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THE MATRON'S COURSE

AN INTRODUCTION TO

HOSPITAL AND PRIVATE

NURSING

BY

MISS S. E. ORME

LADY SUPERINTENDENT, LONDON TEMPERANCE HOSPITAL

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b

THE MATRON'S COURSE

AN INTRODUCTION TO

HOSPITAL AND PRIVATE

NURSING

LONDON: THE SCIENTIFIC PRESS, LTD

WILLIAM E. GORDON

Author of "The Matron's Course" and "The Nurse's Course"

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LECTURES ON NURSING.

I.

INTRODUCTORY.

PEOPLE talk about the noble work of nursing, and some of the worst nurses I ever met used this phraseology most glibly. Now, let me beg of you to put away all cant in speech and thought as well as all romance ; do not picture yourselves as angels of mercy giving cups of cooling drink, and surrounding yourselves with halos of glory.

Hospital work is a stern reality, not a game to be played at ; it needs strong, brave women for it, and should call into activity all that is best in woman's nature—patience, unfailing kindness, thoughtfulness, self-reliance, obedience, pity, sympathy (the putting of one's self in the place of the sufferer)—in short, self-sacrifice.

All this means a great strain upon a woman, and unless her health is good it is unwise for her to undertake duties for which she is clearly unfitted, even though she may gain admittance into a hospital.

Every one taking up nursing should do so in an earnest spirit, desiring to "do noble deeds, not dream them all day long," praying to be kept pure and gentle in thought, and true in word and deed. Those of you who have entered hospital work in the right spirit will find an immense amount of happiness in store for you ; for whatever drawbacks this life has, and it has many, it has pleasures which no other life can yield. At first you will feel inclined to think this cannot be the case. Tired and footsore, home-sick and lonely, you will frequently be tempted to throw up the whole thing, and fancy you have made a great mistake in attempting to nurse the sick.

Not only in the wards will you find your need of patience, self-control, and unselfishness, but also in the family life of the hospital nursing staff. You may meet with those who differ from you on matters about which you have thought there could be no two opinions. Faults may be found in you that were quite unsuspected by you before. You may feel an inclination to say sharp and bitter things. You may have to associate with those whose religious opinions are not at all like your own, and who will be very ready to sneer at any inconsistency on your part. You will mix with some who grumble at everything and do their utmost to spread abroad a spirit of discontent; with others

who love to gossip and make much of petty hospital scandal.

All this is very trying when met with. You are made to feel that you are indeed no longer at home. Let your life speak for you. "If ye serve the Lord Christ" try to think and do what would please Him in even the smallest thing. "Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely . . . think on these things."

Erskine says, "Life is not divided into religious and secular parts; all should be religious; . . . the world is a temple, and the business ought to be the services of the temple".

Set the right always before you, and never sanction wrong in any shape or form in yourself or others. If you ever hear a fellow-nurse saying anything which may injure or grieve you, go to her at once and try to set matters straight. Put as kindly a construction as you possibly can on everything said or done, and try to help your fellow-nurses. Be kind to any new probationers, who may be feeling lonely and unhappy.

It will no doubt seem strange to you to do many things which, as nurses, it is desirable you should do. You meet people you would usually associate with as equals, on a different platform altogether, and your connection with them is

purely official. You must be prepared to treat with deference those who are officially your superiors, and to give those in authority implicit obedience. "Who rules o'er freemen must himself be free," and certain it is that those who have never learned to give obedience will never command it themselves.

Your connection with the house surgeons and dressers is purely official, and you should never forget this. Any thoughtlessness on your part or indiscreet action may result in your becoming the talk of the hospital. You are not in a position to know the men you meet in your work, so you have need to keep up rigidly your self-respect. Your intercourse with them should be confined to matters connected with your duties; for you are working in an institution where all you say and do, and all that you yourselves are, have a wide influence for good or evil. Think, then, of your individual responsibility.

Now, as to dress, I cannot but think outdoor uniform is a mistake under ordinary circumstances. It seems to me it is better for any one living in a hospital, when off duty, to lay aside everything suggestive of sickness; and the mere changing of a dress is a relief, quite worth the very short time spent in doing so. As to your indoor dress, you are expected to be always in uniform. Your dress should be short enough

to clear the ground. Your caps, collars, and cuffs should be as clean as possible.

You should be very careful to avoid getting into a slovenly way of putting your things on, pinning apron or dress if a button has come off; arranging your cap in such a way that it looks as if it did not belong to you. Wear sensible shoes with low heels. You can hardly imagine how annoying the tap-tap-tap of high heels, or the squeaking of boots, can be to sick people. If you have never been ill yourself, or accustomed to illness, you can but faintly understand the irritability of an invalid whose nerves are so disordered that the slightest annoyance of this kind may give him untold pain. *Try* therefore to be considerate in matters of this kind.

You want to secure your patient's restfulness. Now, an untidy and thoughtless nurse will never conduce to restfulness. The patient will be conscious of disorderly surroundings if the nurse has untidy hair, her cap falling off her head, a long dirty tail to her dress, or an apron soiled or torn. Try to keep yourselves as clean as possible whilst about your work.

In sickness some of the senses are greatly sharpened. The least smell of cooking produces nausea, and the sense of hearing is very keen. I often think the chatelaine abomination must be most exasperating to patients. Avoid leaving a door unlatched, so that it keeps

up a perpetual nagging sound. Try to avoid everything that is likely to produce uneasiness or annoyance to those under your care. This you can accomplish only by habitual thoughtfulness; and it rests with you whether you refresh and gladden those about you, or cause discomfort and depression.

II.

HEALTH AND METHOD.

THERE are special qualifications required in an efficient nurse, namely, the faculty of observation, forethought, presence of mind, gentleness, accuracy, good memory, and good health. I have put this last, but I ought, perhaps, to have put it first, and I will give you one or two suggestions as to the best way to preserve your health.

It is essential that you should have a good amount of fresh air, food, and sleep. Avoid the habit of lying down during your hours off duty. Remember, you are breathing more or less impure air all day long, air laden with germs of disease very different from that which you have been accustomed to breathe. It is *most* necessary that you should get out daily for an hour, at the very least, or you will soon exhaust your stock of strength, become languid, have no appetite, and feel generally out of sorts.

You know how difficult it is to keep travellers awake sometimes on snowy mountains. They beg to be allowed to lie down just for a little, but the guide knows it means to sleep the sleep of death ; well, so it is with nurses. They feel

tired and say, "Oh, I shall go and lie down," and they forget that by going into the fresh air they will take into their lungs the life-giving element oxygen, and will come back better in every way. You can easily get on the top of an omnibus if too tired to walk. If you have studied physiology you know how important fresh air is; and if you have not, let me beg you to take my advice on trust and act upon it. Unless you go out you will assuredly find your work become burdensome.

Now as to food. You may see a beautiful fire burning brightly, and say to yourself, "That fire will last for hours"; but if you do not go near it for some time, you will find it nearly all burnt out for want of fresh coal. So it is with our bodies. There is a constant fire burning in them, and food is, so to speak, the fuel, and you must supply them with this fuel, unless you wish the fire to burn low or go out altogether.

I would strongly urge upon you the necessity of beginning the day well in this respect. Be punctual at breakfast, and make a good meal. Remember this, if your stomach is empty you become at once susceptible to all the bad influences at work in a hospital ward, and you must not be surprised if you become sickly and feverish, or knock up with a hospital throat. Therefore, *do* fortify yourselves by eating a good breakfast, and give yourselves time to eat it

properly. I am very anxious to impress you with the fact, that there will be a great strain upon your health, and it is for you to carry out such rules as will help you to preserve it; for if health gives way the spirits flag also, and your usefulness as nurses is greatly lessened.

Then as to sleep. Get as much sleep at night as you can. Go to bed early, so that the brain may have restored to it that which the wear and tear of the day has deprived it of.

Let your clothing be light, yet warm. Heavy clothing is very tiring. Be sure and wear flannel, for whilst you are at work you frequently get very heated, and on going out of your wards, you are liable to meet cold draughts in the corridors, to take cold, and thus lay the foundation of perhaps serious illness. Flannel next the skin is a great protection, and a very wise precaution.

Hospital life is apt to become a very narrow life, and the work an all-absorbing one; and it is not good for nurses to get their world confined to the institution they are connected with, nor to get their views of life narrowed, and all their interest centred in the hospital of their choice. I would have you very diligent during your on-duty time, but equally diligent in refreshing mind and body in off-duty hours.

Keep up your home interest. If you are only thinking of a short training this need not apply,

but if you are taking up nursing as a profession do try to act on my advice. You will regret it exceedingly in after years if you let your work separate you from your home people, and cause you to be out of touch with them. See your friends as often as convenient, and try in your leisure to get hold of good books. Let me beg you in your hours of recreation to shake off hospital thoughts as much as possible, then you will come back refreshed, and ready with zeal to begin work again, thankful that you are one of the world's workers. As Carlyle says, "Blessed is the man who has found his work in life".

We have spoken of the need of fresh air, food, sleep, now let me speak of method—economising of labour.

A probationer suffers if her head nurse lacks method. This I found to my cost years ago, and certainly many a probationer suffers from not knowing how to economise her labour. Allow yourselves time in the morning to dress with comfort, and to make your room tidy. Do not get into the slovenly way of just throwing the bed-clothes over the unmade bed, as I have known nurses do, making the outside respectable. Then, having had a good breakfast, begin your ward-work with the determination not to scamp any of it, but to do thoroughly all that you have to do, however insignificant it may seem to you.

Cultivate the habit of doing things quickly, not dawdling over them nor wasting moments by chatting with your fellow-nurses, until your work is finished. At first your duties may seem like those of a housemaid. Never mind ; this is a part of your training, which you will be glad some day you have gone through. Think over what you have to do, and go steadily on with it ; do not leave things half done with the idea of finishing another time. If you do, your mind will be constantly burdened with having to recollect items of work. Get them off your mind as quickly as possible. Put things away directly you have finished with them, so that there may be no sense of disorder in your mind.

Some nurses are, however, splendidly methodical and well trained in the details of nursing, and yet their success with patients is not so great as that of others who are not so well up in the knowledge of the art. The key-note of the latter's success is sympathy. The patient surrenders himself to doctors and nurse, and it is for both to remember their duty to their neighbour. If ever "*noblesse oblige*" applies to anything, it applies to your treatment of those who have placed themselves in custody in our wards.

Galen laid it down as a principle that his disciples were to bring all their power, skill, and ability to bear, to prolong life and to ease suffer-

ing, and it is necessary to maintain this principle and to act upon it, letting no enthusiasm for order, punctuality, rule, or love of organisation lead you to forget your first duty. Try as you look on each patient to think, "Lord, he whom Thou lovest is sick". Speak a few cheering words to new patients; show that you take an individual interest in each person. Ask about his complaint, not in a flippant way, but because you want to help him, and make him feel he has a friend near. Remember, each man is his own world, so to speak.

"The paths of pain are thine; go forth
With patience, trust, and hope;
The sufferings of a sin-sick earth
Shall give thee ample scope.

"Beside the unveiled mysteries
Of life and death go, stand,
With guarded lips and reverent eyes,
And pure of heart and hand.

"So shalt thou be with power endued
From Him who went about
The Syrian hillsides, doing good
And casting demons out.

"That Good Physician liveth yet,
Thy Friend and Guide to be;
The Healer of Gennesaret
Shall walk the rounds with thee."

—Whittier.

III.

DUST, DUSTING, AND DISINFECTION.

Dusting.

ONE of the first things you have to do on entering the ward is to dust. This you may think has very little to do with nursing, but I want you to learn that it has a good deal to do with it.

If you ever go into a room where the window shutters are closed, you will probably find there is some chink through which the sun is penetrating, and in that ray of sunlight you will distinctly see particles of various substances. Generally these motes or particles of atmospheric dust are invisible; and it is only when this strong sunlight is upon them that they can be seen, but whether seen or not, they are always present in the air we breathe. These particles were formerly supposed to be inorganic matter, like sand; but it has been proved by Professor Tyndall that air passed over a flame or through a red-hot tube, is entirely deprived of its particles, thereby proving that they are organic.

Now I want you to realise this fact, that every

patient in your ward is helping to pollute the atmosphere by filling it with harmful germs of disease. There are flying about shreds of linen from sheets, or wool from blankets, pieces of hair, epithelial scales, dried particles of pus and blood, crystals from urine, poisons from sweat, etc.

You will thus see that dusting is a very important thing, and should be done with the utmost care, in a hospital especially. Not only should the tops of furniture be wiped, but every place where dust may lodge—skirting boards, ledges, bedstead rails, shelves, chair legs, table legs, etc. You should learn, too, the necessity of taking pains in dusting, to avoid sending the dust from one place to another. A damp cloth should be used where it is possible, and if the duster is shaken out at all, it should be outside in the fresh air, or over the fire, so that the dust may be carried up the chimney. After dusting put your duster away in its place; do not leave this for some one else to do.

Another piece of work which will fall to your lot will be the tidying of cupboards. As Miss Nightingale says, "These ought not to be receptacles of half-empty medicine bottles, stale food, and a miscellaneous mass," but should be in such order that at any moment the doors may be thrown open and the cupboard inspected without your feeling uneasy.

Disinfecting.

The utmost cleanliness of all utensils used in a hospital is essential ; not a speck should be seen on spittoon, bottle, slipper, or bed-pan, and a little disinfecting fluid should be put into these before use. All utensils should be scalded after being used. If you have lived in the country and known anything of a dairy, you will have learnt that the tins which have contained milk have always to be scalded when washed. If this is not done the milk soon turns sour. Take a saucepan, and boil some milk which is just turning, it will probably curdle, and you throw it away. Wash the pan with warm water till it looks quite clean, then put some new milk in it to boil. To your astonishment that, too, curdles. Yes ! because your saucepan was not scalded.

Warmth encourages life, but intense heat destroys it ; hence water should be at boiling point if it is to destroy germs.

When milk turns sour, putrefaction has begun. Some solids and fluids are more quickly turned putrid than others. If you take some blood and expose it to air, heat, and damp, the various parts of which it is composed will separate and give rise to foul gases, which are poisonous to a certain extent and more or less offensive to the smell. As these component

parts separate, small organisms begin to appear. These organisms are the tiniest of tiny living things. Some idea may be formed of how small they are by the fact that one drop of impure water may hold almost as many organisms as there are men, women, and children all over the earth. These bodies are always to be found in stagnant water or in decaying animal or vegetable matter. They destroy the body after death.

Directly life ceases bacteria appear; their germs or seeds are always floating about in the air. There are wholesome germs and poisonous germs. The air over drains is full of these last. They are waiting for a suitable place in which to develop. They lodge in the wrinkles of the skin; but while we are alive, and the place on which they settle is clean and healthy, these germs cannot enter the part and survive, while dirt or the death of the part, as in sloughing wounds, enables them quickly to flourish.

The bad gases before spoken of and the small germs of these bacteria escape into the air in favourable circumstances and float about, and when they enter any fluid such as blood or any solid that is liable to putrefaction they soon mature, and as bacteria cause this putrefaction to take place. In this way disease spreads. The decaying matter in which these bacteria always exist must be disinfected—that is, their

life must be destroyed, and with their destruction putrefaction ceases.

“What, then, will destroy these germs?” you will say. Something is needed which will not only kill them when they are alive, but will also prevent them when lodged in an unhealthy part from coming to maturity at all; and it is the object of disinfectants to destroy or make harmless germs which under favourable conditions will prove most harmful. Antiseptic substances are those which prevent the growth of these small organisms, and which thus check putrefaction.

Germ of disease, such as small-pox and scarlet fever, escape into the air and spread the disease, and if no means are taken to destroy them they will lodge in human beings, who are then said to “catch” the complaint. From this you will see the very great need there is to disinfect all bedding used by the patient suffering from any infectious or contagious complaint, and not only the bedding and linen worn by the individual, but the air itself and all the furniture of the room in which the patient has been living.

In order to disinfect the room one ought to have every aperture closed, chimney stopped up, and then sulphur put into an earthenware jar or plate and be set fire to, care being taken to place the jar or plate on an old tray, so that the floor cannot by any chance be set on fire. If the

walls are painted it is better to damp them first, in order that the fumes may in the moisture find a resting-place, as sulphurous acid is a powerful antiseptic in itself. When the fumes have been allowed to fill the room for twelve hours, the doors and windows can be thrown open, and carpets, curtains (if any), and bedding should be sent to be steamed. A temperature of 250 deg. F. can generally be borne by such things. Then the walls of the room should be washed over with a weak solution of carbolic acid, and the floors scrubbed with the same, skirting boards, bedstead, chairs, etc., all being treated in like manner.

As sunlight and oxygen kill many bacteria, a current of air should be constantly moving. All infected or soiled linen should be at once put into a pail and carbolic acid (1 in 20) poured on to it. It can be wrung out a little, and sent to the wash wet. A nurse should never let infected linen be carried through her wards, in a loose, disorderly manner. It is best to bring the pail, if possible, to the bedside of any patient suffering from an infectious disorder. At all events, the greatest care is needed not to distribute the germs into the air by shaking the sheets about.

Izal, manufactured by Newton Chambers & Co., Limited, Sheffield, is a very good disinfectant and antiseptic.

Chinosol is also highly approved of by some doctors, as being a prompt and powerful germ destroyer.

Sanitas is very useful for sanitary purposes. It has a very slight, and by no means an unpleasant odour, and does not discolour.

The poisonous germs of different infectious diseases are thrown off in various ways; for instance, the infection in small-pox is contained in the discharge from the pustules, that of typhoid fever in the evacuations from the bowels, that of scarlet fever in the secretions of the skin and mucous membrane, and in the peeling skin; that of diphtheria in the discharge from throat or nostrils; and it is generally supposed that if these vehicles of disease become chemically altered by heat, oxygen, or disinfectants, the change would also affect the poisonous elements themselves.

All secretions, therefore, as they are voided, and all matters expectorated or vomited, ought to be received into vessels charged with a sufficiency of disinfecting solution to cause chemical changes in the whole mass, thus effectually destroying the poison.

Vomited matter should always be inspected by the Sister unless she tells you it is unnecessary, as the doctor will rely upon her acquainting him with facts which will be of any assistance to him. A very large quantity vomited at one

time would point to the pylorus being blocked. The pylorus is the opening from the stomach into the duodenum. If the vomit is very frothy he will gather that food ferments in the stomach. If blood is thrown up of a dark colour it may point to ulcer of the stomach, or gastric congestion in heart, or liver disease. Then when there is obstruction of the bowels, as in strangulated hernia, fæcal matter is vomited. Sometimes when blood is thrown up it is changed in colour from red to dark brown, this being caused by the gastric juices acting upon it. Vomiting of blood is called "hæmatemesis".

It is a good plan to have a piece of glass to cover any offensive matter, so that it can be clearly seen without inhaling an unpleasant odour, and all such matter should at once be removed from the ward or room and kept in the lavatory.

IV.

CARE OF BEDDING, BEDS, BED-PANS, AND
LAVATORIES.

A NURSE should take care to keep her ward as tidy as possible, as the general appearance depends so much on attention to details in this respect.

The beds should look as uniform as possible, the quilt being put on so that its centre is in the middle of the bed, the same applying to the sheets, which should be turned down a uniform length. Very little attention frequently seems to be paid to this matter. In some hospitals I have seen several empty beds in a row, and on one, the pillow has been quite covered and the sheet turned down over the pillow only, the next bed having the sheet turned down so as to show half the pillow, etc. This gives the ward anything but a trim look.

Linen soiled in the slightest should never be dried in the ward, thereby not only causing a disagreeable smell, but rendering the air impure. Great care should be taken to protect the mattress. It is, to say the least of it, a very disgusting thing for it to get saturated with

urine. Every new patient should be supplied with a mackintosh under the sheet or draw-sheet. These mackintoshes, when not in use, should be rolled, and not folded, as the latter causes them to wear out very quickly in the folds, and then they are useless. It is a good plan to roll them up with old linen to prevent their sticking. Sapolio is the best thing to use in scrubbing them, and they should be well dried before being put away.

In your zeal for tidiness, do not worry your patients, or cause them to feel as if pinned down. On the other hand, remember there are few things more uncomfortable to a patient than an untidy bed, with the clothes in disorder, the pillows hot and damp, and the linen generally moist. Very often just straightening the under sheet first, and tucking it in tightly, then shaking the pillow (not over the patient), turning the cool side up, and making the top sheet and blanket straight, will afford unbounded relief, and cause the patient to doze off into refreshing slumber.

Before putting on clean sheets while the patient is in bed they should be aired and kept warm; and in placing the under one on, it should, as a rule, be rolled lengthwise side by side with the soiled one, which, freed from the bolster, should be rolled up. An assistant nurse should very gently turn the patient on his side ever so

little, while the sheets are unrolled under him. He can then be put back on the clean sheet, which is drawn straight by the assistant nurse, and the soiled one removed.

If the patient cannot be moved from side to side, one nurse will have to push the soiled sheet out on the sound side, whilst on the affected side the nurse passes her hand under the patient and helps to draw the sheet through. A top sheet should be put on before the soiled one is removed. In arranging pillows to support a patient, do not pile them up as to cause the head to be thrown forward. See that the small of the back is well supported, and in raising him to enable him to drink comfortably, place your hand behind his pillow and under his shoulders, so as not to hurt his neck.

If a patient has been lying long in his bed, it is a very good plan to give him a change by putting him into another one. To do this, draw a bed alongside the one he has been occupying, and move him very gently on to it, either by sliding or by lifting him by the sheet, or by a blanket placed under him, which he should retain until he is nice and warm.

Never allow a patient to get up for any purpose, unless you know he is permitted to do so; and if he has permission to use the night chair, be careful and see he is well wrapped up, and has his feet on something warm.

Before emptying a bed-pan used by a patient, look carefully and quickly at the motion. If you see anything at all unusual in it, show it to the Sister, as evacuations always afford important indications as to the condition of the patient. You may find them looking like clay, indicating insufficiency of bile; or black, indicating blood, or it may be the result of the patient taking iron. They may be very hard, indicating costiveness; or loose, showing a tendency to diarrhœa. Medicines of various kinds cause the motions to appear of different colours. You may sometimes see mucus or pus in the stools, so always notice evacuations; and report the fact also if they have an offensive smell.

And here let me say a word as to the giving of the bed-pan. I know full well how trying this duty is at first—to girls who have been brought up in refined homes—but remember you are attending sick people, and rendering help to such. Oh! how many nurses try to shirk this piece of work! I once knew a “ministering angel,” who looked so sweet, yet, rather than ask her for the bed-pan, patients would suffer ever so much, and wait till another nurse came on duty. Think of the misery of being forbidden to get up, and yet having to ask an unwilling attendant to render such a service. I have known nurses pretend not to hear such requests. Put yourself in the patient’s place.

“There is much in the daily life of a nurse,” says one who speaks with authority, “to blunt her sensibilities. Familiarity with suffering takes from its reality, the perpetual presence of death robs it of half its mystery and awe; seek then as an antidote to cultivate a spirit of reverence in the presence of these realities, encouraging in yourself and in your patients a veneration for that masterpiece of mechanism, the human body, so you will preserve a spirit of modesty and decency in them and in yourself, and whatever you see or have to do, by being met in that spirit will pass you by unsullied.” You may not only pass through with your womanhood unscathed, but you may incalculably influence and elevate those under your care.

Never let vessels containing urine stand about near the beds of your patients, for not only is it a most unpleasant sight, but its vicinity to a patient must have a sickening effect upon him. Urine should always be thrown away directly it has been passed, unless required for testing or other purposes.

Then as to the lavatories. You cannot be too particular about these. Not only should the W.C. pans be kept scrupulously free from impurities, but every day some chloride of lime should be thrown down the sluices, and the plugs pulled, and, indeed, it is well to pull the

plug frequently, day and night, that the water in trap and pan may not become impregnated with the foul gas arising in the soil pipe.

Care should be taken that all typhoid excreta, properly disinfected, should be thrown down one sluice, and that bed-pans used should have a distinguishing mark upon them, so that they are not used for other patients.

V.

THE ADMINISTRATION OF MEDICINE.
BEDSORES.

THE giving of medicine is a very important matter, and there are one or two rules that should be invariably followed, as any carelessness in the use of drugs may end in some sad disaster, embittering a nurse's whole life.

(1) Never give any medicine from a bottle without a label.

(2) Never give a dose without reading the label, as the strength may have been altered, or the quantity of the dose changed, without your having noticed any alteration of the prescription.

(3) Never give medicine if you have the slightest doubt about its being right, as mistakes may occur even in a dispensary.

I have known a nurse give a patient lotion for medicine, and apply the latter to his leg. I remember another nurse who, many years ago, administered a night draught to a man without noticing the direction, and emptied a small bottle containing four times the right quantity of chloral. It was well for her that he had been

a great drinker ; had this not been the case, the man would never have awakened probably from the sleep thus induced. Do not trifle with matters of this kind ; always keep lotions in a separate place from medicines, see that the bottles containing them are of blue glass, labelled "Poison," and be sure to put them out of reach of your patients in a locked cupboard.

In one hospital I was in, many years ago, a man of a highly nervous temperament sprang out of bed, seized a bottle of opium on a table near him, and drank the contents ; fortunately, the bottle had only a little in, but sufficient to make it necessary to keep the patient walking about the whole night, and by rough means to *p*revent him from falling asleep.

If you have omitted giving a dose at the right hour, do not make up for this by giving a double dose next time. You do not always know the potency of the drugs contained in the medicine. I remember an instance of a doctor, who being ill and under treatment, and having had his medicine at the right time, insisted on his attendant giving him another dose long before it was due, saying he knew quite well the quantity of chloral he could take. The unfortunate attendant listened to his patient, and disobeyed orders, the consequence being the almost instantaneous death of the sick man.

In pouring physic out, hold the bottle so that

the label is uppermost, and thus avoid soiling it. If a patient is delirious (or a child obstinate) and refuses to take medicine, gently but firmly hold the nose; he will then be obliged to open his mouth to enable him to breathe, when you can pass a spoon far back in the mouth, and empty it slowly. Do not give patients any medicine not ordered or sanctioned by the doctor—indeed, none should be given which is not ordered in writing; and here let me say how wrong it is for nurses to doctor themselves or each other. I have known cases in which they have caused serious alarm by infringing this rule.

Prescriptions.

It is well you should be able to read prescriptions, and you should do this constantly, so as to become familiar with the words and signs usually employed.

A model prescription consists of four parts: (1) the Superscription, the letter *R*, a sign which is an abbreviation of the imperative mood of the verb "Recipio"—it is also an astrological symbol representing Jupiter, whose ascendancy favoured the collection of herbs: (2) the Inscription, the names and doses of drugs prescribed: (3) the Subscription, directions to dispenser: (4) the Signature, instructions for patient.

The ingredients of a typical prescription are

representative of the following: (*a*) the basis or active ingredient; (*b*) the adjuvant or auxiliary; (*c*) the corrective; (*d*) the vehicle.

For example: *R.* (*a*) Magnes. Sulphatis, ʒii.; (*b*) Magnes. Carbonatis, gr. xx.; (*c*) Syrup. Zingiberis, ℥xx.; (*d*) Aq. Menth. Pip. ad ʒi.; Sig. Cap. ʒi ter in die.

There are a good many classes of drugs; some of them no doubt you are quite familiar with. EMETICS, to induce vomiting, for instance, mustard and water; PURGATIVES, which increase the secretions of intestines and cause them to expel their contents, such as magnesia; ASTRINGENTS, which lessen secretions, such as chalk; EXPECTORANTS, which favour discharge of secretions from the respiratory organs, such as squills; STIMULANTS, which increase the activity of the heart, as ammonia; ANODYNES, which relieve pain, such as opium; AROMATICS, which relieve spasms in the intestines, such as ginger; SEDATIVES, which depress vital action, such as bromide; DIURETICS, which increase amount of urine, such as spirits of nitre; DIAPHORETICS, which induce sweating, such as acetate of ammonia.

It is very important a nurse should learn the effects of various drugs, that she may be able to tell if the medicine is producing undesirable symptoms, and to report accordingly, so that the doctor may discontinue their use; for instance,

Pot. iod.—potassium iodide—sometimes causes iodism, *i.e.*, bronchial catarrh, increased flow of mucus, coryza, increased flow of tears, dripping from the nose; headache; and acne (or skin eruption); Quinine and cinchona bark produce cinchonism, or buzzing in ears, deafness, and headache; Antipyrin, scarlatina-like rash, cardiac depression, and faintness; Nux vomica or strychnine, spasm of larynx and gastric disorder; Salicylate of soda, depression, deafness, and delirium; Hydrargyrum (mercury, calomel) produces salivation, *i.e.*, profuse saliva, swelling of gums and mouth, foul breath, diarrhœa, and muscular tremors; Arsenic, headache, soreness of eyes, muscular trembling, diarrhœa; Opium, dry and foul tongue, contracted pupil, insensibility, and stertorous breathing, etc.

Some medicines can be taken by patients better at one time than another. Cod-liver oil is most easily taken the last thing at night, and, indeed, can be taken then in some instances when the patient cannot take it at any other time. It is always best to give it on a full stomach, and children can frequently be induced to take it in the form of cod-liver oil and maltine.

For a long time fruitless attempts were made to produce a tasteless castor oil, and at last Messrs. Allen and Hanburys, have succeeded in their efforts and supply oil which is as free from taste as possible. Some people prefer taking it

in coffee, but I think the most agreeable way is with lemon. The medicine glass should be rubbed with the lemon to the very brim inside, and a few drops should be dropped into the oil. The patient can then swallow it easily without the slightest nausea. To clean glasses which have had oil in, a little whiting rubbed round them will absorb the oil, after which they can easily be washed. If no whiting is at hand a little common plaster will act in the same way, taking up the grease.

Arsenic and iron should be taken after food, but quinine, in tonic doses, before a meal. If iron be given in the form of powder, it is best put on slices of bread and butter. If taken as a fluid it should be sucked through a tube or straw to avoid discolouring the teeth or injuring them. Drops should always be measured in a minim glass.

Bedsore.

One of the chief things a nurse should remember is her patient's liability to contract bedsores. Such a large proportion of these being the result of carelessness, a nurse should, as a rule, feel it a great disgrace for any patient under her care to develop one. Of course, there are exceptions to this rule; and however much care is taken to prevent their forming, some cases will contract them, and sometimes even in one night. Œde-

matous patients are very liable to get them, and paralysed persons have to be carefully watched, because, feeling no local pain, they are not conscious of any discomfort.

Bedsore are caused by pressure and moisture. They generally occur on the most prominent parts of the body, *viz.*, the sacrum, the great trochanters, shoulders, elbows, and heels. A very heavy or very thin person will be most liable to them. Helpless patients should be frequently moved, in order that prolonged pressure on one spot may be avoided. Always see that there are no rucks in the under-sheet, that it is also dry; make use of pads where necessary, and keep the patient as clean as possible, washing the exposed parts frequently during the day with soap and water; after washing and drying them thoroughly, apply the methylated spirits, and dust the part with zinc powder.

Should the skin be actually abraded, zinc ointment or a mixture of equal parts of balsam of Peru and white of egg will be found a most comforting application. Amadou plaster is a favourite remedy with some doctors, a hole being cut in the centre as large as the sore, which may be dressed with one or other of the preparations referred to. If you ever find a patient has a sore, however small, be sure and tell the doctor at once—that is, when you are the responsible

nurse ; but if you are a probationer, and notice any redness or any broken skin, immediately inform the Sister, as delay in treatment may bring about a great deal of harm ; occasionally a man suffering from a long, troublesome complaint has conquered that, but has succumbed to bedsores.

At times nurses are afraid to speak of them, fearing they may be blamed, and hope to heal the sores before the surgeon finds out their existence. Now this is highly reprehensible ; a bed-sore is often an index to a person's state of health, and it is most important to tell the medical man if there is one. I remember an instance in which a patient's temperature went up, and continued high, whilst there seemed nothing to account for it. The surgeon so thoroughly trusted the nurse that he thought that she would be sure to tell him if there was anything of that nature. Suddenly it appeared that the poor woman had a nasty sloughing sore on her back ; but the nurse, who really was most devoted, had hoped to get it well in a few days, and so had not mentioned it.

Sometimes the skin may break ; the subjacent tissues however remaining healthy, it soon heals. Another state of affairs may exist, in which you find the skin unbroken, though looking red ; this is soon followed by blackness, and suddenly the skin gives way, revealing a sloughing, dirty wound, that may take months to heal.

Do not wait for the patient to tell you his back troubles him, but look constantly for yourself. A great danger to be anticipated from a bed sore of long standing in the back is, lest the discharge should burrow down to the spinal canal. Sometimes it is only necessary to attend to a patient's back once or twice a day ; but in other cases, where there is incontinence of fæces or urine, constant care is required.

VI.

GENERAL CONDUCT.

Causes of Irritation to Patients.

IN walking about a ward or sick room study to move quietly and quickly. This is not at all difficult, and is merely a matter of habit. You may sometimes see a nurse lounging into her ward with her hands tucked into her apron pockets. Another one will come in post haste, not looking where she is going, perhaps run against some one going out, or she will knock the end of a bedstead and will shake a poor nervous, rheumatic patient, or will push against a table, making the crockery on it rattle, or will catch her dress on the knob of a door and tear it, causing people to shrink from her as from the proverbial bull in a china shop.

Then you get the dreamy nurse, who will walk into the ward kitchen with perhaps an earthenware teapot in her hand. Her eyes are fixed on some distant object, and she first knocks the spout against the door, then, suddenly roused, attempts to save it, in doing which she shakes it so violently that the lid comes off and breaks; or, if it happens to be

on a tray, the whole thing falls to the ground with a horrid crash and the tray spins round. If this happens at night a whole ward may be roused with a sudden start, and the night's rest of several unhappy people be spoiled. This same individual, if told to hold a candle, will do it in such a way that the grease will gutter down into the candlestick, or drop on to the floor, or the flame will burn the hair of the doctor who is unfortunate enough to be examining the patient. If she takes a jug out of a basin, she will knock the side of the latter with it, and will probably hold it with one hand only; the whole strain being on the handle it will break off, and down will go the jug and the water will swamp the floor.

Then there is the mincing nurse, who enters the ward walking on tiptoe; if she has a door to open she will take nearly a minute to turn the handle; if a door creaks, she will prolong the agony by opening it as slowly as possible. She will then go to her patient (meaning to be very gentle) and speak in such a whisper that he has to ask her to repeat what she has said, and to lift his head in order to catch her words.

Speak distinctly to your patient; do not shout at him nor whisper, and do not stand behind him when you speak, or in his efforts to see you he will make his neck ache, and tire his eyes. Try to be perfectly natural in all

you do. The sick are usually very inquisitive. Have you never heard people say of a deaf person—"When you do not want him to hear he hears fast enough"? and it seems as though this were the case with patients. They want to know all they can about their complaints, and they are suspicious: so, when you are whispering to their friends or others, they think your conversation must refer to them, hence their keen desire to hear all that is said.

Especially should nurses be careful of what they say when patients are apparently unconscious. For instance, a lady now in India (and alive to tell the tale) had typhoid fever some years ago, and was exceedingly ill, and supposed to be unconscious; she heard the Sister ask if it would be as well to telegraph to her friends, and the doctor replied: "Oh, no, it is of no use, it can only be a question of an hour or two". Jerky speaking is very trying to the sick, so are sudden noises. How often I have felt a poor patient's pulse throb and the hand quiver as some thoughtless nurse has banged the ward door, or clumsily knocked something down, or even spoken in a sudden sharp way.

Try to make all about you restful; the presence of some nurses has this effect to a wonderful extent, and at most serious operations will impart confidence and courage to the

poor sufferers, whilst, on the other hand, the presence of a thoughtless nurse distracts them.

As a rule, you will find sick people turn their faces towards the light, and we know how cheering its effect is upon every one. Notice, however, if the sun is streaming directly in on the eyes or head of your patient, and offer to pull the blind down far enough at least to protect him from the heat and discomfort of the direct rays. If there is fever, delirium, or head affection of any kind, it is best to keep the room dark, light being exciting. If your patient has had a restless night and seems inclined to sleep, he will stand a much better chance if there is darkness about him.

Now let me speak of something constantly lost sight of even by experienced nurses, and that is the importance of not only keeping the ward quiet at night, but of preventing talk and laughter in the kitchens adjoining the wards. I frequently hear nurses chattering in anything but quiet tones. Now, if your own mother were ill, and had just been "settled" for the night—if she had fallen into a nice sleep, would you not be very angry if two or three people stood laughing and talking just outside her bedroom door? You would call them exceedingly thoughtless. Well, this is constantly being done by those who in other respects are thoughtful and kind. Remember how important sleep

is, how easily disturbed in the case of a sick person, and how difficult it is to sleep again if roused in the early part of the night.

Sympathy.

Remember, too, *your* mother may be ill, but may have no harassing home worries to disturb her. The poor found in hospitals are not usually so fortunate; they have all sorts of troubles to contend with. Some do not know if, when they get well, they may not find others filling their places, in their so-called "homes"; some may dread finding their "little homes" broken up, their furniture, and even their clothes, pawned for drink; some may fear losing their situations and being turned adrift on the world, and their one thought is, "How can I get well most quickly?"

I often marvel at the patience of our sick in not complaining of the talk too often carried on by nurses. Do let me urge you to be sympathetic! At the same time never "put on" sympathy; it is an affectation quickly detected by sufferers, and affectation of all kinds is intolerable to invalids. "All likings and aversions of the sick towards different people will be found," says one, "to resolve themselves into presence or absence of care in these things." Do not forget poor patients cannot complain, as rich ones very

quickly do. Many a shy person will pass a bad night rather than speak to a nurse about some small yet great annoyance, such as a door ajar or window rattling.

Economy.

I would press upon you the importance of studying economy, whether in a hospital or private nursing. Things are provided in such large quantities in a hospital that nurses are apt to forget that they cost money, and are frequently reckless in the use of them. Do not forget that an institution supported by voluntary contributions, if conducted on extravagant lines, is greatly curtailed in its usefulness, the number of people benefited being, of course, reduced. Learn to discriminate between stinginess and wastefulness.

Find out the value of materials used for dressings. It is most important that you should try to save expense. If, for example, you were nursing in the house of a poor professional man, where the illness of wife or child meant no little strain on a small income, how important it would be that you should avoid spending one penny unnecessarily, that the family might feel you were in every way a comfort and a help! For instance, you might put on a clean sheet one morning, and dry and air and fold the one

taken off. At night you could put this one on, reserving the one just removed for the next morning; the same might be done with the night-dress. You would thus make the patient more comfortable (for change of linen is comforting), save washing, and save appearances, not making the comparative poverty too obvious by letting the patient lie in crumpled, dingy-looking linen.

In every hospital one hears complaints of the number of thermometers broken—and how often is this simply the result of carelessness! If asked how one got broken a nurse may say, “Oh! a patient broke it”; and on asking which patient, it may turn out to be a young child who could not possibly be expected to know the value of the piece of glass, or a man more or less delirious who may not be fully conscious of having to guard it, or the nurse may have left it so long under a patient’s arm that he has dropped asleep, and so the thermometer has got broken.

VII.

VENTILATION.

I WOULD now call your attention to the subject of ventilation; for certain it is that of all the things a nurse should know, nothing can be of more importance than that she should be acquainted with the laws of ventilation. It is of the utmost moment to her patient that he should breathe a pure atmosphere—as pure as the outside air—and yet that he should never be exposed to a draught.

You have all probably seen a stagnant pool of water in the country, and if some one walking with you at the time began to drink of it you would be inclined to think he had suddenly gone out of his mind. Now this is precisely what we are doing when we inhale foul air, and if we could see its impurity we should be filled with alarm.

Air and water are necessary for the maintenance of life. Water is taken into the system in various ways—in the fluid we drink, in the food we eat, the air we breathe, and is absorbed through the pores of the skin. People are generally very frightened of drinking water they

think is impure—so much so that when travelling abroad they will rarely even taste it. They should be equally afraid of inhaling air that is contaminated. In every room or ward you want to provide for the escape of foul and the supply of fresh air. In a former lecture I described to you the composition of dust in hospital wards. Dust being the deposit of the atmosphere, you are always liable to take into your lungs the harmful particles floating about.

Air is a mixture chiefly of two gases—nitrogen and oxygen. There are 79 volumes of nitrogen and 21 of oxygen in 100 of air. Oxygen is necessary for the maintenance of animal life.

The changes which the air undergoes by its contact with the lungs are: (1) Its temperature is raised; (2) its oxygen is diminished; (3) the carbonic acid and aqueous vapour are increased; (4) a small quantity of ammonia and organic matter is added to it.

For every volume of air inspired into the lungs $4\frac{1}{2}$ per cent. of oxygen is absorbed by the blood, and about the same quantity of poisonous carbonic acid gas is thrown off; this process is called the aeration of blood, and consists essentially of this interchange of these two gases. The blood is the great nourisher and purifier of the body, and the blood itself is purified by this process of aeration in the lungs. The blood flowing into the lungs is dark, venous, or impure,

containing a considerable amount of carbonic acid, which is an effete product of the tissues. In the lungs, as we stated, this gas is given off, and its place taken by oxygen, oxygen rendering the blood pure or arterial, and bright red in colour. This is the blood which flows from the lungs to the heart, which then pumps it to all the tissues of the body, imparting to them the oxygen which is necessary for their nutrition and activity.

It is essential for the maintenance of life that the blood should be aerated, and if the process of aeration is stopped entirely for a few minutes death is the result. Every one has heard of suffocation, but every one does not know that if the blood is not purified, diseased and shortened lives must follow. You can thus understand how necessary it must be to have a constant supply of fresh and removal of vitiated air, because if we breathe over and over again the same air that has been expired from the lungs, of course the proportion of carbonic acid and organic matter will go on increasing until they produce fatal results. Long before this occurs the poisoned condition of blood causes drowsiness, headache, and fainting.

It was the vitiated condition of the atmosphere in the Black Hole of Calcutta that worked such frightful havoc to the poor prisoners, causing the death of 123 out of 146 shut up in it for one night.

Each person requires 3000 cubic feet of fresh air per hour for breathing, and a room 10 feet by 10 feet by 10 feet would give the required space if the air could be changed three times in an hour.

If it is necessary to change the air breathed by persons in health, how much more so is it when the atmosphere is charged with the germs of disease!

A nurse should pay the greatest attention to the ventilation of her wards. I admit that it is a most difficult thing to let in fresh air, and yet to avoid draughts. But remember, the wind does not blow from east and west or north and south at the same time, consequently if you find a draught when the windows are open on the east side, close them and open those on the opposite side. It often happens that patients feel a great draught and yet do not like to complain, and in such a case there is often a want of thought on the part of the nurses; the only excuse being that they probably are so warm with having so much exercise that they do not notice the cold air. Miss Nightingale says: "For the sick, warming is a necessary part of ventilation; a careful nurse will keep a constant watch over her sick, especially weak cases, to guard against the loss of vital heat by the patient himself".

In some diseased conditions very little heat is

produced, and the call made upon the vital parts to supply the deficiency may greatly weaken them, or, indeed, prove their death. With such cases the nurse should constantly be on the watch, examining the lower extremities from time to time, and should be ready with hot drinks or hot flannels to restore warmth if she finds a tendency to chilliness. This is of the utmost importance, as it is no uncommon thing for a patient in the latter stages of disease to sink for want of this external heat.

The lowest temperature of the twenty-four hours is in the early morning, and it is then that the greatest care is required to prevent the fatal chill taking place. The vital powers are less able to resist cold in the morning. If patients are feverish at night they are sure to be chilly in the morning. To make a room cold is not, as some people imagine, to ventilate it. The safest atmosphere for a patient is that of a room where there is a nice bright fire and an open window, except in extremes of temperature. Notice for yourselves what a cold place the front of a fire is, and how cold your back becomes when you sit there. You will then form an idea of the rush of air constantly being carried up the chimney. Now, if foul air leaves the room in this way and is replaced by fresh air, you see how pure the atmosphere may be kept.

When you want a fire to burn you clear away

the ashes so that air may get at the fire, and as nurses you should know how to lay a fire so that it may quickly burn up, and how to keep one burning brightly, for nothing is more depressing than to see a feeble bit of fire struggling to show itself through large lumps of coal. People sometimes say they cannot think why a fire does not burn. If you put a towel over a man's nose and mouth you will suffocate him, and in like manner a fire must breathe or it will die.

Try to keep your patient in an equable temperature; do not have a roasting fire one hour and a few red embers an hour or two afterwards.

In a medical ward the temperature should never be under 63 deg., and, unless specially desired, over 66 deg. In surgical wards it should not be over 63 deg. Study the ward thermometer. Pay special attention to the ventilation of the lavatories, and try to prevent a draught or rush of cold air coming down on to the patients allowed to go there.

Think what sudden chills may be given to persons getting out of warm beds, and merely covered with a cloak, if on entering the lavatories they meet a cold gust of wind. The invalids may not dislike it, and it may seem refreshing to them, but it is none the less dangerous. You know when you are perspiring after a hot walk you may feel glad of the nice cool draught of air, and when a kindly friend warns you, you

pay no heed, because you are "so hot"; but how often have you taken cold in this way! It is your duty to think of your patients, and with all kindness to make them obey you.

It may be that when you open the ventilators in the morning the wind is in the south, and you arrange accordingly; but do not forget the wind may change to the east in the course of the day, and the ventilators previously opened should be closed, and others opened. Do not be satisfied by just saying, "There is a great draught somewhere," and then think you have done your duty. Do not rest till the cause is found out and the evil remedied. Night nurses should be very careful to have a warm atmosphere whilst the beds are being made. What can be more miserable for an invalid than to sit shivering by his bedside in the early, chilly morning? If he gets back to bed cold and wretched, he may be shivering for hours, and may not even know of the existence of a hot bottle. Should you find a patient in this condition, pray let him have a hot tin to his feet, and he will then probably soon fall asleep.

VIII.

FOOD-STUFFS.

ONE of the things which distinguish an animate object like the human body from an inanimate one is, that in the former there is constant wasting away of its parts, which waste has to be replaced by new material, and this new material we call food. The food-stuffs are divided into two great classes, the organic and inorganic. The organic includes proteids, fats, and carbohydrates; the inorganic, water and mineral substances, and particularly salts of sodium, calcium, and iron.

PROTEIDS.—The common examples of these in the animal kingdom are white of egg and the lean of meat; while in the vegetable kingdom we get legumin in peas, beans, and the cereals like wheat. The proteid-containing foods are broken up small in the mouth by mastication, but are not absorbed until they reach the stomach, where the gastric juice, containing pepsin and hydrochloric acid, changes them into peptone, a substance which is soluble and can pass into the capillaries, or small blood-vessels of the stomach. Any proteids which

are not absorbed in the stomach are acted upon by the pancreatic juice.

FATS, which supply heat, are principally, but not entirely, furnished by the animal kingdom, and undergo no change, except being broken up in the mouth, until they reach the duodenum (the upper part of the small intestine), where the bile emulsifies them, separating them into the tiniest particles, and the pancreatic juice converts them into a soap-like substance. They are then absorbed or sucked in by the lacteals, which are vessels that convey the chyle or nutritious part of the food from the intestines to the thoracic duct. This is a small vessel that opens into one of the large veins of the left side of the neck.

CARBOHYDRATES are of two kinds, starches and sugars. Starches are found chiefly in roots and seeds. They are less easily digested than sugar, because before they can be assimilated or absorbed by the system they have to be converted into sugars. This is effected partly in the mouth by the action of the saliva and partly in the intestines by the pancreatic juice. On the other hand, the sugars after having been converted into grape sugar are easily absorbed into the blood. It should be remembered that the saliva of very young children does not possess the power of converting starch into sugar. Hence the importance of not giving them starchy foods like arrowroot or potatoes.

Salts are absorbed into the blood at once, either in the mouth or stomach through the thin walls of the capillaries. Salts of iron deserve special mention, seeing that the red corpuscles of blood contain a large percentage of iron, and probably owe their oxygen-carrying powers to its presence. It is to the presence of calcium that the hard parts of the body, such as the bones and the teeth, owe their properties. Mothers therefore should see that their children have a plentiful supply of wholemeal bread and porridge, because in the milling processes which convert the grain into the "purest whites" a large proportion of the calcium salts is lost.

Water is absorbed more or less from all parts of the digestive track. It plays an essential, if not the most essential, part in the nourishment of the system. There is not a single tissue in the whole body into the composition of which water does not enter. It forms 70 per cent. of the whole weight of the body, and all the nutritious substances are without exception finally carried to the tissues of the body, dissolved, or suspended in water.

Not only is this the case, but water is the fluid by means of which all waste products are carried off.

First, by perspiration. It has been estimated that from two to three pounds of water are daily evaporated from the skin, and this is hardly

to be wondered at when one learns that there are no less than twenty-eight miles of tubelike sweat glands on the surface of the human body. It is also thrown off from the lungs when we breathe, and lastly, a large quantity is excreted by the kidneys. By means of evaporation of the sweat, too, the temperature of the body is regulated.

To realise how important an article of diet it is, one has only to recall to mind the cases of the men like Succi, who have lived for fifty or even more days without any other form of food than water.

A person doing an ordinary amount of work would require per day of proteids, $3\frac{1}{2}$ oz.; of fats, $3\frac{1}{2}$ oz.; of carbohydrates, 8 oz.; of water, 80 oz.; of salts, 1 oz. But it has been found that the mere presence of these food-stuffs in the above quantities and proportion in a diet is not of itself sufficient to ensure good health. A certain proportion of the food must be fresh. It is owing to a want of appreciation of this fact that so many sailors have in past time lost their lives at sea from scurvy, and that nowadays so many little children, if not actually losing their lives, suffer from ill-health.

Milk as an article of diet deserves special mention, as not only does it contain all the various food-stuffs in the proper proportions,

but it has antiscorbutic properties, *i.e.*, properties that safeguard against scurvy.

But in settling a diet, especially when doing so for a sick person, we must consider not merely its chemical composition, and whether or not it possesses antiscorbutic properties, but also whether it can be easily digested. For instance, cheese and cold hard-boiled eggs, considered from a chemical point of view, are excellent articles of diet, and, indeed, for healthy individuals starting out for a day's picnicking to be highly recommended; but they are hardly articles of diet for the sick chamber.

We may briefly summarise the changes that food undergoes in its passage from the mouth to the blood-vessels which convey the nourishment to all parts of the body as follows: It is ground fine by the teeth, and being moved about by the tongue is mixed with the saliva. The saliva not only moistens the food but mixes up with it the substance, ptyalin, which converts its starch into sugar. The saliva is secreted in glands which open into the interior of the mouth, and discharge a liquid varying in quantity in a full-grown person from 8 oz. to 24 oz. in the twenty-four hours. It consists principally of water, but a small quantity of saline matter is mixed with the ptyalin.

It is therefore most necessary that the food should not be "bolted," but that people should

thoroughly masticate all they eat. On reaching the stomach the food is thoroughly mixed with the gastric juice, and by it has part of its proteid materials converted into soluble peptones.

After this process the semi-solid acid food, now called chyme, passes on to the upper part of the small intestines. Here its presence causes an active secretion of bile from the liver, and of an alkaline juice from the pancreas. The bile, as before stated, emulsifies the fats, while the action of the pancreas is threefold.

(1) More insoluble proteids, which have escaped the action of the gastric juice, are now made soluble.

(2) The fats are saponified.

(3) Carbohydrates, which have escaped the action of the saliva, are converted into grape sugar.

The food now is in a condition to have its soluble parts absorbed by the lower part of the small intestines. This is effected partly by the lacteals on its walls and partly by the blood-containing capillaries. In both cases the ultimate destination is the heart; but that portion taken up by the capillaries passes by way of the liver to the heart, whilst that absorbed by the lacteals is conveyed by the thoracic duct to the veins of the neck and so to the heart.

From the right side of the heart the blood is pumped into the lungs, to be aerated, whence it returns, bright red in colour, to the left side of the heart, and is then distributed to the hungry and thirsty tissues of the body.

IX.

ADMINISTRATION OF FOOD.

IT seems to me an essential part of a nurse's duties to learn how important it is to give food wisely and in a tempting form. Soon after I became a nurse I was greatly gratified by a speech made by a boy who was very ill, and not easily pleased. I had been delayed by hospital business one morning, and came to my ward a few minutes later than usual. On going near this patient's bed, he said to me, in an irritable tone, "Oh, nurse, how late you are! I have been waiting ever so long for my breakfast. You know I won't let anybody else give it to me; no one cuts bread and butter like you do." Though I reproved him for his impatience, it pleased me very much to receive this word of commendation.

I have often been amazed at the thoughtlessness nurses display in the giving of meals to the sick. I have seen great slices of thick bread and butter handed to a person who would perhaps take just one bite of a slice, and leave all the rest; and I have thought how different it would have been, if the nurse had given him

two or three dainty little slices instead ; these, in all probability, would have been eaten with relish. Then, again, I have seen toast made—such toast ! Clumsy pieces of bread with the crust left on, and perhaps burnt or dried till there was very little taste of bread remaining.

Sometimes I have noticed a patient, with a “finicking” appetite, staring at a plate piled up with large, thick slices of meat and a heap of greens and potatoes ; and I have said to myself, “If that plate had been put before me I should have felt sickened at the sight of it, before making an attempt to eat the food”.

Another time I have watched a nurse hand a basin of beef tea or broth to some one on low diet, never observing that it was swimming with grease. If you really love your work, do consider these details, which appear so small and yet are so important to invalids. See that the crockery, knives, forks, and spoons you take to your patient are clean, that the tray cloth is unsoiled, that he has salt and all that he requires without having to wait for it. Take care that food intended to be hot is hot ; make everything look as appetising as possible.

Never say to a sick man, “Don’t you think you could take this or that?” unless you have it at hand all ready for him. Very often some fresh article of diet brought suddenly to a patient with a quiet, cheery “Now, then ! I have

something for you I think you will like," will result in his taking it at once and enjoying it; whereas if it has been talked about, and the patient has for the moment fancied it, by the time it has been cooked all desire for it will have passed away. Do not hurry a helpless patient through his meals, and always put your hand under his pillow and raise his head whilst he is eating.

Do not be afraid of letting patients drink water. Any one who has not been ill can hardly realise how deliciously refreshing cold water is to a sick man. It should, however, be given in small quantities at a time, and the nurse should make quite sure of its being perfectly fresh, and should never take it from a bottle which has been standing long in the room. If it is fresh let him have it as often as he likes, unless contrary orders have been given by the medical man. Semi-conscious people are often very thirsty, so they should have water or liquid of some kind pretty frequently.

A nurse should always try to find out the peculiar likes and dislikes of her patient as to food. There is an old saying, "What is one man's food is another man's poison," and surely it is very true. Mutton is supposed to be the most easily digested meat, and yet there are some people who dare not touch it.

In G. H. Lewes's *Physiology of Common*

Life, he mentions the case of the Abbé de Villedieu, to whom mutton proved a poisonous food. From his earliest years he had an intense repugnance to it, and neither the entreaties of his parents nor the menaces of his tutors could induce him to overcome it. After reaching the age of thirty on a regimen of vegetable food, he was over-persuaded, and tried the effect of meat soups, which led to his eating both mutton and beef; but the change was fatal, plethora and sleepiness supervened, and he died of cerebral inflammation.

The same book tells us that Dr. Prout knew a person on whom mutton acted as a poison. "He could not eat mutton in any form. The peculiarity was supposed to be owing to caprice; but the mutton was repeatedly disguised and given to him unknown, but uniformly with the same result of producing violent vomiting and diarrhœa. And from the severity of the effects, which were, in fact, those of a virulent poison, there can be little doubt that if the use of mutton had been persisted in, it would soon have destroyed the life of the individual."

These facts should make us very careful not to urge upon children food they may have an intense repugnance to, such as fat, eggs, milk, vegetables, or fruit. I once knew a man who so disliked the smell of vegetables that he would cross over the road to avoid passing a green-

grocer's shop ; and we have all of us, no doubt, known persons who have had, to us, an unaccountable antipathy to some or other article of diet. I think doctors sometimes err by not considering the idiosyncrasies of their patients, and nurses should certainly do their best to find out any peculiarities of this kind they may have, and acquaint the medical man in charge.

A few years ago a lady with whom I am familiar was asked to go down to the country to see a friend who was very seriously ill, and her life almost despaired of. It was said she would not do as the doctor wished her, and it was hoped that a visit from one accustomed to hospital life might be of use. The lady I refer to started off as soon as she could, and found her friend so ill that she felt there was little hope for her. She learned that the doctor wished the patient to take milk, with egg and brandy beaten up with it, and bread and milk in addition ; but with the result of causing sickness after every meal, and constant diarrhœa. The poor sick woman, always thin, seemed to have scarcely any flesh left on her bones, and was a pitiable sight.

Knowing that from a girl, eggs, however disguised, always disagreed with her, that milk was too heavy for her, and that brandy always sickened her, my friend at once set to

work to think what could be done in the way of altering her diet.

She drew up a little diet card, and arranged that the lightest food possible, and in small quantities, should be given constantly, and at regular and short intervals; and to her joy the diarrhœa abated, the sickness stopped, and in a very short time she had the satisfaction of hearing the doctor say to his patient, "Well, I really think I can say you are better". He was very good, and left her feeding henceforth in the hands of the patient's friends, who felt they had had a great deal to do with "pulling her through". One of the things found very useful as an article of diet was Revalenta Arabica, made with beef tea. This most useful flour was in great demand some years ago, but, like so many good things, has had its day and seems almost forgotten, and yet it certainly is an excellent food, and can be cooked in a variety of ways.

I know a lady who suffered terribly from dyspepsia, and for more than a year lived almost entirely upon it, enjoying during that time fairly good health and freedom from pain. It is made from lentils, but baked and ground, and prepared in such a way that it is most easily digested. It can be made with milk, beef tea, veal or chicken broth. The last is the lightest and most delicate way of preparing it, and great

care should be taken that all grease be skimmed off the top. A breakfast-cupful is sufficient for one meal. It is better not to take a large quantity at a time, even if the patient can eat it, and this remark applies, I think, to everything given to a patient. If the quantity is the least bit more than he fancies, he will probably take a dislike to the nicest thing imaginable, and turn from it in future with disgust.

Few people appreciate the value of coffee, and fewer still know how to make it. If strong it acts as a splendid stimulant, and the aroma is most appetising. Messrs. Symington, of Bowden Steam Mills, Market Harborough, supply the best prepared coffee I know. For one person a tablespoonful of freshly-ground coffee should be used; three ounces of boiling water being poured on, or more if preferred. It should be made in a percolator if one is obtainable; if not, it can be strained through an ordinary penny strainer. Pour into a cup three parts filled with boiling milk. Thus you have a most nourishing, refreshing drink. An excellent little coffee-pot can be obtained for 7s. 6d. at the Atmospheric Churn Company, 119 New Bond Street.

Van Houten's Cocoa is a very favourite drink with some invalids and is particularly easy of digestion.

I would advise every nurse who intends to do private nursing to obtain a copy of Mrs. Ernest Hart's *Diet in Sickness and in Health*, as she will find it extremely helpful, and full of valuable information, though I disagree with her remarks as to the value of alcohol.

X.

RECIPES.

IT is very necessary that the diet of sick and convalescent patients should be varied as much as possible, for the most dainty food soon palls upon the taste if presented too frequently. Beef tea used to hold a very high place as an article of diet, but now much more importance is attached to milk. This, if taken hot, is more digestible if not allowed quite to boil. It makes a most refreshing drink if soda water is added to the hot milk.

Eggs are exceedingly nutritious, containing a large quantity of oil in their yolks. They should not be boiled, but put into boiling water and allowed to remain in a covered saucepan on the hob for five minutes. The albuminous (white) portion will be solid, but much lighter and more creamy than if allowed to boil. In poaching an egg, it should be taken out of its shell and put into a saucepan of water that has been boiling for a minute or two, and allowed to stand on the hob for five minutes as in the former case. There is another way of taking an egg, which I can strongly recommend. Squeeze the juice of

half (or the whole) of a lemon into a tumbler three parts full of hot or cold water, sweeten to taste, and add an egg thoroughly well beaten. It is much more easily digested than when put into milk, and is a very sustaining and pleasant drink. If taken cold, ice can be added, making it most refreshing.

Milt tea is highly nourishing, but is not very generally known. It is made in the following way: Take a freshly-killed sheep's milt; chop it into small pieces, put into a pint jar of water with a little salt. Cover the jar, and let it stand by the side of the fire. Bring the temperature to near boiling point. Let it simmer for eight hours, flavour with a brown onion and little pepper. Strain it and serve.

Bovril, prepared by the Bovril Co., Limited, London, E.C., is both stimulating and nutritious.

An excellent veal broth is made as follows: Take a knuckle of veal chopped up like a cucumber; put it in a jar with a pint of water. Cover it up and let it simmer on the hob for eight hours, and add some Valentine's juice to flavour it.

To make strong beef tea take a pound of top side of beef, strip it of all gristle, skin, and fat, cut it up into small pieces and put it into a stone jar with about three-quarters of a pint of water; cover it and let it stand for an hour, then place the jar in a large saucepan of boiling

water, and let it remain for three hours, if possible, on the hob. Skim it when it is cold, and heat as required, adding salt after it is boiled. Sometimes a patient will like it much better if a lump of ice is added, and it is given quite cold.

Brand's Meat Juice has long been used, and will be found very valuable by the nurse in her efforts to sustain her patients, and to vary their diet.

In some cases where the digestive powers are much impaired it is necessary to partially predigest the food before feeding the patient with it. This can be most conveniently done by using Benger's Liquor Pancreaticus. A teaspoonful of the liquor, together with a pinch of bicarbonate of soda, should be added to the milk or other food, and then the whole gently warmed for about twenty minutes. The object of warming like this is to facilitate the action of the pancreatic ferments, which are most active at a temperature of 140 deg. At the end of twenty minutes, when the necessary changes have taken place, the milk must be raised nearly, if not quite, to boiling point, in order to stop any further action of the pancreatic ferments. If these are allowed to go on acting, the milk becomes bitter and nauseous. When the patient has a great dislike to even a suspicion of bitter flavour, it is better to prepare food fresh each time.

Benger's Food, prepared by F. Benger & Co., Manchester, is invaluable for invalids and infants, being very nourishing and easily digested.

Whey can frequently be taken by persons who have excessively weak stomachs. To a pint of milk slightly warmed add a large dessertspoonful of liquid rennet; let it stand for six hours, then put it into a strainer; breaking the junket into small pieces, let the liquid drip into a basin or jug.

Sweetbreads, if properly prepared and cooked, are most nutritious and easily digested. They should be soaked in lukewarm water, to which a teaspoonful of vinegar has been added, for two hours, changing the water once or twice during the time. Then they should be thrown into boiling water, and allowed to simmer for five or ten minutes till they are firm and round, but not hard. After this they should again be put into cold water for about ten minutes, taken up again, wiped dry, and set aside till quite cold, when they are ready for cooking. Stewed sweetbreads are often preferred by sick people, and the recipe for cooking them can be found in any cookery book.

Boiled chicken minced in a mincing machine, with a small quantity of cream mixed with it, is a delicate article of diet, and can be eaten without much trouble.

Food should never be kept in the sick room;

beef tea and other liquid foods can be easily warmed in an adjoining room by using a spirit lamp.

Tea made with boiling milk is sometimes recommended as nourishing and stimulating, but more tea will be required than if made with water.

In the treatment of some maladies, much depends on the proper course of dieting pursued. Diabetes is one. It is a disease chiefly characterised by the presence of a large quantity of sugar in the urine. The patient suffers greatly from thirst and hunger, whilst the body wastes away rapidly. The sugars in the system are used up as a rule in the circulation, and in a state of health are not found in any appreciable quantity in any of the excretions. Diabetes is usually brought on by injury or disease of the brain and mental excitement or worry. Any great "strain" of continued anxiety may cause it. Sometimes errors of diet; an excessive use of sugar, for example, may bring it on.

The urine is usually of a high specific gravity, perhaps 1040 deg.; the skin is dry and harsh, the tongue red or glazed, or slightly furred; the mouth dry and clammy; the breath sweet like hay; the lips and gums covered with sticky mucus, and the face wears an expression of weariness. Various organs are more or less diseased—brain, liver, pancreas, lungs, and

kidneys. Men are more frequently attacked than women. Middle-aged people are most subject to it, and are more likely to recover if they are from forty-five to fifty years of age. They do recover to a certain extent frequently, if under judicious treatment, but much depends upon the food they take. Usually a diet is prescribed containing the smallest possible quantity of sugar or starch, which is, of course, easily turned into sugar.

Naturally, the patient longs for ordinary bread, which is, as a rule, forbidden, and he is often ordered instead gluten bread, which is made of flour out of which all the sugar is extracted. Bran bread and almond cakes are also given. It is the nurse's duty to see that the doctor's injunctions are strictly carried out. Meat is generally looked upon as the chief constituent of the patient's diet. Some vegetables are permitted, such as the green parts of asparagus and celery, cabbage, spinach, broccoli, Brussels sprouts, mustard and cress, and young French beans. Cheese may be eaten as well as cream and butter. Cold tea with some lemon juice squeezed in, will be found not only a very refreshing drink, but will cleanse the mouth. Buttermilk is sometimes allowed, and this is lighter than milk and very nourishing. Sucking ice and washing the mouth with iced water will do much towards assuaging the thirst. All sweet drinks are pro-

hibited, also all cereals, peas, potatoes, parsnips, carrots, and beetroot.

The first sign of improvement is a moist skin and an abatement of thirst ; less urine is passed, and it contains less sugar, the specific gravity also being lessened ; and the patient gains weight. If the disease does not yield to treatment the symptoms usually become aggravated, the sight becomes dim, complications take place, pneumonia comes on, and the patient sinks under diabetic coma or by gradual exhaustion. A person in health, as a rule, passes about fifty ounces of urine in twenty-four hours, but if suffering from diabetes may pass as much as forty pints in the same time, and it will be the nurse's duty to measure this daily, and to report the quantity, the specific gravity, and the amount of sugar. She will also have to weigh the patient week by week. People suffering from this complaint should always avoid wet and cold, and wear flannel underclothing, which should be frequently changed.

When the amount of sugar has to be estimated daily, perhaps the simplest method of doing so is by yeast. Some of the urine taken from the total amount collected in the twenty-four hours is placed in a specimen glass, its specific gravity is taken and noted, and a piece of German yeast about the size of a pigeon's egg is placed in it ; the height of the urine in the glass should then

be marked on the outside with pen and ink. The urine is then set aside for twenty-four hours. The glass must then be filled up to the mark with water in order to replace what will have been lost by evaporation. If the specific gravity is then again taken the number of grains of sugar per ounce will be represented by the difference between this specific gravity and that determined on the previous day. For instance, if on the first day the specific gravity was 1040, and on the second 1025, the number of grains of sugar per ounce equals $1040 - 1025$, *i.e.*, 15 grains. It is then only necessary to multiply the number of grains per ounce by the number of ounces of urine passed in the twenty-four hours, in order to determine the number of grains passed in the twenty-four hours. Thus, in the above case, if the patient were passing 100 ounces of urine per diem, then $15 \times 100 = 1500$ would be the number of grains passed in the twenty-four hours.

XI.

TYPHOID FEVER.

ANOTHER disease in the treatment of which feeding plays an important part is typhoid fever. It is generally contracted by drinking impure water derived from decaying organic matter, such as the infiltrations from cesspools or latrines, and containing in suspension the germs of the disease. The outbreak at Worthing some years ago, of which we heard so much, was the result of the drainings of a sewage farm dripping into a newly-sunk well which largely supplied the town with water, and the epidemic was of a particularly virulent form.

We often hear of "milk epidemics," and when these occur there has usually been a case of typhoid at a farm house or dairy, and through some defective sanitary arrangements the water used at the farm has become infected by the excreta, and has been used either for adulterating the milk or for "washing the pans," and so has contaminated the milk and carried the disease to a large number of people. Some doctors insist on all milk being boiled before being given

to their patients, so that the germs may be destroyed.

The incubation period of typhoid usually lasts from ten to fourteen days. The onset of the disease is very insidious. The rash appears from the seventh to the fourteenth day, and consists of slightly raised rose-coloured spots about the size of a pin's head. They appear in crops, disappear on pressure, to reappear when the pressure is removed. Each spot lasts about four days. In typhoid fever there is ulceration of the small flat raised patches, known as Peyer's patches, in the small intestine. During the first week these patches become inflamed. During the second week they slough, and in the third week the slough comes away, leaving an ulcer. This is the most dangerous time, owing to the wall of the intestine being so thin from the separation of the slough, and because the patient feels so much better that he begins to beg eagerly for solid food, and it is difficult to persuade him that he must on no account take anything but liquids.

The general symptoms of typhoid are tenderness over the abdomen, diarrhœa (though sometimes constipation), the motions being like pea soup in colour and consistency, and the reaction alkaline, turning red litmus paper blue. In case of constipation it should be remembered, should an enema of soap and water have been adminis-

tered, that in itself would be sufficient to render the stools alkaline. This possible source of fallacy should be borne in mind by the nurse when testing. Bleeding from the nose frequently occurs.

At the end of the first week the temperature will probably reach 103 deg., or even 105 deg. in the evening, and will most likely be 1 or 1½ deg. lower in the morning. In the third week the temperature gradually begins to go down if the case is progressing favourably. This is called "lysis," but if the temperature suddenly falls it is looked upon as a very unfavourable symptom, as it denotes hæmorrhage or perforation, and the danger is very great.

If sordes collects on the teeth, lips, or tongue, the nurse should wrap a piece of lint round the finger dipped in Condyl's fluid or carbolic lotion (1 in 40) and gently rub the teeth, and the mouth can be wiped out with tiny swabs of cotton wool dipped in some disinfecting fluid and held by dressing forceps, the pledgets always being burnt immediately afterwards.

The nurse should be very particular never to allow a typhoid patient to sit up, because the intestines being more or less ulcerated, the slightest pressure put upon them may cause perforation. At the same time, she should not permit him to lie flat on his back too long together for fear of pneumonia. If he is constantly in this position the lungs do not get full play, and the blood is not

aerated, so that the base of the lungs becomes congested and pneumonia sets in. The patient should, therefore, be moved gently right on to his side, care being taken to move him by his shoulders or thorax and by his hips, so as to avoid touching the abdomen.

The temperature will have to be taken every four hours, perhaps oftener, and any sudden rise or fall should be at once reported. The patient may have to be sponged with cold, iced, tepid, or hot water. Sometimes packs are ordered, and in some hospitals the bath treatment is employed, and the patient is allowed to remain for days together in the bath, that the temperature may be kept down and the poison eliminated from the system as much as possible through the pores of the skin.

In other cases Leiter's tubes are used. Before attempting to fill these the air should be exhausted by means of a syringe, and they should be kept under water till the circulation is complete. It is a good plan to make a wide flannel binder, with loose shoulder straps, to line the front of the binder with calico, leaving the lower edge open so that the tubes can be kept in position, even if the patient is somewhat restless. The binder can be turned back to front if the tubes are ordered for the back. The tubes should never be put on without calico, lint, or muslin being put next to the body.

A cradle can be used to prevent the weight of the clothes resting on the patient, and in case of an ice-bag being ordered, the weight should be mainly borne by the bars of the cradle, from which it should be suspended, so as just to touch the surface of the part to which it is applied. In some hospitals ice is kept in small toy buckets which are hung inside the cradle.

In case of distension, enemata are ordered, or the long rectal tube may have to be passed for four or five inches, and if that is insufficient, for double that length. Enemata serve a threefold purpose—to empty the rectum, for nutritive purposes, and to check diarrhœa.

The nurse should keep her patient scrupulously clean, both in person and in linen, and should guard against bedsores by rubbing the back night and morning with spirit; zinc ointment may be used if there is much moisture, or if sores have formed. Saturated solution of tannic acid in spirit is an excellent thing. All vessels used for feeding the patient, bed-pans, and other utensils should be kept apart from others, with some distinguishing mark upon them; those used for receiving the excretions should always have some disinfecting solution inserted previous to use.

All linen coming in contact with the patients should be put at once into a covered pail, and be saturated with disinfecting fluid; if carbolic is

used, it should be one in twenty to be of service. Every typhoid stool should be disinfected before disposed of. As the chief danger of infection lies in the excreta, the nurse should wash her hands and dip them into a disinfectant after attending to the patient, taking great care that her nails are thoroughly cleansed.

The feeding of the patient is a very important matter, as the slightest indiscretion may produce fatal results. The following diet scale has been found of great use in one hospital :—

FLUID DIET DURING THE DIFFERENT STAGES OF THE
FEVER.

<i>Diet.</i>	<i>Remarks.</i>
Milk with soda or barley water.	Three parts of milk with one part of soda water or strained barley water, three pints in 24 hours; generally given half a pint every 4 hours.
Lemon or orange juice, with water.	Strained, one pint in every 24 hours.
Iced water.	
Weak tea, cocoa, or coffee.	
Eggs.	Two in 24 hours, yolks only, lightly beaten, and added to milk or tea.
Beef tea and chicken broth.	Strained, one pint and a half in 24 hours.

Thickened Fluids.

Gruel. Arrowroot.
Benger's food.
Raw beef juice.
Brand's essence.

Semi-solids.

Calf's-foot jelly.	Jelly may be frozen.
Milk shapes. Cream.	
Custard. Chocolates.	Chocolates are very grate- ful to a patient who is craving for solid food.
Poached or lightly boiled eggs.	

Solids.

Thin bread and butter with-
out crusts.
Milk puddings.
Fish (plaice).
Mince. Chicken.
Fancy diet.
Full diet.

Cadbury's chocolates are so well known that it is hardly necessary to remind the nurse of their value, but in obtaining these, she may be sure of having the best that can be got.

Soda water must never be given effervescing, for fear of its causing distension.

During the convalescent stage food must be given frequently, but in small quantities, so as not to overload the stomach.

Great care will have to be taken to guard against a relapse, and the patient must not be allowed to exert himself too much, and must be kept from exposure to cold.

Inflammation of the veins (phlebitis) sometimes comes on during the convalescent stage. It begins frequently with pain in the groin, followed by swelling of the legs. It is then necessary for the patient to maintain the recumbent position for some little time.

XII.

OBSERVATION.

IT is essential that a nurse should cultivate the habit of observation, as nothing connected with a patient or his surroundings is too trivial for notice. A very slight change may indicate a serious condition of things, and it is of the utmost importance that the doctor should be told everything that can help him to diagnose a case.

The nurse should carefully notice the general appearance of a patient, whether flushed, anæmic, or blanched, as if he had lost a large quantity of blood ; whether feverish or faint ; whether tremulous, as if suffering from some nervous complaint ; whether there is a look of horror, dread, and suspicion, peering round the door, etc., as in delirium tremens.

She should observe whether the expression on the face is calm or excited ; whether there is the drawn face, the limp condition of the limbs on one side of the body, as in hemiplegia ; whether there is the hollow cough, the hectic flush of the phthisical patient ; the convulsive seizures and struggles, the upturned eyes, the foaming at the

mouth, the grinding of the teeth, the biting of the tongue, the livid appearance often accompanied by the peculiar shriek of epilepsy; the stertorous breathing, the florid face and unconsciousness of the apoplectic; the peculiar involuntary muscular movement of chorea; the puffy face and pallor of chronic Bright's disease.

She should see if there is any scarlet rash, as in scarlet fever; a red-mottled crescent-shaped rash as in measles, or a rash composed of small vesicles, some of them perhaps having crusts upon them, as in chicken pox.

The patient's position in bed (*decubitus*) should be noted; whether he lies in a flat immobile posture with his face to the ceiling as in typhoid fever; whether he lies on the affected side so as to leave the other free from embarrassment as in pleurisy; whether he sits bolt upright in bed, gasping for breath, probably with cyanosis of face, and general look of anxiety, denoting, perhaps, advanced stage of cardiac trouble; or if with flushed perspiring face and rapid shallow breathing of pneumonia; whether he lies on his back with a look of suffering on his face, with knees drawn up, indicative of peritonitis; whether his skin is cold, clammy, hot, pungently hot, dry, or moist.

Any peculiar odour should be detected, as the fœtor of the gangrenous lung, or of malignant disease—the sweet hay-like smell of diabetes.

The pulse should be noticed whether quick and strong as in fever, or quick, full, hard, as in inflammation; whether rapid, small, or "thready," as in low, debilitated condition; whether jerky, giving a quick bound and then suddenly ceasing, as in some valvular diseases of the heart; whether an intermittent pulse, in which a pulsation is omitted every now and then, the number of beats differing one moment from that in another, as in some diseases of the heart; whether it is hard and difficult to compress, or wiry, *i.e.*, hard, yet small.

In taking the pulse the nurse should see that the patient is as restful as possible, and has not been exerting himself for some time previous; she should distract his thoughts, if possible, so that he does not think of his pulse. The arm should be resting on the bed, and she should apply the tip of the first finger of her right hand to the front of the forearm, one inch above the wrist, and about half an inch from the outer edge.

There should be no pressure on the artery in any part of its course between the wrist and the heart. The watch used by the nurse should have second hands, and she should count the number of beats in thirty seconds and then multiply by two. The pulse of an adult beats 70 to 80 a minute on an average, that of an infant 100 to 120, that of a child 80 to 100.

The temperature: This is of the utmost im-

portance, being a most valuable index to the state of health, more especially in specific fevers, ague, midwifery practice, and after operations.

Every nurse is familiar with the clinical thermometer generally used in England, which is graduated according to Fahrenheit's scale, that is, 32 deg. freezing and 212 deg. boiling point, but the index only ranges between 96 deg. and 110 deg. Each of the smaller divisions of the scale = $\frac{2}{10} = \cdot 2$ of a degree; two divisions therefore = $\cdot 4$, three divisions = $\cdot 6$, four divisions = $\cdot 8$. The bulb of the thermometer should be as thick only as the diameter of the stem, and the index a thread of mercury detached from the bulb by means of an air bubble. Before taking the temperature the index should be shaken down to 96 degrees. This is especially necessary where children are concerned, because their temperatures are so frequently subnormal. Care must, however, be taken not to drive the index down too violently for fear of sending it into the bulb. Five minutes should always be allowed in registering a temperature, with the ordinary thermometer in use, and it should always be taken in the same place in the same patient, as it varies according to where it is taken, being higher in the internal than in the external parts of the body.

The axilla, as a rule, is the best place in which to take the temperature, but if it is moist with

perspiration the part should be carefully wiped dry before putting the thermometer under the arm. It is best for the patient to lie partly on his side and partly on his back during the time of observation. If the temperature is taken in the mouth, the bulb should be put under the tongue, the lips should be tightly closed, so as to exclude the cold air, the teeth being lightly closed, so as not to bite the bulb off; the stem should be held by the hand of the nurse, or of the patient himself if well enough. When finished with, the thermometer should be well washed in carbolic. With young children it is rarely safe to put it into the mouth, so the temperature is usually taken in the rectum. The child should be placed on its side and prevented from moving, and the bulb introduced for about an inch, the stem being held to steady it—or the temperature may be taken in the groin, the child lying on its back, and the thigh being flexed on the abdomen.

The normal temperature is 98·4 deg., but higher usually with children; and if it rises above 99·5 deg., or falls below 97·5, the presence of disease is indicated. It rises from morning till midnight, and is lowest about six A.M. When it is above 100 deg. it is spoken of as pyrexia, and when it reaches above 105 it is called hyperpyrexia. This usually occurs only in rheumatic fever, or in spinal injuries, when it may go up

to 108 deg., or even higher, but death almost always follows. When above normal it should always be taken four times a day, and charted, or entered at once in a book, as a nurse should not trust to her memory.

Respiration : This should be noticed by the nurse when the patient is in a restful condition, and when he is unconscious of her observation if possible, as the knowledge of her watching him for this purpose may alter the rate. She can count the inspiration whilst her attention seems to be on the pulse. The normal rate varies somewhat, but is usually about seventeen respirations per minute. If difficult to count without doing so, she can place her hand on the chest, and on the abdomen of children. In some cases the nurse may notice a peculiarity in breathing; the patient may inspire at first lightly, then deeper and deeper until he reaches a maximum, then the inspirations will be feebler and shorter until he seems to stop breathing altogether, and may continue in this condition for so long as to alarm those about him; then suddenly a low inspiration will be noticed, followed by fuller ones. This occurs in some brain diseases, and is called the "Cheyne Stokes" breathing. It is a very bad symptom of great danger.

The tongue: Notice whether it is moist or dry; whether swollen and flabby, indented by

the teeth ; the colour like strawberries as in scarlet fever ; whether glazed as in diabetes ; whether when put out it protrudes on one side of the mouth ; whether dark-coloured and cracked as in some fevers ; or with small ulcers ; whether there is a thick black fur with sordes on the teeth ; whether a white fur as in inflammations.

The mental condition : If the nurse notices any sign of mental aberration, she should most carefully remove anything that may suggest or be used for self-destruction ; all instruments, even needles, string, etc. I once knew a girl who, having gone through a great deal of suffering, attempted suicide one night by taking some of the bandage off her leg, and fastening it to the top of her bedstead, wound it round her neck with the intent to destroy herself. Fortunately the night nurse found this out in time to save her, but not before her face was livid.

Always be on the alert when on duty, ready for any emergency ; and remember that conscientiousness in your work is of primary importance.

“ A little thing is a little thing ;
But faithfulness in a little thing
Is a great thing.”

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