the 8th day; when they are full of matter, and the skin in the space around the eruptions, becomes of a red color.

If the pock be mild; the fever will subside when the eruption appears, and the case will go on lightly; but when the eruption is thick, and runs together in patches, it is called a confluent small pox; and the fever is continued after the eruption. The face is swollen, the eyes closed

up, the skin becomes darkly red between the patches, puffed and swelled: the scabs as they dry up, look black, the throat is sore, and a foul smell rises from the surface of the body: the pulse is quick and weak, the tongue dry and coated, and all the symptoms of a malignant fever are present.

From the 8th day, the matter in the eruption dries up, and a scab is formed, which falls off by the 14th or 15th day; in many cases, leaving a dent or pit in the skin. The more severe the disease, the browner or darker is the color of the scabs; and the longer are they before they fall from the skin. The disease may be said to be at its height on the 11th day.

In severe cases, the spittle becomes thick, and the pocks form along the air passages. The air enters the lungs with difficulty, and does not produce its proper effect on the blood; being prevented also, by the collection of sticky mucous covering the lining of the air tubes.

There is no cutting short an attack of small pox; it will run its course, either mildly or severely; and you can only pilot your patient quietly or gently through it. A certain change is produced upon every particle of the blood, and a sort of leaven is given out from the body of the sick man, which will produce the disease in others.

Before the eruption, the man is down with fever; which you treat as common fever, by opening the bowels with a dose of physic: you then place the patient in an open berth, and make every thing clean about him. If the fever is strong, the pulse hard, and the man very robust or powerful, you may take away a little blood. The physic will act better, and the chances are, that the eruption will be more mild. Keep the man cool, but do not allow a draught of air to go over his body so as to chill it. Let him have water to

drink, or weak lemonade, and as little food as possible; such as sago, gruel, or arrow-root without any thing stimulating, which might increase the heat and fever: when these abate, and the eruption appears; he may at first take weak-broth; and gradually more nourishing diet: always being guided by the patients desire for food: never forcing him to eat if disinclined.

Through the course of the complaint, you must see that the bowels are occasionally moved by a mild purgative; such as castor, oil or senna and cream of tartar, or by a glyster. The body may be washed all over frequently, with warm water, or with water and a little vinegar in it. Do this when the heat of the skin is great, threatening a severe eruption, you will find it lower the heat: or at least, you wash and sponge the whole of the skin with water, as often as the patient feels relief from it; but do not when chilly or cold, or when the skin is moist and the heat moderate. As to medicine, you may give saline draughts, now and then with advantage, to allay thirst. Lemonade, made from sulphuric or muriatic acid, should be given; and the throat when sore, be sponged with equal parts of muriatic acid and water, on a piece of linen tied to a cane or whalebone. In malignant cases, towards the latter period of the complaint, you will find glysters most useful in the fever of small pox: mild ones, to wash out the bowels occasionally. If about the 10th or 11th day, there be great weakness with insensibility, so that the patient cannot be easily roused; with a feeble though frequent pulse; you must try wine: by giving a table spoonful every hour, for a few hours. If it revive the patient, you may continue to give it; being very observant, that it do not increase the heat of skin, or rambling of the mind. Should there be a looseness

of bowels, you may join five drops of laudanum in some of the doses of the wine ; and finding that the wine does good, you may give a draught with twenty or thirty drops of laudanum at night. Remember to let the patient have plenty of fresh air. Whenever you have one case of small pox, prepare yourself for other cases. Examine your men, see if they are in health, and persuade them to lower their diet, and take a dose of physic to purify their blood ; so that whatever may happen, you have done your best.

Those who have not, or cannot say if they have had the disease ; had better be kept from the sick, and be vaccinated when matter can be procured.

SORES.

See Ulcers.

SPASMS OF, OR WIND IN THE STOMACH.

The pain and bursting feeling in this complaint are very distressing, and often appear to be in the chest, or the heart itself. "Spasms in the chest" as persons ignorant of the real cause and seat of the mischief, miscall it. This painful state, may be relieved sometimes, by ginger tea, or essence of peppermint in a little water, or on sugar. If the spasm be violent ; a large dose of laudanum must be given, with an ounce of tincture of rhubarb. Pain and wind, when severe, generally depend on substances ill digested, remaining in the bowels.—And in such cases a purgative gives permanent ease, by driving away the offending cause. Do not apply heat over the belly in this case.—See Colic.

SPITTING OF BLOOD.

Is a symptom of some serious mischief in the lungs, or some part of the throat. Blood coming from any part of the lungs is coughed up : it cannot escape any other way ;

and frequently, mouthful after mouthful is rapidly brought up. It is of a very light florid color, and generally frothy; being mixed with air.

Blood from the stomach, is brought up by vomiting; a large quantity being thrown up at once; not in mouthfuls. It is dark colored; is mixed with the substances that happen to be in the stomach at the time; it may be clotted, or of an appearance like grounds of coffee.

Blood from the throat is hawked up, not with a decided cough, but in the way we clear the throat of any phlegm.

Spitting of blood, arises from small arteries giving way in the lungs. The severity of the complaint, depends upon the number and the size of the blood vessels which are broken.

It happens frequently to those who are of a consumptive habit; at that age, when the body has nearly attained its full growth: and always arises from some obstruction to the free flow of blood through the lungs; either because this organ is not sufficiently large to allow of its free passage; or because of an altered state of it from inflammation, or from the presence of diseased products, called tubercles.— See consumption.

The fright of the patient is very great; his heart beats, and his pulse goes fast from agitation. Spitting of blood is usually preceded by a sensation of tightness on the chest, some difficulty of breathing, chilliness, disinclination to move about, and other signs of oppression.

When much blood has been thrown up, nature appears to have relieved herself, and then it is rarely necessary to take any away by bleeding in the arm; although that is the usual practice. The object will be better attained by a bold dose of opium. It allays the fright which the sight of blood

has caused; it puts the whole circulation on an equal, slow movement. The dose should be three or four grains, with six or eight of calomel. When the patient awakes; give strong purgatives at intervals, so as to open the bowels freely. If the pulse keeps frequent, and any oppression at the chest remains; give the antimony mixture from time to time, until some sensible effect be produced.

The patient must keep quiet; and must prevent the formation of too much or too rich blood, by spare living. Allow of no indulgence in any fluids.

If the disease depends upon great changes that have taken place in the lungs; the utmost abstemiousness is required, with an active life in the open air. Not that the patient should live on slops, or starve: but on a very moderate quantity of solid food, with very little drink. The object being, not to distend the delicate blood vessels of this organ to bursting — See consumption.

SPRAINS.

A sprain, is a twisting or wrenching of the tendons and soft parts about the joints; or an overstretching of the muscles, either from violent exertion, or from accident.

When accompanied with great pain and swelling; apply over the whole joint, a large poultice or fomentation; for you have to guard against inflammation; and you must sooth the over stretched parts. Never attempt to cure at first a violent sprain with liniments and heating things; such as opodeldoc, oil and hartshorn &c.; but place the limb in an easy position, foment and poultice; and if the person is strong, and the hurt very severe; the loss of a little blood may be adviseable. When not fomenting, the sprain may be covered all over with raw cotton wool; or a wet bandage

may be constantly applied, as long as any heat remains in the part. Do not forget to give a little cooling physic; and put your man on half diet, without any wine or spirits.

As the heat and tenderness go off; you may begin to rub in your liniments, and bind up the limb with a neatly applied flannel bandage, firmly put on; so as to support the limb by gentle pressure, and afford protection from the air. After severe sprains, any disordered state of the body will keep up pain and uneasiness in the sprained part. Therefore, always look to the general health. A good diachylon or soap plaster, well adjusted; will assist to strengthen the joint very much.—(See Bruises.)

STOPPAGE IN THE WATER.

A stoppage in the flow of water from the bladder, may be caused by a stricture of long standing; which has suddenly been made worse by some irregularity of life, as by drinking hard; or by some exposure to cold, or an injury to the part itself. The urine comes away by drops with very great effort; the bladder becomes distended with urine; and at length, perhaps not a drop of water will follow all the efforts made to pass it. The pulse rises, and the man becomes alarmed. Take away some ounces of blood according to the man's strength, and give a large dose of Laudanum, say fifty drops; if the fears of the man are not calmed by the drug, you may go on, according to the severity of the suffering, to give the laudanum again until the man falls asleep; the probability is, that he will awake deluged with water; or the spasm will be taken off, and he will be able to make it: for the drug quiets the nerves, and takes off the spasm or cramp, which closed the neck of the bladder, and the water often flows out unknown to the

patient. At the same time, put on a poultice under the crutch between the thighs; let it be made of any thing you can get, and very large. After this, get the bowels open; and exhort the man to be steady; you can do nothing more.

It becomes the business of the surgeon to remove the stricture.

You may have a stoppage of water, arising from the inflammation of gonorrhœa getting to the neck of the bladder. In this case, bleeding, sitting in hot water, purging with castor oil, and giving glysters of warm water and oil with laudanum, will obtain relief. The man in either case must be kept in bed. A glyster of two or three ounces of thin starch or arrow root, with fifty drops of laudanum, will probably relax the spasm; and being in contract with the passage of the urine, may produce a quicker effect than opiates given by the mouth. You may try to pass the catheter after a dose of laudanum; do not use force, but gently persevere. (See Bladder inflammation of. Catheter.)

STRICTURE.

See stoppage in the water.

STROKE OF THE SUN.

There is a description of apoplexy depending on heat; and known by the name of "stroke of the sun." It is supposed, that the rays of a powerful sun, striking on the body, particularly the head; has a peculiar influence on the human frame, and produces its effects instantaneously.

This opinion, is in a great measure an error. It is true, that the accident occurs most frequently in hot countries; or in summer, in northern countries. Exposure to heat however produced, brings on the affection: but other causes must be joined with this; such as a full state of the blood

vessels, and exertion more or less violent. With some persons, a mere exposure to a powerful mid-day sun, produces most disagreeable feelings; and brain fever, may be the result of such exposure in particular constitutions. A stroke of the sun, is observed to occur when the person is under exercise; and particularly, when that exercise is taken after a full meal, or after indulging in much drink. All cases that I have known or heard of; have occurred after full eating and drinking.

The cause is a mechanical one; arising from the expansion of fluids by heat: the distended blood vessels pressing on the substance of the brain, produce apoplexy. Unless the pressure is taken off the brain, the man will die. The lungs, after life, are found stuffed with blood. The treatment is to bleed; to cool down the body, applying cold to the head; proceeding, as in a case of apoplexy. A stimulating turpentine injection may be of use, and even imitating the respiration, as in drowning.—See Apoplexy.

TESTICLES INFLAMMATION OF, OR SWELLED TESTICLE.

A swelled testicle, may be caused by a hurt; but more generally, the complaint is produced by an inflammation, creeping along the cord from the passage of urine, during a gonorrhœa. If the gonorrhœa has existed a long time; it is frequently followed by a swelling in one or both testicles.

In this complaint, the patient must lie on his back; otherwise, the pain is most distressing. The testicle swells and gets hard; it is hot and red; there is a dragging ache in the back, which makes the upright position unbearable; nor can any weight be borne on the inflamed part.

An emetic should be given at first; the bowels should be well purged; and warm fomentations applied to the part,

by flannels wrung from hot water; the testicles should be placed on a poultice, and supported from hanging down between the thighs, by cushions. You must be very particular not to allow the parts to hang down, nor to place any weight whatever on them; the poultice, if placed on them, will produce agony; but the testicle placed on, and supported by a warm poultice, will be greatly relieved.

After purging once, give the antimonial mixture; one tea-spoonful every four hours; increasing the dose to produce sickness, and keep up a state of nausea for some time. When you allow your patient to get out of bed; the part should be kept triced up, but not tightly pressed against the body. If any swelling remain; a little blue ointment, may be gently rubbed over the part every night. Occasionally, the inflammation runs on to form an abscess, which must be opened, the matter let out, and poultices applied; and then, when it breaks, the part is to be dressed with simple dressing. This occurrence is very rare, and only happens where the constitution is very bad, or where there has been the greatest neglect in the management of the case.

In every case, support must be given to prevent the part hanging down. A soft handkerchief under the testicles and round the hips, to keep all up together; or a bag truss should be got. A truss, may be made readily from the heel of a stocking; to which you sew two tapes, to pass round the hips, crossing at the back and tying in front. The testicle, by this contrivance, may be drawn up to feel easy; any heat or pain may be relieved, by keeping a piece of linen around them wetted with goulard water. A testicle, will remain a little swelled and hard, for a long time after the inflammation has gone off.

THROAT INFLAMED, OR QUINSEY.

Is an inflammation of the membrane lining the throat, and the glands called the tonsils on each side. It may be more or less extensive, or more or less severe, according to the state of the body at the time: from a very simple stiffness and difficulty of swallowing, to a malignant and putrid disease. Or the inflammation may extend to the root of the tongue and surrounding parts.

The symptoms are, a pain and difficulty in swallowing, and speaking; some swelling, and more redness than usual of the part; pain shooting to the ear, with noise and throbbing in the ears; foul tongue, and some fever.

A dose of purging physic, rubbing camphorated oil on the throat, and covering up with a little cotton wool; leaving off a great part of the food and drink; and sponging the inflamed throat inside, with muriatic acid and water, or a strong solution of caustic; will generally prove sufficient to check the complaint. The solution of caustic, is made by dissolving five grains, in a table spoonful of soft water that has been boiled. If the inflammation goes on, so that matter be formed, there is no cause for being alarmed. It is true the patient cannot eat or drink, and feels greatly distressed; but the gathering will break, and all the symptoms will disappear at once, by the discharge of a quantity of matter.

It is very necessary to sponge the inside of the throat; for gargling is of no use; a gargle never reaches the inflamed part, unless it is swallowed. Sometimes it is difficult, and painful to open the mouth, nor can any thing be got down: in which case, apply a blister over the fore parts of the neck, on each side of the wind-pipe; and keep it on for four or five hours. Breathing the vapour of hot water may relieve the uneasy sensations. This is done by

placing a funnel over a pot containing boiling water; the patient breathing the vapour through the funnel. Act on the bowels by strong glysters. Before the complaint is so far advanced, if cold chills be occasionally felt; give a dose of dovers powder at night, and a little quinine in water and acid, as in the formula, three or four times a day. In cases of ulcerated sore throat, mopping with the caustic solution, or by the muriatic acid and water will be most useful.

(INFLAMED WIND-PIPE.)

There is a much more serious affection of the throat, although, fortunately a much rarer one, which is an inflammation of that part of the wind-pipe where the voice is formed. You do not see much redness in the throat, nor much swelling:—but there is pain in swallowing, and pain on pressing on the bone or gristle of the throat:—there is fever, great anxiety and distress, hot skin, hard pulse, the breathing is difficult, accompanied by wheezing and a rattling sound; there is a shrill and whistling cough: the voice is only in whispers. As the disease advances, the power of breathing decreases; for the narrow chink through which the air passes, is fast closing up; and the patient must shortly be stifled if not relieved. It is easy to distinguish this disease from common sore throat, by the absence of any swelling, and the too laboured breathing from the first: also from the pain on pressing on the “adams apple” as it is called. Bleed immediately, and largely, to make a decided impression on the complaint; give four or five grains of opium, or a hundred drops of laudanum, with ten grains of calomel.—If absolute relief be not obtained, and after a few hours a cure; give the tartar emetic mixture every quarter of an hour, to lower the fever; and continue it as long as

it can be borne. Remember, that like croup, you have only a few hours, to fight with any chance of success against this disease, and must not throw away this chance.—When your efforts fail, and the patient appears to be dying from suffocation; the face and lips getting dusky-colored; you have one means left of saving life; and that is to make an opening into the throat. This operation is simple, throw the head back to put the wind-pipe upon the stretch, and then, just below the gristle, or round ring of bone in the throat under 'Adam's-apple' you begin to cut through the skin and flesh in a line down the centre, for an inch; then push the point of the knife through into the wind-pipe, and make a cut in it dividing two or three rings large enough to breathe freely through: be sure to cut quite in the middle line up and down, or you may wound some blood vessel; then you must contrive to keep the hole open, by putting in a thick smooth pipe of any sort, taking care not to let it slip into the passage; but secure it by any contrivance, for a time, until the inflammation subsiding, the breath comes through the natural opening. Other complaints as erysipelas, sore throat, and small pox, may at length attack this part of the air passage, and produce the symptoms as above described.

TOOTH-ACHE.

You will be often called upon to relieve this painful affection; which always springs from a decay in the tooth. The sensible part or nerve, being exposed to the air or food; becomes irritated and inflamed. You do not always find the hole in the tooth; for it may be between two teeth, or under the gum: and frequently, the pain is felt at a great distance from the real cause of it; by which you may be misled. Most of those pains in the face; shooting along the

jaw, and up to the ear and temples, are called Rheumatic ; but nearly always, the cause springs from a decay of one or more of the teeth. Pulling out, is of course the radical cure ; but teeth should not be extracted, until all other means fail of relieving. If you can find a decayed place, first pick out any substance that may have got into it, and dry the part with a piece of lint, on the end of a wire.

There are many substances which occasionally succeed ; but perhaps, the most successful remedies we are acquainted with ; are creosote, or oil of tar, and caustic. A single drop of the first, put into the hollow of the tooth, previously well dried, will often have a surprising effect in removing the pain. A very small particle of caustic also, may be put into the hole carefully, and covered over with a little wax or lint: the hole should be made dry. If the pain goes off; the tooth must not be urged into aching again, by touching it with the tongue, or finger ; the mouth should be covered; and the breath drawn through the nostrils.

It would be as well to give a smart dose of physic. After this, if the pain is not greatly better, give a dose of twenty drops of laudanum, and repeat it every so many hours, until the pain be lulled. After the use of the applications named, the purging, the laudanum, and perhaps a blister behind the ear, and a piece of cotton wool in it; there is little else you can do to give ease. It is better not to try the thousand remedies, which every one may recommend. In the most severe agony ; if you can but firmly resist putting any thing to it, or touching it for an hour ; the pain will subside. When tooth-ache comes on at periods ; such as every evening, or at any expected time ; it is frequently stopped, by taking a few doses of quinine ; as two or three grain doses at intervals between the fits of pain.

ULCERS AND OLD SORES.

Seamen are very liable to injuries of the leg; and these wounds or bruises, when they happen to men whose health at the time is not good, frequently become very difficult to heal; and when healed, are apt to break out again upon the slightest hurt, forming troublesome ulcers. We observe that ulcers occur in the leg, more frequently than on any other part of the body. The chief reason may be, that the blood in the lower limbs circulates with more difficulty; it has to rise against its gravity; and thus keeps the veins distended. A fulness and pain is caused about the wound by this stuffed state of the veins; and inflammation with ulceration proceeds. If the patient is out of health from intemperate habits; you must first look to this, and give physic, and check the food and drink, until the blood is purified, as we may say. If the ulcer is very large and foul, and much inflamed all around; cleanse it by poulticing for a day or two; giving the limb rest, and prescribing a brisk purgative dose.

You may then begin the cure, by preparing a very long and even bandage; and proceed to dress the surface of the sore with the red precipitate ointment No. 25 spread thinly, upon a piece of linen of the size of the wound; place over this a piece of very smooth linen, folded three or four times, but much larger than the wound; then roll the limb in a bandage from the toes to above the knee: this is to be done as directed under the head of bandaging. Ulcers at first had better be dressed twice a day. If much burning heat is felt in the sore, and round about; keep it all over thoroughly wet with cold water, or goulard-water; wetting the dressings from time to time by means of a sponge, until the heat and inflammation subside. When you dress the wounds,

you had better not wash them; merely wipe off all the discharges by a piece of lint, and apply the dressings again immediately: which should be ready prepared to put on. In this way these sores may be subdued very quickly. You must allow some old drunkards, a quantity of the liquor which they have been accustomed to: if suddenly deprived of all stimulating drink, their sores may put on a very bad appearance, and even slough, or mortify. When the healthy flesh has begun to rise near to the level of the skin, the new white skin, is seen covering more and more of the space daily. The ointment now may be used weaker; and the dressing only put on once a day.

There are several methods of cure for old sores in the legs; but this dressing, with good bandaging, is one of the best for sea practice.

Men frequently keep up the ulcers in their legs purposely; to avoid duty, or get discharged. You must be on the look out, if you have any suspicion of such practices.

The large veins to be seen in some legs, which rise above the skin, and look as if they would burst; are in a state of weakness; and while these remain unattended to, no healing of the sore can be expected: steady pressure by a well applied bandage, that is elastic; a course of physic, and laying up the limb for a time, keeping it wet if hot; will be the means of relieving this state of the veins; but will not prevent a return of the complaint. Such limbs should never be left unsupported by some elastic contrivance; as tight stockings, tight elastic drawers &c.

As the legs are so liable to be injured by spars, ropes, guns &c. while seamen are carrying on duty: it is well to protect a tender shin, by a contrivance of padding or leather, to prevent these consequences.

VACCINATION.

Examine if your men have been vaccinated. One or more marks or pits may be left in the arms. If there be no marks; you may suspect that the man has never had the cow pox; and it will be as well to get him vaccinated before leaving port: or procure some flesh vaccine lymph and select those young lads, who either have no marks in the arm, or very imperfect ones. Raise the outer skin with the point of a lancet, drawing as little blood as possible; then scraping off some of the matter on the glass, lay it under the scratched and raised skin, and put a small piece of sticking plaster over it. The matter, is sometimes on ivory points, which should be put into the cuts made in the skin by the lancet. Vaccination can be practised by any one; but it requires some experience to know a regular vaccine pimple. It goes on in one constant course; is always of one shape; becoming fully formed by the 8th day, after its first appearance as a pimple, and continuing full for a day or two, beginning to scab and dry up by the 12th and 14th.

Whenever an opportunity offers, young persons should be vaccinated where there is any doubt. We see, that the small pox itself, is no certain protection against a future attack; for it has come on frequently a second time; yet this second disease is nearly always mild: not running its usual course, but coming to its full ripeness, on the fifth day of the eruption.

VENEREAL DISEASE.

Gonorrhœa or clap has been spoken of before; it is also a venereal disease: but what we now mean by this name, is a train of complaints, beginning with a sore on some part of the genitals.

There is a great deal of difficulty, to distinguish whether a sore is a venereal one or not. Very many sores come on this part of the body, which are caused by heat or irritation. A very common one, is a tettery, ring-wormy eruption, consisting of several little watery pimples in a patch, which itch, and discharge a watery fluid, and form scabs in drying up. Wetting them with goulard water, or rum and water, two or three times a day, will get rid of these.

Many bad sores are made by doctoring, and applying all sorts of remedies; until an ugly ulcer is established; and then, under the idea that it is a venereal sore, mercury is taken, and a long course of needless suffering and physicking follows.

To any itching place, or trifling redness, just apply two or three times a day, a little goulard-water on a piece of lint; and give a mild dose of physic. If a sore gradually forms, and spreads deeper and wider; it will be safe to consider it as a venereal one,

Bad sores do not come on these parts of themselves: there is always a foul cause; an impure connexion with some diseased person: therefore, sores occurring after such connexion, must be looked upon with suspicion.

Sores coming on after impure connexion; may, where the blood is in a good state, be easily cured without mercury; and many medical men do not use mercury for the cure of these complaints, under any circumstances. But on board ship, when you have made up your mind, as to the origin and nature of the sore; you must either treat the patient with this medicine, or give none at all. If you give no course of medicine, you must place your patient on a very moderate diet, and give occasional purgatives: applying to the sore, a little wax ointment twice a day. You must keep

all around the sore quite clean; and if there be any heat or itching; bind a strip of clean linen wetted with water round the penis; which wet several times a day, and keep wet at night.

After a few days, the man may be allowed to eat a little more; particularly if he is at work. The sore healing under this simple plan, may convince you, that you are doing right. A man with such a sore, will be the better for work.

Do not be doing too much: do not be meddling with, and dressing a sore too often: you will interfere with the healing of it. When you see a good red appearance at the bottom, and the skin around of a natural color, there can be no use in caustic, nor in heating, nor burning dressings. One thing you will find very important, in the management of sores in this part, which is, to keep the skin back: otherwise the discharge confined irritates, and excites inflammation. Lash it back with a narrow bandage.

If you cannot be seconded by your patient in this plan of cure; you have to pursue a different one; which perhaps in your circumstances is far the surest: after due examination and enquiry, as to the nature of the sore; rub it with the caustic, and give mercury pills, two at night and one in the morning: which may be either, five grain blue pills, or one grain calomel pills; you must keep your man from work in bed, and on low diet. After the application of caustic, you may dress the sore with a little of the precipitate ointment, weakened with an equal quantity of lard; the ointment to be spread thin, upon a piece of linen, just of the size to cover the sore: the dressing is to be renewed night and morning, and if the part feels burning hot, cover the whole with wet slips of linen.

You give the mercury while you find the sore healing, and you continue to give it until it has quite healed. One thing you must attend to, and that is, not to bring on a salivation. You may go on with the drug, until you have produced a little tenderness in the gums, no more. You may give two pills, and then one pill daily, for a week or fortnight after the healing of the sores.

You should not allow the patient to commit any excesses during the cure; and you should keep him at first in bed upon low; then put him on half diet and very light work; not exposed to wet or cold. When quite well, the man should be kept from the shore for the cruise. Any debauch, may, by disordering the system, bring on a number of obstinate complaints, which you will not be able to manage.—See Bubo.

For venereal sore throat, venereal eruptions, and other symptoms called 'Secondary' you must apply for the earliest medical aid. But by giving two grain doses of the hydriodate of potass, two or three times a day, in a little water; you will relieve and cure many of these affections, which appear to depend on a corrupt or ill conditioned state of the body, however produced.

WARTS.

These excrescences are very common on the hands and fingers of young lads. They should be frequently rubbed with caustic: or a drop of the tincture of steel, should be applied to them every night. If they occur on the genitals; they should be frequently washed; and powdered at night, with fine precipitate powder.

WATER STOPPAGE OF.

See Stricture.

WHITLOW OR GATHERING ON THE FINGER.

Men are occasionally disabled by whitlows. A whitlow is an inflammation at the end of the finger; and may be deeply seated near the bone; or it may be merely under the skin. The pain is very severe: shooting up the arm: the finger is much swollen; and extremely, tender and hot.

By rubbing the end of the finger all over with caustic, and by giving a strong dose of physic, placing the hand at rest, and leaving off some portion of the food and drink; and by giving the antimony mixture regularly, the disease may gradually be subdued. If not, and if the pain becomes extremely agonizing; it is a good plan to bleed from the arm; and, as matter may be forming so deeply down, as not to be felt; it is wrong to delay, but proceed immediately to make a cut with the scalpel, down to the bone. If no matter follows the cut, the bleeding will be of service; and if the matter comes out, it will give immediate relief.

The operation is very painful, in consequence of the tenderness produced by the inflammation, on so feeling a part as the finger end. You place the hand with the palm up, firmly on a table; and with a very sharp knife, or large lancet, you cut right down to the bone, always in the centre of the finger, longways. Be satisfied that the instrument has touched the bone. After the wound is made, continue to poultice it. If a deep seated whitlow is allowed to run its course; it destroys the bone; or spreads along to the next joint, and the inflammation may even extend to the bones of the hand. The death of the bone and tendon is a sad accident; for the discharge and swelling may continue for months; the finger remaining stiff, and frequently requiring to be removed after all.

Salves are of no use; you must trust to bleeding, purg-

ing, the antimony, and an early and free opening; before the bone becomes diseased. Remember, you cannot injure anything seriously in doing this operations. The matter may appear to be pointing to the side of the nail; but it will be of less use to make the opening here, for the matter goes where it finds an easier way to escape; but you must not wait to allow it to make its way out; for before this takes place, it will have done some serious harm to the finger. Whenever there is a necessity for opening into an abscess; or for cutting down upon a part; always follow the course of the muscles and tendons; and do not cut across them. The flesh and tendons in the limbs, always run from joint to joint.

WORMS.

Are of several varieties; the small thread worms which collect in the lower intestine of children, and cause much itching and distress; are best cured by an injection, containing salt water and a little spirits of turpentine, or strong soap water. The general practice for worms, is to put the stomach and bowels in order, by a regulated diet: not a sloppy one, nor one containing much floury substances; such as bread or meal; nor trashy food, and heaps of fruit. Give a good dose of physic; as calomel at night, and jalap in the morning. Then from five to twenty drops of the tincture of iron, twice a day, for two or three weeks; with now and then a little rhubarb joined with it, in case there is any binding of the bowels. No violent purging drug is to be persisted in. Recollect that worms are occasioned by some departure from a state of vigor and health in the organs of digestion: they are not to be considered as a cause of the derangement, although of course, when numerous, they tend to keep up any disturbance in the health.

WOUNDS.

The more simple your surgery the better. Too much is generally done to wounds. From the simple cut of a sharp instrument, to the most frightful tearing of the flesh and smashing of a limb, there is every variety of mischief to be considered.

We will suppose the case to be a clean cut in the flesh, unattended with any injury to the cavities of the body, to arteries, joints, or bones. If the flesh be deeply cut; if a great piece be nearly severed off; even if quite separated from the body: you first proceed to pick out any substance or dirt that may be in the wound: you will have some trouble to discover these substances, in consequence of the flow of blood; but by a piece of sponge, and a little cold water, the bleeding may be stayed; and you will be able, by a steady perseverance, to find anything in the wound that ought not to be there: removing which, you then proceed to bind up the cut in its blood; getting the edges together as nearly as you can. A simple bandage of slips of linen, will do very well for this object, if the wound be on a limb; for by pressing the cut edges together with one hand, you with the other pass the slips of linen round and round, so firmly, as to prevent the lips of the wound from separating; and yet not so tightly, as to check the circulation in the limb, by which you would defeat your own intentions. Broad straps of sticking plaster, is the best application for this purpose, covering the dressing with a fold of smooth linen.

Having done this, pour through the bandage upon the wound, some friar's balsam; until the bandage be soaked down to the skin: confine the part from all motion, and do not disturb the dressing until matter has formed, and the part become uneasy and discharges.

Cut wounds, on persons of good constitution, will be found to have grown together on taking off the dressings : or they will be very far advanced towards a cure. The dressing, you will find stiff and hard with the dried blood ; and you will have to cut it with sharp scissors, and work all round, so as to remove and cut away every part, except that which is immediately on the wound. If you pull this away roughly, you may separate the newly formed flesh. If you cannot remove it without violence, apply over it a poultice, or keep the parts wet with water ; until being quite soaked through, the dressing will come off easily. You will rarely find a wound so completely healed that it requires no further protection. You will generally have to encourage the edges to approach, by strapping with strips of sticking plaster and a bandage over all ; removing them from time to time.

When the cut flesh hangs down, or is quite cut away from the body ; you may have to keep it in place, by taking a stitch or two with a needle and thread. A common needle and strong thread will do for this purpose, but better if curved. You first pass the needle quite through the skin and draw it out, then pass it through the edge of the cut flap, or piece cut off, at the part exactly corresponding with the sound part ; and take in enough of the skin and flesh with your needle, to have a firm hold ; you then cut the thread and tie it, until you have drawn the cut edges together. You take another and another stitch, according to the size of the wound. When the skin is cut, it draws back, and you can hardly succeed in bringing the parts quite together. When you have made the stitches, put over the wound slips of sticking plaster ; wide and long enough to keep the separated part firm, by taking in a considerable length of the sound part ;

then placing over all a fold of linen, proceed to bandage it up. Cuts on the head are to be treated as in other parts; being careful to shave off the hair for a good space round the wound; and here, it may often be necessary to keep the wounded edges together by a stitch; then apply slips of plaster and lint.

When you are satisfied that the part is united in some measure, you may, with a pair of sharp scissors, cut the threads and take them out of the wound; giving the necessary support, by strappings of plaster and bandages.

If a wound discharges a good deal of matter, you must keep it dressed with wax ointment, lint, and a bandage twice a day. Do not forget, that if you allow the part to be in continual movement, it cannot easily grow together; so you must confine the limb as much as possible, to prevent motion; and it may even be necessary, to place splints on an extremity, to steady it.

CUTS ABOUT THE THROAT.

A deep cut in the fore part of the neck is always a serious wound, from the number and size of the blood vessels, from the wind-pipe, and the swallow: the first lies near the surface, and is very likely to be cut through: there is always a great deal of bleeding; and the blood getting into the wind-pipe, excites coughing, and a feeling of suffocation. The first appearance of a wound here, is very ghastly and alarming. If the larger arteries are cut, the man will quickly bleed to death, unless they are tied.

Proceed to bare the part and wash with cold water: if you can see a blood vessel pumping out blood; try and get hold of the bleeding mouth with a pair of forceps, and tie a thread round it tightly; and so with as many others as

there may be: try to bring the edges of the division together; and if it be very extensive, take two or three stitches in it, being careful not to pass your needle through the windpipe.

You will have great trouble and be embarrassed with the bleeding and cough; which, just as you have got the wound nearly to rights; will loosen the dressings. Keep the head up, and insist on the most perfect stillness: if the man is restless, give him a full dose of opium, by the mouth, or in a glyster. Keep the first dressing on as long as you can, even until the wound be offensive from the discharges.

After some days, the threads of the stitches will come away; or you may cut through them, and dress the wound as lightly and simply as possible; and carefully confine the head with straps or tapes, from the nightcap, on each side to the body, to prevent any motion.

When you remove the dressing, let it be done very gradually, cutting away all you can with sharp scissors; and if the plasters stick very fast, be satisfied with clearing away any discharge there may be, and put on a piece of soft rag with some simple ointment, and over this, folds of linen wetted with water. It is well in dressing the wound, to leave a place uncovered for the escape of matter, which otherwise might make its way into the windpipe and be coughed up. Do not forget to attend to the diet and to the state of the bowels; supporting the man with nourishing glysters, if he cannot swallow, and by glysters of water.

All cases of severe wounds, must be placed on low diet at first. A certain degree of inflammation follows wounds: if this be excessive, linen, wetted with cold water should be kept on, and refreshed frequently, until all the heat is gone off.

LACERATED OR TORN WOUNDS.

Must be treated on the same principle as the simplest cuts. There is less likelihood of their healing at once, and they are more painful, from the greater force that has been used in causing them. If any part of the skin or flesh is so torn as to render it impossible for it to unite again, it should be cut away, but it must be mangled most severely, before you resort to the knife or scissors.

Clean the wound, and place the parts together in their proper situations, as well as you can; making use of the needle if required, and putting on plaster slips, or slips of wax dressing; over which place a fold of linen and then a bandage. Do not bind the part forcibly: all must be done with a light hand. You must keep the wound perfectly still. You may expect much swelling and inflammation; and you may have to keep the injured and surrounding parts cool, by a constant application of cold water, until the swelling, pain, and heat are gone.

Put a piece of oil-skin or tarpauling under the limb; and by a vessel slung or otherwise fixed, allow a constant dripping of water on the inflamed part. The water may be conveyed from the tarpauling to some receptacle under the patient's bed. When the inflammation is gone, you may bind up, as in other simple wounds:—but generally, as there is a copious discharge, you will do better to keep it lightly dressed, and bandaged with the many tailed bandage.

BRUISED WOUNDS.

Contused or bruised wounds, are those where great violence has been used to produce them. A man gets the fleshy part of his arm or leg jammed and torn between two casks: this is an example of a bruised wound; by which you per-

ceive that a bruised and a torn wound strongly resemble each other. The most forcible example of a bruised wound, is one made by a gunshot. There the ball, a blunt body, passes through the flesh, with a violence to break down and destroy all in its passage.

A bruised wound without fracture of the bones, cannot like simple wounds, be expected to heal at once: there has been so much injury done to the soft parts, that they may not be able to recover themselves, and a death of them may be the result; or a severe inflammation attended with fever.

Tight dressings are out of the question:—you are to place the part in the easiest and most favourable position; put a piece of lint lightly over the wound, and cover the whole with a piece of folded linen, and a bandage applied slackly. Keep the part bathed with cold water; or if the heat and inflammation be very great, continue to drop cold water constantly upon the bandage: not continuing this practice when the limb is cold. Of course you must not forget the diet; and take care the bowels be not confined.

If the man is strong and has fever, take away blood; for if you allow the inflammation to get to a great height in the injured part, it may cause a death of the parts wounded, or what is called sloughing or mortification. If the bruised part die and slough away; you must remove all the dead pieces that are separated perfectly, wipe the surface of the sore, and place the limb in such a manner, that the matter may run off as fast as it is formed. Cover the surface with lint, and the wax or resin ointment. At length, when the part begins to heal and fill up, support it with a gentle pressure, by means of a bandage; and dress with slips of plaster, or the wax cerate, or with the weaker digestive

ointment. The healing will be more or less tedious, according to the constitution and habits of the patient. In all severe wounds, it may be necessary to give an opiate at first, to quiet the nerves, agitated by the shock of the accident.

The two descriptions of wounds last spoken of, may be classed together: for there is seldom a tearing without a bruising of the flesh. Wounds caused by the explosion of powder, busting of fire arms &c.; are instances of a combination of the two.

WOUNDS OF JOINTS.

A wound opening into a joint, or any tearing or bruising of it, is more serious than similar wounds in other parts of the limb.

The inflammation which follows is likely to be very severe. The least motion must be prevented: the strictest practice against heat and swelling is to be employed:—as cold water externally, purging, the loss of blood, &c.

Endeavour to keep the heat of the wounded part of a natural degree; but not to allow it to be cooled down below that state. Do not permit air to enter the wounds. When no wet application is on the joint, cover all over with cotton wool, treat the wound itself as similar wounds elsewhere. Your main object must be to prevent violent inflammation. Leeches when to be got, are most useful in these cases.

WOUNDS OF THE CAVITIES OF THE BODY.

If a ball or other instrument penetrates a cavity of the body, such as the belly or chest: the wound may, or may not be fatal; it depends upon what organ within the cavity is injured: for a ball passes through the lungs, or wounds the brain without always destroying life; and the man may

recover. Suppose you have a case of a ball or sword passing into or through the chest; you will immediately have a distressing difficulty of breathing; for the air has got through the opening made by the weapon, and pressing on the lung, prevents its play: no air will now go into it through the wind-pipe, and all the breathing is carried on by the lung on the other side. You may expect that blood has flowed from the wound into the chest, and perhaps a large artery of the lung has been cut; in which case, there is no hope, and the patient will bleed to death inwardly. Should only smaller vessels be cut, the closing together of the lung will prevent the flow of blood from them. Attempt to quiet the fears of the patient, and give an opiate: then, when recovering a little from the first shock caused by the accident, he should be bled. For now, the lung on one side has to do the duty of both lungs; and as this duty is to produce certain changes in the blood, which constantly flows through them; you must lessen its quantity in the body; to make this duty lighter for the sound lung.

Before you proceed to do this, you must see if the man has any blood to spare; for if he be pale, his lips white, and pulse feeble; you had better wait to see the event. A little wine or cordial is necessary here; for this state may arise from the severe shock on his nerves produced by the accident. When heat and the circulation come round, that is the time to take away blood, or to give remedies, to check or keep inflammation or fever within bounds; always recollecting, that a moderate degree of heat need not be interfered with. The quantity of blood taken away, must be proportioned to the strength of the patient, and it may be required to repeat the blood letting, if the pain and distress in breathing be great.

After bleeding, a good dose of opium will be of use to calm the patient, unless you have given it before. After a time the bowels must be moved by some mild physic.

It need not be said how necessary it is to keep the patient on low diet, and to allow but a very moderate quantity of fluids of any sort. Of course, no wine nor spirits. You will keep some plaster on the wound, to prevent the rushing in of the air, for every time the muscles act in breathing, they suck the air into the chest; and it will pass through the opening made by the ball, rather than by the wind-pipe. If the man go on well, the breathing improve, and pain go off; you may gradually relax the severity of your diet: but with great caution. It is a case of much doubt, and causes you great anxiety; but you can do nothing, nor could a surgeon, were he present; he could only fight against any unfavorable symptoms that might arise.

When a wound occurs in the belly, a portion of the intestines may come out. If they are not wounded, bathe them with milk warm water, and gently return the bowel inch by inch: apply sticking plaster and a pad of linen and a bandage over all, with firm pressure. Keep the man still and very low. Open the bowels with glysters, and apply water poultices over the belly, if there be pain and heat. In case a piece of the gut be much wounded, you may venture to take a stitch in it, to draw the edges together, and return it in the most cautious manner. The danger of course is very great: you have reason to expect an inflammation of the most serious kind. Bleed at first, keep the patient still, give no strong physic, but if necessary open the body by glysters. From the intestines being closely packed, their contents, are not so apt to flow out into the cavity of the belly, as might be expected: the great danger from wounds

penetrating this cavity, arises from inflammation of its lining membrane.

GUNSHOT WOUNDS.

There is nothing of a specific nature in these wounds: the mischief that balls occasion, is by the extreme force with which they strike. If a limb is shattered by a cannon shot, the only practice is to cut it off far above the injured part and splintered bone. This is the business of the surgeon, and you cannot be supposed to take so important a step as cutting off a limb. If a limb hang only by a piece of skin or flesh, you might save the man from much torment, by cutting through the torn parts, and thus getting rid of the dead member; as you might then make the person much more comfortable than he otherwise could be.

If there is any serious bleeding from the wound, you must search for the open mouth of the bleeding vessel, but you will rarely meet with any success; for the artery is drawn up amongst the flesh, and to an inexperienced eye all the parts have a like appearance; watch where the blood runs from, or where it comes out by jets; and press a piece of sponge upon it wetted in turpentine, or creosote; over this another piece, thus keeping a tight and firm plug upon the bleeding artery.

If a ball pass quite through a fleshy part of the body, without breaking bones, or cutting large blood vessels, the treatment is simple: when any substance can be seen sticking in the wound, it must of course be removed. As the ball has killed the flesh which it has touched, there can be no healing of the wound, until it is all brought away in the discharge, which will sooner or later come

on. Before matter forms, inflammation must set in, accompanied with pain and swelling, and most likely with some fever.

It may be necessary to bleed: certainly to purge briskly; to keep on low diet for some time; to have the swelled and inflamed part covered with cold water, and be kept at perfect rest. When the discharge begins, it may be gently pressed out along the course of the ball, and if the flow be great; the strength of the patient must be supported by a better diet. Nothing whatever should be injected or thrust into the wound: the openings may be covered with any simple dressing, or with a piece of lint. The wounded part should be so kept, as to allow the matter to flow out freely. If you do not interfere too much, nature will gradually repair the loss.

When a bone is broken by a ball, it becomes a most serious accident. The bone is killed as well as the soft parts; and it is likely to be broken into small fragments.

After doing what has been directed before, you can only place the limb on soft pillows, and the patient in bed:—steading the motion of the broken limb as much as you can, by some mechanical contrivance, that may occur to your mind: but do not give pain by any pressure. You must be content to allow the limb to be at rest, and wait for the season of inflammation, swelling, and discharge; but you must be more active in your treatment at first, to prevent that inflammation becoming violent.

There is no use in what is called 'setting a limb' under these circumstances: no surgeon would think of doing so. You must wait, until the dead parts come away: often splinters of bone find their way out, or a swelling takes place over the broken bone; matter forms, it breaks, and the dead

parts digest out at this place. It is likely to be a tedious cure under all circumstances, and you must seek the earliest opportunity to place your man under medical care.

The course which balls from fire arms will sometimes take, is surprising. If a ball strike slantingly, it may penetrate the skin, pass along under it, and nearly all round the body or limb. A ball is easily turned from its course when it does not strike point-blank.

There is a very common notion, that people may be killed by the wind of a shot; we see a man lifeless from a passing cannon shot, without any external sign of injury. The fact is, that he has been struck by the shot itself; but in an oblique direction: the ball has glanced off. On examining the body, the skin is sound, but the bones beneath may be smashed, the bowels ruptured, the bones of the chest beaten in. Any elastic body will turn the direction of a shot, however swift it may be flying, if it strike very obliquely.

It is supposed to be of the greatest importance to extract the ball in all shot wounds; and it is right to do so, if it can be felt or seen; for it eases the patients mind; and the ball and other matters of clothes &c. driven in, are always a source of more or less uneasiness and mischief; but it is very wrong to grope and probe about for it. If you can feel it any where near the surface, you may cut down upon it, and press or hook it out. More harm is often done by the search than by allowing it to remain. Balls may remain in the body all a person's lifetime, without producing any distress.

Whenever an artery in any of the limbs is wounded, and you cannot succeed by pressure in stopping the flow of blood, the man's life being in the greatest peril: cut

down with your scalpel, carefully and gradually on the wound, making your cut lengthways with the limb and five or six inches long, until you come to the bleeding opening, which you may find out by slacking the tourniquet; and then with your curved needle, pass a strong thread on each side of the opening into the vessel; or if cut in two, over both its ends, and tie tight: do it completely, and seek to tie only the bleeding vessel and nothing else. (See Bleeding from wounds.)—After wounds of every description, it is always better to clear out the bowels thoroughly, even should the wound be only a scratch, or a cut finger; for you may thus prevent the coming on of locked jaw, one of the most fatal and frightful of diseases; which in some seasons and climates is apt to follow even trifling injuries.

APPENDIX.

PART I.

CONTAINING A GENERAL DESCRIPTION

OF THE MORE IMPORTANT PARTS OF THE HUMAN BODY,

THE CIRCULATION OF THE BLOOD &c. &c.

The Brains and Nerves.

That part of the head, which extends from the top of the nose in front, to the joining of the head and neck behind; and from between the ears upwards; is a bony case, filled with brain. The brain is the centre of all the operations of the mind, and the source, from whence all the nerves, or organs of sensation, and motion arise. The spinal marrow, which runs down the whole length of the back bone, is only a continuation of brain. The brain is first covered with a tough membrane or skin; then with the stout bony case, the skull; over this is the scalp, or fleshy skin of the head, covered by the hair: so that this most important part, the brain, is well secured from injury. The nerves are like threads, of larger and smaller size; forming the medium through which sensations are conveyed to the brain; which perceives and judges of these sensations or impressions:—

The nerves also convey back the will to all parts of the body: for example you perceive any thing placed in your hand, and your will induces your hand to close upon and grasp it. The nerves branch out in every direction, and spread to every part. Wherever there is sensation, there are nerves: some are for feeling, some are to excite to movement, some to assist in forming the fluids and juices of the body. A pressure on the brain, as in apoplexy; destroys all power of motion, all sensibility. If the spinal marrow be injured; all below the injury is paralysed; that is, it neither feels nor moves. The organs of the senses have large nerves. The large nerve of the eye has the image of any object you look at formed upon it; and the brain immediately perceives it. Sound is conveyed to the brain through the means of the nerve of the ear. Taste, touch, and smell, are all produced by nerves, which are spread out on the tongue, skin, and nose.

The Chest,

Is all that space, which is contained within the ribs, from the lower end of the breast bone, to about the middle of the back. It contains the lungs, the heart, and some of the great blood vessels. The chest is divided from the cavity of the belly, by a large spread of muscle and membrane, which completely closes one cavity from the other. The chest itself may be said to be double; for the lung on one side, is separated from that on the other side, by a membrane or skin: so that a wound on one side of the chest, does not greatly affect the other: the breathing is carried on by the one lung still. The heart lies on the left side of the chest, where it may be felt beating, under the nipple of the breast on that side.

The Lungs,

Are two spongy masses contained in the chest, and nearly filling it: all the blood that circulates in the body is brought to these organs; and while in them, is acted upon by the air; which rushes in through the windpipes: by this means, the blood is changed in an extraordinary manner; for it goes to the lungs of a dark red color, and comes back to the heart of a bright vermilion: it receives one of the elements of the air, and gives out in breathing, water, and a gas called carbonic acid. The lungs are exceedingly delicate organs, very liable to be inflamed; and an inflammation of them is a disease of a most serious nature requiring active and prompt measures to subdue it.

The Heart.

The Heart is the centre and source of the circulation, of the blood. It is a powerful fleshy body, with two large cavities, which receive and pump out the blood into the great arteries which rise from it. It is placed in the chest inclining to the left side. The arteries are elastic tubes, which convey the blood from the heart to every part of the body; branching off from the main trunk, and dividing into smaller and smaller ones, until they end in veins: these last are thinner tubes; which, from the most minute size, run into larger and larger branches, until the main trunk empties its blood again into the heart. This is called the circulation of the blood. Some of the arteries are so small, that they are invisible; and so delicate, that they will not even admit the red particles of the blood: as for example in the white of the eye; the arteries of which, in its healthy state, will admit only the thinner or colorless particles; but when inflamed; they are pressed by the increased force of the larger vessels

and stretched, so as to allow the red part of the blood to enter : as is seen in an inflamed or blood shot eye. The blood flows with such force in the large arteries ; that a wound in them is exceedingly dangerous; and the blood not to be stopped without an operation. You bleed in the larger branches of the veins, but you do not bleed in the arteries. (see circulation of the blood.)

The Belly or Abdomen.

The Belly or Abdomen, is the space between the chest and the hips ; and from the navel to the back. In this cavity is the stomach, the liver, the intestines, and several other organs. The stomach is placed on the left side, extending across the front of the body just under the chest and close to it. The liver is on the right side, filling all the space under the edge of the rib. Nearly the whole of the remaining space in the belly is occupied by the intestines and their appendages. The bladder lies within the bones ; below what is properly called the belly. The kidneys are placed about the middle of the loins, on each side of the back bones.

The Stomach,

Is a sort of bag or pouch into which, all we eat or drink goes to be digested : that is, so changed, that the nourishing, parts are sucked up by little vessels, opening all over the inner surface of the stomach, to carry to, and deposit this fluid nourishment in a larger vein ; where it is mixed with, and becomes blood. The grosser parts of the food, are then pushed, by the contraction of the stomach, into the small intestines or guts ; which are, as it were, a continuation of stomach and similar to it in their structure. The food is passed along through the whole length of the bowels ; which

continue to extract any remaining portion of nourishment. There is a juice poured into the stomach, called the gastric juice, which serves a most important office in the business of digestion.

The Intestines.

The Intestines are kept in their relative situation by a membrane or skin, which binds them down to the back. The intestines when removed from the body, are of great length: the termination of them is in the fundament.

The Liver.

The Liver is a large organ which operates certain changes on the blood, and forms a liquid called bile; which also serves some important purposes, as expelling the food, and combining with and carrying off the impurities from the body. The fluid which it forms, is of a yellow greenish color, and bitter taste: this is the bile, or what in cattle we call the gall. When this fluid is badly prepared by the liver; which occurs when its functions are impaired; some disturbance takes place in the digestion; and the train of symptoms which arises, is called a bilious attack.

The Kidneys.

The Kidneys lie close to the back bone on each side, in the loins: they secrete the urine, which is conveyed by two tubes to the bladder; from whence it is discharged from the body, as a useless excrement.

The Bones.

The Bones are the solid supports or frame work of the body. The bones are knit together at the joints, by strong ligaments and tendons. The vital parts of the body are de-

fended by a casing of bone: thus the skull, contains and protects the brain: within the space formed by the ribs and the breast bone, the lungs and heart are placed: the bony projection round the eye, defends it from injury: and the larger trunks of the arteries, or blood vessels; are so disposed, as to be out of the way of common danger.

The Muscles.

All the fleshy parts of the body consist of muscle. The flesh of the animals we eat is their muscle. A muscular part, has the power to shorten or extend the fibres of which it is composed.

The muscles are the moving powers of the body: they are to the body, what the ropes of a ship are to the yards and sails; they move it. Bend the fore arm upon the arm, and you will observe the swell of the large muscle of the arm; which is contracted into a firm hard mass; and by this contraction it has pulled the wrist and fore arm towards the shoulder, or bent it. Some muscles move at your will; others are independent of the will: the heart is a muscle, and it beats whether you will or no: the muscles of respiration or breathing and others are also involuntary.

If these important muscles were under the command of your will; there would be no security of life. Your will is conveyed to the muscles through the nerves; which all originate, directly or indirectly, in the brain.

The Tendons.

The Tendons are the tough leaders, at the ends of the muscles: which being fixed to the bones; move them when the muscles contract. These bodies are either rounded, as we observe them at the wrist; or flattened and expanded, according to the duty they have to perform.

Skin.

The Skin is a great outlet of the body; thousands of vessels open on it; and these vessels or pores, as they are called, let out continually, some fluid from the body; which at times, becomes sensible to the touch and sight; as in perspiration: but there are always more or less fluid bodies passing out in health, according to the state of the external air, and the exertion of the individual. We perceive in cold weather, but little moisture escaping by the skin; and the urine is then greatly increased in quantity: in warm weather the reverse of this takes place. The skin very quickly sympathises with other organs; that is, any movement or disorder in other parts of the body; is felt, and replied to, as it were, by the skin. A chill upon the skin, causes a flow of blood to the internal parts; and a consequent disturbance in one or more of these. Anything disagreeing with the stomach, will often be followed by a rash over the skin. It is subject to many diseases; which are generally best managed by taking care of the health; and by observing great cleanliness. Diet affects the skin; and a proper attention to this, will cure most obstinate skin diseases. The sympathy of the skin with some organs of the body is very perceptible and quick: an impression of cold and damp on the skin, produces an irritation and discharge on the lining membrane of the nose and throat, with more or less of disturbance in several of the functions of the body, as is observed in colds, a cough, &c. &c.

Circulation of the Blood.

It is necessary that you understand, how the blood; which is a fluid, formed to supply all parts of the body with nourishment, is circulated.

There are elastic vessels or tubes for this purpose called arteries and veins. The heart is placed in the chest, towards the left side, above the stomach: you may feel it beating against your hand. A main artery arises from the heart; this artery, may be likened to the trunk of a tree, from which other arteries branch out, like the branches and twigs from the tree; the smaller ones are so very minute, as to escape the sight; but you know that if you scratch the skin with a pin, a drop of blood follows; and this comes from arteries which are torn by the instrument.

By a stroke of the heart; that is by a contraction of its sides; the blood which flows into it on one side, is forced out on the other: wave of blood following wave, untill it runs into every minute and invisible blood vessel. Now this contraction of the heart, or this wave of blood, causes a vibration through all the arteries, and you may feel it at several parts of the body where a large artery is placed near the surface; or near a bone: and this wave is called the pulse. The current of blood having arrived at, and nourished all parts of the frame, is no longer fit for nourishment: it loses its bright color, and gets much darker as it passes into another set of tubes called veins: these tubes, run into others larger and larger; as do the rivulets and streams which unite to form a river, until it arrive at the sea. The veins are visible in many parts; as in the hands, in the arm, and more particularly when the body is heated. The blood being brought back to the heart; is first forced by it, into, and all through the lungs; where the air, sucked in by breathing, produces some change upon it in the air cells.

Before it gets into the lungs, it has had mixed with it, the new blood formed by the digestion of the food: for of course, there is a continual expenditure, which requires a

continual supply of nourishment. The air acts upon it even through the cells of the lungs; when the air, as it escapes from the body, is no longer fit to be breathed. The blood now prepared, passes again into the heart; where it is pumped out at every pulsation, to undergo the same round as before. It must be clear enough to you, that if you press upon a large artery or branch, you can stop the flow of blood through it, and through all the smaller branches which arise from it: so, that if you know where to find a large artery, you may always command the flow of blood through all its branches. In the veins also, if you stop the flow of the blood through them; as it is on its way back to the lungs and heart; the limb will swell, and the veins that are nearest to the skin will rise, and allow of being opened by the lancet; when the blood will flow out, as long as you keep up the obstruction to the current, or until the person faint from the loss.

The blood is continually flowing round the whole body; and that blood, which at one minute is in the head, will at the next, be at a distant point. Suppose the whole of the blood in the body to consist of so many pounds; and that the heart at each contraction, forces out so many ounces; it becomes a matter of simple division, to know how many beats it will require to circulate the whole quantity. As the heart beats about 70 times in the minute; if it force out two ounces of blood at every beat, it will circulate about 9 pounds in that time.

The Pulse.

It has been before explained that the pulse is the vibration given to the arteries by each beat of the heart: for at each contraction of the heart, it sends into the arteries

or blood vessels, a quantity of blood; and the shake or vibration, is communicated to all the branches of these vessels, through which the blood circulates, to the very extremities. Whenever an artery lies near a bone, and not deep under the flesh, a pulsation may be felt; as at the wrist, on the temples, over the lower jaw, and at various other places. The easiest and most convenient spot to feel the pulse, is at the wrist; and from this, on the inside of the arm, for the distance of two or three inches along the bone corresponding with the thumb. One or more fingers placed along the line in this direction, will easily detect the beat; but be careful not to press too heavily, as you then stop the flow of blood through the vessel, and you feel no pulsation. You must press it with firmness, so that it give to your touch a distinct sensation. You should practise the feel of the pulse in health, so that you may know when it departs from regularity. The pulse varies in different men even in health: one man will have it naturally faster or slower than another: we may say that it ranges from 60 to 80 beats in a minute, in different people. In infants and very young persons it is much more frequent. Besides frequency or slowness, there are other varieties of the pulse, shewing a departure from a state of health; such as unusual fulness, when it seems to be larger and strike against your fingers with a greater surface. It is said to be hard when it resists your pressure, or soft when it yields more easily to the pressure of the finger: so you may have it; full and hard, or full and soft: it may be very frequent, of a hard wiry feel, or very weak. But to describe all the varieties and shades of pulsation would be but to puzzle you, and therefore useless. A little practice on yourself and others, will make you at home with the more essential state of the circulation of the blood.

Before you can judge by the pulse, you should wait, until any little alarm at what you are about has passed off; or if the patient has been under exercise; he should be allowed to rest, until the circulation is calmed down.

Blood Letting.

Every commander of a ship should know how to bleed: and with a proper instrument, the operation is easily performed. You have been told the difference between arteries and veins. That arteries are tubes which carry the blood from the heart, and veins are tubes, which bring the blood back again. Arteries pulsate or beat, veins do not. The blood in arteries is vermillion red; in veins it is much more deeply colored. We choose for bleeding the bend of the arm; for here, the veins are nearer the surface, and more fixed. Preparatory to bleeding, you must have ready besides your lancet, two or more yards of broad tape or ribbon, two pieces of hard-folded rag, to cover the opening in the vein; a basin of a proper size to hold the blood, with a stick or staff for the patient to keep in his hand as a support. You must begin by feeling with your finger at the bend of the arm for the beat of the pulse. This beating, is caused by the blood from the heart, passing along the large artery of the arm. You had better always ascertain where the artery is; because, in opening a vein, it is right to avoid doing so just over it; as any jerk of the mans arm, may cause you to push the lancet deeper than you intended, and thus open into the artery; the bleeding from which you might find very difficult to stop. Having ascertained where the artery runs; you proceed to pass a fillet round the arm just above the joint; and draw it so tight, that the veins may swell, but yet not so tight, as to stop the circulation of the

blood through the limb. To be sure of this; you must put your finger on the artery at the wrist, and if you can feel the pulse there, and have got the veins to rise below the fillet, you go to the next step of the operation. This preparation ought to be frequently practised; to make yourself master of the appearance and feeling which I have attempted to describe. The patient is desired to hold his arm perfectly still; and after selecting the vein you intend to open; you hold the arm with the whole of your fingers round and behind the joint, and your thumb just under the part of the vein you have chosen for bleeding; fix the vein with this thumb, and draw the skin tight with it; so that the lancet may slide into the vein more easily, and give less pain. You hold the lancet with the finger and thumb of the other hand, and gradually, but firmly push the point slantingly into the vein; continuing the cut, along the course of the vein, until an opening is made sufficiently large, to allow the blood to flow out freely. It is better to make the cut in the vein obliquely; for then it is not so likely to slip from under the lancet and foil you. In the event of not getting blood in the first or second attempt; do not give up, by supposing that the blood will not flow; it will always flow, if your lancet has gone into the vein. In taking blood away, it is of very little use, unless you take a quantity sufficient to make a decided impression on the disease; you may let the blood flow until some very decided relief be obtained; and here it is proper to observe, that you should always bleed your patient while sitting up. Where bleeding is really necessary; much more blood will flow away before faintness comes on, than in a case where bleeding is not so necessary. It is a sign more or less of the utility of the operation. It will take double the quantity of blood to

make a man faint, who has an inflammation of the lungs, than to make a healthy one faint; both being in the upright position. The patient should never move his arm; as by so doing, he sometimes covers the opening in the vein, by the skin or fat sliding over it and stopping the flow of blood. When you have taken the quantity you intend; you proceed to untie the fillet; the blood then flows through the veins, and they cease to swell out: still the blood will continue to ooze out of the cut; do not wash the blood off the arm, it is needless loss of time; but place a small tight fold of linen over the wound, then a larger one over that; holding them on with you thumb, the hand still grasping the patient's arm. Then proceed to pass round the tape or bandage in the form of the figure 8, above and below the joint; each crossing, coming just on the linen pads: then pin, or secure the bandage, and desire that the arm be kept still for some hours.

Several accidents are liable to occur during, and after the operation, which you must be on your guard against. The patient may faint, even before an ounce of blood flow away. Nothing so resembles death as fainting, nothing is so alarming to those unaccustomed to see it. The face becomes pale, the lips bloodless, the eyes roll about, or are turned up, the limbs fall, and the person before you is, to all appearance dying or lifeless. The head should be immediately placed horizontal; by laying the person on the deck; cold water should be dashed in the face, and some harts-horn held to the nose. The recovery will be immediate. There is no harm in fainting: it becomes necessary to cease from taking more blood away at this time. The blood, (in consequence of the vein being badly secured, or from the person moving about) will sometimes burst forth again: and

this may occur, when the patient is in bed or in his sleep: and on waking, he will be alarmed to find himself bathed in blood. In this case, do not seek to pass any thing tightly over all, but immediately cast loose the binding; bare the arm, and secure it with fresh pads of linen made larger and firmer, bound by a bandage more carefully and firmly wound round: being cautious, not to bind the arm so very tight as to cause pain, or the limb to become swollen and dark colored by the stoppage of the circulation. In severe cases of disease; it may be necessary to repeat the operation of bleeding in a few hours: the blood will frequently flow from the same cut, when you tie up the arm, if you separate the edges of the wound. Blood is drawn in five cases out of ten needlessly; for there are means, if judiciously employed, of managing most disorders without the loss of blood; but this requires sound judgement, and that knowledge of the powers and properties of remedies, which you cannot possess. The lancet, is an easy mode of attacking disease; and the worlds experience goes to prove, the amazing relief which bleeding affords in some cases of fever and inflammation. Nature herself, seems to shew us the way to relieve her at time, by causing the blood to flow from the nose, or bowels, or some other part.

Before you can get medicines to have any effect; it is frequently necessary to take away some blood, more particularly in inflammatory complaints. It is not because a person is too full of blood; for a few hours of abstinence from food and drink, would soon lessen the quantity of this fluid that is circulating in the veins; but because the portion of the blood remaining, can more easily be acted upon by the vital powers, and undergo its changes: the system is relieved, and a fresh activity is given to all the

functions. By blood letting, the resistance to remedies is weakened, and they now take effect, when they would not before.

It is a mistake to suppose, that by removing blood you take away the disease; that the disease is in the blood; and the more you take, the more you gain from the enemy.

Great losses of blood are slowly and difficultly recovered from, in the very young, the aged, or the weakly. The consequences are; debility, palpitations on the least exertion, throbbing in the head, deafness, weakness of sight, a feverish state with delirium, and numerous other affections; for all of which no remedy is so good as opium, given regularly to relieve these feelings as they come on.

Fortunately you have to do with a robust class of men, who can very well bear the loss of blood: and you are not likely to do much harm with the lancet by one or two bleedings; even should they not be absolutely necessary.

Recollect, that, the blood first drawn from a vein is very dark colored; much more so than that which flows from a cut in the flesh. It is a mistake therefore to suppose that it is in an unnatural state, from this appearance. After standing for a time, the blood separates into two parts—the watery part or whey, and the clot or more solid part. In cases of inflammation this clot is seen to be of a buff color on the top, and its edges are gathered together, having a sort of cup-shaped form. This appearance is generally considered as a proof of the necessity of blood letting.

APPENDIX.

PART II.

INSTRUCTIONS FOR PRESERVING HEALTH

ON SHIP BOARD, &c.

Bathing.

Is a very salutary exercise, which should be encouraged by commanders of ships. No man should bathe, who is not well at the time; or who, when he comes out of the water, feels weak or chilly, or when bathing is followed by headache. Men may bathe at any period of the day, except soon after eating; particularly after a full meal; for it certainly interferes with the proper digestion of the food, and is more likely at that time, to be followed by some uneasiness.

It is improper also after excessive fatigue; for when the body is exhausted by labour; there is not power left to bring on warmth to the surface; and it may be followed by fever or other mischief. There is little or no danger when the body is heated by exercise; provided the strength is not spent by previous toil. A person might bathe in the morning, while on a journey, and covered with perspiration,

with advantage; but in the evening, after being worn by the exertion of a day's labor; cold bathing might be fatal when so heated. Men should not be allowed to remain too long in the water; the purposes of health and cleanliness are fulfilled by remaining in for 15 or 20 minutes. Pouring a bucket or two of water over the body daily, is a very wholesome practice: and where men cannot plunge into the sea, they might use this method of bathing with benefit. In the hot stage of all fevers; when the skin is hot and dry; pouring cold water over the body, is a powerful means of cutting short the hot fit: the patient feels refreshed, and a perspiration often follows. Before the heat comes on again; you may give such medicines as may prevent a return of it; or if it return, the attack will be less severe. The cold water dash may be repeated for several times: by which practice, you may succeed, in putting a stop to the severe fevers of hot countries.

Your patient must be taken gently from his bed: and when naked, a bucket or two of cold water must be poured over him; when wiped dry, slip on his linen, and place him in his bed again. A glow of warmth and moisture will generally follow the bath. In the latter part of fevers, this remedy is of little use, or even dangerous, when the strength has been much spent. To any part of the body, when the heat is raised much above the natural state, the constant application of water on linen is proper: being careful, not to continue the application, when the heat of the part is below that of the rest of the body.

Cleanliness and Ventilation.

Nothing tends more to the health of people on boardship, than attention to cleanliness, and perfect ventilation.

Disease breaking out in a dirty confined ship, will commit more ravages than in a clean one, under circumstances, in other respects the same. The air should be changed as much as possible, and every part frequently inspected by the commander, to see that no collection of dirt be present. All moisture or dampness should be dried up; and the practice of dry rubbing, rather than washing be enforced in cold latitudes. The rubbing with dry stones and sand, called holy-stoning, would be good, but for the fine dust which finds its way into every thing; and being breathed into the lungs, must be injurious to the delicate lining membrane of the air passages; particularly if they are inflamed or weak. Dry scraping and rubbing, is therefore far preferable to any other mode of cleaning a deck in damp weather.

In warm weather, and during drying winds, washing or flooding the decks with water is unobjectionable. Wind-sails should always be let down when practicable, and a ship laying in harbour in a warm latitude, should be so moored, as to allow the full advantage of every wholesome breeze. Personal cleanliness, and airing of bedding should be ordered and seen to by commanders. The health of a ship's company is generally good in a gale of wind; notwithstanding the fatigue, and the want of many of the comforts which they enjoy at other times. This is because of the thorough, and continual change of air produced by the violent motion of the ship, and the force of the wind; as well as from the increased exertion to preserve the balance of the body. This demand night and day for muscular exertion; drives out all humours, increases the appetite, and tends to make healthy good blood. The men's bedding should be exposed on deck every fine day; and all their berths completely

turned out, and cleaned once a week. In hot latitudes particularly, this is a very important regulation. There is a simple contrivance, which would contribute very much to the wholesomeness of a ship. A tube of 1 or 2 inches diameter, made of copper; opening below in a bell-shaped mouth, from the lower part of a vessel's hold, passing behind, or through the Galley or Caboose fire, and opening above into the funnel: the heat produced by the fire, would rarify the air in the pipe, fresh currents would constantly flow from below; thus perpetually changing the air of the hold, and consuming any that may have become foul. The only caution necessary, would be to prevent the tube from being stopped up by water, or other substances getting into it from below.

Climate.

Men can go from a cold climate to a warm one: and from India to the North of Europe without any peril to their health. The inhabitants of Europe, can well bear these transitions from hot to cold and may be benefitted by the change; provided they use proper precautions: such as clothing adapted to the change of temperature; and by lessening or increasing their stimulating food. An Englishman goes to the south of Europe or to India, and he continues his habits of eating great quantities of animal food: and, as his thirst is increased by perspiration and heating diet; he drinks continually of porter, water, lemonade, wine, brandy and water; any thing that offers. Fruits are abundant, and he indulges in them to excess: forgetting how unaccustomed his digestive organs are to this new sort of food, and these quantities of drink. The stomach labours to digest them but only partially succeeds. Much of what

he has taken, passes crude into the bowels; irritating as it goes. Perhaps the unusual heat will cause him to seek sleep on deck: now the temperature of the air at night is much lower than during the day, there is also a great giving out of heat from the earth and all things upon it to the sky (called radiation), the body by this is cooled down; and he awakes in a chill; he shivers, and cannot recover his warmth; his head begins to ache, and at length the skin becomes hot, and fever or dysentery, or some other inflammatory attack sets in. It is this conjunction of causes which brought on the illness, it was not altogether the quantity of drink, nor altogether the strange food, nor going from north to south, nor the night air; but it was the combination of several circumstances. Perpetual drinking weakens the stomach, and washes away the gastric juice which serves to dissolve the food. The stomach being filled with water, or other fluids, feels no desire for solid food. The skin is continually pouring out the perspiration formed from the drink: by which duty it becomes weakened, and rendered far more liable to be injured by the cold at night. Let a man when he goes to a warm climate, adapt himself in a degree to the customs of that climate: let him clothe himself more lightly, leave off nearly all his strong drinks, eat sparingly of animal food, take fruit by degrees and with moderation, and drink a little water, but not by quarts: under this system, he will not feel the heat oppressive; he will feel light and active; and he will escape the evils which may assail those who are less cautious. The weak framed vegetable-feeders of India cannot bear the cold of a northern latitude; they become powerless, losing all their spirits and strength. If exposed, their extremities become frost bitten and mortify. This arises more from their habits continuing unchanged,

than from change of climate: for an African flesh eating savage, can do as well in the north as a native. When it is said that men can bear the transition from one climate to another without injury; it is spoken of heat and cold merely, and has no regard to particular places; for there are some spots on the earth so poisonous, that no strength, no precautions, can save a man from disease or death, who exposes himself to its influence. The intemperate and weak; or those who are disordered by any excess; will be most readily laid hold of by the poison. The most unhealthy season of the year in marshy places and jungles; appears to be that, in which the moisture is drying up; for during the rainy season, when the earth is saturated with wet; as also, when the heats have prevailed so long as to dry up the earth; the poisonous air seems no longer to be formed, or formed in lesser quantities and more mildly. The night is also more to be feared in these places than the day; the poisonous exhalations are more condensed, and when combined with the moisture of dew, they more easily affect the body. The Sun in the day dissipates the effluvia or rarifies it.

Contagion.

By contagion, it is sufficient that you understand that some diseases are said to be communicated from one person to another, by means of a more or less near approach of their bodies; or that it can be conveyed by articles of clothing, or other things that have been worn by or been near the person sick. To a certain extent you may believe this, and it is as well for you to be cautious, and err on the right side; but do not let this opinion cause you to abandon the sick. Fear produces weakness of the body and disorders the functions.

The person thus disordered, becomes far more liable to be acted upon by the causes which produced the disease in others. The breath, the steam or exhalations from a sick man, if condensed; becomes a sort of poison; which, being received into the lungs, through the mouth and nostrils by a man, who may in any way be out of order; either from excessive fatigue, from debauch, from bad air or food, from fear or grief &c, will produce in him a similar disease. Thus you see the propriety of keeping up the spirits of your men; of insisting upon cleanliness, and of keeping the ship as dry and airy as possible. By constantly ventilating; you dissipate, or dilute the unwholesome effluvia that rises, and lessen its power of doing mischief. Those who have had the greatest opportunities of observing the yellow fever, the coast fever, and other marsh and jungle fevers; are of opinion, that they are not to be taken by one man from another. When men fall ill one after the other; it has the appearance, as if the complaint arose from contagion; but we must recollect, that the causes which gave it to the first, are still in operation, and may give it to others. A poisonous coast, a foul ship, joined to a particular state of the air, may together be sufficient to produce it. The Plague itself, may be considered to be of local origin, and not to be carried from man to man, when the men are removed from the original source of the disease. For instance, a number of men are taken from the shore, say in Egypt, the ship is perfectly cleanly, the ships company in excellent health, and there is strict discipline observed. After being at sea for a day or two, one or more of the men taken from the shore, shew symptoms of fever; it goes on, without its nature being at first suspected: at length, buboes, plague spots, and death, declare what the disease is. Now if the Captain is a judicious, bold man, the

complaint may, in all probability be confined to the men who were taken from the shore; some of whom may be attacked, but not his own well cared for, and well disciplined crew; even though they should have attended upon, and assisted the sick strangers. In such a case the captain, however anxious he may be, should shew no symptoms of fear: he should order the free ventilation of the sick berths and bedding, should make light of the notion of catching the disease, should not allow his men to be fatigued with watching, and should employ the very oldest hands to assist the sick: for young men, are far more liable to be attacked by fevers than older ones: games and amusements should be encouraged, as a means of keeping people in health, and taking their attention off from thinking of what is going on around them. The sick, if possible, should be brought upon deck under an awning: and should not be berthed with the other people. The constant sight of them, tends to make the men melancholy; besides the change produced on the air between decks, by the breath and fumes from the sick. Berth them on deck therefore if possible, taking care to have them sufficiently secured from cold by a spare steering-sail or any other sail.

The small pox is considered as one of the most contagious of diseases: in this as in other fevers, the disease may be controlled by good management. It breaks out at times without our being able to trace it to contagion. If your ship is what a ship ought to be, the disease, that may by accident be brought on board, will not spread. If otherwise, the whole of your people may be seized with the malady.

There are fevers such as of small pox, and others; where there is a change produced on the blood; and a yeast or leaven given off from the body capable of producing the

disease in others; this is properly the nature of a contagious disease. Now the difficulty is, how to distinguish a contagious disease from one that is not. Fevers that originate from any exhalation from the earth: such as yellow fever, bilious remittents of unhealthy countries, aguish fevers &c. are not to be caught by one man from another.

We know very little about how fevers are caught: it cannot be said that the first man who has a fever, has caught it by contagion. A number of men are thrown together all under the same circumstances precisely; one is seized with a fever, then another, who may have had no communication with the former.

Those men are first seized with fever, who have been most exposed to the causes which produced it in the first instance, or who, from their state of body, are most liable to be so attacked. Whatever may be the origin of any fever; your duty, under all the circumstances that may arise, is clear: namely, to take every proper precaution, and to inspire your people with confidence by your example.—(See Climate, Fever, Malaria, Plague.)

The wonderful cases related of contagion if examined closely, will give way in the proof. The facts, as they call them, generally want one thing to make them convincing, they are not true. We will not go so far as to say, that all who tell these tales, intend to deceive; they themselves may verily believe them. But men are so fond of the marvellous, that nothing that can be explained rationally will satisfy them. The doctrine of contagion keeps up extensive quarantine establishments, all who live by the system, are of course, thoroughly convinced of its necessity. If we allow, that in consequence of the imperfect state of our knowledge as regards the laws of contagion, some system

of quarantine is necessary; it must be a great modification of the inconsequent, contradictory, vexatious, and expensive one now in force. What being who deserves the name of rational, can without laughter, read the list of articles considered as susceptible, and others non susceptible to receive and convey plague fever; or can observe the mummery practised by the chief actors and underlings in this tragi-comic farce.

No nation seems to allow, that the plague fever originates with them; but declares that it is always brought from some other country by travellers or goods. In Egypt it comes from Syria; in Syria from Constantinople; and there, from both the other places. The truth is, it is native to the soil of these and many other parts. The proofs of its introduction always failing.

Discipline.

As the health of a ship's company greatly depends on the discipline on board; a commander should seek every means to make this perfect. A seaman is but a child of a larger growth, requiring another to think for him; and when he is persuaded that his superior is desirous of his good, he will obey with pleasure. A judicious commander will not require too much from his people; will not issue contradictory and vexatious orders: he will see that each man bears the proper proportion of work; he will interest himself about his men, their mess, their berths, their health: he will not seem to hear every angry expression uttered under strong feeling, not intended for his ear; or perhaps repented of as soon as uttered.

Men should be made proud of a good character as men and seamen; they should never be insulted with degrading language. If a man be degraded by contemptuous expressions; he grows careless of himself, indifferent to please,

sullen, and a skulker. Many a man who has been dismissed from one ship as incorrigibly bad, has become a very good man, in another, under a different discipline. It is a great truth, that good commanders make good men. Seamen must be humored and kept in order as children: if they are idle, they will be disorderly and soon become sick: if too much harrassed and disturbed at all seasons without a sufficient cause; particularly at times which they consider their own, or at meals: ill humor and sullenness will be followed by attempts to escape duty, or by feigned and frequently by real sickness.

Diet of the Sick.

It is a very general notion, that unless sick people eat, they will become weak. Upon this principle, they are urged to take food. A person labouring under any severe complaint, has no desire to eat; nature takes away the appetite; for she has not the power to digest, when the stomach is disordered by sickness. A man with a fever, or a dysentery is urged to swallow food: he gets down a quantity of something; and it remains fermenting in his stomach. If he is fortunate enough to vomit it up, he may be saved for the moment from further harm: but perhaps it passes on, half dissolved, into the bowels; producing great distress, and an increase of the malady. To a man under active disease, his usual diet and drink is poison. It is better to keep from every kind of food on the first attack of any severe illness. A sick person may remain a very long time without food, or with only a little water to calm his thirst. The proper time to give nourishment, is, when there appears to be some return to a healthy condition of the functions. When the desire for food returns, it must at first be given sparingly; and be chosen, so as not to heat or overpower the stomach by its strength or quantity.

In selecting articles for the diet of a person recovering from disease; attention ought to be paid to the former habits of the patient, even to the extent of allowing a little wine or spirits along with his principal of meal, if he has been in the habit of indulging in these articles; as they may perhaps tend to assist digestion. But, as a general rule, the best food : is that prepared from some sort of meal ; which may be varied by beef tea, or chicken broth, from which all gross and coarse parts have been removed.

Those substances he has been used to when well, are more likely to agree with a man when his appetite returns, than any strange diet. A little ship's soup, when carefully cleared from the fat and grosser parts, is very suitable for a seaman who is recovering from disease. In all things regarding diet, you should follow where nature points the way. If the man crave for food, give it: if he loath it, it should not be pressed upon him. Beware of gratifying fully, the appetite of a man recovering from illness. Give nourishment very cautiously, and in such a way, that the stomach may not be distressed; otherwise you will check, rather than forward his restoration to health. Eggs, milk, and white meats, which are considered as nourishing; are really far more difficult to digest than full-grown meats. In all matters of victuals and drink, the former habits and diet of the patient must be taken into the account.

Preserved meats should be provided for the sick: and a ship's company should be supplied with fresh vegetables, whenever an opportunity offers. A good stock of potatoes should be laid in; which ought to be kept dry and frequently examined. Many sorts of vegetables may be packed in barrels with baked sand. Vinegar, mustard and pepper are indispensable : a large supply of these should be kept, the two

latter must be put up very dry, into small, well stopperd bottles. Fruits of all kinds may be allowed: the precautions to be observed with these are, that they should be ripe, and not taken to excess.

An abundant supply of good water is most essential for the health of the people. It should be kept in iron tanks well secured down; and only pumped occasionally into a barrel for present use. If the water be thick or muddy: a small piece of alum thrown into the barrel, will tend to clear it.

Dress.

On the article of clothing; the feelings of the individual is the best guide. At a general rule, it is prudent to keep on the winter clothing longer; and the summer dress, for a shorter period, than the temperature of the air may seem to warrant. The delicate, or those who are very sensitive to atmospheric changes, will do well to wear flannel next the skin in changeable and humid climates. In warm latitudes, I have not observed that men do better with flannel next the skin, than without it. Flannel by increasing the heat of the surface, increases the perspiration. Warm clothing should be put on as circumstances, and the feeling of cold demand.

Drinking.

Seamen are too generally made drunkards by education and example. Songs are made in praise of grog, with grog a sailor is rewarded if he does well; his grog, is stopped if he does ill. To be able to drink grog makes the boy a man; and we cannot wonder, that with precept and example before him, this man-child becomes a drunkard. You may trace nearly all the calamities that occur on board-ship to the abuse of spirituous drink. It is the cause of the mutiny and disobedience of the men; of the tyranny and oppression

of the masters. What numberless ships have been lost by negligence, the result of drink.

If men are not actually too drunk to stand or speak: they foolishly argue, that they are not the worse for liquor. Perhaps soaking and tipping continually, has a worse effect on the health and the mind than a drunken bout now and then.

Drunkenness has the effect of rendering the person more subject to be attacked by other diseases.

Those ships are doubtless the most happy, where the rule of temperance is strictly observed. It has been scoffingly said; that the temperance men are always the first to get intoxicated when on shore. The fact is, that being long unaccustomed to any spirituous drink, a very little has the effect of overcoming them.

There are some iron frames, that resist the power of liquor for a long time; yet sooner or later, the strength gives way in some part. The brain and nervous system, are generally the first to suffer: and drunken delirium, apoplexy, or palsy are the consequences.

The following, are a few of the maladies which arise from indulgence in liquor: Weakness of stomach, diseased liver bilious complaints, gout, dropsy, inflammations, disease of the kidney, fever. Brain fever, drunken delirium, apoplexy, epilepsy—ulcers &c. &c.

A small quantity of spirits mixed with water, is a very proper drink; and if confined to a moderate allowance, no harm could result from its use. It is purer than wines or beer, and as it is stowed in much less space, is therefore more fitted for sea service.

The abuse is what is to be blamed; and it is clear, that where spirituous drink is not to be got, it cannot be abused.

Malaria or foul air.

By this term is meant an aerial poison which rises from the earth in many parts of the world. We know not how it is formed, we only know it by its terrible effects. At times, this poison is so very powerful as to destroy life before any fever comes on. The effects which follow the exposure to this foul air, are more or less severe; and go by the several names of ague, intermittent fever, fever and ague, remittent fever, bilious remittent, yellow fever, bulam fever, plague. &c.

The malaria which produces these fevers, is sometimes formed in the ship itself. It has been traced to a foul and moist state of the shingle ballast; to quantities of green wood being on board; to a close, moist, ill ventilated state of the hold. Numerous are the instances of destructive fevers breaking out in ships, owing to the state of the vessel, where no communication can be traced with other infected places. A fever, which under other circumstances, would be mild; in a foul ship, becomes a malignant disease, and spreads from man to man.

The causes, which in England would produce the complaint called an ague, or intermittent fever: in a more southern climate and between the tropics, will be followed by a severer form of the disease. There is nothing to be detected by the senses, and frequently the appearance of the country will hardly lead you to suspect the malaria poison to be present. It not unfrequently, seems to be owing to some changes which are going on under the surface; moisture always being present, which, acting upon vegetable matters, causes it to be thrown up in large quantities. These changes are more quick when assisted by a warm atmosphere; and the poisons are more active, when

the places they are formed in are sheltered from winds which might otherwise dissipate them. When the earth is quite covered, or quite saturated with wet; the air is comparatively free. At night too, the malaria is most active: the sun during the day disperses it; but at night, the dew which falls, appears to be a means of dissolving and conveying it into the human body, through the medium of the mouth and nose, to the lungs. No one should allow his men to be exposed to night air, until he has informed himself as to the healthiness of the place he happens to be in: and while at anchor in rivers, it will be well to use every precaution to guard against mischief. In such places, men should be very temperate in food and drink; they should not be exposed to the air in the morning, before they have taken their breakfast; they should not go on shore until the vapours in the air are dispersed; and they should return on board before sundown: their meals should be taken with great regularity, and their food should be easy of digestion. They are not to indulge in strange fruits, or vegetables, to excess: not that there is any thing in these articles injurious in themselves; but the stomach being unaccustomed to them, will not digest them, and a disorder is thus begun, which will easily be kept up; or be followed by fever, by dysentery or other evils. When your people are obliged to be exposed on shore at improper times, serve out daily, small doses of quinine; let them take this drug two or three times a day, in doses of one grain each time. Tea or coffee are good substitutes for spirits; and if men must remain on shore at night, let it be under a tent or tarpawling; with their beds raised as high as possible from the ground: and when in bad localities, keep up a good fire at night, even if the weather be ever so hot.

In catching fever from this cause, foul air; one thing seems to be essential, an exposure to the tainted air. The disease caused by malaria cannot be communicated from one man to another: it cannot become contagious as it is called: but a crowded state of the sick, may so infect the air, by the effluvia arising from their bodies; that any person exposing himself to breathe the air so infected, may be seized with some illness; more especially, where the person is himself out of health, depressed by fear, or worn out by attendance on his ship mates.

The fevers which are taken on shore, in unhealthy parts of the Globe; or even in foul ships in warm latitudes; have many names according to some variety in their symptoms or appearance: but they all are derived from the changes going on in the surface of the earth at various places, which produce gases or airs that poison the atmosphere, and through it the blood, (See Contagion.)

Ague or intermittent fever, bilious fever, remittent fever, and yellow fever, even plague itself, are all of the same family. These fevers at times rage at places, with much more violence than at other seasons; and are in proportion, more difficult to manage. The poison that produces them, is occasionally so strong, as to destroy life in a very short space of time; even before the signs of fever appear; and when fever sets in, the whole mass of blood seems quickly changed and broken down. You may have these fevers occurring in every possible degree, from a simple tertian ague, to the plague. And it will some day be acknowledged, that when people are removed from the poisonous cause which first produced these fevers; they can no longer be conveyed from man to man; where cleanliness, good discipline, and courage are maintained. But if your ship be

foul, and ill ventilated; if your men be disorderly, and debauched; you yourself be wanting in boldness and conduct; then there is no reason why fever of any character, may not arise on board. The effluvia from badly attended sick, will itself produce fever in the healthy, under such circumstances. If fever prevail upon a coast, begin at once to prepare for it, make every thing as comfortable as you can; berth your men airily; put up an awning to protect them at night; see that the stomach be not disordered by any excesses in fruit, or things from the shore: in fact do all you can to prevent any disturbance to their constitution. Never permit them to sleep on shore in such places, and keep them amused and cheerful; allow no green wood to be brought on board for stowage if you can help it; and if you must have it, let it be baked: go without shingle ballast, or at least, never move it when in sickly latitudes, but rather flood it completely if you can do so.

Sleeping.

The sleepingberths should not be too crowded. Sleeping in the open air under certain precautions is wholesome; but an awning should always be spread over head, to prevent the escape of the heat of the body which is continually flying off by radiation to the sky; and consequently, without an awning the heat may be so reduced that a man would awaken cold and benumbed: and if not in perfect health, inflammation or fever might result. It is not the dew that is injurious, but the excessive lowering of the heat of the body: an effect similar to that produced by a long exposure to a thorough draught of cold air. Now an awning stretched overhead, however thin it may be; prevents this radiation or giving out of heat, and the consequent chilling down of the body.

APPENDIX.

PART III.

CONTAINING A LIST OF MEDICINES &c. &c.

WITH DIRECTIONS FOR THEIR USE.

Contents of the Medicine Chest.

Acid muriatic	oz.	1
„ Sulphuric (diluted)	„	12
„ Tartaric (powdered)	„	1
Adhesive plaster.	roll	1
„ „ (spread on linen)	yds.	2
Ammonia (or smelling salts)	oz.	4
Antimony (tartar emetic)	„	1
Balsam of Copaiba	lb.	1
Blister Plaster	„	$\frac{1}{2}$
Blue Pill	oz.	1
Calomel	„	4
Camphor	„	4
Castor Oil	qt.	1
Cream of tartar	oz.	8
Croton Oil	„	$\frac{1}{2}$
Creosote.	„	$\frac{1}{4}$
Dovers Powder	„	2

Epsom Salts	lbs.	4
Essence of Peppermint	oz.	2
Extract of Colocynth	„	4
Friar's Balsam	„	4
Ginger Powder	„	2
Hartshorn (or liquid Ammonia).	„	8
Hydriodate of Potass	„	2
Ipecacuanha Powder	„	$\frac{1}{2}$
Jalap Powder.	„	4
James Powder (Kiddles)	bott.	1
Laudanum (or tincture of Opium)	oz.	4
Lint	lb.	1
Lunar Caustic	oz.	$\frac{1}{2}$
Nitre Powder	„	8
Ointment (wax or simple)	„	8
„ (resin or baslicon)	„	4
„ (mercurial)	„	8
Opium powder	„	1
Opodeldoc, or soap liniment.	„	8
Quinine	„	2
Red Precipitate, finely powdered	„	$\frac{1}{2}$
Rhubarb Powder	„	2
Rochelle Salts for Seidlitz powders	„	8
Senna leaves (or the concentrated solution)	„	4
Soda Carbonate of	„	8
Spirits of turpentine	lb.	1
Sugar of lead.	oz.	1
Sulphur Flowers	lb.	1
Sulphate of Copper (or of Zinc)	oz.	1
Tincture of Colchicum	„	2
„ of Steel (muriate)	„	2
„ Rhubarb compound	„	8

INSTRUMENTS & UNTENSILS.

A small case containing.

- | | |
|----------------------------|-------------------------------|
| A pair of scissors. | A caustic case armed. |
| 2 lancets. | An abscess lancet. |
| 2 curved needles threaded. | A pair of dissecting forceps. |
| A Probe with an eye. | A small knife or scalpel. |
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|--|----------------------------------|
| An elastic catheter in a case. | A drop measure. |
| A glyster apparatus (pewter.) | A set of splints for legs. |
| A Tourniquet. | Do. Do. for arms. |
| 2 Small syringes. | Bags to form pads. |
| A paper of pins. | Cotton wool $\frac{1}{2}$ lb. |
| A piece of broad tape. | A prepared leather for plasters. |
| 4 Bandages of calico 6 yards long, $2\frac{1}{2}$ inches wide. | Some old linen for dressings. |
| 4 do. flannel. | 2 yards of flannel. |
| A small wedgwood mortar. | Small scales and weights. |
| A 2 ounce glass measure. | A Pill knife and a tile. |
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The foregoing scale of medicines, is calculated for 12 to 15 men. Of course, the quantities may be encreased or diminished, according to the number of hands.

DOSES AND DESCRIPTION OF THE MEDICINES &c.

Acid Sulphuric Diluted.

Dose from 10 to 20 drops three times a day; for weakness of stomach; or after any considerable loss of blood from the nose or lungs. Added to water, it forms a useful gargle; and a few drops in a glass of water sweetened, makes a cooling drink in hot weather.

Acid Muriatic,

Is extremely useful as a gargle with water; to wash the inside of the throat; occasionally swallowing a little, in fevers attended with sore throat; as in scarlet fever and small pox. In using acids of all sorts, care should be taken not to allow any to touch the teeth.

Ammonia, or Smelling Salts.

A good sized bottle of this should be kept, well stopped. Useful in faintness; or where it is necessary to arouse the patient from any state of extreme insensibility.

Arrow-Root,

Is valuable in a sick mess; because it will keep well, is easily prepared, and can be got ready nearly as soon as water can be made to boil. Put a good sized tea-spoonful of it into a small cup; mix with it a very little cold water; and then, pour on it the water as it boils till the cup is full; stirring it round at the same time. It will become a jelly, which you may sweeten or flavor to your taste. There is no necessity for boiling it, although it is better for simmering a minute or so over the fire. Very little nourishment is contained in Arrow-root; therefore, it is a better food for those who have no appetite, and yet who think they want, or ought to have some sort of food.

Assafætida in a Mass.

A piece to be broken off and taken 2 or 3 times a day. Where the stomach is enfeebled, as in hot weather, and the appetite has failed; also in nervous affections, or after drinking to excess, it is a valuable medicine.

Antimony or Tartar Emetic.

In doses of one grain, dissolved in a little water, acts as an emetic. When given in doses of one sixth, or one eighth part of a grain; it acts upon the skin, or the bowels; and frequently vomits, even in this small dose. It is a most valuable medicine, and more manageable than any of the other preparations of Antimony. It is given in inflammations; particularly in inflammation of the lungs: the dose is increased at each time of taking, so long as the stomach will bear it. A surprisingly large dose will be borne in cases of inflammation, without producing sickness.

Where it nauseates and vomits, you will be obliged to reduce the dose, or omit it altogether. The best way to give it, is to dissolve a grain in an exact quantity of water; so that you can give an eighth part, a sixth, a quarter, or any division of the grain that you may wish. As there are about 8 good tea-spoonfuls in an ounce of fluid; consequently, if a grain be dissolved in an ounce of water; a tea-spoonful will be one eighth of a grain, and so on. Give it at intervals of from half an hour to one, two, three, or four hours, according to the urgency of the symptoms; always pushing it so far, that it may have some sensible effect on the skin, bowels, or pulse. This drug will, in a great many cases, prevent the necessity of blood letting.

Balsam of Copaiba.

Is given in Gonorrhœa, in doses of a tea-spoonful three times a day, in any warm liquid. If pain and heat about the

bladder, with increased distress in making water, follow its use: omit it, and give gruel, and barley or rice water. Apply a warm poultice between the thighs, and keep the patient at rest.

Bandages, both Flannel, and Calico.

Should be about 6 yards long, and $2\frac{1}{2}$ inches wide, without any joining or selvage. The bandage should go spirally round and round: each turn covering one third of the last turn; beginning from the very end of the limb that is to be bandaged. The pressure should be equal all over the limb; so, that where the bandage is, there should be a feeling of firmness, and support. If it presses tighter in one place than in another; it should be immediately removed, and re-applied. It is very difficult to apply a bandage well, in consequence of the form of the limb; but when you find that your bandage will no longer lay smooth; you must leave the last turn, following the direction the bandage will take, and gradually work down again, to cover any place you were obliged to omit in your course up the limb. As thus, you can get up to the swell of the calf of the leg very well, round and round: but here, you must either make a turn of the bandage upon itself, or you must carry the spiral turn much higher up the leg; perhaps near to the knee: go round, and following the course of the bandage, you will find it brings you down to near the spot where you left off. In this way, you may succeed in covering the limb completely. This operation, should be practised very frequently; and the bandage should not be stiff, but elastic, and without any twist in it; nor should it be sewn at the edges.

Bandages are applied for sprains, wounds, ulcers, enlarged veins, &c. being of great use; or doing much harm; according as they may be managed.

In the ulcers about the leg, to which seamen are particularly subject, a properly applied bandage is the chief means of cure. A many tailed-bandage, is but slips of linen, about 2 inches wide, and long enough to go round a limb. These slips, are passed round the limb and over the dressings; their ends crossing over the wound; and each slip, covering a third of the one passed before. These bandages keep every thing very firm; they can be undone without moving the limb, to get at the wound; and can be cleaned, by sponging them with warm water.

Blisters.

To make a blister; spread the blistering ointment with your thumb, upon a piece of leather of the size you wish: the ointment is to be spread to the thickness of a new shilling. First wash with vinegar, the part to which the blister is to be applied; press the plaster close to the skin: over this, put a fold of linen; and bind a bandage over all, to prevent the blister slipping from its place. If the blister be good, 3 or 4 hours will be long enough for it to remain on: for although the skin may not have risen in bladders full of water; which is the serum or whey of the blood; yet you will see all the skin red, as if scalded; and the rising will follow, when the blister is remoted. It is this redness and soreness of the skin, that is intended to be produced by the blister. Having taken off the plaster; you should cut the bladders containing water, if there be any; and then, spread a little wax ointment very thin upon a piece of linen, just the size of the blister, and lay it on over the sore: keeping it in its place by a bandage, or some other contrivance. The blister may be dressed night and morning, until it be well. Blisters, on some skins, will produce great un-

easiness; while on others, very little pain is caused by them. They often bring on a difficulty of making water, attended with a burning heat, but little water passing at each effort: this however soon goes away. The best thing for it; is thin gruel, or linseed tea. It is called a strangury, and is more liable to occur when the blister has remained on too long. No invention for blistering, is so good as the plaster made with the spanish fly.

Blue Pill.

Blue Pill, is given in doses of five grains at night, as an alterative. It is a mild preparation of mercury. As a purgative, ten or fifteen grains is a dose, followed by some other purgative; such as senna tea, or jalap, or castor oil. (See Calomel.)

Calomel.

Is a preparation of mercury, and a medicine of great power. As a general rule, calomel should only be given, when the heat of the skin is greater than natural: not when the patient is pale, weak, and cold. Night is the best time for taking it; for then it acts upon the body uninterruptedly. When every other kind of medicine is rejected, calomel will remain on, and frequently settle the stomach. When given to act upon the bowels, it should always be followed, after a few hours, by a purgative. Calomel is given in some diseases, with a view of altering the condition of the blood; in which case, it is ordered in repeated and small doses, at stated intervals: but if you go on in this way too long; you may give it until it produces, tenderness of the gums, stinking breath, soreness and swelling of the tongue, a flow of saliva from the mouth, ulceration, and extensive destruction of the soft parts of the mouth, throat, or the tender bones of the nose. Cases of sudden death have occurred

From the imprudent continuance of mercury. Mercury should never be pushed beyond the point, when the breath is slightly tainted, and the gums have become tender. It must then be checked at once. For this is a sign, that it has produced its peculiar action on the system. It is often necessary to join opium with calomel. Dover's powder is an excellent addition : so also is James's powder. Calomel is best given in pills ; or placed on the tongue, and washed down with water : for you cannot mix it up with any liquid. You should avoid taking acids immediately after calomel ; as they may produce some change upon it in the stomach.

Neither calomel, nor any other medicine should be given directly after a meal ; nor immediately before one : the effect is liable to be prevented or disturbed, when the drug is mixed with a quantity of food.

Camphor, (Spirits of,)

Is very useful in some head aches. A piece of linen wetted with it, should be held to, or bound on the forehead. When the head-ache arises from fatigue and anxiety, it is a good remedy. A few drops in a glass of water, is a useful stimulant, when the stomach is uneasy from indigestion. Linen, dipped in it, and applied over the bowels, will often relieve colicky pain ; or pain arising from wind. The spirit, should contain just as much camphor, as will allow it to be mixed in water without separating.

Castor Oil.

Is best given in something warm. Milk, warm and sweetened, covers its taste well : so does warm lemonade. When mixed with any thing warm, it does not hang about the teeth ; and it sits easier on the stomach. From two to four table spoonfuls, is a dose for a man. It is a pretty certain purgative ; and a mild one.

Catheter.

This instrument should only be employed under the most urgent necessity: when every other means of relieving the patient has been tried and failed. To pass this instrument, requires very little dexterity when the passage is free, and in a natural state. Where there are strictures, or straitened places in the canal leading to the bladder; you can hardly expect to succeed. In cases where no water can pass out of the bladder; as in inflammation of the neck of that organ; or over distention of it; you must attempt to pass the instrument.

The best sort of catheter for you to use; is the flexible gum-elastic one; with a thin piece of silver wire in it, to give it a little more stiffness. When to be used, the man had better try and stand up, with his back against the bulk-head, his legs a little apart, and his shoulders bent forwards. The instrument being well greased, and perfectly free and open; take it by the middle with your right-hand finger and thumb; and with your left hand, draw the penis tight out: pass the instrument along the water course, gently and steadily: first, nearly in a straight direction inclining down and along the course of the passage. Having passed it as far as your finger and thumb have grasped it, take another hold of the catheter as before; and now, as you pass it onwards, lower the penis a little; for when the point of the instrument has got under the arch of bone, the passage begins to mount up to the bladder, quite behind the bone which forms the arch between the thighs; so, that by lowering the penis, and the handle of the instrument together; the point looks upwards, and by pushing gently and steadily, will enter the bladder. You will know this, by there being no resistance to the catheter, and by the water finding its way through.

You then draw out the wire, to allow the water to flow freely, and the bladder, will soon completely empty itself. You may have to draw out the instrument a little, and then push it in again; as it may hang in a fold of the lining skin of the passage. It frequently happens; that the mere attempt to introduce an instrument will cause a flow of water. When used, wash the instrument clean, and be particular to see that no blood lodges in it; wipe it perfectly dry, and wrap it up in paper, ready for using another time. Considerable bleeding sometimes follows the introduction of the catheter even where no violence has been used—this may be rather of service than otherwise.

A middling sized one is the best for general use. It is quite impossible to give directions as to the degree of force to be employed in this operation. Little or none is required when the passage is free: you coax, as it were, the instrument in; and after due consideration and inspection of the course it has to take; you direct your efforts accordingly.—(See stricture.)

Cayenne Pepper,

Is very useful, when the stomach is weakened in hot weather, by indulgence in fluids or fruits. If used moderately with the food; it assists the digestion, and does not heat like wine or spirits. An infusion in water, makes a gargle of great use when there is a tickling cough, arising from the thickened and loose state of the lining membrane at the back of the throat. The best way to gargle, is to fasten a piece of lint or sponge, to a piece of cane or whale bone; and use it to mop the throat with. Press down the tongue with the handle of a spoon, and introduce the mop to the back and sides of the throat.

Cotton Wool.

Better known as raw cotton. It will be found very useful, in protecting inflamed parts from the air; as in scalds, erysipelas &c. It may be called a dry poultice.

Cream of Tartar.

Useful as a cooling purgative: also to make a refreshing drink, called imperial. The dose, is from two drachms to one ounce of the powder. It is better joined with some other purgative. For imperial. (See formula.)

Creosote.

A drop put into the hollow of a painful tooth, is one of the best applications known to ease the pain. Eight or ten drops to a pint of water checks bleeding in wounds; and is used as an injection in severe bleeding piles, and in dysentery.

Croton Oil.

In doses of one drop, made into a pill with crumb of bread, is a powerful purgative. In divided doses of one eighth, or one fourth of a drop, it is an aperient. It acts, when other medicines fail in removing costiveness. It is used also as a linament, to produce a crop of pustules on the skin. For this purpose it is mixed with oil or spirits, as, one drachm of croton, to one ounce of common oil.

Diet drinks for the Sick.

May be any mild fluids. They should contain neither wine nor spirit, nor any stimulating ingredient. A little flavoring, a little sugar, or a very little acid may be allowed. Some of the best drinks for the sick are. Pure water, toast water, barley water, thin gruel, rice water, linseed tea, sugar water, and weak lemonade, either hot or cold.

Dover's Powder.

Is one of the best medicines we possess, to check any agitation in the bowels; as in diarrhea, or dysentery. In coughs, colds, rheumatism &c. given in doses from three to fifteen grains; it acts by inducing perspiration, and checking spasm and pain. Four grains of this, and one of ipecacuanha powder; may be repeated several times, in cases where it is desirable to produce and keep up perspiration.

Emetics,

Are most important remedies; you can scarcely do wrong, to give an emetic in the beginning of fever; or in severe colds, coughs, bilious complaints, and in many inflammations. An emetic, not only discharges the contents of the stomach; but, by the shock produced on the whole frame; it excites perspiration, opens the bowels, reduces the pulse and enables nature to throw off the offending source of illness; causing all the functions to resume their natural and healthy play.

Epsom Salts.

In doses of one or two ounces is a purgative; half an ounce joined to a cup of senna tea is a good purgative mixture. Salts should be taken early in the morning, and dissolved in a good deal of water: they act much quicker so taken.

Dissolve an ounce of salts a in wine-bottle of water, and take a glass full every morning where there is any obstinate breaking out upon the skin. By adding to the whole solution, one grain of tartar emetic, the mixture is made much more active.

Essence of Peppermint.

Is given to relieve pain arising from wind in the stomach ; or it is added to many medicines to prevent their griping. Five to ten drops is a dose. The essence should be made, by adding one part of strong oil of peppermint, to seven parts of spirits of wine.

Extract of Colocynth.

Is a ready form to make into pills. About ten grains is a dose ; and, if a grain of calomel be added to each dose, divided into two pills, they may be taken every three hours, until they operate freely. Pills are apt to spoil by getting mouldy, unless kept exceedingly dry : so that it is better to make them when wanted, by keeping a mass of this drug ready.

Friars Balsam.

Is used in wounds. After the wound is bound up (as directed under the head of wounds) the balsam is to be poured on through all the covering. It acts as a cement to wounds ; keeping out air, and glueing all the dressings on the wound, so as to prevent any displacement of the parts.

Ginger Powder.

And ginger tea are good in indigestion ; and for spasms in the stomach. If mixed with purgatives, in doses of five or six grains, it tends to prevent griping and flatulence.

Gregory's Powder.

Is a favorite aperient, and consists of one ounce of powdered rhubarb, half an ounce of calcined magnesia, and a quarter of an ounce of ginger. The dose, one to three tea spoonfuls.

Gruel.

Is made by well boiling groats or oatmeal in water, first mixing it if meal, with a little cold water; and then stirring it while mixing, with the boiling water; continuing to boil it for some time: afterwards, strain the gruel. Salt, sugar, or any flavoring you please, may be used to make gruel palatable. Gruel should be given instead of other food, not in addition to it. A table spoonful of meal, will make a large cup of gruel.

A Glyster Apparatus.

Can be obtained at a very little expense. There are many inventions for glyster machines; but the one likely to be most useful on board-ship; is a large pewter syringe, holding a pint and a half, or more. You should see to its being kept in good order, and that the piston or plunger can play freely.

When using it; draw up the fluid to be injected, as in a common squirt; you then drive out any air that may have been sucked up, by holding the instrument with the pipe uppermost, and push on the piston until the fluid begins to flow. The syringe is now charged. After observing that the fluid be not too hot; the patient laying on his side, with the buttocks well exposed, and his knees drawn up or bent on his body; you push the pipe previously greased, gently and steadily, through into the gut, following the direction of the back bone.

Should you meet with much resistance; draw back a little, and then pass it on again; as the pipe may get entangled in a fold of skin. When the pipe is in the gut; you will know it, by the freedom with which it moves about: you then force up steadily, the whole of the injection, and with draw the pipe; desiring the patient to keep the glyster in, as long as he possibly can.

Harts-horn, or Spirit of Ammonia,

May be given in doses of twenty to forty drops in a little water, where there is faintness; or when there is flatulence or acidity in the stomach. One part hartshorn, and one of oil, forms a good liniment for sprains. The spirits of hartshorn should be of the strength directed by the college of physicians.

Hot Lemonade.

A thin piece of lemon peel is put into a tumbler glass, with two or three tea spoonfuls of fine sugar; add one or two tea spoonfuls of juice: boiling water is to be poured on it. Drink the mixture as hot as it can be borne. This is an excellent drink where a person is fatigued, or has head ache, sickness of stomach, indigestion, and fever. It induces perspiration, and excites the kidneys: thus carrying off any slight febrile heat.

Hydriodate of Potass.

Is a medicine of great power used after the fever stage of rheumatism; when pain and swelling remains in the joints: in any scrofulous, or diseased habit of body; when there is no fever present, doses of from 2 to 4 grains, three times a day should be taken. In any swelling of the glands, not arising from inflammation, it is a most useful medicine. When this drug produces pain in the head, any salivation, or any distress about the stomach, it must be omitted.

Ipecacuanha Powder.

Is an emetic in doses of twenty to thirty grains: in doses of one grain, at intervals, it promotes expectoration from the lungs, and acts upon the bowels. It is a very mild emetic; and usually affects the bowels, after the emetic operation has passed off. Three or four grains of Dovers powder, and one of this, given at intervals of four to six hours, is a remedy in dysentery, colds, &c.

Jalap Powder.

Is a purgative, in doses of 30 and 40 grains. It is better to be joined with two or three drachms of cream of tartar, mixed in water; adding a little essence of peppermint, if agreeable. Early in the morning, is a good time to take this medicine. Thus cream of tartar three drachms, jalap half a drachm, essence of peppermint five drops, is an opening physic, which may be repeated after three or four hours, if the first dose do not operate.

James' Powder.

Is given to produce perspiration, in doses of two to six grains, at night. It also acts on the bowels, and is a good addition to calomel.

Lancets.

Two good ones should be in the chest. They must be lightly smeared with mercurial ointment, wrapped round with brown paper, and kept in a dry place; which will prevent their becoming rusty. After use, the point must be prevented touching any thing which may blunt it. This is done, by folding the blade between the handles, and laying it on one side until the arm be tied up. It must then be dipped in hot water, and carefully wiped dry.

Laudanum.

Is a preparation of opium in spirits. It is given in doses of from ten to fifty drops. You had better measure the drops: this being the more certain way of giving a proper quantity. Laudanum, is taken in cases of severe pain; and the better way is to give it in doses of 10 to 20 drops at intervals, until it produces the effect. These doses are calculated for grown persons, you must be very cautious how you give it to children. (See Opium. Poisons.)

Linen.

Old linen is very useful for dressings; to spread ointments upon; to cover wounds; and when using lotions. Compresses of old linen, should be without ridges; perfectly smooth.

Linseed.

On a table spoonful of the whole seeds, pour a pint of boiling water, and when cold use it as a drink. It is useful where there is any heat or pain in passing water; as also to make a soothing glyster in dysentery.

Lunar Caustic.

Should be carefully handled; as it immediately blackens what it touches, and the mark does not come out.

In using lunar caustic to sores and inflamed places; there will be no occasion to wet it, if there is any moisture in the part: but should there be none, you will have to touch the point with a very little water before applying it. The least touch of the caustic is sufficient over a sore. Where the skin is not broken, you will have to rub it with more force. Caustic seems to destroy the painful sensibility of the inflamed part, and to check the progress of an inflammation on the skin. It destroys diseased growth of flesh, and brings on a healthy condition in a foul sore. It should not be applied too frequently, for then it will destroy the healthy growth as well as the unsound.

Measure Glass.

Is marked from half a drachm up to one ounce, or to two ounces. One drachm is equal to a tea-spoonful, two drachms to one quarter of an ounce or two tea-spoonfuls; and half an ounce is equal to a *table*-spoonful. As spoons differ much in size, you can never be sure of the proper measure by them; the glass therefore is very useful on that account; and may be got marked by spoonfuls.

The drop measure, is marked from 5 drops up to 1 drachm or 60 drops. Drops, from different bottles, differ in size: the fluids themselves also, form drops of different sizes. A drop of laudanum, for instance; is much less than a drop of water: and a drop of syrup is still larger than the water drop. The drachm or tea-spoonful, is divided by this glass into 60 equal parts.

Mortars.

The mortar should be a small wedgwood one, of No. 2 or 3 size.

Mustard.

A quantity of powdered mustard, should be kept in a dry place well corked. A table-spoonful in a glass of water is a safe and quick emetic: mixed into a thin paste with water, and spread upon a piece of linen; it is an excellent application to relieve pain; acting as a blister. Four ounces stirred in hot water, to bathe the feet and legs before going to bed, is efficacious in slight cases of fever; or of cold and head ache.

Needles.

With thread, should be kept ready threaded. Smear the needle with a little blue ointment to prevent rust. In sewing up a wound; be sure to take a sufficient hold of the skin and flesh with the needle; so that when you draw the stitch tight, it will not tear through. You do not go on sewing; but you take one stitch through both edges of a wound, and then you cut the needle off, and tie the thread in a knot, drawing the two sides of the wound together; as described under the head of "simple cuts and wounds."

Nitre.

Is a cooling salt, which generally increases the flow of urine. Five grains in barley water, or common water, is a dose; or, it may be dissolved in weak lemonade, and taken

frequently in fever as a common drink. In doses of ten to fifteen grains ; it lowers the pulse and heat, in inflammatory fever. Where there is pain on pressure at the stomach, with sickness ; it had better not be given. Mixed with half the quantity of Dovers powder, and a little tartaric acid, it is a good sweating dose, to be repeated at intervals.—(See formula.)

Oatmeal.

Is a good substitute for linseed meal to make a poultice ; and is to be treated in the same manner. Having this on board, you will have no occasion for the linseed also. (See gruel.)

Ointments.

Quickly spoil, and lose the property of mildness. The best simple sort is lard, stiffened with a little bees-wax. This forms a good covering for sores and wounds, and may be called healing ointment. Joined to an equal part of pine-tar, it forms an excellent application in many ulcers and eruptions.

Yellow Basilicon,

This is a good digestive, warm cerate ; and when mixed with the red precipitate, is a most valuable dressing for old sores, and slow healing ulcers. Ointment to be healing, should not be made with oil: oil is irritating: nothing is so mild as lard, fresh from the animal. Very little simple ointment should be kept on board: for wherever you go, you can generally procure a little fresh lard.

Ointment of Mercury, or Blue Ointment.

When used for venereal disease, is usually rubbed in with the flat of the hand, within side the thigh. The rubbing should be continued for half an hour, or more ; and when the hand is quite dry, a little lard or oil may be put on it, to

enable you to work the ointment in still more. It should not be washed off till the next time of using. You must watch its effects; as in some constitutions, it quickly produces salivation. It is usually rubbed in night and morning; to the quantity of from one to two drachms.

Ointment of Sulphur

To four ounce of sulphur flowers, add as much grease of any kind, as will make it up to the consistence of a stiff ointment. Mix it well, and use it freely at night; or every night and morning to cure the itch. The whole of the eruption should be covered, and the ointment rubbed in with force and perseverance. (See itch.)

Opodildoc, or Soap Liniment,

Is rubbed on sprained or bruised parts after the inflammation is gone down. When the rubbing is finished, the part should be rolled in a bandage. Where there is stiffness after rheumatism, or after injuries; the friction with liniments or embrocations will be found very serviceable; used night and morning. Common oil and turpentine; oil and croton oil; hartshorn and oil produce similar effects.

Opium.

Laudanum, morphine, and several medicines are prepared from opium: which is the dried sap that flows from the white poppy in hot climates. Opium powder should be kept in the chest, as also laudanum. They act in the same manner: the latter being a fluid, is rather quicker in its operation. As a medicine, opium is invaluable. It is a specific against intense pain, and controls all disorders called spasmodic or crampy. In large and continued doses, it lowers the action of the heart and pulse, and cures inflammation: but it is to be exhibited in this way, only by a skilful hand. Opium and its preparations should be given in doses at intervals,

so that you may go on giving it, until it produce the effect you intend, without danger of an overdose. 20 drops of laudanum or 1 grain of opium at a time, in common cases: or if the pain be excessive; a much larger dose at first may be ventured on. In diarrhœa or looseness, 5 drops of laudanum on a piece of sugar, occasionally, after each liquid stool, is a safe dose.—(See Laudanum.)

Pads.

For fractures, should be bags of cotton or linen: long enough to reach from joint to joint; and wide enough to protect the limb that is broken. These bags may be half filled with bran, or meal, or cotton, or any soft substance, which can protect the limb against the pressure of the splints and tapes, used to secure the broken bones.

Pearl or Scotch Barley.

Must be kept in canisters in a dry place. To prepare barley water, you wash 2 oz. of barley, and then put it into a quart of cold water, allowing it to simmer over the fire, until the barley is dissolved, and the water becomes quite thick. If the water waste away in the boiling, add more, so as to keep the full quantity of a quart to the 2 oz. of barley: strain off through a sieve, and add a piece of lemon-peel to give it flavor. It is a good drink in fevers, inflammation of the bowels, or dysentery. Rice water is made in the same way.

Pills.

Such medicines are made into pills, as are given in very small doses; or when the substance is too disagreeable to be taken in any other form. Some powders with water only, will form a stiff paste; which you can cut into any number of pieces, and roll them round. Some substances require gummy or sticky articles to form them into a paste. A little

flour, (always to be had) you can mix with your calomel, antimony &c. and work it up with the point of a knife, into the consistence of a piece of dough. Add water, to what you are going to make into a pill, in the most minute quantity; for you will easily drown a small dose of medicine, and have to add more flour, and thus increase the size of your pill. Five grains of calomel will make a very moderate pill, even with the addition of something to give it the necessary consistency; whereas, you would have to divide five grains of magnesia, into three or four pills. A dose of rhubarb powder, is from thirty to forty grains; which would form about eight large pills, for one dose. Jelly, or preserve, or treacle, are all very proper things to make your pills up with.

Poultices.

Are made of many materials; as bread, meal of any sort, as linseed and oatmeal; potatoes, &c. Any mild substance that will retain heat and moisture for a considerable time, is good for this purpose. Linseed, or oatmeal is very easily managed; you have only to pour boiling water over a quantity of meal that you may judge sufficient for your purpose, in a basin: mix it up thoroughly, and when of the proper consistence, neither too stiff nor too loose; spread it thickly on a piece of linen, and apply it to the part as hot as it can be borne. When it becomes dry or cold; it may be changed, or warmed up again. Bran, soaked in hot water, and put into a bag or cloth, is an excellent poultice; and may be renewed as often as it gets cold. Folds of soft linen, wetted in hot water, and covered with oil skin; forms a good poultice, retaining the heat a long while.

Powders.

In mixing up your powders with water &c. you should use a mortar, and add the fluid very gradually: for if done hastily, the powder will get lumpy, and give you much trouble. Any medicine containing powder; should be stirred up just before taking it. Do not mix calomel, nor any heavy powder with water.

Purgatives.

The several purgative medicines, are not to be given indifferently; for frequently, one kind is more suited than another for the complaint. If the stomach be irritable, it will not bear any bulky drug; but it may retain pills, or some active medicine in small quantity. Castor oil is a very mild purgative, but many stomachs will resist it. With some, one sort of drug, causes more pain in its operation than another. Epsom salts is a good cooling medicine, but it should only be given as a dose, early in the morning; dissolved in a good deal of water. The combination of several purgative substances, has a better effect, than a large dose of any one of them separately. Aromatic substances; such as cloves, ginger, camphor, joined with purgatives, make them sit easier on the stomach, and prevent griping. You must remember, that if your object be to purge: you must go on, until you have obtained this effect: by repeating your doses at intervals. Should the medicine operate with a degree of violence which you did not expect; you must check it by four or five drops of laudanum, on a piece of sugar; repeating this, if required, until the irritation set up by the purgative, has subsided. As very many complaints of long standing, will yield to persevering purging medicines; such drugs as Le Roy and

Morrison's pills, have obtained great celebrity: any other purgative drug persevered in, in a similar way, would be attended with the same benefit, or mischief. The diseases on ship-board, rarely require severe and continual purging: a simple fever, has often been purged from mildness into severity. Never forget, that a medicine becomes a poison, when one dose too much be given.

Quinine.

Is the essence of peruvian bark; and is given in ague, or intermittent fever: also in weakness after severe illness. In every case, where pain or uneasiness comes on at regular periods; quinine is pointed out as a remedy. It is given *between* the fits of pain, or fever, in doses of from one to ten grains, every so many hours. When it has cut short an ague, or prevented the return of pain, in any case; it should still be continued for some days, in smaller doses. It is best given made into a pill, with any adhesive substance. Should any uneasiness of stomach, or pain in the head follow its use; the medicine should be omitted, or given in an injection. It will not cure intermittent fever in all constitutions: and when it is seen to do no good, it must be omitted, and other means used. See Fever.

Red Precipitate Powder.

This should be kept in a very finely powdered state; so that no grittiness can be felt by the fingers. When well mixed with basilicon ointment; it makes an excellent application for old sores: producing a growth of firmer, healthier flesh. The strength may be reduced, by adding an equal weight of lard to the red ointment of the formula. Three grains, to a drachm of lard; forms an ointment, to be used, after the inflammation is gone from the eye; and a weakness, or any speck is left by the disease. One drachm

of red precipitate, to one ounce of basilicon, or rosin ointment; is the form of ointment for dressing old and sluggish ulcers.

Rice water, (see pearl barley water)

Rhubarb Powder.

To be given as an aperient, in doses of thirty or forty grains ; with five or six drops of essence of peppermint, in a little water. An equal quantity of magnesia, or of soda, may be added, when there is any heart burn, or acidity in the stomach.

Rochelle Salts.

Is the basis of seidlitz powders. It is a cooling aperient in hot weather; taken in the morning, with a good deal of water. (See Seidlitz Powder.)

Sago and Tapioca.

Are similar as to their nourishing properties. To prepare either; you throw a table spoonful into cold water; after remaining one hour, pour off the water, and boil the sago in a pint of clear water, until it be perfectly soft and smooth: add sugar, spice, or wine, according to taste.

Seidlitz Powder.

Consists of rochelle salts, three drachms; carbonate of soda, two scruples ; dissolved in a tumbler of water. When fully dissolved, add two scruples of tartaric acid, in powder; stir it up, and drink it off immediately. The best time for taking this, or any kind of saline purgative, is early in the morning : and the more the salt is diluted, the quicker is the effect.

Senna Leaves.

An infusion of these leaves is a good purgative : but it is better to join other things with it ; such as epsom salts, or cream of tartar, and a little ginger, to make it agree better

with the stomach. The tea, is made by pouring a cup of boiling water, on half an ounce of the senna leaves; which, after remaining an hour covered over, strain off, and drink it while it is warm. A few drops of spirits of camphor, increases its efficacy. The concentrated extract of senna, is a convenient form for sea use: two drachms, mixed with any other purgative is a dose.

Soda.

Soda is given in doses of twenty grains, when acid forms in the stomach. An effervescing fever draught, is made by dissolving from fifteen to thirty grains of soda, in a little water, sweetened: when ready; throw into the glass, the same weight of tartaric acid; stir it up and drink it immediately. In fevers, this draught may be repeated as often as agreeable. Sixty grains of soda, with fifty of acid, will generally have an aperient effect, if taken in the morning; a little ginger added, will improve the draught.

Spirits of Turpentine.

Used in glysters, and as a stimulating liniment. In inflammation of the bowels, after bleeding; it is useful when applied in the following way. Wring a large piece of flannel out of hot water, lay it all over the belly; pour on the flannel the spirits of turpentine, and cover all up with a dry piece of flannel or cloth. The spirit soon begins to produce a heat and redness of the skin; which continues, even to blistering it.

Splints for fractured legs and arms.

Are thin pieces of wood, hollowed on one side, and rounded on the other. They should be long enough to take in the joints of the broken limb. Thus, in the leg, it should

reach from above the knee, to below the ankle on each side. For the thigh; it should reach from the hip bone to the ankle, on the outside; and from the crutch, to the ankle, on the inside. Those for the arm, should in like manner be made to take in both joints.

Sugar of Lead.

Sugar of lead, makes an excellent cooling lotion; called Goulard water. As, one drachm of it, to one pint of water, and four drachms of vinegar, mixed together.

Sulphate of Zinc, or white Copperas.

Is used as an emetic, to act suddenly: twenty or thirty grains in a little water, is a dose. It is used also to form an eye water, in weakness of the eyes, after the inflammation has passed off: about one or two grains, to one ounce of water. In injection, for gonorrhœa; the strength may be four or five grains to the ounce.

Sulphur.

The flowers of sulphur are useful in piles, when they arise from confinement of the bowels. Ten to twenty grains should be taken at night, mixed in a little water. When sulphur is mixed with grease, it forms the best itch ointment; and only requires to be well rubbed in every night, over every part where there is any eruption. As the smell clings to the clothes; after the use of this substance, they should not be changed until the cure be completed.

Tincture of Colchicum.

Given in Rheumatism and inflammatory complaints, in doses of a drachm, to two drachms. Ten grains of magnesia, and ten drops of laudanum, may be added to it in a glass of water, occasionally.

Tincture of Steel.

Is the most convenient preparation of iron. It is taken in water, in doses of fifteen to thirty drops, three times a day: in debility, after fevers; or other severe illness; in weakness of the bladder, and urinary passages; or in any case where steel is recommended.

Tincture of Rhubarb.

Is a warm stomachic purgative; and a good medicine when the stomach has been weakened by any excess in food or drink. From half an ounce to one ounce, is a dose. In colic; a dose of this tincture, with ten drops of laudanum, may be of much service.

Tourniquet.

An instrument to stop the flow of blood from wounded arteries. (See bleeding from wounds.)

Treacle.

A good supply of this article should, be provided in every ship: it corrects the effects of salt provisions, when used with the food.

Water.

Should be kept in iron tanks, well screwed down. See Hydropathy.

Weighing.

The marks on the pieces of brass used for weights, should be learnt. See that the scales be always even, and work freely; turning with the weight of a quarter of a grain. See also, that there be no moisture under them, on the table; as that would prevent their playing. Weigh accurately, and never guess the quantities.

Weights.

Medicines are weighed by the apothecary's weight. The ounce, is divided into eight drachms; each drachm into

three scruples ; and the scruple into twenty grains. In the box will be found : weights of two drachms, or one hundred and twenty grains, marked thus ʒjj—of one drachm, or sixty grains, thus ʒj—of two scruples or forty grains thus ʒjj—of one scruple or twenty grains, thus ʒj—of half a scruple or ten grains, ʒss—and others, marked with dots; according to the number of grains they represent, down to $\frac{1}{2}$ a grain.

Doses of Medicines.

Supposing a full grown person to require one drachm, or sixty grains, of any drug : for one of sixteen to fourteen years ; the dose would be two thirds, or forty grains—from fourteen to ten ; one half, or thirty grains.—From ten to five ; one third, or twenty grains.—From five to three ; one sixth, or ten grains.—From three to two ; one eighth, or eight grains.—For one year old, one twelfth part ; or five grains—and so proportionately to the tenderest age.

With many powerful drugs, these proportions will not hold good ; for example : infants bear large doses of calomel very well ; but are powerfully affected by very small doses of opium. Therefore, this is only a general table ; but with the exceptions of opium, and its preparations laudanum, and Dover's powder ; you have no medicine in the list, that may not be regulated in its dose by the above rule.

Several drugs in the preceding pages, are not named in the contents of the medicine chest ; as not being strictly essential for ship practice : yet they may be found very useful in many cases ; and it will be better to be provided with them.

FORMULÆ OR PRESCRIPTIONS.

- No. 1. Acid drink.—Take, of sugar, an ounce; of water a pint. Dissolve the sugar in the water, and drop in as much of the diluted sulphuric acid, as may give the water an agreeable and slightly acid taste.
- No. 2. Antimony solution.—Of tartar emetic, a grain; water, an ounce. Dose, a teaspoonful, gradually increased.
- No. 3. Antimony ointment.—Of tartar emetic, two drachms; lump sugar, half a drachm; lard or grease, an ounce; mix. To be rubbed in at night, or oftener.
- No. 4. Antimony plaster.—Spread a pitch, or diachylon plaster, on leather or paper: sprinkle over it tartar emetic.
- No. 5. Astringent mixture for bowel complaints, (called bowel mixture.)—Of Dovers powder, half a drachm; magnesia or soda, one scruple; essence of mint, ten drops; water, half a pint. One table spoonful, to be taken at intervals of two or more hours, according to symptoms.
- No. 6. Black dose, or infusion of senna.—Take, of senna leaves, half an ounce; of salts or cream of tartar, half an ounce; ginger, ten grains; camphor solution or camphor spirit, ten drops; boiling water, a cupful. To stand an hour covered; then strain it, and drink all at one time, while it is warm. If the concentrated extract be used, add two drachms of it, instead of the leaves; and it is ready immediately.
- No. 7. Camphor Julep.—Camphor, twenty drops; and water, a wine glassful.
- No. 8. Carminative mixture for children.—Of nitre, ten grains; of magnesia, or soda, ten grains; sugar, one

drachm ; essence of mint, five drops ; water, one ounce. From half a tea-spoonful to a tea-spoonful frequently, when in pain from wind. An older child may take two tea-spoonfuls, and a grown person, the whole of the above at one time.

- No. 9. Cooling drink in Fever—Water, one pint ; sugar, one ounce ; nitre, twenty grains ; lemon peel, a piece ; add muriatic acid, until it become as acid as weak lemonade. If much is drunk, the nitre should be left out ; or only five grains added to each draught.
- No. 10. Common oil liniment.—Oil, one ounce ; harts-horn, one ounce.
- No. 11. Croton oil liniment.—Of spirits of camphor, or opodeldoc, one ounce ; croton oil, one drachm ; mix, for an irritating embrocation.
- No. 12. Dinner Pill.—Of extract of colocynth, (compound,) ipecacuanha powder, rhubarb, cayenne, one drachm of each ; soap, one scruple ; and water, sufficient to make sixty pills : one or two at dinner time in habitual costiveness : or four at night, for an aperient.
- No. 13. Effervescing lemonade.—Of sugar, half an ounce ; rubbed, on a piece of lemon peel ; carbonate of soda, twenty grains ; dissolve in half a pint of water, and when dissolved ; put in twenty grains of powdered tartaric acid, and stirring it up, drink off immediately. This is to be used as an occasional draught, when sick at stomach ; or suffering from excessive thirst. Hot lemonade. Of sugar, half an ounce ; lemon peel a piece ; lemon juice, one tea-spoonful ; boiling water, half a pint ; to be drunk hot.
- No. 14. Emetic draught.—Of ipecacuanha powder, twenty grains ; tartar emetic, half a grain ; water, two ounces ;

- mix the whole for one dose; after which, no fluid must be taken, until the dose begins to operate; when warm water may be drank to wash out the stomach. A table spoonful of mustard, in a glass of water, is a safe and quick emetic.
- No. 15. Ginger tea.—Of ginger in coarse powder, one drachm; boiling water, half a pint; to stand for twenty minutes, and to be drank warm: useful in windy colic.
- No. 16. Goulard water.—Of sugar of lead, one drachm; vinegar, half an ounce; water a pint, or a pint and a half. As a cooling wash.
- No. 17. Hydriodate of potass solution.—Of hydriodate of potass, two scruples; water, eight ounces. Dose, one table spoonful three or four times a day. After venereal disease, or rheumatism; where there is pain and stiffness in the joints; in any impurity of blood; and in glandular swellings; this is a very valuable remedy.
- No. 18. Imperial drink.—Of cream of tartar, half an ounce; white sugar, four ounces; peel of one lemon; boiling water, three pints: when the tartar is dissolved, decant off into clean bottles for use. These drinks are very agreeable; but they should not be indulged in too freely; as they tend to weaken the stomach, and take away the appetite.
- No. 19. Purgative or antibilious pills.—Of extract of colocynth, four drachms; gamboge, thirty two grains; calomel, sixty four grains; tartar emetic, three grains; essence of mint, thirty drops: mix very accurately, in a mortar; rubbing the powders together by degrees; then add the extract of colocynth: divide the mass into pills, by continually halving each piece,

until you have sixtyfour; which roll up for use. A dose, should consist of two or three; and be taken at night.

No. 20. Quinine Solution.—Of quinine, eight grains; dilute sulphuric acid, twenty drops; of water, one ounce: add the acid to the water first, then dissolve the quinine. A tea-spoonful, contains one grain of the quinine.

No. 21. Mixture to increase the flow of urine. Take, of nitre, two scruples; tartaric acid, ten grains; dovers powder, ten grains; sugar, four drachms; water, eight ounces. Mix. Two table-spoonfuls every four hours. In gout, and rheumatism; mix half a drachm of magnesia, or soda, and half an ounce of the tincture of colchicum, to the above.

No. 22. Mustard poultice.—Of mustard, two ounces; oatmeal, or other meal, two ounces; and cold water, enough to make a soft paste. Spread it thickly on linen or stiff paper, and apply it to the part in pain.

No. 23. Purging powder.—Of Jalap powder, twenty grains; calomel, five grains; to be mixed in something thick, as treacle: not in water. Another, consists of jalap, half a drachm; and cream of tartar, three drachms.

No. 24. Tar ointment.—Pine tar and wax ointment, equal parts.

No. 25. Stimulating ointment for old sores.—Of ointment of rosin or yellow basilicon, one ounce; red precipitate, very finely powdered, one drachm: to be mixed perfectly. It may be reduced in strength, by mixing with an equal weight of simple ointment. Used as a dressing for ulcers.

- No. 26. Rhubarb draught.—Of Rhubarb powder, half a drachm; soda, fifteen grains; compound tincture of rhubarb, two drachms; essence of mint, five drops; water, two ounces; mix.
- No. 27. Sweating mixture —Of Dovers powder, five grains; nitre, five grains; tartaric acid, three grains; camphor water, or common water, two ounces. To be taken at night, or early in the morning: keeping in bed to encourage perspiration.
- No. 28. Turpentine fomentation.—(See spirits of Turpentine.)
- No. 29. Turpentine injection, or Glyster.—Spirits of turpentine, one ounce; gruel, one pint.

Other injections or glysters, consist of warm water, or gruel; to which you may add, oil, or salts, or any fluid substance that may be required in the disease. Quinine, tartar emetic, and other drugs; when they cannot be taken by the mouth, may be exhibited in form of glyster. It will then be necessary, greatly to increase the dose: and, as you wish such medicines to be retained in the body; you must add them to as little fluid as possible. In extreme debility, people may be kept alive by strong injections of broth, and other nourishing things; as eggs, milk, gruel &c.

APPENDIX.

PART IV.

CONTAINING A PAPER

ON PULMONARY CONSUMPTION

OBSERVATIONS ON THE NEW METHODS OF CURE

BY HOMEOPATHY AND HYDROPATHY

WITH SOME GENERAL DIRECTIONS FOR TRAVELLERS &c.

Consumption or Decline.

Although it is a departure from the original intention of this work, to notice any chronic complaint; yet, considering how many persons, are every year induced to seek abroad, and in travel, relief for pulmonary or chest diseases: it is not out of place, in a book expressly intended to be useful, to such as may be away from medical aid; to offer some remarks on the management of a disease so prevalent as consumption; and to point out to the invalid, the most likely means of regaining a tolerable share of health. The writer, by long observation of the result of other practice; can speak with confidence, of the comparative advantages of that which he recommends.

By consumption, or decline; is meant, a gradual wasting away of the flesh and strength; the effect of extensive disease in the substance of the lungs: which disease, may be either accidental; the result of repeated attacks of inflammation of the air tubes and cells, destroying their texture: or it may arise, from that ill conditioned state of the body, termed the Cachectic, Strumous, or Tubercular; in which state, there is ever a tendency to form deposits from the blood, called tubercles, into the substance of the lungs.

In consumption arising from either cause; recovery depends, upon what quantity of lung remains sound: for if there be extensive alteration or destruction of its substance, the air cannot enter to perform the necessary changes on the blood. (See Circulation of the blood.)

If the destruction be partial; a patient may so manage himself, by not overpressing these organs; that they may be able to carry on their functions for many years. The whole of the lung on one side has been destroyed; and yet the party has survived, and enjoyed tolerable health afterwards: the remaining lung doing the whole work of respiration. In that corrupt state of the system, when tubercles are forming; the signs of the changes which are going on, are unnoticed or unattended to: the disease proceeds stealthily, undermining the lungs, until it declares itself by a loss of flesh, a more hurried breathing on exertion, particularly on going up hill; encreasing weakness; at first, a slight dry cough, then it is accompanied with a frothy, ropy, expectoration; which at length becomes purulent:—slight fever after daily chilliness; night perspirations; pains in the chest; diarrhœa; together with a nameless train of sadly distressing ailments, all tending to one fatal termination. The patient is buoyed up to the last by the hope of reco-

very ; a persuasion so constant, as in a manner, to characterize the malady. Tubercles, the immediate source of all this mischief ; are at first, small, hard substances of various sizes ; deposited round the air cells, in the body of the lungs, from minute arteries or blood vessels. They run together in clusters ; inflame, enlarge, suppurate, and form abscesses ; obstructing, absorbing, and breaking up the delicate texture of this organ. The matter formed, is squeezed into the air pipes by the action of breathing, and then coughed up. The disease goes on increasing : sometimes a large arterial branch is involved in the abscess ; the blood escaping from it, may suffocate the patient at once, or be thrown up by coughing. Spitting of blood, is often the first sign of the complaint : and in the early stage, indicates obstruction to the circulation through the lungs ; either from tubercles, or from an overpressed and stuffed state of them, however arising.

Pulmonary consumption may run a very rapid course ; or it may be arrested for a few years ; or a partial cure may be effected : depending both on the extent of the injury, and the greater or less tendency of the constitution to this disease.

If consumption is to be prevented, arrested, or cured ; the patient must submit to the necessary severe discipline, nor think the conditions too hard. All his efforts must be united, in the attempt to throw off the diseased humor ; by employing every means which can invigorate the frame, and ultimately overcome the tendency to these tubercular formations. As this humor is generated in the blood ; to the blood, in the first instance, attention must be directed. To establish a perfect state of this vital fluid, the purest air must be breathed, the open air. No regard need be paid to its temperature ; for the body may be so protected by warm clothing, that the impression of cold cannot be felt. Very uni-

versally the opinion prevails, that exposure to cold is injurious. Certainly, mere exposure to a low temperature, when unprotected by sufficient clothing, and when the person is incapable of motion, is hurtful: but where furs, and all the appliances for retaining heat can be obtained; there is little cause to fear. Even in a carriage, (*a*) warmth can be maintained by foot warmers, by hot water, or other contrivances. A cold and humid air, will not be a sufficient reason to avoid exertion out of doors; where exercise must be taken, as far as the strength can bear: returning for food and repose, and again renewing the exercise: until, by steady perseverance, more and more can be daily borne without fatigue. It should if possible, be continued to produce a moisture upon the skin. Walking, horse exercise, sailing, mild gymnastic games, field-sports, sea voyages, (*b*), a continual change of place &c. The exertions of carpentering, turning, sawing wood, and even breaking stones, are advised (*c*) as modes of exercise. The upper extremities and chest, should be brought into action, not fearing the rupture of blood vessels. Even should any spitting of blood follow unusual exertion; it should not deter the party from continuing it. Labor is the patient's only resource, which failing, he

(*a*) While taking air in a carriage, it is better to drive rapidly to meet the wind. The more of it that is received into the chest, the better: throwing away respirators, and all such impediments to free breathing.

(*b*) Sea voyages operate on the invalid favorably, in consequence of the perpetual motion; for even when asleep, there is always an unconscious effort of the body to preserve the equilibrium. The sickness is useful; and the pure air is of service.

(*c*) To render open air exercise more inviting, a pursuit is necessary; to obtain which, some department of natural history should be earnestly studied.

must expect a lingering death. On this point, therefore, there must be no compromise. The actions of inspiration and expiration, should be forcibly made, to exercise and strengthen the chest. Each day, something may be gained in power by this practice.

While sleeping, the windows may be kept open, if the wind be not too high, and the sleeper be protected by covering. And here it must be observed; that night air, so much talked of, and so much dreaded, is a mere bugbear; differing in nothing from that of the day, but by the absence of the Sun. The exhausted powers of the invalid, toward night; make the lesser temperature more sensibly felt: increased clothing, will obviate this inconvenience. I have never observed any permanent advantage result from nursing, nor from confining the sick to a regulated temperature:—but on the contrary, the greatest benefit from exposure; provided the skin be sufficiently protected. As we cannot control atmospheric changes, nor understand the relation, particular states of the air may have with the phenomena of disease; I consider, that we ought to enable the body, by exposure, to resist such changes: selecting a locality to dwell in, that is considered salubrious. I believe, that no plan of cure can be successful, if uncombined with free air and bodily labour. Timid patients, are so depressed by the fear of exposure to bad weather; a fear perhaps, encouraged by their medical advisers, that the very apprehension of evil, will prevent any advantage they would otherwise derive from the attempt:—and if their first essay, should be followed by some increase of catarrhal, or other symptoms; they will blame the doctrine, and relinquish all further efforts; instead of increasing their exertions, and at the same time, attacking any accidental inconvenience they may encounter.

Any sudden change from idleness to activity, or from activity to idleness, will produce some illness : and it is not surprising, if the nursed and pampered invalid, feel some unpleasant effects from his first attempt on a different plan.

As a modification of exercise ; the shampooing, tepid shower, or sponge bath, may be daily used : followed by persevering friction, all over the surface of the body : which, to be effectual, should be done by the hand of another. General rubbing daily ; even without the bath, should never be omitted. Every sedentary profession or employment, every occupation which may require much study, should be abandoned. All must give way, to the one great pursuit **Health.**

It is absurd, to expect that mere change of climate can possibly effect a cure. The benefit at first, is generally evident ; arising from the exertion and excitement of travel, or the hope of some undefined advantage from change. The invalid, here makes an egregious mistake, who supposes, that any climate under heaven can alone cure him. All that a more temperate climate can really do ; is to enable the feeble patient, to be more constantly on foot in the open air. Invalids, form most utopian notions of southern climates : fancying them free from the vicissitudes of seasons ; that all is there, brightness and sunshine. Their inflated hopes, always meet a sad check, from the wind, the clouds, and the rain, which happily, visit every habitable region of the earth. After the novelty of scene is over ; they relapse into an indolent state ; or, forgetting the rules and restraints prescribed ; they go to pleasant parties, dinners, and crowded rooms ; doing away by one debauch, months of regularity and regimen.

Hot weather, is certainly prejudicial to the pulmonic invalid: therefore, a southern sun, in summer, is to be avoided. Where there is but little space left, for the air to act upon, and perfect the blood carried to the lungs; a rarefied atmosphere, having its vivifying principle much diluted; cannot be so good as a denser air: the chest labours, in the former case, by more frequent inspirations, to produce the same effect, that the denser air produced with less effort.

The statistics, which draw comparisons of the health of troops in our various colonies, and at home, with reference to pulmonary disease; are valueless as guides. Hot air, intemperate habits, spirituous drink, will soon bring out any hidden seeds of the scrophulous constitution; and cause disease, when formed, to run on to a rapidly fatal termination. Consumption is of every country; and the weakly born, who are badly or insufficiently fed, ill lodged and clothed; fall victims to some form of the disease, in infancy or childhood; equally with the weakly, pampered, and idle rich at a later period of life.

In the article of diet; it will be most essential to practise self-command: committing no excess, and avoiding every temptation to exceed. Recollecting, that as but very little blood can be acted upon by the injured lung; the fresh blood derived from the food, should be only just enough to renew the daily waste: more than this, in popular parlance, will feed the disease, rather than strengthen the body. The source of pulmonary consumption, may, in the majority of cases, be traced to repeated oppression of the digestive functions; producing a plethoric state of the system; loading the blood with nutritious matters, which undergo changes productive of tubercular disease: such diseased blood, may

cause deposits and changes in many parts of the body; as we see in the numerous modes of scrophulous disease. It is difficult to legislate for people's stomachs; or to say, what description of food is most proper. As to the quality of the food, individual experience is the best guide. As a general rule, it should be simple; so as not to tempt by variety. The articles of diet, to which the person has been long accustomed, are the most likely to be well received. The food should rather be bulky, than highly condensed and nutritious. Bulk satisfies the appetite, and stimulates the bowels to regular action; and does not form too much blood. Milk diet agrees well with some; so does fruit, and vegetables, salads, &c. with others.

The best drink, is water, in moderate quantities. An invalid, does not require the nourishment of a ploughman. What is digested, can scarcely be perfected into blood; and what passes crude into the intestines; frets the lining membrane as it passes on, inducing bowel-complaint and fever. The following, may serve as a general notion, of what the writer considers a proper diet. A basin of gruel and milk, with toasted bread, for breakfast: without eggs, or meat of any kind. An early dinner of mutton chops or any tender meat, with vegetables, salading, or fruit. No pastry, pudding, or trash of any description, to tempt to repletion. An early supper, of gruel and milk; or salading and bread; with water for drink, if required. Coffee and tea had better be left off. In all plans of diet; the peculiarity, or habit of the individual, must be regarded. No change should be suddenly made: but every new plan, be gradually adopted.

Medicine can do little more than palliate in this complaint. Prior to the coming on of any fever, one grain doses of the hydriodate of potass, three times a day; may tend to improve

the cachectic habit, if continued for a considerable time. The use of emetics, every other day; either at bed time, when they seem to insure calmness and repose; or early in the morning, when they assist in clearing the lungs, and cause the expulsion of tuberculous matters. The practice with emetics; seems to have been attended with more success than any other plan of medication. Counter irritants are of use: that is, external applications; as blisters, sinapisms, and antimony; or other substances, which inflame the skin, or cause discharges from it: in which are included; issues, seatons, dry cupping, leeching etc. on the chest, or between the shoulders and back of the neck. The object of such applications, is to excite an irritation on the surface; to derive from, and relieve the deeply seated one. (a)

The frequent abstraction of small quantities of blood, whenever any sense of tightness may exist in the chest, has been much extolled; but depleting measures, are chiefly required by those who cannot or will not work; yet will eat and drink. Occasional palliatives, to relieve any urgent symptom: as opium, hyoscyamus &c. may be resorted to beyond this; the pulmonic patient had better abstain from all physicking. As medicine has done little or nothing for him hitherto; and all that medical men have written on the subject, is but an exposition of their inability to contend with this devastating malady; the patient, had better trust more to nature and common sense; remove the causes which impede her operations; and then, if he has any spring of life in him, the method above detailed, will enable him to temper it into a healthy tone.

(a) Attacks of inflammation in any part of the chest, while pursuing this cure,—should not prevent the exertions being continued—even while applying the remedies for the local mischief.

HOMEOPATHY.

This new system of curing all diseases ; is one of those novelties which occupies the world's attention for a while and makes the reflective think. It is a plan to cure, by influencing the imagination. For seeing how greatly the mind influences the body; men practising medicine, have from the earliest times, made use of this knowledge to assist their remedies.

It must be familiar to every one of experience ; how charms, incantations, holy-shrines, or even bread pills ; succeed in curing really serious diseases.

The medication by almost invisible globules, ranks in the same class with fortune telling and mesmerism. The conjuring part of the system, by infinitesimal doses, is founded on principles, which are absurd and untenable. But the manner of living to be observed by those who follow this cure, is highly rational; and without which, the doses of medicine would be utterly inert. Persons are to abstain from all excesses ; avoiding many things, which experience proves to be hurtful. To live with great regularity as to hours, and pleasures ; to take air and exercise ; to pass little time in bed ; &c. &c. The whole treatment may be summed up in few words. "To live moderately, and earn that living by your labour." The cure of acute diseases can hardly be trusted to Homeopathy. The nervous, the delicate, and the luxurious, are the proper objects to be treated by this method. The system was invented by a man of genius, "Hahneman," and it has done infinite good, by disabusing the world as to the necessity of employing, in all cases, powerful medicaments, uncertain in their effects ; rather, than to assist nature to remove the weight which is pressing her down. Every honest medical man

must acknowledge, that very many severe cases of disease, are produced by impertinent interference, by rude medical discipline, and by the injudicious exhibition of drugs: by which, routine practitioners gain great reputation; first making the disease, which they afterwards may have the merit of curing.

No practitioner of any standing, but must be sensible of numerous errors of diagnosis made, and of ill-judged remedies prescribed, even by himself. Errors, which it has taken years of experience, in the course of a long practice, to correct. At any rate, homeopathy is not so dangerous a weapon as physic in the hands of the ignorant; yet less-effective, when the latter is regulated by skill and judgment. The disciples of this, as of every other system, are not wanting in facts, nor evidences, to support their theories, however extravagant they may be: by which, we are brought to confess, that neither medical testimony, nor the world's patronage and applause, is sufficient to establish facts, that are in themselves unsound.

HYDROPATHY OR THE COLD WATER CURE.

Is another novelty of the day brought into notice, and practised extensively by an intelligent man, although an illiterate german peasant, in a remote part of Silesia. Like Homeopathy, it has done much service to science, if it has only removed, in a great measure, the prejudices entertained about cold and cold water. The world for this, and for much more, (for it is a practice of great promise), is deeply indebted to Priesnitz, and to some of his talented disciples, who do not make it a mere vehicle of quackery and gain. The practice of affusion of cold water in diseases; and the application of it to any part, where the heat is exalted above the natural

standard. has been a practice of great antiquity, and frequently brought into notice ; but never extensively applied, or reduced into a system of universal treatment, until now. The drinking of countless glasses of cold water ; must be considered an abuse of that wholesome beverage. It is making as it were, a water bag of a stomach, never intended for such a use : but in fever, of whatever character ; and in most inflammatory complaints, during the period of exaltation of temperature ; a full gratification of the thirst by this fluid, may be permitted with advantage. Wet sheets wound round the body, which is then to be rolled in many blankets, covering all but the head, will, like cold affusion, be followed by reaction ; and most likely, by profuse perspiration, attended with the best results. The cold bath should always be followed by powerful friction ; continued so long, as to restore perfect warmth, and a glow over the whole skin, chilled by the bath. It is essential, that the cold sheet or other application, should be followed by a glow of warmth. To insure this, it is, that blankets are wrapped round, or the skin powerfully rubbed. This glow is almost sure to come on in fever. Wet cloths applied to inflamed parts, or wherever the heat is greater than natural, relieve by reducing that heat. The cloths soon become hot, and may be said to act as poultices.

The severe discipline of the water cure, requires for its success in chronic cases ; a certain spring or strength in the constitution, and the absence of any serious change or destruction of vital parts. A feeble invalid, may have the little vitality he has left, quite extinguished by a rude application of cold and water. Hydropathy implies, a robust exercise, with cleanliness :—regularity of life ;—much time passed in the open air, and but little in bed.—A well

selected plain fare, to which labour gives sauce.—The abandoning of all strong drink, and other vicious habits.—The fault in medical generalizers seems to be, the attempt to adapt their practice to every case; instead of judiciously selecting, a particular and fitting one for its application. Making of their system a real Procrustes bed. Hydropathy, as a universal remedy, will like others, have its day. One novelty in practice, reigns triumphantly for a little space: at length, yielding to another, doomed like it, to experience in a few years, the same neglect. The water cure, however, may be considered as an additional and very powerful arm in the hands of a judicious physician. The following, are the chief modes of applying cold water.

The wet sheet, as a cold bath.

A sheet dripping from cold water, is wrapped closely round the body, where it may remain from a few seconds to a minute. It is then thrown off, and the whole surface of the skin rubbed powerfully and perseveringly, until reaction and a glow of warmth comes on.

The wet sheet to reduce fever and excite perspiration.

The sheet is wrung out of cold water, and spread upon a mattress. Upon this, the patient is placed, in a state of nudity; the sheet is wrapped round him; over this, a thick blanket is also closely packed round him, leaving out the head: and over all, as many others as may be sufficient to prevent evaporation, and preclude the admission of air.—Reaction comes on; a general warmth, is succeeded by perspiration, which may be kept up for a longer or shorter time, as may be considered necessary; the patient drinking as much cold water, as he may wish, or more. By the pro-

cess; relief from pain, and repose is procured. The blanket being removed, and the patient well rubbed down, is put to bed, or allowed to go about as the malady may require: or when taken out in a state of perspiration, the whole body may be washed over with cold water; which, in these cases, does not produce the ill effects which sometimes follow, when the person is under violent exertion, and is fatigued.

Sweating Blankets.

By closely packing any one up in blankets and giving cold water to drink, perspiration may be excited: in which state, the application of cold water to the surface, or the wet sheet, and subsequent rubbing produces a very strengthening effect, no danger attending the practice. Partial cold baths, and wet linen, are applied, where either a tonic effect is to be produced; or where lowering the heat of a part be the object. In the latter case, the application must be frequently renewed. Where water is continued long upon any part, and covered up by dry cloth, or oil skin, the application has then the nature of a poultice.

The Douche, or cold water dash.

Is a stream of water poured on any part from a height. The effect is powerful, being followed by great reaction.

Cold water is the only beverage allowed and this is to be drank liberally to the amount of many glasses in the day.

Patients willing to try this plan of cure, require the direction of some practised person.

Friction.

By the Hydropath, much stress is placed on rubbing, with force and perseverance. Friction has had its systematic advocates. Some one says that "He who can afford to keep a slave to rub him, need never be sick."

The late Doctor Grosvenor of Oxford, was eminently successful in the treatment of cases of gout, rheumatism, and stiffness of joints, paralysis &c., by the practice of rubbing: for which purpose, a number of women were instructed by him, and employed on his patients.

The late Admiral Henry of Bethersden in Kent, was decrepid and worn in constitution at the early age of 45 and 50; but by friction, perseveringly pursued; he rubbed out his infirmities: and at a very advanced age, was an active and leathy man, and at the head of the list of admirals when he died. The fact really is, that it becomes a labour; and that any other labour, such as sawing wood, or breaking stones, would be equally beneficial; if pursued, 'con amore.'

GENERAL DIRECTIONS FOR TRAVELLERS.

In addition to what has already been said ; regarding the means of preserving a state of health in southern climates, and in unhealthy localities. It may be well to repeat, that while persons are travelling in such climates, they should observe great regularity in living, and strict temperance ; never to eat or drink to repletion ; particularly when much fatigued by travel or exercise ; for then, the strength is so exhausted, that a feverish state would follow indulgence in food, arising from its imperfect digestion. Repose must first be given to the distressed and worn frame ; which should be refreshed by a little warm tea, arrow root, or any simple substance. Persons going to warm latitudes, or within the tropics ; must so modify their manner of living, as to meet in some measure, the habits of the natives : yet they ought not altogether and suddenly, to abandon their own.

It must be remembered, that in hot climates, we cannot bear the same amount of stimulating food and drink as in the north : and also, that any sudden change, would be injurious in any climate or season. In the morning, before starting on a journey ; some refreshment should invariably be taken ; as a cup of coffee, tea, or any thing that can be readily prepared. The dinner should be taken before two o'clock ; after which repose for two or three hours, will allow of a due digestion of the food, and enable you to rise earlier in the morning for work.

Your next meal is taken after sun down ; and it should be a moderate one. The best beverage is good water ; it may be dashed with wine or spirits. Do not indulge in copious draughts of seducing liquors ; such as sherbets, lemonades, &c. &c. these things, tend to weaken the powers

of the stomach, and keep up excessive perspiration. You should avoid sleeping on the ground if possible; and if in the open air; be sure to have a covering over head, and some awning, or protection from strong currents of wind: more particularly, if it is blowing from off a marshy or unwholesome spot: in which case, besides an awning a fire should be kept up to windward. When encamping, select an elevated table land if you can: and in houses, choose upper apartments: closing any window, which may open upon malaria lands. Do not allow yourself to be tempted by the great heat of the day, to sleep at night unprotected; for the temperature differs so greatly between the day and night in many places; that you may awaken stiff with cold; and some inflammation or fever may follow. This change from heat to cold, is a chief cause of the severe inflammatory diseases so prevalent in Egypt. Sporting is only to be avoided, in so far as it may lead to extreme exhaustion: at which time, the body will be more sensible to cold, and to any impression from the poisonous airs of unhealthy districts; as on banks of rivers, in jungles, or marshes. Bathing may be indulged in, by attending to the precautions given under this head; and then, only when the water is absolutely warm. The vapour bath of the east, found in all the towns of the Levant; is a most salutary, delightful, and refreshing mode of bathing; which may be used at all times with advantage.

The following, will be found to be some of the most useful articles, with which travellers can provide themselves. The majority of the things, will be necessary on any route in the Levant or Barbary: and many of them indispensable, in crossing any part of the desert—A large double tent,

with compartments; lined, and a stout valise, to pack it in. It should be furnished with iron pegs, rather than with wooden ones—Mattress bags and cushions, that is, empty mattresses; which may be filled with straw, dried leaves, or any other material the country can afford. These occupy little space. Air beds would be preferable, only, that they are liable to be disabled by any chafing or puncture.—Turkish rugs, to serve as beds or saddles, or to spread on the sand as carpets—Camp stools, or stretchers; made with canvass and canes; which take to pieces, and pack in small compass; serving both as seats and bedsteads. These should be made extremely strong, as should every other article, that they may resist the rough usage they will meet with—A Couchouc sheet or a tarpawlin, for an awning or covering; or to spread under bedding—Russia leather saddle bags; furnished with implements for drawing or writing.—These, except the implements for drawing &c. may be met with in the East of a proper size,—A net or other hammock, to sling between trees, or in any convenient place.—A large quantity of good rope, of sizes; for binding on luggage, tethering cattle, and fifty useful purposes—Leather straps, of different lengths; with buckles, for fastening bedding, clothes &c.—A Canteen, furnished with useful, but not costly contents—A conjurer, or contrivance to boil water readily—Spirits of wine—A hammer—Large nails—A saw—A gimblet—A shovel—A straw hat, lined—A dark veil—A very strong umbrella—A portable water flask, slung—A Fowling piece, with plenty of powder and shot.—A good stock of tobacco, always an acceptable present to the natives—Padlocks, and keys; all your provisions and water, requiring to be secured under lock and key—A Telescope—A Compass—A Thermometer

—Some books of study—Murray's guide to the East—Boxes of a certain size, and in pairs; for conveniently slinging over a horse or camel's back: about three feet long and eighteen inches deep—English saddles—Clothes, that will not readily shew the dirt, rather than white ones—Canvas boots and shoes, with leather soles, for the desert—Earthen Coolers for water—A Filterer; which may be made of a small cask or keg, headed nearly in the middle, with a hole in the heading, into which, a fine sponge is rather tightly pressed. The water passes clear into the lower division, through the sponge, and is drawn off by a cock. If the water has any unpleasant flavor, some fresh burnt charcoal, put in the upper division, will correct it—A contrivance, called a "Levinge" from its inventor; which consists of two sheets, firmly and closely sewn together as a bag; on the open end is to be sewn, a fine muslin, bobbin net, or gauze curtain, drawn together with tape on the top; and made to form a dome, by hanging it to a nail, or hook in the roof or wall, and extending it open by means of canes or wholebone, passed through loops in the inside. The sheet is placed, like any other, on the bed: the curtain is hung up, and stretched open when you get into bed, which you do, by means of an opening in the side formed as a sort of wide sleeve, which you draw in after you, and tie round. The advantage of this contrivance is, that no insect can molest you; and no annoyances are more harassing than those, caused by flies, fleas, musquitos and other insects. This curtain will be found to be very essential to your comfort and safety.

Travellers should never carry valuable trinkets, or much money about them, for evident reasons. It may be well to observe, that those who wear the European dress; are more likely to be respected and well treated; than if they put on

any Asiatic costume. As a moustache or beard, accord with the prejudices of the people of the east; the growth of these may be encouraged.

All sorts of dried or preserved provisions; tea, sugar, wine and spirits, should be provided ere starting. Most of which things may be procured at Malta, should the traveller proceed by the Mediterranean route.

As a mountainous or hilly country, secondly, the
 the prejudices of the people of the east; the growth of these
 may be encouraged, and made to flourish in a
 All sorts of dried or preserved provisions, tea, sugar,
 wine and spirits, should be provided in quantity. Most of
 which things may be procured at Malacca, should the traveller
 proceed by the Malacca route. It is also possible to
 procure them at other parts of the coast, but it is better to
 buy at Malacca, where they are sold in great quantities, and
 at a low price. The traveller should also procure some
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