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THE HOME NURSE'S HANDBOOK OF PRACTICAL NURSING

A MANUAL FOR USE IN HOME NURSING CLASSES IN YOUNG WOMEN'S CHRISTIAN ASSOCIATIONS, IN SCHOOLS FOR GIRLS AND YOUNG WOMEN, AND A WORKING TEXT-BOOK FOR MOTHERS, "PRACTICAL" NURSES, TRAINED ATTENDANTS, AND ALL WHO HAVE THE RESPONSIBILITY OF THE HOME CARE OF THE SICK

BY

CHARLOTTE A. AIKENS

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SECOND EDITION, THOROUGHLY REVISED

PHILADELPHIA AND LONDON

W. B. SAUNDERS COMPANY

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Talk Health. The dreary never-changing tale
Of mortal maladies is worn and stale.
You cannot charm or interest or please
By harping on that minor chord—disease.

"Whatever the weather may be" says he,
"Whatever the weather may be,
Its the songs you sing and the smiles you wear,
That's a-making the sun shine everywhere."

RILEY.

PREFACE TO THE SECOND EDITION

THE very cordial reception given to this handbook indicates a growing tendency toward better care for the vast army of individuals who must be cared for in the home. Since the first issue of this volume several careful investigations have been made in typical communities—large city, smaller city, town, village, and country districts—all of which show that the number of patients receiving hospital care is less than 10 per cent. even in large cities. Even of the acute contagious diseases in New York City, figures secured for six months showed that more than 80 per cent. of such patients were cared for in the home. In another large city, in a recent canvass of 2000 maternity patients, the investigation revealed that 1189 were cared for wholly by the family; 408 employed practical nurses. In 175 cases the mother was cared for through this critical period by a child of between ten and fifteen years, with such assistance as the father could give at night. Of the 2000 maternity patients in homes of moderate means, 24 only had employed graduate trained nurses for full time.

It is very evident that for many years to come the vast majority of the sick will be cared for in the home and by their relatives, and that efforts to improve conditions must include the extension of a knowledge of elementary methods and of how to prevent disease to the women and older girls in the homes, who have the care of the sick thrust upon them.

In this edition numerous minor changes and additions have been made. Of the additions, the most important are the notes on the care of premature babies, infantile paralysis, tuberculosis patients, aged patients, and patients afflicted with chronic diseases of the heart and kidneys, and on the prevention of mental diseases—all of which have their beginnings, and in most cases their endings, in the home.

Several new illustrations have been introduced.

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DETROIT, MICH.
February, 1917.

PREFACE

By the most fundamental of all laws, women are the nurses of the world. Few, if any women, escape the responsibility of the care of some sick or helpless one. All women have the responsibility of the nursing of health in the home, or the prevention of disease. A lamentable fact to consider is that so many ailments, which are, in the early stages apparently trifling, readily curable, result fatally because of ignorance and lack of proper home nursing. Thousands of children and youths and others in early middle life go to premature graves every year who need not have died had their mothers or wives known the barest essentials of proper care of the sick. The most ardent love, the most untiring efforts, nor the best of intentions, will not undo the results of ignorance.

This little volume deals with home nursing as distinct from the more elaborate technic of hospital practice. It is the result of years of experience in hospital work where one sees as nowhere else, the results of maternal ignorance of the laws of health and sanitary living, ignorance of the rudiments of proper management when signs of illness manifest themselves in the home circle. It is designed as a guide to the home girl or woman who seriously desires to fit herself to do her best for the health of her own family, and as a working textbook for the "practical" nurse or trained attendant who desires to be a useful helper to the physician in the home sickroom.

Special attention has been given to the care of babies and maternity nursing. Those who lead in advance movements for public welfare are more and more emphasizing the thought that since every girl naturally and instinctively looks toward motherhood, instruction in baby hygiene is her right, and no motives of prudery should longer deprive her of this instruction. It is being recognized that an educational scheme which leaves infant and child hygiene entirely out, which leaves young

mothers to learn wholly by experiment and at the risk of the baby's life, how to care for the babies of the state, is not calculated to produce the best results to the child, the home, nor the nation. How to conserve this most important of all national resources is a practical problem in the solution of which all educational institutions which have to do with growing girls and young women should share.

The first step toward obtaining a better, more intelligent motherhood for American babies, is to train the older girls and the young women in the elements of baby hygiene and proper home care of the sick. To leave the fate of the new generation to unreasoning chance or impulse, to neglect to give the mothers of the coming generation a word of instruction about the most important duty they will have to perform, is not compatible with American common sense, even if custom has for years sanctioned it.

In preparing this manual it has been assumed that students have had some previous instruction in the elements of physiology and general hygiene, also that the theoretic instruction will be accompanied with practical demonstration in how to do the duties mentioned in each chapter. The studies have been arranged so as to be easily grasped by the average girl or woman who is able to master sixth or seventh grade school work. The practical demonstrations mentioned at the beginning of each chapter are only suggestive. The instruction should be given preferably by a physician or trained nurse, and the resourceful instructor will be able to make many additions to the list of methods which may profitably be demonstrated before a class.

The illustrations have been chosen with a view to being helpful especially to the home woman who uses the book without the aid of a teacher. Special thanks are due Messrs. Meinecke and Co., of New York City for loaning several electrotypes illustrating sickroom appliances.

CHARLOTTE A. AIKENS.

DETROIT, MICH.

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THE HOME NURSES' HAND-BOOK

PART I.

CHAPTER I.

HOW TO KEEP WELL.

Demonstration and Practice Work.—Plan a meal containing six articles of food, and show that these foods contain all the material necessary for healthy growth and repair of the body. Explain charts illustrating disease germs and show how some grow in clusters like grapes, others in spiral form, etc.

Those who wish to have strong healthy bodies must early learn that there are laws of health which must be known and observed, and that sickness follows the continued violation of these rules. These health laws have been likened to a chain of defence consisting of several links. Important links in the health chain are: Plenty of clean air to breathe day and night; proper food properly prepared and eaten; water free from impurities; a uniform degree of sunshine and heat—air neither too hot nor too cold; exercise, rest, and plenty of sleep; the body must be kept clean; the poisonous waste products of the body must be thrown off; disease germs must, as far as possible, be prevented from getting into the body.

The body in many respects resembles an engine needing to be constantly supplied with material from which heat comes, from which new tissues are formed and power to work or move around is produced. If an engine is to do good work, the flues must be kept clean; it must be well oiled; it must not be allowed to become clogged with

ashes and waste matter; the amount of fuel must be regulated; the draughts must be properly adjusted. In a general way this is true of the human body.

Air is the most immediate necessary of life. About one-fifth of the air is oxygen.

The blood is purified by its contact with the oxygen in the lungs; hence it follows that unless oxygen is supplied, the blood must retain the impurities it has accumulated in its circulation through the body, and the whole system suffers.

Impure Air Diseases.—A large proportion of sickness comes from breathing impure air—air which is loaded with dust, poisonous gases, smoke, or the exhalations of the body; and air which is infected with disease germs. Among the common impure air diseases are pneumonia, bronchitis, influenza, and tuberculosis. Those who constantly breathe bad air, weaken their bodies so that they contract other diseases very easily. The bad air in homes is directly responsible for a great deal of the colds, sore throats, coughs, tonsillitis, etc., which afflict some families every winter.

Cold air is healthy, stimulating and curative in its effects, and in every living and sleeping room there should be some means of escape provided for the bad air and of entrance for fresh clean air. The belief that night air is injurious is a delusion. It is, as a rule, freer from dust than the air breathed during the day.

Sunshine and light are also necessary if sound bodies and robust health are to be maintained. It is hard to explain how the sun influences the health, but it is well known that it does so. And this is true of plants as well as of the animal creation. For illustration: if one geranium plant is placed where the sun may shine on it freely, and another is placed in a dark room or cellar, there will soon be observed a great difference in the color of the leaves and the general growth of the plants. A similar difference will be seen by careful observers in children who are housed in dull dark rooms, as compared to

those who have plenty of light and sunshine in and about their homes.

Rest, Recreation and Exercise.—Every one knows the saying about "all work and no play," but people do not always remember that if their "play" is really to do them good, it should be as great a change from their work as possible, and should also give their bodies some exercise. "It is not a good thing when one's only form of recreation is to go to crowded places of amusement, where, perhaps, the ventilation is bad, and they are breathing air which is so stale as to be poisonous. Very much depends on what anyone's everyday work is, for the best recreation is something that is a complete change from that. As a rule, people use one part of their bodies far more than another in their work; for instance, those whose work is typewriting or machining, sit still, and chiefly use their hands and their brains, while others may be walking or standing or doing work in which they use their muscles a great deal. It is well to let our recreation give the unused part something to do, so as to try to have every part of the body used equally and have its fair share of exercise. If the work means sitting still indoors, the recreation should be something in the way of outdoor exercise, while for anyone who works out of doors, or is constantly moving about, that is not so necessary. People who spend their time in workrooms and factories where the air is often bad, should make a great point of getting some exercise in the open air, and though they may be feeling almost too tired to do anything except go home and rest, it is worth while to make the effort, for the sake of the good it will do them."

Proper food, properly prepared and eaten, is necessary to build up the body during the growing period, to repair it, to furnish heat, and strength to work. The foods eaten should be chosen so as to supply the different elements the body needs for all these purposes.

Among the foods needed for building up and repairing

the body are: milk, eggs, lean meat, bread, oatmeal, and corn.

Foods needed to produce heat and strength are: starches found in potatoes, rice, breakfast foods, etc.; sugar, honey, and fats, such as butter and the fat of meats. A certain amount of lime and other mineral matter is necessary to provide material for bone making and repair, and for the teeth. These elements are found in water, fruits, and green vegetables.

Chewing the food thoroughly is one of the important essentials of health. Hence in keeping well, the teeth have a very important work to do. Food that is not properly chewed is harder to digest, and the stomach often refuses to do the double duty forced on it by half chewed food. This is the cause of much of the dyspepsia and other digestive trouble that is so common.

Overeating.—Eating more food than the body needs, or than the organs can dispose of, is a fruitful cause of sickness. The system gets clogged up with waste products, and sooner or later some organ is going to weaken because of the overwork it is forced to do.

Eating the wrong food, or not enough of any one class of food, or food improperly prepared, all affect injuriously the human structure and make it impossible to keep entirely well.

Plenty of water is needed to supply the fluids of the body and to help wash away the waste or broken-down tissues. Neglect to drink enough water every day, summer and winter, helps to cause sickness.

Cleanliness is one of the greatest aids to health. Dirt and disease go hand in hand.

The mouth and the way in which it is cared for (or neglected) has a more direct bearing on health than most people believe. It is the gateway to the body. Leading from it are seven openings—two to the nose and upper air passages, one to the stomach, one to the windpipe, and thence to the bronchial tubes and lungs, two tubes lead from the throat to the ear, and one opening

leads to the outer world. Therefore the importance of keeping the mouth clean, of careful cleansing of the throat when acute diseases are prevalent, and of keeping the teeth in good order, needs no argument. Decaying teeth are a breeding place for germs and favor the development of germ diseases. Poor teeth mean poor mastication of food, and consequently poor digestion.

Friends and Enemies of Health.—While much has been said and written about germs or bacteria or microbes as causes of disease, there is still much misunderstanding as to these tiny forces which exert such a powerful influence in favor of or against health. The misunderstanding and indifference arise partly from the fact that the germs are so small that they cannot be seen by the eye without the aid of a microscope.

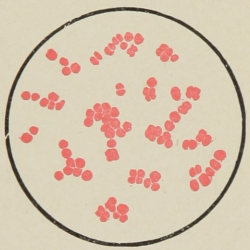


FIG. 1.—Micrococcus meningitidis cerebrospinalis (×1000). (*Lehmann and Neumann.*)

A germ is much like a very tiny seed, and like other seeds must be planted in a soil that is suitable before it will grow. Pansy seeds if planted in dry sand or ashes would not grow. They might retain their power to germinate, but they would not take root in such a soil. If a very poor soil of dry clay were provided for the seeds they would probably grow a little, but the chances are the life of the plant would be short. If good suitable soil and conditions were provided to receive the seeds there would be fine healthy plants as a result.

The body is the soil in which the seeds or germs of disease develop. There are natural elements in the body intended to overcome or kill the germs of disease which enter the body. When the blood is pure, and the organs sound and healthy, doing their work properly, the germs which gain entrance will find "stony ground" unsuitable for their growth, and will be quickly cast out or overcome. But if the body is weakened from any

cause, or the blood is deficient in quantity, or poor in quality, there will be less resistance to the growth of the seeds of disease, and they will more readily take root and cause sickness.

The germs of diseases of various kinds are always found in the air. They are often carried in food and water. They flourish wherever dirt is allowed to collect, and in dark damp or unsanitary surroundings, and are readily carried about in the air by means of floating dust, or clothing, dishes, etc.

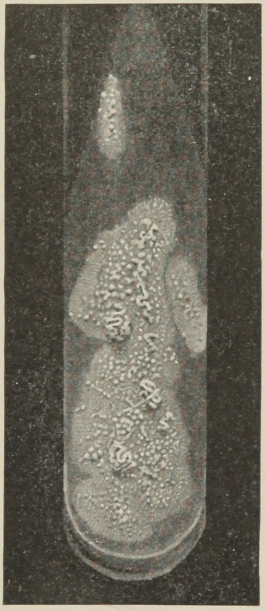


Fig. 2.—Bacillus tuberculosis; glycerin agar-agar culture, several months old (*Curtis*).

Disease germs are different from each other in many ways, just as other seeds are different in appearance and general characteristics; some bodies are suitable soil for one kind of germ, and very poor soil for other germs. By means of the microscope and other methods of investigation, medical men are able to determine the kind of disease that is developing by finding out the kind of germ. For instance, a case of severe sore throat may or may not be diphtheria. If diphtheria, in order to protect others, the sick one should be promptly isolated. The matter can be decided by a scientific examination of a swab which has been used to brush the throat. Children are much more liable to develop sickness on exposure of disease germs than others, and for that reason greater precautions are needed in their case than with adults.

The Spread of Disease.—Among the common methods by which disease germs are spread are:

1. By means of dust the germs may, when dry, be distributed through the air.

2. By being washed over the surface of the earth or by filtering through the ground they may infect the water supply. (It is claimed, however, that disease germs are rarely found lower in the earth than 5 or 6 feet, certain elements in the earth having the power to destroy them in course of time.)

3. By means of flies they may be deposited on food or drink.

4. By means of clothing, unclean utensils, soiled boots, or animals.

5. By direct contact through handling.

6. By means of mosquitoes.

How Disease Germs Enter the Body.—Disease germs may enter the body through the mouth, the nose, through the skin, through wounds, and through any of the cavities of the body which have an external opening.

Communicable diseases are those caused by disease germs, and which are capable of being communicated from one person to another. A false sense of security is often observed, when for instance a mild case of measles or scarlet fever exists. There is a feeling that there is less danger of infection, because it is not a severe attack, while it is forgotten that the severity of the disease depends greatly on the soil in which the seeds or germs of disease are sown. One person may have a mild attack of a certain disease while another to whom the disease was transmitted may have a serious or fatal attack because the body was "run down" or in poor condition to resist disease.

Disease germs are always destructive. Their work is to tear down and feed on the living tissues in the body, and to produce within it substances poisonous to the parts which are attacked by them.

Good Germs.—All germs are not disease germs. The majority of germs are good germs, or germs which are friendly to life and health. Good germs feed on dead leaves, grass, and waste matter, and render harmless many objects which would otherwise be destructive to life. Animal life is dependent on vegetable life. Vegetable life is dependent on certain qualities in the soil, each blade of grass and plant appropriating from the elements of the soil the material needed for its growth. If the earth is to continue to produce the vegetation on which animal life depends, the elements drawn from it by plants must in some way be restored to it. The restoring of these elements is dependent on these little invisible friends, the germs. Through their increasing activity dead plant and animal matter is disintegrated, broken up into simple elements, to be again absorbed by the earth and again used to produce vegetation.

Disinfectants are substances which have the power to destroy disease germs.

Heat is the most effectual of all methods used in destroying such germs and rendering objects safe after being infected.

Boiling will destroy practically all disease germs in a very few minutes. A temperature below boiling-point is sufficient to destroy most of them in a half hour. There are some few diseases in which the spores or seeds of germs are hard to destroy. In such cases boiling for two hours is needed. The germs of cholera, typhoid fever, dysentery, pneumonia, diphtheria, erysipelas, influenza, cerebro-spinal meningitis, tuberculosis and pus-producing germs do not have spores and are readily destroyed by ordinary methods of disinfection, intelligently used.

When drinking water is suspected to contain disease germs, it is never wise to depend on filters to cleanse it. A glass of water that is clear as crystal may contain enough disease germs to infect a whole village. It is always safer to boil and cool the water before drinking

it. Ice which contained typhoid fever germs has been responsible for some of the most serious epidemics of the country. Green vegetables or fruits washed in impure water, or in water containing disease germs, may as readily convey the infection into the system as drinking water. Infected ice may be put in pure water to cool it and thereby carry disease into the body.

Chemical disinfectants are used for disinfection of such substances as cannot be purified by heat. Carbolic acid, and chloride of lime are illustrations of chemi cal disinfectants.

Ordinary cleanliness, dryness and sunshine are important aids in the work of disinfection as well as in the prevention of disease. Experiments have shown that few disease germs can live many hours if exposed to the direct effect of the rays of the sun. Dryness also is unfavorable to the development of disease germs. Hence dryness and sunshine combined, are two powerful weapons with which to fight disease.

Points to be Remembered.—Those who wish to be well must observe the laws of health.

Clean air, proper food, pure water, plenty of sleep, rest, and exercise and general body cleanliness, are the important essentials to health.

Give the body plenty of water, in summer and winter to keep the machinery lubricated.

The lungs, skin, bowels and kidneys are the sewers of the body. It is important to keep each of them in good working order if waste products of the body are not allowed to accumulate.

A large proportion of sickness in cold weather comes from impure air.

Cold air is one of the best remedies in some diseases.

Sunshine and light are necessary if sound health is to be maintained.

Properly balanced foods are essential to sound robust bodies.

Cleanliness of the mouth has a direct bearing on health.

When food is imperfectly chewed it throws an extra burden on the digestive organs.

To keep the body in sound condition is one of the best ways to guard against communicable diseases.

Children are much more liable to develop germ diseases than adults.

A mild case of scarlet fever is quite sufficient to cause a severe case in another person.

Filters are not to be depended on for safety if the water supply is suspected to contain disease germs.

Infected ice may easily infect pure drinking water if put into it.

REVIEW QUESTIONS.

1. Name eight rules of health that must be observed by those who desire to keep well.
2. Show how the body resembles an engine.
3. What effect does pure air have on the blood? What sort of blood may we expect to have if we breathe bad air constantly?
4. Name some diseases which are mainly due to impure air.
5. What effect do sunshine and light have on plants? On children?
6. For what different purposes is food needed in the body?
7. Name some foods which you would class as body-building foods.
8. Mention some foods which help to keep the body warm and produce strength.
9. Why is lime or mineral matter needed in the body? In what foods would you expect to find it?
10. Where are disease germs found?
11. How are diseases spread?
12. Mention several ways in which disease germs may enter the body.
13. What useful work do good germs perform?
14. What would happen if all good germs ceased their work?
15. What is a disinfectant?
16. Mention several ways by which disease germs may be destroyed.
17. What effect does sunshine have on disease germs?
18. How would you render drinking water safe that was suspected to be impure?
19. What precautions would you use in preparing green vegetables for the table when the water had been pronounced unsafe?
20. Is, or is not, dryness favorable to the growth of disease germs?

CHAPTER II.

THE SICK-ROOM AND NURSE.

Demonstration and Practice Work.—Proper methods of sweeping and dusting and arrangements for ventilation.

A very simple and trifling ailment may develop into a more serious one through lack of proper care. In most cases of illness, rest in bed is an important part of the measures used to win back health. On the proper care and management of the room, bed, and general surroundings, the comfort and welfare of the sick one largely depend. Hence it is important for every girl and woman to know something about how to manage the sick room and the surroundings, so that the sick one will have a good chance to get well as soon as possible.

The room in which the invalid is confined to bed will have a great deal to do with his comfort. A corner room with two windows which allows a good current of air through, is always preferable, but in this as in other things one must often get along with conditions that are far from ideal. It is true, however, that by having an ideal in mind a much nearer approach can sometimes be made to it than at first glance seems possible. A room on the second floor is more likely to be quiet. At the same time, if the home nurse must preside both in the kitchen and sickroom, a room on the same floor as the kitchen will prove more convenient.

The furnishings of the sickroom should be restricted to the articles really necessary for convenience. Useless draperies, curtains, elaborate fancy articles, upholstered chairs and all unnecessary things should be removed till the sickness is past. These catch and hold the dust and add to the danger of disease as well as to daily labor.

Any drapery or piece of fancy work that will be hurt by washing, any furniture that will be injured by being wiped with a cloth wet with a disinfectant solution is out of place in a sick room, especially where communicable diseases of any kind have to be dealt with.

The room should be kept scrupulously clean. Soiled clothing or slops should never be allowed to remain. Flies should be kept out not only for the comfort of the patient, but because flies are active agents in spreading disease germs.

Flies swarm over decaying matter outside, and gather to themselves disease germs. These germs are liable to be deposited on food or dishes later to be carried into the body. Flies are, because of their filthy habits and ceaseless activities, a dangerous kind of vermin to allow in the house under any condition. Many thousands of germs have been seen under the microscope on the legs of one fly, which had been hovering around a filthy garbage pail. Food or drink should never be left uncovered in the sickroom, and remains of food or drink should be promptly removed.

How to Sweep.—Do not sweep rugs in the sickroom if it can possibly be avoided. Take them outside to be brushed. If this cannot be done, sprinkle the rugs with wet tea leaves, or moistened salt, or tear a newspaper in small bits, soak it a few moments in luke warm water, and sprinkle over the floor. The wet particles help to keep the dust from floating about. Another precaution equally good and especially useful for the light daily brushing up is, to tie a damp cloth over the broom. The cloth can be redampened as the sweeping proceeds.

Be sure that no food of any kind is left uncovered while the sweeping is being done. Do not sweep just before meal-time. Practise using short strokes of the broom, and try to use all sides and ends of the broom, so that it will wear out evenly and keep in good shape. Always sweep from the edges to the center. Gather up the dust on the dust-pan frequently if the room is a large one.

Never sweep against a direct draught. Never sweep dust from one room to another. Burn the sweepings promptly.

Hard-wood floors require especial care. On these very little water is used. A brush-broom made of coarse hair is best for such floors. Follow this by wiping with a dry mop.

Fig. 3.—Nurse sweeping with damp cloth over broom.

In case of communicable disease, it is best before sweeping to sprinkle the floor with some disinfectant solution such as bichloride of mercury, and moisten the broom in it before sweeping, and at intervals during the process. In diseases like diphtheria, measles, scarlet fever, etc., the broom used for the sickroom should not be used to sweep other rooms in the house.

A broom may easily spread the disease germs all over

the house. Pour scalding water over the dustpan each time after using it as a precaution in dealing with such diseases.

Ventilation.—Whatever else is provided the nurse should see that the patient has plenty of good clean air to breathe. Never forget that the blood is purified by its contact with the oxygen in the lungs. If a fresh supply of oxygen is not admitted at frequent intervals

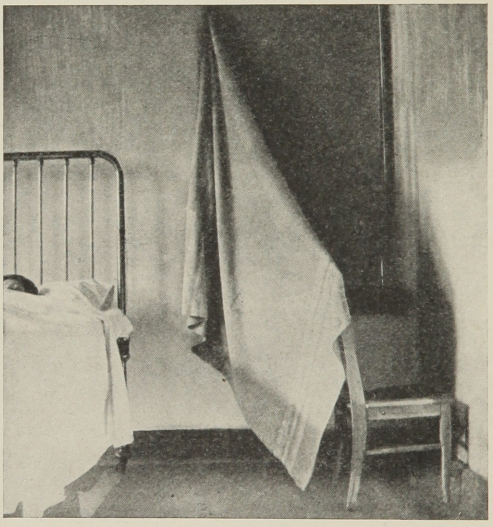


Fig. 4.—Screen with blanket and chair.

and the patient is forced to breathe impure air or air that has already been used, the health is necessarily adversely affected. A nurse should no more allow a patient to breathe impure air than she would allow him to wash in or drink dirty water. No consideration of warmth should interfere with the admission of pure air. It is surely the poorest of all methods to depend on the breath of a sick person to keep him warm.

An improvised screen may be made of a clothes horse

with a blanket thrown over it; or, what is sometimes more convenient, an umbrella may be raised that will quite effectually shield the patient from draughts while the windows are opened periodically to let a good volume of air come in. Another method is shown in Fig. 4 where a blanket is secured to the side of a window and draped over a chair. If a piece of thin board about two inches in width can be procured, it is a good plan to keep one window raised a couple of inches all the time. This piece of thin board fitted across the opening at the bottom of the sash will shield the direct draught from the patient and yet admit a constant supply of fresh air.

Dusting is removing dust. It is best accomplished by using a damp cloth. A feather duster serves to stir up dust and distribute it, but does not remove it. It should never be allowed in a sickroom. In case of polished furniture a damp duster may deface it. In such cases, a clean dry duster should be used and frequently shaken out of doors. Where the disease is liable to be carried by floating dust the duster should be frequently wrung out of a disinfectant solution.

Under the microscope dust resolves itself into particles of soot, sand, iron and steel, glass, lime, woody fiber of vegetables—in fact, all manner of vegetable matter, dried sputum, shreds of linen or wool from soiled bedding, pieces of hair, dried particles of pus, blood and human tissue, dried waste of horses, dogs, cats, and birds, scales of skin, fragments of food of every sort, with disease germs of every kind. This is the material that mingles itself with the food; that is inhaled into the lungs of both sick and well if not properly and frequently removed; that is scattered over fruits, vegetables, candies, and other food wherever it is exposed for sale without covering.

Slops.—Never keep a slop pail in the sickroom. Carry out all wash water and slops promptly; wash basins and wipe dry. Scald all soiled utensils frequently.

The temperature of the atmosphere in the sickroom

is a point of importance. Overheated rooms are bad for both sick and well persons.

For the average invalid a temperature of about 65° F. will be warm enough. At night a temperature of 55° F. is better for sleep, at which time an extra blanket may be added if needed. Those who perspire easily are apt to be easily chilled.

Aged invalids, very young infants, and those in which the circulation is poor, or the blood impoverished, will need warmer clothing and a warmer room than those having vigorous circulation and plenty of good red blood.

In summer it is difficult to regulate the temperature, but the home nurse should see that doors and windows are open, and the air kept as fresh and pure as possible, always protecting the invalid from direct draughts. Cold outdoor air is now regarded as of special importance in the treatment of pneumonia patients, and in many of the best hospitals, beds are put out on balconies or on the roof. In such cases, besides many cases of fever and other diseases, marked improvement has resulted from the outdoor treatment, the good results being due as much to the stimulating effect of the cold air as to the increased oxygen obtained by the invalid.

Good nursing includes good general management of the entire situation. It is not enough to carry out the doctor's orders and attend carefully to the bodily needs of the patient, but in every home precautions are needed to prevent disturbances from outside sources that would mar the comfort of the patient. It is sometimes the little discomforts that are the hardest part of the situation to manage. Children persist in running in and out of the sickroom. In fact, too often it forms the general meeting ground of the family. Curious neighbors insist on seeing the patient. Doors bang; rocking chairs creak; window shades rattle; the fire gets low; somebody brings in a disturbing bit of news; people insist on carrying on a whispered conversation just outside the sickroom door; these are a few illustrations of points

that require guarding and prevention in every illness of any importance.

The home nurse must not only manage the patient, his room, and the family and friends so that the well meant efforts or thoughtless blunders of the latter do not interfere with his comfort or general welfare, but she must also manage herself. She should train herself always to knock gently on the door before entering the sickroom. This is a point of good breeding as well as good nursing.

Those who have watched some trained nurses go about their work have often envied them the ability to make the sick one comfortable. They seemed to know by intuition just what was needed, just the right angle at which to place an aching limb, just the best way to fix the pillows. They could think of scores of things which added to the patient's comfort and which the home folks would gladly have done if they had only thought about it.

The home nurse must learn to control herself first of all, her face, her voice, her tongue, her emotions, her nerves and her temper. If she really wants to be a comfort to the patient she must not become panic-stricken, and she must not fidget.

Fidgets are the bane of a great many sickrooms. A good letting alone is as badly needed as other good things in the sickroom, and should be planned for at regular intervals. Sometimes a dozen questions are hurled at the poor patient in as many minutes. "Can't I do something for you?" "Are you sure you're comfortable?" "Wouldn't you like a cup of tea?" "Is your head high enough?" "How is your pain now?" Are you feeling any better?" These are illustrations of the fidget's habits. That kind of nursing is simply teasing the patient. One of the first principles of good care of the sick is to train oneself to observe and anticipate what is needed before the patient has to ask for it, and without bothering him with unnecessary questions.

A FLY CATECHISM.

The following Fly Catechism is now being distributed to the school children of North Carolina.

1. Where is the Fly born? In manure and filth.
2. Where does the Fly live? In every kind of filth.
3. Is anything too filthy for the Fly to eat? No.
4. (a) Where does he go when he leaves the vault and the manure pile and the spittoon? Into the kitchen and dining-room. (b) What does he do there? He walks on the bread, fruit, and vegetables; he wipes his feet on the butter and bathes in the buttermilk.
5. Does the Fly visit the patient sick with consumption, typhoid fever, and cholera infantum? He does—and may call on you next.
6. Is the Fly dangerous? He is man's worst pest, and more dangerous than wild beasts or rattlesnakes.
7. What diseases does the Fly carry? He carries typhoid fever, tuberculosis, and summer complaint. How? On his wings and hairy feet. What is his correct name? Typhoid Fly.
8. Did he ever kill any one? He killed more American soldiers in the Spanish-American War than the bullets of the Spaniards.
9. Where are the greatest number of cases of typhoid fever, consumption, and summer complaint? Where there are the most flies.
10. Where are the most flies? Where there is the most filth.
11. Why should we kill the Fly? Because he may kill us.
12. How shall we kill the Fly? (a) Destroy all the filth about the house and yard; (b) pour lime into the vault and on the manure; (c) kill the Fly with a wire-screen paddle, or sticky paper, or kerosene oil.
13. Kill the Fly in any way, but *kill* the Fly.
14. If there is filth anywhere that you cannot remove, call the office of the Board of Health, and ask for relief before you are stricken with disease and, perhaps, death.

Points to be Remembered.—In most cases of illness rest of body and mind is an important part of the treatment.

Nothing unnecessary in the sickroom is a good rule.

There is a right and wrong way to sweep and dust. Study to manage such duties properly.

A broom used promiscuously over the house when contagious disease is present may easily become an agent to spread the disease.

In nursing there are no trifles. Nothing is small enough to be careless about.

Be sure to give your patient plenty of clean air to breathe.

Dusting is removing dust. Removal is not accomplished by a flick of a feather duster.

Do not make the mistake of keeping the temperature of the sickroom too warm.

Remember that fresh cold air has a stimulating effect.

Try to guard against the petty irritations that are liable to happen.

Very often a nurse must take firm ground to protect a patient from his friends. Nothing is more foolish than to allow a weak patient to waste his strength or become excited or exhausted by meeting curious visitors.

REVIEW QUESTIONS.

1. Describe a model sickroom.
2. What care would you give a room every day in a case of contagious disease?
3. Mention some reasons why good ventilation is important.
4. How would you ventilate a room with a patient in it, if the room had only one window?
5. Tell what you know about what dust is composed of.
6. What degree of temperature would you recommend for a sickroom by day and by night.
7. Mention some precautions you would take to guard against petty annoyances to the patient.
8. Tell why flies are dangerous visitors to allow in a sickroom.
9. How should a sickroom be swept and dusted.

CHAPTER III.

THINGS TO HAVE READY FOR SICKNESS.

Demonstration and Practice Work.—Making roller bandages. Explanation of uses of sickroom utensils. How to care for utensils before and after using. Improvising screens to prevent draught.

"In time of peace prepare for war" is a good rule, but "in time of health prepare for sickness" is an equally good rule. Even if serious illness does not come, the wise home nurse will always be nursing health, and will find that certain appliances are very useful in keeping away sickness, while they are a positive necessity in serious illness.

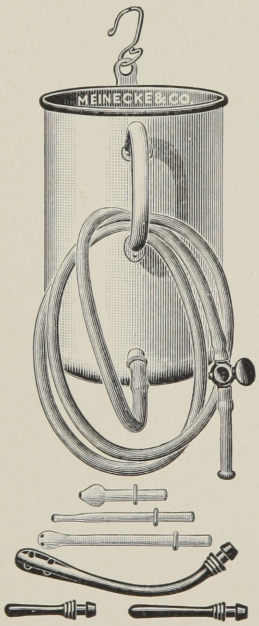


Fig. 5.—Fountain syringe of enamelled iron with attachments.

A fountain syringe is one of the most useful and necessary sickroom appliances. These are obtainable, made of rubber or enameled iron, in gray, blue, or white, and also of tin. The kind to be purchased depends on the purse and the taste of the buyer. Rubber is less durable than the others and likely to spring a leak when most needed.

A two-quart can with about five feet of rubber tubing about one-quarter inch in diameter will prove a satisfactory investment, and will prove useful in a variety of ways in every home. A set of three nozzles should be secured at the same time.

A bed-pan is a vessel used to catch the discharges of urine and from the bowels when the patient is not able or is not allowed to get out of bed to relieve himself. It is a necessity in most cases of serious illness. The so-called "perfection" bed-pan has the advantage of being easily cleaned, fits the body better than the old-fashioned kind with a spout, and is altogether more comfortable and sanitary. In emergency, an ordinary wash-

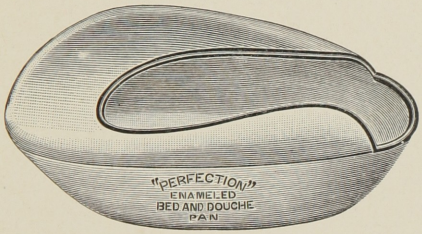


FIG. 6.—"Perfection" enamelled bed and douche pan.

basin has been used instead of a bed-pan. A quilt rolled up, or a stiff cushion is placed under the hips, the edges of the basin brought close to the roll, and the patient's hip's brought well over the edge of the basin.

A rubber sheet is a good thing to own, but table oil cloth can be used if necessary. A piece of oil cloth or a rubber sheet about one-half yard by one yard is useful to slip under the bed-pan as a protection for the sheets, to save frequent washing. Newspapers can be used in the same way.

A box of bandages (a shoe box is large enough) can be made from a well-worn sheet and will prove useful, especially in homes in which there are children. The 2- to 2 1/2-inch bandage, and the 1-inch bandage for fingers, are the widths most commonly called for. To make the bandages, tear the cloth the desired width, remove selvedge edges, lay the two ends to be sewed together flat one on top of the other and sew firmly. Re-

move the ravelled threads, wind firmly, and secure with a pin.

Old linen such as handkerchiefs, table napkins, and pillow covers should be saved for use in sickness. Pieces of old worn blankets and the backs of flannel shirts make excellent material for applying hot fomentations to the chest or abdomen. A box of old linen, flannel, bandages, etc., in the attic will save a general stampede and flying hither and thither hunting for things when accident or illness occurs.

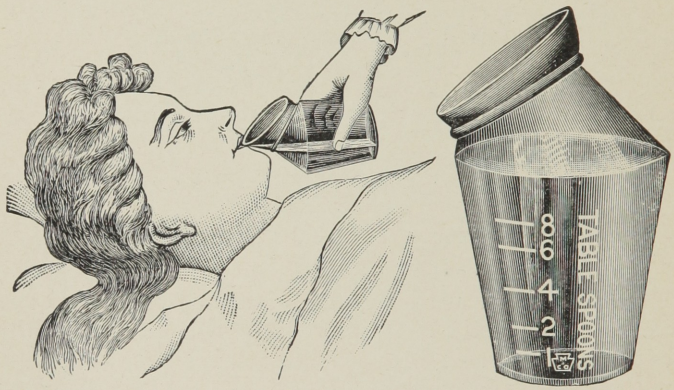


FIG. 7.—Invalid's "Ideal" drinking cup, graduated. An improved sick feeder.

A medium size tray for the patient's meals is a necessity to a refined patient. For a very small meal, a smaller tray should be used when it is on hand.

An individual teapot, sugar bowl, and cream pitcher should be counted among the necessities, not the luxuries of a sickroom. They can be bought for ten cents each. Tea or coffee will taste better if poured into the cup, hot at the bedside, rather than downstairs in the kitchen.

Feeding cups are useful but not indispensable. The cup with a spout needs careful attention to keep it sanitary.

The graduated feeding glass with the number of

ounces or teaspoons marked is a help to accuracy when it is necessary to know the exact amount of fluid taken by the patient (Fig. 7).

A small cream pitcher is an excellent thing to use in giving fluids to very ill patients, when a feeding cup is not available.

Improvised Appliances.—A sheet, shawl or blanket pinned over a clothes-horse makes a good screen when one is needed to protect a patient from a draught.

Fig. 8.—Getting air out of hot-water bag and replacing stopper.

A roller towel can be used in emergency for an abdominal bandage.

Bricks or flat irons heated and wrapped in newspapers are excellent for applying artificial heat to any part of the body. If rubber hot-water bottles are used be sure to have the air out of the bag and avoid pins in covering it.

Where a number of small pillows are needed to make

a very sick patient more comfortable, bags can be made of old cotton and stuffed with straw or excelsior. These are placed under feather pillows to give support.

A soap dish such as is found on almost every wash stand is as good a thing as can readily be found, to catch the waste water when washing the mouth or teeth, or gargling, when the patient is in bed.

The Home Medicine Cupboard.—In every home there are minor ailments arising, which a little common-sense management will promptly relieve. A great many of these common ailments will right themselves without drugs, if rest, good air, quietness, and proper dieting be practised. But in keeping well, as also for use in sickness, some drugs, as a rule, are needed.

Olive oil is one of the most useful household remedies. It can be safely used for a baby, in childhood, and all the way through life and for a variety of conditions externally and internally. It is a laxative and a food. It is also used as a soothing application in case of superficial burns, and in various other ways.

Cathartics.—As a rule there should be some kind of cathartic medicine kept on hand—some pills or tablets that will stir up a sluggish liver and bowels. It is better to ask the family doctor to recommend a good standard pill than to depend on patent medicines. Such pills can be bought in small bottles containing about a hundred, at trifling cost.

For a laxative for children, licorice powder is easier to take than many other medicines, having a similar effect.

Epsom salts is a good old-fashioned remedy that never goes out of date, and it is well to keep it, or a box of seidlitz powders, always on hand, for use when prompt action is required.

Castor oil is another medicine that has stood the test of the years.

Miscellaneous Drugs.—Glycerine and vaseline, spirits of turpentine and borax, mustard and ginger, are always desirable household remedies to have at hand.

Turpentine is an old fashioned drug which comes in useful for various conditions. Mixed with olive oil or "goosegrease" it is much used for soreness in the chest, and it serves as a liniment for strained or sore muscles.

For abrasions of the skin, chafing, sunburn, and sores of various kinds, a simple ointment will be needed. For this purpose there are few things any better than oxide of zinc ointment, which can be bought at any drug store, but is never advertised. An ounce box will help to tide over many a little emergency.

Vaseline and various kinds of cold cream are useful applications for these conditions. Boracic acid or carbolic acid dissolved in water are desirable to have for washing cuts or dressing any ordinary wound. Boracic acid is safe to use even when made as strong as possible.

The carbolic acid solution ought not to be used stronger than a teaspoonful of the acid to half a pint of water unless ordered stronger by the physician. It should always be dissolved in boiling water.

It is well to remember in case of burns with carbolic acid, that common vinegar quickly applied will act as an antidote and relieve the pain. Alcohol is the best known antidote. Vinegar or alcohol may be used either externally or internally for this purpose.

Great care should be used to keep all such drugs out of the way of children, and properly labelled, so as to avoid accidents and mistakes.

Peroxide of hydrogen is one of the very useful household drugs. It has the advantage of being perfectly safe in unskilled hands, while at the same time it is powerful in its cleansing properties and in its effect on disease germs. It has a wide range of usefulness. Diluted about one-half with clean water it is an excellent wash for discharging wounds.

For a gargle in sore throat or tonsillitis, for a mouth wash or for a foul breath due to decaying teeth, peroxide of hydrogen one part, to three parts water, is one of the

best things to use in the absence of a physician's order. If these drugs, combined with rest, clean air, quietness, proper diet, and common sense are not sufficient to tide over the ailment it will be time to call a physician. It is extremely unlikely that some higher priced drug with a high sounding name and an assuring label, accompanied with testimonials, will be the thing that is needed. Instead of experimenting further in the dark, call in some one who understands the human machine, and let him investigate conditions and intelligently prescribe.

It is exceedingly important to have the household remedies kept together and labelled where one can readily lay hands on them. In many of the modern homes a little medicine cabinet is built in the bathroom, and sometimes in some of the bedrooms. In any case, a wall cabinet can be purchased, or a home made medicine cupboard can be made out of a medium sized packing box, such as is used for shipping toilet soap or cocoa. This can be papered, inside and outside; the cover can be put on with hinges and fastened; a shelf can be put in it, and the whole placed high enough upon the wall, so that a child standing on a chair could not reach it.

Points to be Remembered.—Every intelligent housekeeper should keep in mind the possibilities of sickness and keep certain appliances and remedies where they can be easily found.

A fountain syringe is valuable in the prevention of sickness and a necessity in cases of serious illness.

Where there are children, it is a good plan to save pieces of clean old linen for use in dressing cuts and small wounds.

Every home should have an individual tea set for serving meals in bed.

The home medicine cupboard or case of drugs should always be kept out of the reach of children.

Never leave medicines carelessly around on window sills or dressers.

See that every medicine is labelled and that bottles of

medicine with one label on are not used to hold another drug without changing the label.

Eternal vigilance is the price of safety where there are children, especially where medicine is concerned.

REVIEW QUESTIONS.

1. Mention some stock articles desirable to be kept in every home for use in sickness.
2. How would you make a finger bandage?
3. Mention some methods of protecting the mattress which you would use if necessary.
4. How would you improvise a screen from ordinary articles in a home?
5. In stocking up a medicine cupboard for a home what drugs would you include?
6. Mention some drugs useful in dressing wounds.
7. For sunburn or abrasions of the skin what simple treatment would you use?
8. In case of a burn with carbolic acid what would you use to relieve it?
9. What are some of the uses of peroxide of hydrogen in a home?

CHAPTER IV.

THE BED AND BEDMAKING.

Demonstration and Practice Work.—Brushing mattress and cleaning bed frame. Making empty bed. Making bed with patient in it. Changing sheets with patient in bed.

The manner in which the bed is cared for will have a great deal to do with the patient's comfort. A well kept bed is one of the signs that a good nurse is in charge.

A single bed is always preferable to a double bed for the sickroom, and an iron bed to a wooden one. The iron bed does not absorb or retain odor or moisture and affords no hiding place for bugs or other vermin. If a bed is too wide, the nurse cannot reach the patient if he lies in the center without getting on the bed, a proceeding which is always objectionable.

The Mattress.—The best mattress is one of hair or felt. Hair is preferable in a sickroom if there is room for choice. A feather mattress is the worst possible kind to use. It is soft, sinks into a hole as soon as the patient lies on it, absorbs moisture, retains odors, and it is exceedingly difficult to keep such a bed smelling fresh and clean. Further, if the patient be entirely confined to bed for any length of time, it offers favorable conditions for the development of bed sores.

Extra firmness in a mattress is needed in many surgical cases, where it is of great importance to keep the bed flat and level. This may be secured by placing a couple of thick boards under the mattress. These boards should have holes bored in them so that the air can reach the mattress.

To protect the mattress, a rubber sheet is desirable, especially where there is a likelihood of the mattress

becoming wet or soiled by discharges from the body, or in giving treatments. When a rubber sheet is not obtainable a piece of table oilcloth may be used. In either case, it should be securely pinned to the mattress to prevent wrinkling. In emergency, a thick layer of newspaper may be used underneath the sheet and bed pad, as a protection for the mattress. Over the rubber sheet, a quilted cotton pad or thin blanket should be used before putting on the lower sheet.

Bed Clothing.—There is a general tendency in cases of sickness in homes, for the home nurse to pile on too much bed clothing. Too much warmth tends to weaken the invalid, and heavy bed clothing is an unnecessary burden.

Position of the Bed.—It should be placed so as to be accessible on three sides, if possible. When a patient is likely to be confined to bed for some time it is desirable to place the bed so that he may look out of the window. Artificial light should come from behind the patient when this can be arranged. In any case, shades should be adjusted over lights so as to prevent annoyance from strong light in the eyes.

To make an empty bed for a sick person there will be needed two sheets, a quilted mattress pad, two pillow covers, a double blanket (or single blanket and light washable quilt), a bed spread; and in special cases, a rubber sheet to protect the mattress and a draw sheet to cover it. Have these ready and arranged on a chair in the order in which they will be placed on the bed. First be sure that the mattress has been brushed and the springs and the bed frame cleaned. One who understands bed making thoroughly will be able to make an empty bed by going around it once.

The mattress pad is first placed in position. The lower sheet is unfolded, the wide hem placed at the head of the bed and the middle fold placed exactly in the middle of the bed. Allow enough to come well over the upper end of the mattress. Tuck it under firmly as far

as can be reached from across the bed. The corner is finished squarely, and the edge of the sheet tucked singly along the side, underneath the mattress and the foot.

The rubber sheet is next put on. It should be large enough to reach the edge of the pillows at the top, to come down well under the hips, and to tuck snugly underneath the mattress at each side.

The draw sheet is a smaller sheet placed over the rubber sheet. Its use saves changing the lower large

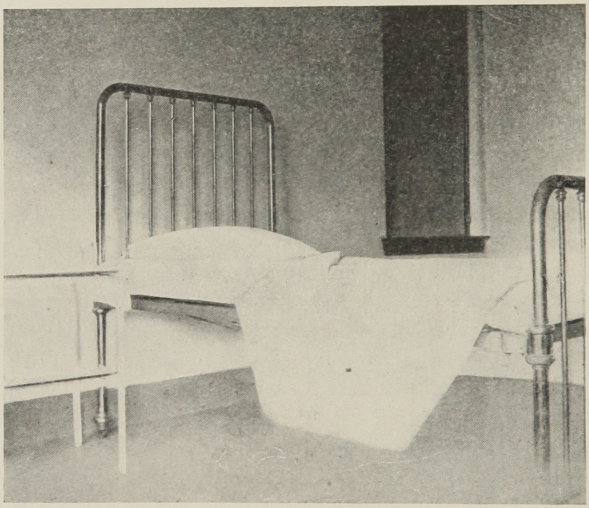


FIG. 9.—Bed finished, turned down ready for convalescent patient.

sheet as often as would otherwise be necessary. It can be drawn from under a patient and replaced by a clean one with very little disturbance or exertion. The rubber sheet with the draw sheet over it must be drawn firmly and tightly over the mattress and secured by safety pins underneath at each corner. The rubber sheet is only necessary for the protection of the bed and should be removed when not needed.

To put on the upper sheet, place the wide hem at the

top, the middle of the sheet in the center of the bed and tuck in first at the bottom firmly at least five inches. It should then be drawn up smoothly and tightly toward the top.

The double blanket is put on next with the fold at the bottom. The spread and the blanket should be tucked in snugly at the foot so that their edges will reach easily to the patient's neck. Avoid too much clothing at the upper end. The blanket is tucked in

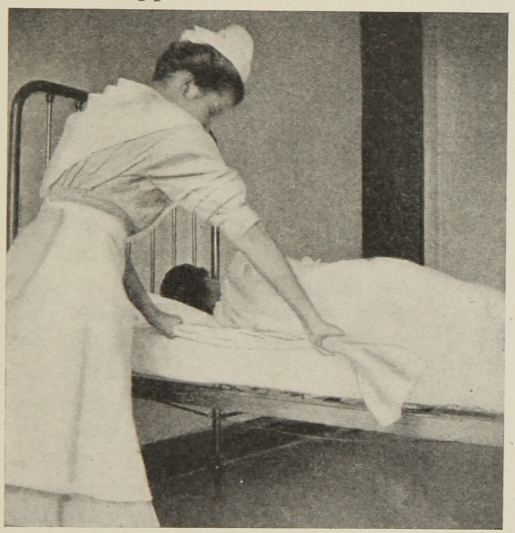


FIG 10.—Changing a draw sheet.

snugly at the sides underneath the mattress. The spread is left free and its corners turned neatly and squarely.

To finish the opposite side the nurse goes to the other side of the bed, turns the upper covers back, tucks in the lower sheet tightly with square corners, secures the rubber sheet and draw sheet with safety pins, arranges the upper sheet as on the other side, and the blankets likewise. The spread or counterpane is then drawn up, and the end of the upper sheet folded back over it neatly.

The pillows are then shaken and the covers smoothed neatly and placed, one flat with the open end of the pillow cover always away from the door, and the other arranged upright on it, leaning against the head of the bed. The bed is then ready to be turned down for the patient. If a spread is not desirable or available, cover the blankets with another sheet to give the bed a finished look.

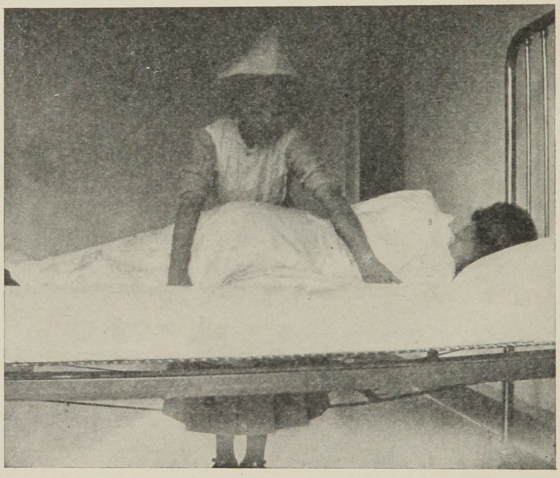


FIG. 11.—Changing a sheet.

To change the bed with the patient in it without needlessly jarring or causing exertion to the sick one is an art that requires practice to do it easily. Have everything at hand before beginning. Remove the safety pins from the draw sheet, take off the spread, arranging it neatly so as not to touch the floor. Take away one pillow. Loosen all the clothing at the sides.

Changing the lower sheet is not difficult if the directions are closely followed. Assist the patient to the edge of the bed opposite to the one on which it is proposed to begin changing. In turning the patient, be sure to

support the parts of the body which need it most. If a leg is fractured, lift it carefully and hold it while the patient rolls over. If the patient has typhoid fever or an abdominal wound the nurse's hands should be slipped under the hip and side. If the patient is to be brought to the left side go to the left side of the bed, stoop, and slip the right hand under the patient's right shoulder,

Fig. 12.—How to lift an injured or painful leg.

and the left hand under the right hip. Then slowly turn her toward you, always being careful that the support is given with the whole hand, not with the fingers alone, and that the finger nails do not press into the skin.

When the patient has thus been brought to the edge of the left side of the bed, the nurse goes to the opposite side, rolls up the lower sheet, the draw sheet, and the

rubber sheet against the patient's back. The clean lower sheet is then put on the right half of the bed as directed in making the empty bed, and the rubber sheet drawn down by tucking one edge under the mattress and securing it with safety pins. The patient is then brought gently over to the side freshly made, the soiled lower sheet and draw sheet are removed, the clean ones drawn tightly over and properly secured under the mattress, keeping the corners square. Avoid tugging or pulling a sheet forcibly from under any sick person.

To change the upper sheet, the home nurse must practice to do it quickly and neatly and avoid exposure. The clothes are first freed from the foot and sides, and the blankets turned back, leaving only the soiled upper sheet over the patient. Before removing this spread the clean one over it, and tuck it in firmly at the bottom. Let the patient hold the upper end of the clean sheet, while the hands are slipped underneath it and the soiled one drawn out. The blankets are then spread and drawn smoothly up, and the extra length of the upper sheet turned back over them.

A well made bed will have the clothes on straight and tight. It will be smooth and free from wrinkles. After the bed is finished run the hand from foot to top of bed, and test the result for smoothness, tightness, and freedom from wrinkles.

A badly made bed has the appearance of being thrown together loosely, carelessly and without method.

To change the pillowcovers stand at the right side of the patient if the bed is arranged so that this is possible. Then gently slip the left hand under the upper pillow (if there are two) and let the patient's head rest on your arm. With the right hand over the patient draw out the pillow on the opposite side and let the patient's head gently down. Shake the pillow thoroughly after removing the cover. Put on the clean cover, smoothing out and folding neatly under it any surplus covering. Then slip the hand under the patient's head and support it

while drawing out the pillow left to the opposite side, and replacing it with the clean fresh one. Never let a patient's head drop with a jerk.

Avoid Exposure.—In making a bed or changing a gown or giving a bath or treatment of any kind the home nurse should always remember this injunction. It is never necessary to completely uncover a patient. The refined well-bred nurse will always manage the work so as to avoid needless exposure.

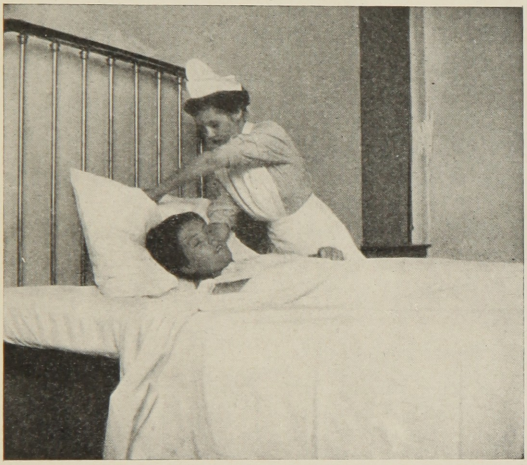


FIG. 13.—Changing pillow.

In cold weather the room should be comfortably warm, and at all times clothing should be carefully aired. Dampness in a bed or bedding is always to be avoided.

To make a bed with a patient in it without changing the sheets, free the bed clothing at the top, bottom, and sides. Brush out carefully all crumbs, lint, etc. A whisk broom is a good thing for this purpose, or a half soiled towel. Do not brush the bed with a towel you expect to use for the patient's face or hands. Straighten the clothing, see that all wrinkles in the lower sheet

or gown are smoothed out. Draw each piece of covering separately and tuck in tightly as previously directed. Shake the pillows, turn, and replace.

This should be done at least morning and evening with every patient who is obliged to be in bed the whole day.

Points to be Remembered.—A well kept bed is one of the signs of a good nurse.

Iron beds are more sanitary than wooden ones and a hair mattress is preferable for the sickroom.

Too much bed clothing weakens a patient.

Be sure to have a method in your bed making. Criticise your efforts and see where you might have improved.

In changing a bed for man or woman always be careful to avoid exposure.

A well made bed will have the clothing on tight, straight and free from wrinkles.

When a patient is constantly in bed, the condition of the bed requires periodical attention. Making it once a day is not sufficient.

REVIEW QUESTIONS.

1. Give reasons why an iron bed is preferable to a wooden bed.
2. Tell why a feather bed should not be used in sickness.
3. How would you make an empty bed for a sick person to occupy?
4. Describe the method of changing a bed with the patient in it.
5. Mention some of the chief characteristics of a well made bed.
6. How would you make a bed with a patient in it without changing the sheets?

CHAPTER V.

THE PERSONAL CARE OF THE INVALID.

Demonstration and Practice Work.—A cleansing sponge bath in bed. Changing the gown of a helpless patient. Cleansing the mouth of a seriously ill fever patient.

First Things to be Done.—Whatever the threatened or the actual disease or disorder may be, there are two things to be done at the very beginning—to secure rest for the part affected (and preferably rest and quietness for the whole body) and to keep the patient with a clean skin and clean clothing, on a clean bed in a clean room with clean air to breathe. This means simply keeping him in the most favorable condition for nature to begin the restorative process. It is as a rule far more essential to attend to these simple duties than to rush to the corner drug store for something to cure the ill. Attention to these points will often ward off serious trouble and in many cases is all that is necessary to bring about a cure. These *suggestions* are important to be observed in *every* disease, more important in most cases than the most faithful dosing with medicines.

Rest also includes freedom from petty worries, from necessity for continued thinking, from interruptions, from unnecessary or unexpected jolts or any kind of jars, from the creaking of chairs or doors, rattling of windows, from squeaky shoes or rustling skirts. The bad practice of sitting on the bed should be guarded against.

In giving drinks or liquid nourishment to a bed patient always slip the left hand underneath the pillow rather than directly under the head of the patient when offering the drink.

The Daily Routine.—In every home in which there is a patient confined to bed there is a certain routine of duties which need to be done every day, if the patient is to be kept comfortable, and in a condition favorable for recovery. If the invalid wakes early in the morning, a hot nourishing drink of some kind such as gruel, coffee with plenty of milk, cocoa, beef tea, etc., may in many cases wisely be given. This helps to tide over and gives

Fig. 14.—Lifting patient's shoulder.

a chance to devote a little more attention to the regular breakfast an hour or two later. If he has fever, the morning temperature should be taken as soon after he awakes as possible, and this should be written down and kept for comparison from day to day. Directions about temperature will be given in later lessons.

The face and hands are bathed, the mouth washed, and the patient placed in a comfortable position for breakfast. After breakfast he may be allowed to rest

awhile. Then will follow either a cleansing bath with soap and water, or an alcohol rub, the combing of the hair, brushing out the crumbs, and the making of the bed. Next the room is tidied and dusted with a damp cloth. Medicines and treatments are attended to as ordered. When this is done, the room should be given a thorough airing. If the weather is cold, throw an extra blanket or quilt over the patient, tucking it in close about the neck; see that he is screened from direct draughts, open

Fig. 15.—Lifting patient in bed.

the windows and doors wide and fill the room with good air. Be sure to do this at bedtime also.

Quite often by the time these duties have been attended to the patient is ready to doze or rest again for an hour or two. To see that he is allowed to rest undisturbed by petty questions or annoyances of any kind is as important as any part of the treatment. Many invalids have a tendency to slip down toward the foot of the bed. If very weak or ill they must be

gently lifted toward the head of the bed once or twice every day.

Most patients like to have their hands wiped off with a damp cloth or washed before each meal, and the home nurse should at least offer to do it.

Medicines that are ordered to be given before meals should be given a half hour before, in the absence of

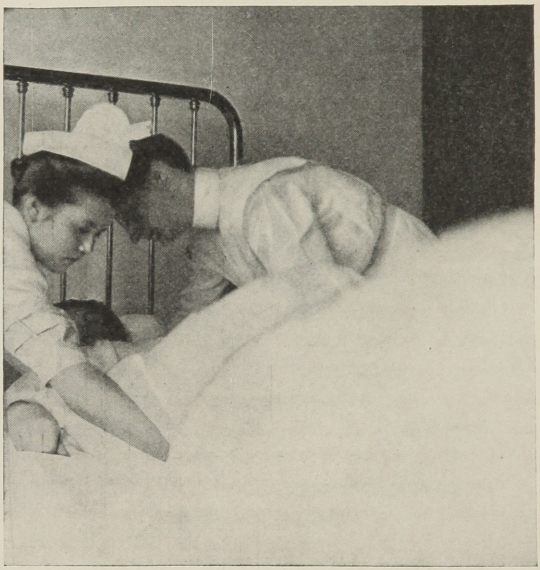


FIG. 16.—Pushing patient up in bed, two nurses present.

more definite orders, and the same length of time should be allowed to elapse before giving after-meal doses.

Getting Ready for the Night.—Every patient should, when possible, be settled for the night by nine o'clock. Preparations for the night may wisely begin at least a half hour earlier. Everything likely to be needed during the night should be in readiness; bedtime nourishment or treatment attended to; the patient's face, hands, and feet bathed; the back rubbed with dilute alcohol; the

bed straightened and brushed free from crumbs; the pillows shaken. Always see that the patient's feet are warm before leaving him for the night.

When the windows have been opened and the room filled with clean air the patient is then ready for sleep. These are the routine duties that require to be done for every patient who is confined to bed.

Opportunities for numerous other little attentions that will add much to a patient's comfort will come every day.

FIG. 17.—Bathing leg. Note arrangement of blankets to avoid exposure.

Baths are given to the sick for a variety of purposes.

1. For cleanliness. 2. To promote comfort. 3. To induce perspiration. 4. To soothe and quiet. 5. To cool the body when there is fever, etc.

Many of the sick have a dread of catching cold, and regard baths as dangerous.

Cleanliness is always a help to getting well. It always promotes comfort, and the patients are very few and

far between who cannot be bathed without danger if the home nurse is careful to observe proper percautions.

The Cleansing Sponge Bath.—In unskilled hands it is wise to guard against accidents by protecting the bed with an old or thin blanket. A very large bath towel is often used. It is laid under each part that is being bathed. The room should be warm and free from draughts. Everything likely to be needed should be ready before starting the bath—hot and cold water, soap, washcloth, towels, clean clothing. Turn back the spread. Always keep the patient covered either with sheet or blanket. The face, ears, and neck should be bathed first, and carefully dried, then one arm at a time, keeping all but the part that is being bathed under cover. Then the chest and abdomen, then one limb at a time and lastly the back. An alcohol rub over the whole body, following the bath is usually much appreciated by the sick. The alcohol should be diluted, about two parts of water to one of alcohol being used, as pure alcohol has the effect of drying the skin.

The finger nails should be scraped underneath and clipped short so as to afford scant hiding place for dirt or germs.

Changing the Gown.—If a patient is very ill, it is always best to rip or cut the gown all the way down the front. The patient's strength and comfort are much more important than any gown. If a shirt is worn under the gown, fit one garment inside the other before putting it on. To change a gown that is not open all the way down, slip off the sleeves of the soiled one and pull it up toward the neck. Put the arms in the leeves of the clean gown, support the head and shoulders, slip the soiled gown off, draw the clean one over the head and pull it down smoothly. If an arm or shoulder is injured slip the sleeve off the arm on the opposite side first.

Washing the Mouth.—When the cleansing bath is completed it is time to wash the patient's mouth.

This should never be neglected. In the nursing of

some fevers it is an important part of the treatment. The washing of the mouth and teeth may be done with plain lukewarm water, or some form of mouth wash may be used. The following substances are sometimes used as mouth washes:

A half teaspoon of baking soda in a tumbler of water.

or,

Equal parts of lemon juice and glycerine, using about a teaspoon of the mixture to a glass of cold water. A little borax is often added.

or,

One part peroxide of hydrogen to three parts of water.

Sometimes the doctor orders a special drug of some kind to be put in the water used for washing the mouth. If the patient is not able to brush his teeth, some little bits of clean cotton or soft old linen around the index finger may be used.

Try to **clean between the teeth.** This is most easily done by twisting a bit of absorbent cotton around the point of a tooth pick, dipping it in the mouth wash and rubbing. Care should be used not to break the mucous membrane which lines the mouth. If the lips are dry, apply a little cold cream or vaseline to prevent cracking.

In caring for the mouth in typhoid fever the home nurse should always remember that the germs of the disease are in the mouth in great numbers, and neglect to carefully cleanse her own hands after washing the patient's mouth may lead to the nurse herself contracting the disease. Burn the bits of cotton used for cleansing the mouth of any patient.

Combing the Hair.—Unless the doctor has positively said the hair must not be combed, this duty should be attended to at least once every day for every sick person, and especially for women and children who have long hair. If the patient is to be in bed constantly, and the hair is long, it is better to part it in two braids. If the ends are properly secured this will prevent it getting tangled.

Begin to comb at the end, holding the braid tightly in the left hand and the comb in the right hand. Do not attempt to comb the hair on the top of the head till the ends are straightened. Then hold the patient's head firmly with the left hand while finishing the combing. A good careful home nurse will not allow a sick one to have tangled hair. Very often it will soothe a patient who is nervous and restless to spend fifteen or twenty minutes in brushing and combing the hair. Bathe the face and hands after it is through, and shake and turn the pillows. Straighten out wrinkles in sheets or gown before leaving the patient.

If the hair is badly tangled and the patient is weak, do not try to comb it all at one attempt. It may take several days, doing a little at a time, so as not to exhaust the sick one's strength, or unduly worry him.

Vermin in the hair requires special attention. There are various preparations used to kill vermin in the hair. In most cases it will be best to try a fine comb, and then thoroughly wash the hair. When it is nearly dry, a preparation called larkspur may be applied and the head tied up in a towel. If larkspur is not to be had, coal-oil may be used.

To destroy nits apply hot vinegar to the hair and then follow in a few hours with a fine tooth comb.

Points to be Remembered.—Favorable conditions for recovery from sickness require a clean bed, clean clothing and room, clean air to breathe, suitable food and rest.

Cultivate a quiet, restful demeanor in dealing with the sick and do not constantly discuss their condition with them.

Most patients will appreciate a hot drink in the early morning hours, the regular breakfast to come later.

A bath properly given has rarely if ever hurt any patient and cleanliness is a distinct aid to comfort and recovery.

Remember that the patient's mouth needs to be washed more frequently in sickness than in health.

Have everything ready to give a bath before beginning it. Never leave a patient uncovered while giving a bath. Uncover one part at a time.

Do not neglect to comb hair, especially long hair, every day.

REVIEW QUESTIONS.

1. Mention some of the first things to be done for a patient when illness is present or threatened.
2. What general care would you give a bed patient every day?
3. Mention some precautions you would take in regard to giving of medicines in relation to food.
4. Describe your method of giving a cleansing sponge bath in bed.
5. Give five purposes for which baths are given.
6. How should changing the gown be accomplished in cases of serious illness?
7. Mention some substances which might be used as mouth washes for the sick.
8. What special precautions would you take in cleansing the mouth of a typhoid fever patient and why?
9. What general rules would you follow in combing tangled long hair?
10. Mention some substances which are used to kill vermin in the hair.

CHAPTER VI.

THE PERSONAL CARE OF THE INVALID (continued.)

Demonstration and Practice Work.—Adjustment of pillows. Propping a patient up in bed. Methods of relieving pressure when a bed sore is threatened. Making a home-made circular cushion with cotton batting and a bandage.

To keep the patient as comfortable as possible is one of the home nurse's first duties. It is fully as important as giving him medicine regularly, and includes a great variety of attentions, not all of which can be mentioned. Humor the patient always when it makes no difference. There may be occasions when gentle discipline of the patient is necessary, but as a rule the time of sickness is not the time to work reforms in the patient's habits. There are some patients, it is true, who demand attention out of all proportion to their real needs, and who have no consideration for the nurse or any one else. A measure of discipline is necessary in such cases, but even in these their fads and fancies should not be lost sight of. Pleasing the patient is always and everywhere an important item in nursing. But on the other hand a nurse's "No" should mean "No," and the patient must learn that no amount of pleading or fretting will procure for him something that will do him harm. He is to be humored only when it makes no difference. For his own good, unless a patient is very ill, delirious, or unconscious, he needs to be left entirely alone at intervals during the day, for complete rest.

Cold feet are common in many diseases. The nurse should not wait to be told about them, but should slip her hands under the bed clothing occasionally and find

out if the feet are comfortably warm. Artificial heat may be applied by using a rubber bag filled with warm water, or by using hot bricks or irons always wrapped in a cloth or thick papers before they are put in the bed. In case of hot water bags use no pins in the cloth covering as punctures easily occur. Never leave hot water bottles or heating devices in contact with a delirious or unconscious person.

Delirious patients should never be left alone. In restraining a struggling patient be sure not to let your weight rest on the chest or abdomen.

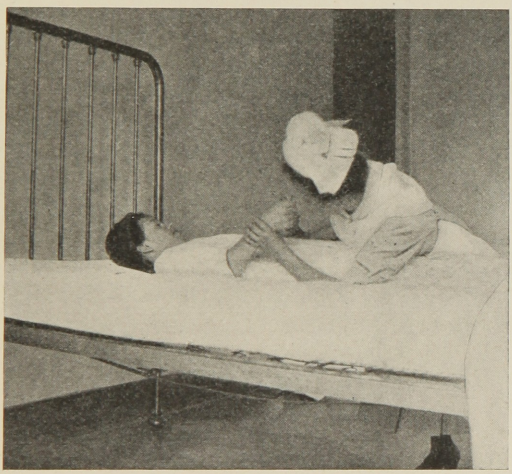


FIG. 18.—How to hold a struggling patient. Nurse's weight resting on patient's thighs.

General Suggestions.—Turning the pillows and shaking them, rubbing the back and limbs gently, keeping the shades adjusted so as to prevent annoyance from light, putting a pillow beneath the knees, or at the back, are little attentions that promote comfort. If the patient is hot and restless, it refreshes him to bathe the face and hands, to straighten out the sheets and shake them gently before tucking them in again.

Small pillows can be used to fit into the hollow of the back or under a shoulder or to give support to any part. Be careful to adjust the pillows under the head so as to be most comfortable to the patient.

Talking too much, even when one is well, is a serious drain on the strength. Many patients, especially those of a nervous type, are inclined to waste strength they cannot afford to lose in needless talking. A wise tactful home nurse will try to restrain this tendency in patients of weakened vitality.

The bladder needs to be kept in mind in practically all cases of illness. "Watch the bladder" is an important precaution. Over-distention of the bladder may occur even when the patient is able to pass urine naturally. Very often, especially in aged patients, the bladder does not fully empty itself when urine is passed. A patient may be too ill to complain even when the bladder is over full.

Difficult breathing is of frequent occurrence. Patients who suffer in this way usually have to be propped up. Sometimes such patients like to lean forward or rest the head on one side. If the sickness is likely to be prolonged, it will add to the comfort to provide a wide board about two feet long for the back with a narrow piece attached to each side, for a back and head rest. This can be supported by an inverted chair and well padded with pillows.

To prop a patient up in bed and keep him comfortable in a sitting position, several points need to be observed. At least five pillows will be needed if there is no back rest. Two or three pillows will do if the patient is supported by an inverted chair or back rest. Be sure to see that the pillows come well down to the base of the spine, that the support is even, that the head is not thrown forward on the chest, nor allowed to tilt too far backward. A board with the ends placed on a box or a pile of magazines on each side of the bed makes a table for use in this position which is often a comfort

for him to lean on. A bed tray with a pillow on it can be used.

In patients in which there is a discharge, see that the surrounding parts do not become excoriated. Proper attention to cleanliness will usually prevent this.

In lifting patients always support the parts of the body which are in special need of support. Practice gentleness in all that you do. Never sit on a bed.

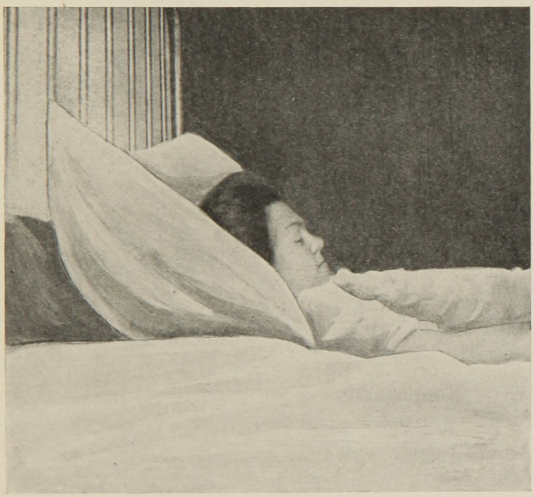


FIG. 19.—Patient with pillow in uncomfortable position.

Snipping the edge of a roller bandage on an extremity, when it seems to cause pain, thus easing the pressure on the wounded part, arranging it at just the right angle for comfort, adjusting the pillows till the shoulders and head are comfortably supported; shading the glare of artificial light from the eyes; moistening parched lips; elevating a part gradually and supporting evenly, so that no part is strained; these are all measures to be used as opportunity occurs, and all are helps to comfort. Adapt your "comfort" methods to the needs of the individual patient.

To get a patient up in a chair, first put on stockings and slippers, if these are to be had. In cold weather put on drawers. A wrapper or bath robe over the night gown is sufficient to wear for the first attempt to sit up after being sick. Have beside the bed a comfortable chair, with arms and a back high enough to support the head. Place one pillow in the seat and another in the back, and throw a blanket over these. Lift or help the patient into the chair, wrap the blanket around him snugly, pin around the feet, with a safety pin and rest the feet on a stool. After a serious illness, from fifteen to thirty minutes are usually as long as he should be allowed to sit up the first time.

Bed-sores are sores which result from continuous pressure on certain spots, from friction between two surfaces, from moisture, wrinkles or creases in the under sheet, or lack of cleanliness. They are more likely to occur in helpless patients such as paralytic, or in old, or very heavy, or very emaciated subjects, or in surgical cases, which require the patient to be kept in one position a great deal. They may occur in any case if a nurse is not alert to prevent. Such sores are usually due to faulty nursing and in such cases should be regarded as a disgrace to the one in charge. The first sign of a bed-sore is redness which does not disappear when pressure is removed. Sometimes the patient complains of a pricking sensation as if he were lying on something rough; but often the patient makes no complaint at all, and unless the home nurse is watchful, a bed-sore may be far advanced before it is suspected.

The patient who is delirious or unable to control the discharges from the bowels and the bladder is a case always to be watched. After lying for even a short time in a bed that is wet or soiled the skin becomes softened and breaks very easily. Germs enter such a wound at once, and very quickly a bed-sore occurs.

Resting too long in one position is another factor contributing to bed-sores that needs constant attention.

Even if the patient is not delirious, he is often too weak to make the exertion necessary to turn from one position to another. To prevent is much easier than to cure. The parts on which bed-sores are most likely to occur are: the back at the end of the spine, the hips, shoulders, elbows, or ankles, or between the knees, but sores may occur on any part when conditions are favorable. Daily examination of such parts should be made in cases of serious or prolonged illness.

Preventive measures consist in keeping the patient dry and clean, his bed free from crumbs, wrinkles or lumps and in relieving so far as possible, the pressure on parts

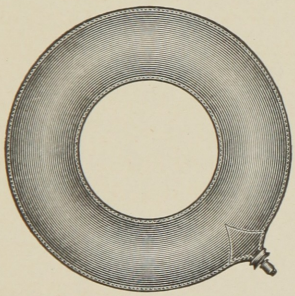


Fig 20.—Invalid's cushion.

in which a bed-sore is threatened. A solution for hardening the skin is also helpful. Alum dissolved in alcohol is often used for this purpose, the part being first washed with warm water and soap, and dried. Keeping the parts clean and dry and relieving the pressure are, however, much more important than any drug or substance that can be applied.

To relieve pressure, circular cushions or air pillows are used. These cushions are shaped much like a doughnut with a hole in the centre. Rubber cushions filled with air are desirable, but a home-made substitute may be made of a small roll of cotton batting made into a circle and covered with a roller bandage. The point at which

the bed sore is threatened is placed over the hole in the centre. Small pads of cotton batting are sometimes bound with a few turns of a bandage over the ankle, heel or elbow, thus making soft cushions for the parts threatened. A similar pad may be placed between the knees when there is liability of a sore developing there. When the skin breaks, a bed-sore becomes an open wound and great care is needed to prevent its becoming a serious complication of any illness. The nurse should not hesitate to tell the doctor when a bed-sore is threatened. After a wound is formed he will give directions as to how it should be dressed and cared for.

A bed-pan if not carefully managed may help to form a bed-sore. There are two or three kinds of bed-pans in common use. When the so-called slipper bed-pan is used, in cases of prolonged illnes, much care is needed or its use may help to form a bed-sore on the lower part of the back. The patient should not be left on it a minute longer than is necessary, and the parts should be carefully cleansed and dried after its use. A pad made of cotton may be slipped over the part on which the back rests to ease the pressure. In cold weather the bed-pan should be warmed before placing it under the patient. It should be covered with a cloth when being carried to be emptied.

Points to be Remembered.—Humor the patient when it makes no difference.

In almost all forms of sickness it is necessary at some time to apply heat to the feet. Cold feet are a common source of discomfort.

Be sure that the bricks or hot water bottles are not hot enough to burn. If too hot the heat is more uncomfortable than the trouble it is to remedy.

Do not leave heating devices close to an unconscious or delirious person. Very bad burns have been caused by carelessness about this point.

The gentle art of making a patient comfortable includes a thousand methods which have never been pat-

ented and cannot be enumerated. Try to discover just what method is best adapted to each individual patient. No service is too small or too lowly if it adds to a patient's comfort.

In propping a patient up in bed be sure that the pillows are placed close down to the base of the spine, and that the support is even.

Bed-sores are almost always preventable by careful nursing. They are to be feared in all cases of protracted illness.

A bed-sore may become infected and prove a serious complication. Be sure to report to the doctor when there seems to be danger of one forming.

Careless management of the bed-pan may contribute to the formation of a bed-sore.

REVIEW QUESTIONS.

1. In applying heat to the feet what precaution would you use? What special precautions in the care of hot-water bottles?
2. Mention some of the general measures you would use to add to the comfort of the patient.
3. Describe some of the general measures you would use in cases of difficult breathing.
4. Give some reasons why "watch the bladder" is a necessary precaution even when the patient can pass urine.
5. Tell how you would prop a patient up in bed.
6. In what kinds of patients are bed-sores most likely to occur?
7. How would you know that a bed-sore was threatened?
8. Name three common causes of bed-sores?
9. What measures would you use to prevent bed-sores:
10. Describe some devices for relieving pressure when a bed-sore is threatened.

CHAPTER VII.

FEEDING THE SICK.

Demonstration and Practice Work.—Methods of varying the milk diet. The making of albumin water and junket. How to pasteurize milk. Pre-digestion of milk.

Our bodies contain certain elements, and these elements must be contained in the food we eat in order that our bodies may be kept in good repair. This is true in both sickness and health. See page 13.

Food is more important than medicines in most forms of sickness. Only as the body is able to digest and absorb suitable nourishment, can the diseased organs or tissues be replaced by healthy tissues. The body must be built up and renewed from the products of the kitchen rather than of the drug shop. This is one lesson which home nurses find it hard to learn. To be successful in cooking for and feeding the sick is an accomplishment of which any girl should be proud.

Tissue-building foods:

Milk.	Fish.	Peas.
Eggs.	Cheese.	Lentils.
Meat.	Beans.	Peanuts.

Heat- and force-producing foods:

Cereals.	Potatoes.	Fats.
Corn.	Tapioca.	Sugar.
Rice.	Sago.	Honey.

Vegetables containing little or no starch:

Cabbage.	Parsnips.	Lettuce.
Asparagus.	Turnips.	Radishes.
Spinach.	Egg-plant.	Onions.
Celery.	Artichokes.	Rhubarb.
Green beans.	Tomatoes.	Cauliflower.
Squash.	Cucumbers.	Fruits.

It should always be remembered that in most diseases where there is fever, the organs which prepare the digestive fluids are weakened and incapable of digesting many foods that are useful in health.

Waste matter also has a tendency to accumulate in the body. These waste products act as poison in the system. The foods given should therefore be such that they will not clog up the system, and that the waste may be easily thrown off.

The physician in most cases will give general directions as to what food may be given during illness. The nurse is expected to prepare and give it so that it will be easily digested, and at the same time be pleasing to the patient.

General Principles of Feeding.—1. In diseases in which fever is present it is generally agreed that the food should be in fluid form so that it can be quickly digested and absorbed.

2. It should be given in small quantities and at comparatively short intervals.

3. It should be of such form and quality as to contribute the greatest amount of nourishment with the least tax on the digestive organs.

4. Plenty of water should be given to replace the fluids in the body, which are lessened by fever, and also to assist in flushing the system and carrying off waste.

5. Foods should be avoided that are likely to disagree with the present condition of the patient.

These principles and rules apply especially to feeding while there is fever. Milk, animal broth, eggs and gelatin are the foods chiefly relied on while there is much fever present.

Milk stands first as a food for invalids, in general desirability and value as nourishment. Every home nurse should study how to give it so that it will not disagree, and will be easily digested. It is not sufficient to simply carry a glass of milk to the patient and let him swallow it as rapidly as possible. There is no

better way to make sure it will disagree. Teach the patient to sip milk slowly so that it may become thoroughly mixed with the saliva. Remember that milk is a food which though it is a fluid outside the body quickly becomes a solid when it reaches the stomach.

Milk which is too hastily swallowed is liable to form into tough indigestible curds in the stomach. These cause pain and are often vomited or passed through the bowels without being digested. Such feeding does the patient harm rather than good.

If the patient does not like milk or is sure it will disagree with him and the doctor wishes him to take it, try at first giving a little at a time, from one or two teaspoonfuls, and give it either ice cold or very hot. Repeat about every fifteen minutes for a few hours, when the quantity may be increased, and the intervals between nourishment made longer.

It is not a good plan, as a rule, to give milk at or near the same time that medicine is given, nor to mix milk with medicine of any kind if there is a tendency for it to disagree.

Junket is milk which has been partly digested by rennet. It is one of the best methods of giving milk in many cases. Use a flavor which the patient likes and alternate it with milk given in fluid form for a change. Milk that has been boiled, condensed or evaporated should not be used for junkets. Junket tablets with directions for use are obtainable at most good drug stores.

Milk and gelatin combined make a smooth, bland easily digested custard, which most patients on a restricted diet will enjoy, and may safely have.

The clear white gelatin made into a jelly and unsweetened is occasionally added to food for infants and invalids—a teaspoonful stirred into a glass of milk.

Milk and coffee make another combination much enjoyed by some patients. Heat a small cup of milk to

boiling point and add about the same amount of strong hot coffee.

Starchy substances in the form of strained gruels are frequently given in milk both for variety, and because they are more easily digested in some cases.

Barley water is recommended frequently in diluting milk in cases of diarrhea, and oatmeal water when constipation exists.

A cracker or a piece of bread given with milk is an aid to its digestion in cases where it is likely to cause distress by forming hard lumps in the stomach. When solid food is not forbidden, and especially with children, this point may often be made use of to advantage.

Lime water is added to milk mainly to prevent the milk from curdling in large lumps after it reaches the stomach.

Salt—a saltspoonful to a glass of milk, is sometimes added to improve its digestibility. "It renders it less likely to cause biliousness." Thompson.

Bicarbonate of soda or ordinary baking soda (about what might be heaped on a dime) to a glass of milk is occasionally put into the milk to correct excessive acidity of the stomach.

Vichy, or plain bottled soda water are often combined with milk. These relieve the flatness of the milk, and tend to prevent the disagreeable after-taste in the mouth of which some patients complain.

Impure Milk.—As milk forms the main (often the whole) food for sick people, infants and small children, it is highly important that it should be as free from impurities as it is possible to secure, and that after its delivery it be kept in a cool place and in covered clean receptacles. Many cases of tuberculosis, diphtheria, typhoid fever, and other communicable diseases have been traced to the milk supply. It is also a common cause of infantile diarrhea.

Pasteurized Milk.—Where there is reason to suspect that the milk is not as pure as it should be, pasteurization is frequently resorted to. Pasteurizing consists in

heating the milk to about 167° F. and keeping it at that point for twenty minutes. This has the effect of killing the germs most commonly found in milk that render it dangerous. A little instrument known as a pastometer has been designed to show just when the pasteurization temperature has been reached. It is inserted in the bottle in which the milk is heated. When the temperature of the milk reaches pasteurization point, a needle is automatically thrown up. After the milk has been kept at that point for about twenty minutes it should then be cooled and placed on ice.

Sterilized milk is milk which has been heated to the boiling point, 212° F. Many medical authorities claim that sterilized milk is more difficult to digest than raw milk, and also that certain of the nourishing properties are lessened.

Predigestion of milk is accomplished by adding pancreatin or some other digestive substance to the milk before it enters the body. In all cases where this is necessary to be done a physician should be asked for definite directions as to what digestive preparation is to be used. Full directions accompany most of the preparations commonly used for digesting milk.

Buttermilk is more agreeable to many patients than whole or skimmed milk and may safely be alternated with ordinary sweet milk in most cases. It contains practically the same amount of nourishment as skimmed milk. It lacks the fat of whole milk.

Broths and beef tea vary in their food value, and often contain very little real nourishment, but when properly made are useful invalid foods. They are slightly stimulating and help in many cases by affording variety, even if the amount of nourishment in them is not great. If continued for any considerable time they are apt to cause diarrhea, and as a rule are best avoided when diarrhea is present or there is a tendency to it.

Gelatin jelly made with different flavors according to directions accompanying the package can be safely

used in most cases in which a fluid or light diet is prescribed. A kind known as "minute gelatin" sets quickly and can be obtained from ordinary groceries.

Albumin water which is made by combining the white of an egg with water and usually some fruit juice and sugar for flavoring, can often be taken by invalids with weakened digestive powers when the whole egg could not be digested. It is much used in protracted fevers, being given alternately with milk. Add the fruit juice and sugar to the unbeaten white of the egg and beat or stir until thoroughly blended. Then add the water.

Eggs contain a large amount of nourishment and are especially valuable in convalescence after wasting diseases. The yolk of the egg contains more fat and more actual nourishment than the white, but is less easily digested.

Feeding in Typhoid Fever.—There is probably no one disease which causes the home nurse more perplexity in regard to diet than typhoid fever, especially if the patient does not take kindly to milk. A much more varied and liberal diet is now allowed by physicians in this disease than was the case years ago, though much care and judgment needs to be exercised. If the patient can take broths, a good variety can be obtained in clear soups by cooking in the soup fresh vegetables in a muslin bag, varying the flavor from day to day. Gelatin and white of egg and fruit juices afford a wide range of choice in methods of preparation. A couple of days' menus might be as follows:

6 A. M. Cup of coffee made with one-half milk, the milk being heated before being added.

8 A. M. Broth.

10 A. M. Dish of junket.

Noon. Orange jelly and cup of weak tea.

2 P. M. Albumen water flavored with lemon or grape juice.

4 P. M. Broth.

6 P. M. Ice cream or sherbet.

8 P. M. Broth or junket.

10 P. M. Cup of cocoa.

Midnight. Glass of buttermilk or sweet milk.

Ice cream can be made in small amounts quickly by using a large baking powder can for a freezer and packing it in a small bucket of ice and salt.

Snow pudding made with whites of eggs, gelatin, and water, beaten till quite stiff, makes an attractive dish for very ill patients, and because it is semisolid and can be eaten with a spoon is likely to be relished. Dissolve 2 tablespoonfuls of granulated gelatin, in 2 tablespoons of cold water; add sugar to taste and a tablespoon of lemon juice, and when the gelatin is dissolved, a cupful of hot water, stirring all the time. Set in a cold place till almost firm. Then beat into the gelatin, the white of an egg beaten stiffly. Set it on ice till quite firm. This melts to a fluid when in the mouth and can be given to most patients suffering from fever of any kind.

Cottage cheese is given in moderate quantities by many physicians to patients with typhoid fever at any time throughout the disease.

The Care of Milk in the Home.[1]—Milk is a perishable food. The length of time it remains sweet depends largely on the care it receives after delivery to the consumer. Keep it clean, cool and covered and it should remain sweet during the 24 hours in which it should be used.

Germs, to grow, require three important things, namely: food, moisture and moderate heat. Milk furnishes food and moisture and the room air furnishes the necessary warmth. Milk is therefore a very good medium for the growth of germs if not kept cold.

Dust, dirt and flies are the carriers through which germs get into milk. Milk, therefore, should be protected from dust, dirt and flies.

Remember: the most important rule about the care

[1] From bulletin of New York Sanitary Milk Dealers' Association.

of milk is: **keep the milk clean, keep it cold, and keep it covered.**

Arrival of the Daily Supply.—1. Do not allow milk to stand on the dumb-waiter, stoop, window sill or other place where the driver leaves it. Place it promptly in the ice box.

2. Keep your ice box cold. Keep it well stocked with ice. You cannot obtain good refrigeration without a well filled ice compartment.

3. Keep your refrigerator clean. Keep it free from disagreeable odors. Milk absorbs unpleasant odors very readily. Strong smelling foods such as onions, garlic, and strong cheeses, should not be kept in the same compartment with milk or butter.

4. Where ice boxes are not available, some makeshift arrangement should be provided. The Department of Health has recommended the following:

"An emergency ice box may be constructed by placing a piece of ice in a covered tin pail or bucket having a hole in the bottom. An old leaky pail will answer.

"Place the bottles of milk in direct contact with the ice, and cover the whole with a heavy cloth or blanket. The pail may be kept in the sink."

5. The Sanitary Code provides that milk should be kept at 50° F. or lower. Milk purchased from stores should be delivered in a clean condition and at or below the required temperature.

6. Keep the milk prepared for infant feeding in nursery bottles in the ice box until just before using. The practice of heating the baby's milk at evening and keeping it warm until the night or early morning feeding is very bad. The heat thus maintained is most favorable to the growth of germs.

Use and Protection.—1. Return promptly to the ice box any unused portion of milk. Standing in the warm room will greatly hasten the growth of germs. Keep the milk tightly covered, so that dust, dirt and flies may not enter.

2. Wipe the mouth of the bottle carefully with a **clean** towel before removing the cap. Use a sharp pronged instrument, inserted diagonally into the center of the cap, to remove it. Keep this instrument clean. Lift the cap with care and rinse it in clean running water before replacing it.

Do not use large steel knives, shears or other heavy implements to remove the cap. Such instruments splinter the glass, particles of which may enter the milk.

Many dealers, on request, will supply convenient implements for this purpose.

3. Pour the milk into clean receptacles. Dirty vessels will as readily contaminate the milk as will dust, dirt and flies.

Place milk dipped from cans or tanks only in clean covered pails or other covered receptacles.

4. Mix the milk well before using. Inverting the bottle rapidly two or three times will accomplish this. Cream separates and rises to the top, making this necessary.

5. Pour only enough milk from the bottle for the the specific use. Do **not** put any unused portion back with the milk from which it was taken, but place it in the ice box in another covered vessel.

6. Do not keep more than one day's supply of milk at a time. **Order a fresh supply daily.**

Treatment of Empty Containers—1. Wash the milk bottles before returning them to your dealer. This is required by law. The proper way to wash a milk bottle is to first rinse it thoroughly with cold water. When all the milky film has been removed from the inside, then wash carefully with very hot water. All vessels used for holding milk or cream should be cleansed in the same manner.

2. Do not use milk bottles for any other purpose than the holding of milk or cream. Such other use is prohibited by law.

3. Rinse nursery bottles and nipples in cold water

and wash in boiling water immediately after each feeding. Turn the nipples inside out and thoroughly cleanse. Rinse the bottles and nipples again in boiling water before using.

4. Return empty bottles to the dealer daily after cleaning.

Legal Requirements.—The law covering the cleaning and use of bottles reads as follows:

SANITARY CODE.

Sec. 183. "*Milk Receptacles.*—It shall be the duty of all persons having in their possession bottles, cans or other receptacles containing milk or cream, which are used in the transportation and delivery of milk or cream, to clean or cause them to be cleaned immediately upon emptying.

"No person shall use or cause or allow to be used any receptacle which is used in the transportation and delivery of milk or cream for any purpose whatsoever other than the holding of milk or cream; nor shall any person receive or have in his possession any such receptacle which has not been washed after holding milk or cream or which is unclean in any way."

Finally.—**Keep the milk clean, keep it cold and keep it covered.**

Points to be Remembered.—It is not the food which a sick person takes, but only that which can be digested and assimilated which becomes a help to his recovery.

The manner in which food is prepared and served has a great deal to do with its digestion.

Food is a far more important factor in many diseases than drugs.

Diseased and weakened tissues of the body must be replaced by new healthy tissues. This new tissue must be formed from the food.

Enforced inactivity makes it more difficult for the body to throw off the waste that is being constantly formed.

Food for the sick should be chosen with a view to lessening the amount of waste and affording the greatest amount of nourishment in easily digestible form.

In nearly all sickness accompanied by fever it is important to give the patient plenty of water to drink.

Milk is a food rather than a beverage and should be used as such. It is one of the most valuable of all foods in sickness.

There is much to learn about how to give milk to the sick so that it will be easily digested. The home nurse should be careful about the little details in giving milk.

Do not give milk and medicine at the same time unless told to do so by the doctor.

Buttermilk often agrees better with some patients than sweet milk. In most cases of prolonged sickness it can be used to alternate with sweet milk.

Many sick people can be persuaded into eating junket when they would protest against taking milk. It can nearly always be used to give variety to a milk diet in an invalid.

In cities, the care of the milk and the milk bottles is an important duty which the home nurse cannot afford to be careless about.

REVIEW QUESTIONS.

1. State the general principles that should govern the feeding of the sick.
2. What foods are especially useful when fever is present?
3. Mention some general precautions which should be observed in giving milk to the sick.
4. When a patient is on a milk diet what can be done to give it variety?
5. Why are barley water and oatmeal water sometimes added to milk for infants and invalids?
6. What effect does lime water have when added to milk?
7. What is meant by the term "pasteurization?" Why is pasteurization needed?
8. How is pre-digestion of milk accomplished?
9. What element of milk is lacking in buttermilk?
10. What is albumin water and how would you prepare it?

11. Why is scrupulous care in regard to cleanliness of milk important?
12. What are the most important rules regarding the care of milk in the home?
13. Show how disease may be spread by means of milk-bottles.
14. How should empty milk-bottles be cared for in the home?

CHAPTER VIII.

FEEDING THE SICK (continued).

Demonstration and Practice Work.—Setting a tray. Methods of serving liquid, semi-solid and full diet.

The manner in which food is cooked and served has much to do with the appetite for it and appetite has much to do with digestion.

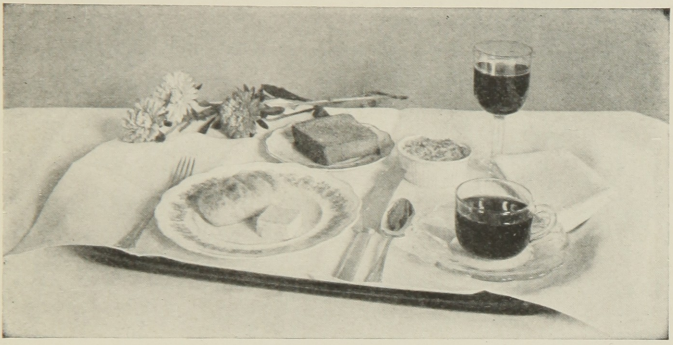
Kinds of Invalid Diet.—In the feeding of invalids there are four grades of diet recognized, besides the so-called special or restricted diets which are required in dealing with such diseases as diabetes, various forms of digestive diseases, and others in which the diet is the most important feature in the treatment.

1. Fluid or liquid diet.
2. Semi-solid diet.
3. Light diet.
4. Regular or "full" diet.

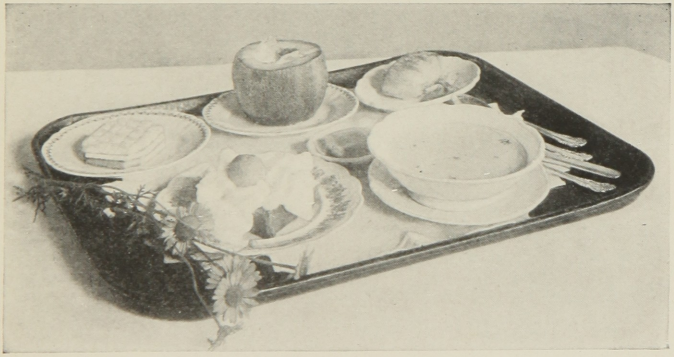
Fluid Diet.—For patients on fluid or liquid diet such foods as the following, are included: beef-tea, beef-juice, chicken broth, mutton broth, gelatin, ice cream, and water ices, barley water, cocoa, albumen water, certain forms of strained gruel, buttermilk, and milk served in its natural state, or in its almost numberless combinations that vary the flavor.

Semi-solid Diet.—For patients on semi-solid diet such foods are suitable as oatmeal gruel, or well cooked cereals, custards, egg nogs, blanc mange, rice, tapioca, sago, prune or apple whips, milk toast, soft boiled eggs, and bread and milk—these in addition to the foods mentioned in the liquid diet list.

Light Diet.—For patients on light diet such additions are made as bread, crackers, toasts, some fruits, certain



A very light diet tray.



For the patient on light diet.

kinds of fish such as oysters, clams, and the white-fleshed fishes, poultry, and game, all meals being served in small quantities.

Regular diet may include any of the above articles with beef, mutton and other meats added, certain vegetables, and all fruits.

Convalescent Diet Suggestions.—For patients in the first stage of convalescence those who have weakened digestive powers especially, fish, chicken and the shorter-fibered meats are usually served in small quantities, before beef, mutton, and other more difficult meats to digest. Many articles that are permitted in health have no place in the invalid's bill of fare. Boiled cabbage or cucumber pickles or boiled dumplings, for instance, are much better not served to the average invalid, even though the doctor may have given permission for the patient to eat anything. Even though digestion is not seriously impaired, the general functions of the body are sluggish through lack of exercise, and it is unwise to put unnecessary work on the organs that throw off waste matter.

Food Preparation and Serving.—It should be borne in mind that because the range of foods admissible in the invalid's dietary is limited, special care must be used in the preparation of the materials allowed, so that no carelessness or failure on the part of the nurse shall spoil the meal or cause a distaste for foods, or which would tend to monotony, when every effort should be made to secure variety. To give variety while adhering to simple, easily digested foods, to excite appetite, and at the same time avoid the use of "indigestibles" which the invalid often craves, calls for skill and good judgment.

In no other part of nursing do little things count for more, and the importance of the little things is rarely sufficiently appreciated until years of experience have been gained. It has been a source of astonishment in dealing with nurses to find how few there are who on beginning their training know how to prepare and serve

a cup of tea, a piece of toast, or an egg so that the result could be pronounced "exactly right." The same is true of home nurses.

Toast and tea are the first thought in invalid feeding with many people. They seem such simple things to prepare, yet there are many details to be remembered in getting even this simple meal. A good deal of the time the toast served to invalids is either burnt, half done, or soggy, buttered over-much, or in patches, and served in slices so that the patient cannot possibly manage to eat it without getting his hands well greased. It would cost no more of either time or money to toast it a golden brown, put the right amount of butter on it, and serve it cut in squares between hot plates.

Quite as glaring and unnecessary failures are seen in the making and serving of a cup of tea. It is very often either made with water which was not boiling when poured on the tea, or the tea itself was allowed to boil; a cup of tea without a cover over it is sometimes poured in the kitchen and allowed to stand cooling while the remainder of the meal was served, or carried through a draughty hall or two till it reached the patient lukewarm. The careful home nurse will see that these blunders do not occur when she is in charge.

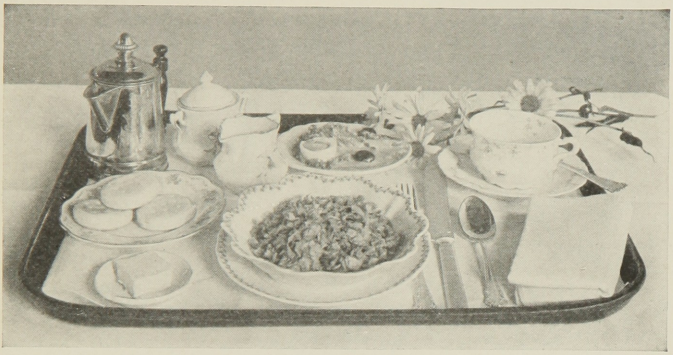
Essentials to Success.—These would include a great many details, but the very first is cleanliness.

1. *Cleanliness* of food, of utensils used in cooking, of all dishes used in serving, of tray linen, of the patient's hands and general surroundings.

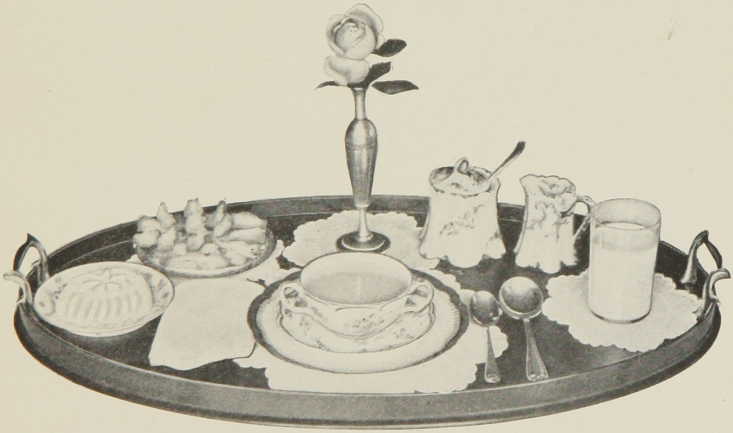
2. *Neatness.*—Next would come neatness. A meal and surroundings may be clean, but the tray be far from neatly or carefully set.

3. *Quality of Food.*—Food supplies should be the best quality obtainable; they should be fresh, there should be as much variety as is permissible.

4. *Preparation of Food.*—The methods used should be simple and the foods should be freshly cooked. Fried foods are not usually desirable for invalids. The sea-



The patient's convenience would have been promoted by having the teapot on this tray in the upper right-hand corner, and the teacup immediately in front of it in line with the plate.



A luncheon tray. (Photograph by courtesy of Woman's Home Companion.)

soning and flavoring should accord as far as possible with the patient's tastes. Usually in sickness the sense of taste is very acute, and less seasoning is needed. Strong flavors should be avoided. Fat should be carefully removed before serving broths. Gravies containing much grease are undesirable for invalids whose digestion is at all impaired. Foods twice cooked or warmed over should, as a rule, be avoided.

5. *Temperature of food* is exceedingly important. Hot foods should be served hot, but not so hot that the patient has to wait for them to cool before he can eat. Hot food should be covered in transit. Cold foods should be cold, never lukewarm.

6. *Amount of Food.*—Care should be used to avoid serving too much at one time and still be sure that enough has been given to satisfy, unless the amount is restricted.

7. *Punctuality.*—This applies to both cooking and serving. Punctuality and regularity in serving meals to an invalid is quite as necessary as in giving medicines. In the cooking of foods the time needs to be carefully considered. Custards intended to be served cold should be cooked long enough in advance for the cooling to take place. Many foods are spoiled by standing after being cooked. A baked potato is delicious and easily digested when cooked just right and promptly served, but what is more unappetizing than a baked potato that has remained after cooking in a slow oven till it is soggy and half cold. Tea is appetizing if made with freshly boiled water and served within three minutes after infusion. It is spoiled if prepared too long in advance. These illustrations might be multiplied indefinitely. Ices should not be served at the same time the hot food is served.

8. *Artistic touches* count for much more in the serving of meals to invalids than to persons in health. A patient who had no desire for food will often be beguiled into taking it, and will relish it if care is taken to present it in the

most attractive form. Daintiness about serving nourishment is a great help in attracting the eye and arousing interest. The prettiest dishes the place affords should be pressed into service, and when possible a change of pattern of dishes occasionally is worth while. If a single article or two of food only are to be served, a small tray rather than a large one should be used. Care should be used to avoid crowding a tray with too many dishes. It is better to use a second tray for serving dessert or fruit than to pile too much on one tray and have it lack in order and neatness. When the sickroom is not too far from the kitchen, serving a meal in courses is a good plan. As far as possible the element of unexpectedness should enter into a meal.

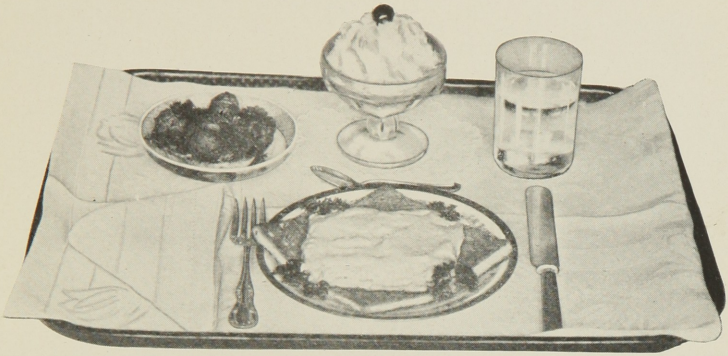
Elaborate garnishing of dishes should be avoided, but a touch of green is always permissible, and lettuce, parsley and watercress can be made to serve quite as useful a purpose in the sickroom as elsewhere.

A spray of maiden-hair fern or any of the dainty green effects can sometimes be used for decoration. The use of flowers on a tray is laudable, but these should be restricted to a single blossom with a touch of green or a full-blown flower of some of the dainty varieties. However one may admire an American beauty rose or a peony, or a large bouquet of any kind of flowers, they are out of place on a tray. A real good joke or an apt quotation, clipped from some of the current journals and laid on a tray, will often add zest to a meal and divert the patient's thoughts from himself.

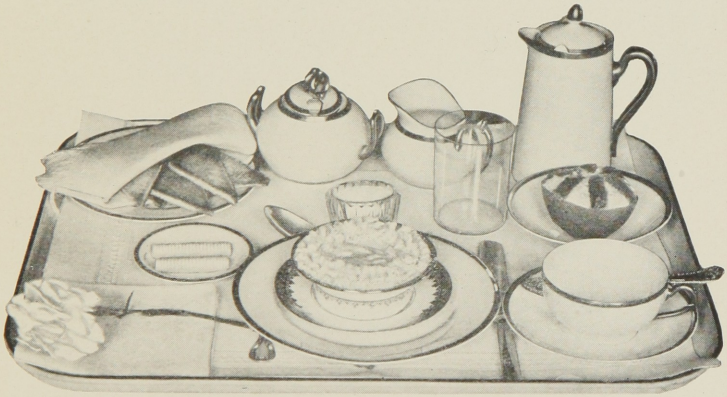
Cracked or unmatched dishes do find their way to invalids' rooms when it is entirely unnecessary. Green cups and blue saucers are hastily set together by careless nurses, but such blunders destroy any artistic effect the tray might otherwise have.

A great many dainty ways of serving bread have been discovered, and the same is true of potatoes and a great many of the simple foods.

9. *Position of the Patient.*—This is a highly important



A luncheon rich in protein—cheese toast, beef balls, and ice cream. (Photograph by courtesy of Woman's Home Companion.)



A light dinner tray. Creamed codfish with potato border, lightly browned; toasted triangles, and orange basket. (Photograph by courtesy of Woman's Home Companion.)

detail in the success of a meal. He should be made as comfortable as possible, and put in the most convenient position for taking the food. If he lies on his side, a small pillow at the back helps to support him. If he is propped up, the pillows should be tucked in snugly at the base of the spine, and arranged so that the head will not be thrown forward on the chest nor be left without support. Grasping of any part of the body with the finger-tips is an uncertain and uncomfortable method of giving support. If the hand is placed behind the back, the full breadth of the hands should be used, and a small pillow between the hands and the patient will increase the comfort. In short, the task of eating and drinking should be made as easy, comfortable, and pleasant to the patient as it is possible to make it.

10. *General Details.*—A thoughtful nurse will be on the alert to promote the convenience and comfort of the patient in every way during the meal. She will not allow a glass or cup to stand in a pool of fluid in the saucer and drip every time it is carried to the patient's mouth. She will, if necessary, cut the meat into small pieces. She will assist in pouring the tea, if desirable, in removing dishes used to keep the food hot, in preparing eggs boiled in shells to be eaten; in removing soiled dishes if the tray is crowded. She will at once remove the tray after the meal has been taken. She will not be guilty of leaving milk or food standing around in the sickroom in the hope the patient may suddenly desire it. Freshness, as far as it is possible to obtain it, is a good rule in all matters relating to food.

Feeding of Helpless Patients.—If the patient's head has to be raised to take the fluid food, it should be done by slipping the hand underneath the pillow and raising it rather than lifting the head only. Care should be used never to have the glasses or cups too full.

As a rule, when a patient craves water or fluids and the amount is restricted, it is better to give it in a small glass

which is nearly filled and allow him to empty it, than to give it in a large glass partly filled, which he is not allowed to drain.

Glass tubes used for feeding should be bent. Feeding cups should be held so as not to allow the fluid to flow too quickly.

Unconscious patients should have only fluid food, and it should be administered very slowly, from a spoon or medicine-dropper. Only a teaspoonful at a time should be given, and the nurse should be sure it is swallowed before giving more. If less than 1/2 teaspoonful is given it is not likely to be swallowed, as swallowing is not induced by a few drops of fluid.

When rectal feeding is necessary, the general rules given regarding administration of medicine by rectum should be observed. See page 106.

Points to be Remembered.—There are many points to be observed even in preparing and serving toast and tea.

Many otherwise good meals are spoiled because the food intended to be hot is cold or nearly so when it reaches the patient.

Always heat the dishes used in sending hot food to the sickroom and always cover the food to keep it warm.

Study the patient's likes and dislikes in regard to flavors in food. Try to make the food attractive to the eye.

Do not serve too much food at one time. Better whet the appetite with a little than disgust it with too much.

Arrange the patient as comfortably as possible when taking a meal in bed.

Watch the thousand and one little details that enter into a successful, enjoyable meal for the sick.

A well served meal on a tray calls for a good taste and good judgment in its arrangement.

REVIEW QUESTIONS.

1. Name the four classes of diet commonly recognized in invalid feeding.
2. Outline the chief foods which are included in each class.
3. Mention some articles of food which as a rule are better not served to patients in bed when full diet is permitted, and give reasons.
4. What rules should be observed in preparing a meal of toast and tea? Mention some common mistakes made in regard to these two foods.
5. Outline the main essentials to success in preparing and serving food to the sick.
6. What rules should always be regarded in serving hot foods to invalids?
7. Mention some things which help to make a tray attractive.
8. How may the home nurse promote the invalid's comfort during a meal?
9. Give some rules that should be observed in feeding helpless patients.
10. How would you give food to a patient who was unconscious?

CHAPTER IX.

SYMPTOMS OF SICKNESS.

Demonstration and Practice Work.—Temperature taking and chart keeping. Disinfection and care of clinical thermometer.

To detect signs of sickness means often to be able to prevent sickness. It is neither wise nor necessary to be an alarmist and imagine that a serious disease is threatened whenever a member of the family complains of not feeling well. But, on the other hand, it is unwise to shut our eyes to real conditions when they exist.

Loss of Appetite.—One of the first signs of sickness which the home nurse will observe is that the member of the family misses a meal or is not hungry. This symptom alone is rarely serious. In ancient days, weekly or periodical fasts were enjoined, and we may well believe that these, like many other regulations in biblical times, were ordered with a view to improved health as well as to promote the devotional spirit. If the loss of appetite continues, if it is accompanied by vomiting or other digestive disturbances, pain or fever, then the home nurse may properly be concerned about it.

Fever Symptoms.—In a great many diseases the early symptoms are similar. There is a rise of body temperature, hot, dry skin, thirst, increased pulse rate, loss of appetite, often amounting to a disgust for food, coated tongue, headache, pain in a greater or lesser degree in the back and limbs, with very often more or less digestive disorder. When most, or several, of these symptoms exist at the same time the home nurse should be on the alert for other signs which will help her to detect the trouble or the real nature of the ailment. It is a common blunder to give a name to these symptoms, and say "he

is going to have scarlet fever," typhoid fever or some other serious ailment, when often the real trouble is that the child or the man had too much Christmas or Thanksgiving dinner. Overloading of the stomach by children at holiday seasons has often produced all the symptoms above described. In fact it is not uncommon for a child to become so poisoned from eating more food than the body could digest, or than the organs that throw off waste could deal with, that he has lain in a stupor for two or three days with high fever, diarrhea, vomiting, rapid pulse, excessive thirst, perhaps all the fever symptoms mentioned. Sometimes constipation instead of diarrhea exists and when this is relieved the other symptoms will soon subside.

Temperature.—The body is all the time producing heat. The foods supplied to it are like so much fuel consumed, and the degree of heat or cold is called the temperature.

The average normal temperature of the human body is 98.6° F., but it varies a fraction of a degree both according to the time and the location of the body. The temperature is lower in the morning than in the evening as a rule, and if taken in the rectum will be slightly higher than if taken in the mouth.

Age has also an influence on temperature. In the child, the temperature is somewhat higher and in advanced age lower than the normal average. In children the machinery of the body is easily thrown out of order. Very high fever often comes from very slight causes, while it may as quickly subside as it arose.

A clinical thermometer is necessary to accurately ascertain the body temperature. These thermometers are made to register usually within a range of about fifteen degrees, beginning with 94° or 95° up to 110° F. The thermometer should not be subjected to a greater heat then 110° F., which usually is the full registering capacity. A temperature of 105° F., may be regarded as extremely serious, though the danger depends con-

siderably on the nature of the disease. Likewise at the other extreme when the temperature drops below 97° it ought to cause alarm. But the home nurse should be sure that the temperature was properly taken, for mistakes may very easily be made. When the temperature rises above 99° F. the patient should be watched, and if it tends to rise or goes above 100° F. it is a wise thing to insist on quietness, rest, and light diet. If it remains above 100° F. for any considerable time it will be well to consult a doctor.

To take the temperature shake the mercury down at least two degrees below normal and have the thermometer clean. The temperature is most frequently taken by mouth. Place the bulb of the thermometer under the tongue and see that the lips are firmly closed for at least three minutes. Always warn a child or a new patient to be careful not to break or bite the bulb. It is never wise to put a thermometer in the mouths of small children or delirious patients.

The temperature of babies and small children and also of delirious or unconscious patients should be taken by rectum, always using a separate thermometer for this purpose if possible. Oil the bulb and insert it about two inches after turning the patient on one side. Always remain constantly beside the patient while taking the temperature in this way. A sudden lurch might easily break the thermometer and leave the broken glass in the rectum. The temperature may also be taken in the axilla and vagina. The axilla temperature is more likely to be uncertain, and as a rule registers lower than in the mouth or the rectum.

Care of the Thermometer.—Always wash the thermometer carefully in cold water after using it before replacing it in the case. When the patient has a communicable disease the thermometer should be washed in a disinfectant after using. Otherwise the germs of the disease may be carried to the next patient who uses it. In the absence of other disinfectants the nurse may

use a solution made by dissolving a teaspoonful of baking soda in a glass of water.

Time of Taking Temperature.—There should be regular times for taking and recording the temperature in any prolonged illness. It should be taken morning and evening at about the same hour each day in any case of continued fever. The doctor will usually give directions as to how many times each day, besides morning and evening, he wishes the temperature taken. Every four hours in serious illness is a common rule. Under exceptional circumstances for a day or two he may

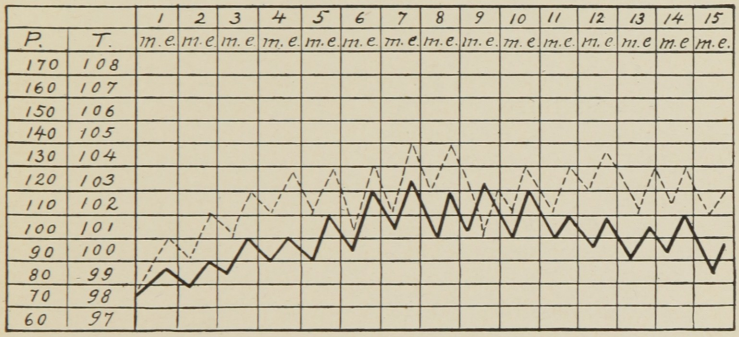


FIG. 21.—Chart of the temperature (———) and pulse (. . . . .) in typhoid fever of moderate severity in a male child five years old. (*Kerr.*)

wish it taken every three or even two hours, but without definite orders it is rarely wise or necessary to test the temperature oftener than once every four hours. Some home nurses who have learned to use clinical thermometers, in their over-anxiety have bothered the patient by taking the temperature every fifteen or twenty minutes, a procedure wholly unnecessary and undesirable.

The Recording of the Temperature is Important.—In all cases the time at which it was taken should be written down when the degree of temperature is recorded. If taken otherwise than by mouth the fact should also be stated.

The average normal pulse rate is 72 beats to the minute in a healthy adult. During a baby's first year it is likely to be from 105 to 120. In childhood it varies, always being more rapid than in adult life. At the age of six a pulse rate of 100 has been given as a normal average; at eight to ten a pulse rate from 80 to 90 may be considered normal.

To find the pulse rate, place three finger ends over the artery where it approaches the surface of the body at the outer side of the wrist, and count for a full minute. To make sure, it is well to count twice for a half minute at a time and see if the counts agree. To count the pulse accurately is never an easy thing at first, and intelligent observation regarding the character, strength and rate of the pulse comes only as a result of continued practice. This method of observing symptoms may be easily practiced on healthy people, noting the difference in the rate after running or active exertion, sitting, standing, or lying. The strength of the pulse should also be noted. The pulse rate in a child is influenced by very slight causes, and in an adult the rate may vary very much in health. Exercise, and excitement of any kind influence the rate and when fever is present the pulse is more rapid.

Respiration.—By this we mean the act of breathing, the taking in and giving out air from the lungs. The average rate of normal respiration per minute is 18 in adults. In infants it is extremely variable, it may range from 44 to 24. From 4 to 15 years the rate may range from 20 to 25 per minute. It should be remembered that the act of breathing in and breathing out of air, together count one respiration. Excitement or exertion will increase the rate. To estimate the frequency of the respiration, watch and count the in and out movements of the chest or place the hand lightly over the chest or abdomen when the patient is quiet or sleeping.

Temperature, pulse and respiration are three very important symptoms which should be considered together,

and taken and recorded at or near the same time. Of the three, the pulse rate is the most valuable indication. The temperature may be high, but if the heart action, as indicated by the pulse, remains strong and regular, there is little reason for great alarm.

Points to be Remembered.—Avoid being an alarmist. Do not imagine that every threatened illness must be dignified by the name of a serious disease.

Fasting a day or two will do more to cure some conditions than drugs.

Do not try to force a child or adult to eat when he is not hungry.

In a great many diseases the early symtoms are very much the same.

Remember that children are liable to have much wider variations in temperature than adults. Trifling disorders are often sufficient to produce high fever in a child.

Do not wash the thermometer in warm water. If too warm it is bad for the thermometer, and it often leads to undue alarm if it registers high and is not shaken down.

Try to be regular in the time of taking temperatures. Do not trust to your memory, but write down at once the degree of temperature registered. Remember that there are many conditions which cause the pulse rate to vary. The pulse is a much more important indication of the patient's condition than the temperature.

Temperature, pulse and respiration should be considered together.

REVIEW QUESTIONS.

1. Mention some symptoms common to all fevers.
2. What is the average normal temperature?
3. How may the degree of the body temperature be tested?
4. What degree of temperature above and below normal would you consider serious?
5. Mention some precautions which you would use in taking the temperature of a child or a delirious patient.

6. What is the average normal pulse rate?
7. How would you count the pulse?
8. In case both arms and hands were bandaged how might the pulse be counted?
9. What do you mean by respiration?
10. What is the average normal respiration, and how would you count it?
11. Mention some conditions which influence both the rate of pulse and respiration.
12. Of temperature, pulse and respiration which is the most important?

CHAPTER X.

SYMPTOMS OF SICKNESS (continued).

Demonstration and Practice Work.—Counting pulse and respiration. Keeping bedside notes.

Pain is a common though not invariable symptom of disease. It is one of nature's signals of danger, to warn us that some part of the body machinery is not working as it should.

The degree or intensity of the pain is something which only the patient knows, and often he fails to describe it at all accurately. Many patients do not bear pain well and exaggerate in regard to their sufferings. Others make light of pain when it is quite serious. When a child complains of pain, it is wise to ask him to put his hand over the part in which the pain is. A child often complains of headache or other ailment because he has heard grown up people complain. The home nurse should notice whether the pain may be relieved or increased by change of position. Also whether it is a constant or spasmodic pain, and if there are external symptoms such as redness or swelling of the part.

In a book of this character with limited space, only a few of the more important indications of disease can be mentioned. Each case will have its own distinct features. It is always well to be on the alert to note and mention to the doctor symptoms which seem a deviation from the normal condition, even though the home nurse may not be able to judge as to their importance. She should also try to be sure she is giving the doctor facts, not her own opinion or the patient's.

The position in bed tells something to the practiced eye. If the patient has a tendency to fall on his back or

lie on one side constantly, if the limbs are drawn up, if he has difficulty in breathing and asks to be propped up, if lying on his chest or abdomen seems to relieve pain, if he is restless or nervous or quiet, because movement causes pain; all these are worthy of mention when the doctor comes.

Bowels.—The discharges from the bowels are always important to observe. Notice whether these are constipated, dry and hard, or soft and watery, whether there is pain at the time the bowels move or after, whether the movements are small and frequent, whether there are particles of undigested food or traces of curdled milk, whether there is any sign of blood or any changes from the ordinary or normal color. The regularity or frequency should always be noted.

Urine.—The average healthy adult discharges from the body each 24 hours not less than 2 1/2 pints of urine, though the amount in health varies. The home nurse who is in charge of a bed patient should be able to tell whether or not there seems to be too much or too little urine thrown off, and whether there is anything unusual about its appearance. In many cases it may be necessary to save a specimen for the doctor to examine, and also to measure the amount passed.

For measuring urine a wide mouthed bottle can be used. Paste a strip of paper on one side from bottom to top. With the little measuring glasses used for medicine which can be secured at any drug store, measure one ounce of water—two tablespoonfuls—and pour into the bottle. With a pen or indelible pencil draw a line on the strip of paper, and pour in another ounce, marking the point on the paper reached when the bottle is standing on a level table. Continue pouring and marking carefully, till the paper has recorded the number of ounces the bottle holds. Such a method is easily followed, and is much more reliable than any guess work in regard to quantities.

To secure a specimen of urine be sure first of all that

the vessel which is to receive it is clean. Scald it before giving it to the patient. The first urine passed in the morning is often asked for. If it is to be sent to the doctor's office for examination put it in a perfectly clean bottle, cork it with a clean cork, and have the patient's name affixed to it.

The quantity of urine secreted in 24 hours is important to know. To ascertain this start to count from some hour when the bladder has been emptied. For instance, if one wished to know how much urine was secreted by the kidneys from four o'clock one afternoon till four o'clock the next, empty the bladder at four o'clock. Do not count the quantity passed at that time, for the same reason that if you wished to measure the quantity of rain that fell from a given point on the roof, you would place an empty bucket, not one that was partly full.

Chills are always an important indication that something is wrong. Sometimes a chill is an indication that pus is forming somewhere in the body. Sometimes at the beginning of pneumonia or scarlet fever and in the course of some forms of blood poisoning chills occur. There is a difference between a real chill and a chilly feeling. With a real chill there is practically always a fever, even though the patient feels cold and is shivering. A nervous chill sometimes occurs after severe pain or because of excessive nervousness. The nervous chill usually passes away quickly and is rarely serious.

Puffiness around the eyes or on the backs of the hands, or in the feet and ankles should never be regarded lightly. The trouble may be temporary or not very serious, but neglect to consult a doctor regarding these conditions very often brings serious consequences. In most cases if treatment is started in time serious trouble is avoided.

Danger Signals in Children.—Many diseases and deformities may be prevented if the home nurse is wise enough to see conditions and tendencies before the

trouble is far advanced, and consult a wise reliable physician.

Mouth breathing is an important sign that something is wrong. Either the nose is stopped up by secretions or there is a growth at the back of the nose.

The trouble is frequently associated with enlarged tonsils. The child who is a mouth breather sleeps poorly, snores and usually has a "running" nose; the voice has an abnormal sound and clear pronunciation is impossible. Such conditions frequently lead to earache and deafness. The child who is a mouth breather will not get on well at school, has a stupid, vacant, awkward look and will have a hard time later on, to get or keep a job. He is both physically and mentally handicapped. The growth or obstruction to breathing is easily and quickly removed and this should be attended to in every case. Chronic mouth breathing is not a habit that children will grow out of.

A bad breath is another danger signal that should be heeded. It may come from decaying or dirty teeth, from a disordered stomach or food tract or from catarrhal trouble, but the cause in any case should be searched out and removed. In a great many diseases, the infectious germ enters the mouth, and bad teeth enlarged tonsils and adenoids harbor germs and render the child especially susceptible to disease.

Keeping the teeth in good order, and giving the mouth a thorough housecleaning twice a day, will do much to prevent disease germs finding lodgement in the body and also keep the breath pure.

Slight lameness or an awkward walk is often supposed to be due to growing pains and neglected. It may be the first pronounced symptoms of hip joint disease. The frequent desire to lean against some support, the high hip or shoulder, the inclination to stand with the abdomen protruding, or upon one leg, sudden starting or crying during sleep, squinting, fidgeting, jerking movements, twitching of the face, repeated attacks of gid-

diness, excessive nervousness, lumps, small or large, often found under the jaw, chronic discharges from the eyes and ears, frequent earache, and such troubles as ringworm, itch, eczema, worms in children are all signs that call for an examination right away.

CLINICAL CHART

PATIENT Miss Mary Smith DR. Paul Jones

ADDRESS City ADMITTED Jan. 4, 1912

ROOM 47 NURSES Mary Brown

DIAGNOSIS Pneumonia

DATE	HOUR	TEMP.	PULSE	RESP'N	URINE	STOOL	SLEEP	NOURISHMENT	TREATMENT	REMARKS
Jan. 7				Sunday						
A.M.	2.	101.6	102	22					Cough mixt. 3T	
	3.							Milk 6oz.		
							2hr.			
	6.	101.2	102	22	X			Broth 6oz.	Cough mixt. 3T	A rather restless night.
	7.									Alcohol rub.
										Perspiring freely
	9							Egg nog 6 oz.	Strych gr. 1/30	
	10.	99.6	104	24					Cough mixt. 3T	Dr. Jones called.
	11.30				X	X good				
	12							Strained soup 6oz.		Sputum streaked with blood. Cough loose.
P.M.	2.	100.6	104	28					Cough mixt. 3T	
	3.							Orange albumen 6oz		
	4.	104.2	120	32					Strych. gr. 1/30	Cold sponge.
	4.30	103.6	120	32	after	sponge				Ice bag to head.
	6.							Milk 6oz.	Cough mixt. 3T	
	7.	103.2	114	34	X					Cold sponge
	7.30	102.6	108	32	after	sponge				
	9.									Dr. Jones called.
	9.						1hr.	Broth 6oz.		
	10.	103.2	114	36					Cough mixt. 3i Strych. gr. 1/30	Cold sponge
	10.30	102.2	106	34	after	sponge				
	12.						1hr.	Orange albumen		
				Monday						
Jan. 8	2	102.	104	28	X		2hr.		Cough mixt. 3i...	Comfortable;
	3.30						1 hr.	Broth 6 oz.		
	4.									Head aches.
								3½ m -		

FIG. 22.—Bedside report.

Keeping bedside notes is quite often a duty which the home nurse is called on to perform in cases of serious illness. The points which are usually recorded are the temperature, pulse, and respiration, sleep, diet and

medicine taken by the patient, the discharges from the bowels, and of urine, and the result of special treatments.

Each disease has its own manifestations and changes, which are placed in the column for "remarks."

Points which are of special importance in making reports for the doctor are: the time at which the thing recorded really occurred, absolute truthfulness, and clear definite statements. Instead of saying he took some milk, say "he took a half tumblerful of milk" or whatever amount he took. Instead of saying "slept pretty well" say "slept 5 or 6 hours." If the patient complains of pain try to state the location of pain. The doctor must often be guided in his treatments by the reports made by the home nurse, and suppositions or opinions are poor things to use as guides in serious cases. State facts which you positively know. Never try to conceal anything from the doctor. If you have made a mistake be sure to tell the doctor about it.

Points to be Remembered.—A great deal of the difference between the trained and the untrained nurse is in their ability to see and to describe accurately their observations.

Try to give the doctor facts rather than opinions.

Neither exaggerate, lessen, color, nor suppress the truth about a patient's condition.

The amount of urine passed is affected by various conditions—perspiration, excitement, the amount of water drunk, etc.

The mouth breathing child is handicapped, and neglect to have the trouble remedied leads to serious results.

In practically all cases of lameness and deformity a child can be relieved or helped if taken to the right kind of a doctor at the right time. There are specialists in this branch of work in most large cities. Avoid the advertising "specialists" or the advertising doctor of any kind. The best doctors do not advertise their cures or methods through the daily or weekly press.

Neglect of throat troubles is a common cause of deafness.

Do not neglect a bad breath as though it were an unimportant thing. It is practically always an indication that some part of the body is out of order.

In keeping bedside notes for the doctor study to have them concise, full, accurate and neat. The doctor does not see much of the nursing, but he sees the notes, and his opinion is materially influenced by them.

REVIEW QUESTIONS.

1. What observations should the home nurse make regarding pain?
2. What should be noted in regard to position assumed in bed, especially in cases of serious illness?
3. In preparing a specimen of urine for a doctor to examine what precautions should be observed?
4. How would you know that a patient was having a genuine chill? What would you do?
5. What is a common cause of mouth breathing and what should be done to remedy it?
6. Name several causes for a bad breath.
7. Mention some "danger-signals" which are often neglected.
8. What are the chief characteristics of a well-kept bedside record?
9. What symptoms would lead you to suppose that a child had fever?
10. Prepare a report for 12 hours of a severe case of grippe of which you had charge.

CHAPTER XI.

BATHS AND PACKS.

Demonstration and Practice Work.—How to give a sponge bath to reduce fever. Administration of foot-bath, pack, Scotch douche to a joint.

It is well for the home nurse to remember that water is the most valuable and most easily obtained remedy that she has at her disposal. It can be used in a greater variety of ways than any other single remedy.

The Uses of Water.—Some of the uses of water in the sick room are:

To check local inflammation.

To reduce fever.

To slow the pulse and relieve restlessness.

To relieve pain.

To check hemorrhage.

To help throw off waste matter.

As a stimulant.

In a previous chapter, directions were given for giving a simple cleansing bath to a patient in bed.

The cold sponge bath is one of the methods used most frequently to reduce fever. When properly given it is one of the most useful forms of treatment, especially when the skin is hot and dry, but unless care is used, such a bath may leave the patient with a temperature higher than it was before giving it.

Before giving the bath, the temperature, pulse and respiration should be taken. Take off the gown and put the patient between thin old blankets as for a sponge bath. Protect the pillow with a towel. Wring a towel out of ice water and put it on the head, or use an ice cap if one is obtainable. Change or re-wet the towel as it becomes

warm. If the feet are cold, apply a hot water bag or artificial heat of some kind. Have a large basin of water ready, and a large sea sponge or soft wash cloth. The doctor will give direction as to the temperature of the water. The cooling effect is produced to a large extent by evaporation and does not depend entirely on the coldness of the water. It is well to start with the water about 60° to 65° F. When possible, have a piece of ice ready to put in as the sponging proceeds. Do not have the sponge wet enough for the water to drip.

Begin by sponging the face and neck. Keeping the parts covered, sponge the arms and body lightly and slowly till the parts feel cold to the back of the hand. Do not use a towel, but let the skin absorb as much water as possible, and let the drying take place by evaporation. Next sponge the arms all over, using light downward strokes. On the inner surface of the arms the large blood-vessels come nearer the surface than on the outer side, and more time should be given to these parts. Next, bare the chest and abdomen down to the hips, and with long light strokes, cooling the sponge with every third or fourth stroke. If the fever is very high and persistent it is a good plan to wring a towel out of cold water and apply it to the chest and abdomen while the sponging is going on. Sponge the legs next. Take one leg at a time, keeping the other covered. Bend it at the knee, and sponge, taking about five minutes to each leg. Turn the patient over on one side, and sponge the back.

The cold sponge bath should take at least half an hour. Leave the patient lightly covered for about fifteen minutes for the drying to take place. Then put on the gown and make the patient comfortable. Such a bath when properly given should be a help in quieting nervous symptoms as well as reducing the fever.

Foot-baths.—A foot-bath may be given to a patient in bed without danger of wetting the mattress, by turning the patient across the bed and letting the feet rest on a chair. Have a bucket or foot-tub with water as

hot as can be borne and sufficient to reach the knees. Have hot water ready to add to keep the water at a desired temperature.

Cover the chest and legs down to the knees. Have an old blanket or cotton quilt to wrap around the knees and enclose the tub. If mustard is to be added use about a tablespoonful to an ordinary bucket of water, rubbing the mustard to a paste in cold water before adding it to the bath-water. The foot-bath should be followed by brisk rubbing of the extremities. The limbs should be warmly wrapped and artificial heat applied.

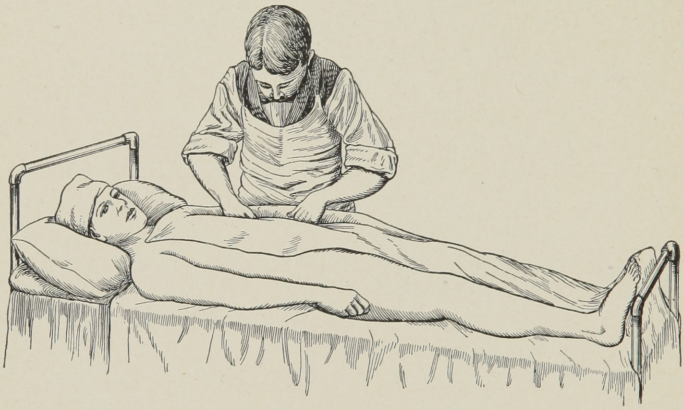


FIG. 23.—Application of the cold pack: pressing the sheet between the patient's arm and body. (*Stoney.*)

Foot-bath Out of Bed.—Place the patient in a low chair. Have a quilt or thick blanket ready to wrap around chair, patient and foot-tub, securing it safely with pins. Otherwise proceed as directed above.

Cold packs are given for reasons similar to the cold sponge bath. When possible protect the bed with a rubber sheet. If one is not available use a cotton quilt folded. Have two sheets ready. Fold them lengthwise. Wring them out in cold water. Lay one under the patient, the other over, taking care that it is in contact

with the surface skin, over every part it is supposed to cover. Wrap the arms in towels wrung out of water. Apply a cold wet compress to the head and heat to the feet. From twenty to forty minutes is the average length of time for these packs.

Hot Packs.—When hot or tepid packs are to be given proceed in the same way, using hot water. Use an old blanket for the upper covering. It is desirable to have the water the sheets are wrung out in, several degrees

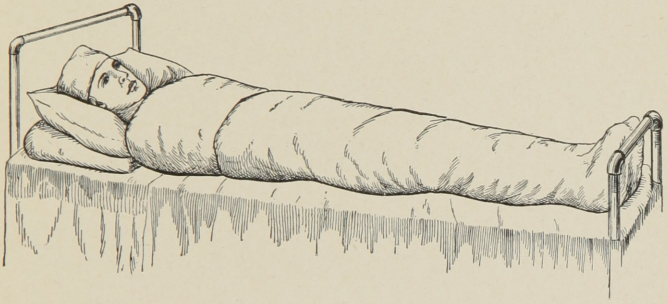


FIG. 24.—Application of the cold pack: patient completely covered, with wet towel on the head. (*Stoney*).

hotter than it is to be applied as it cools rapidly. Cover the pack with heavy blankets or quilts and use hot bottles around it if the pack is to be given to induce perspiration. Hot or tepid packs are often given to quiet a nervous or restless patient and produce sleep, as well as to induce perspiration.

Spray baths are usually given for tonic purposes. They may be taken while sitting or standing in a tub, the head being protected from the spray. They are usually followed by a brisk rub with a coarse bath towel.

The Scotch douche is a form of treatment which can be given at home without special apparatus and has been used with much success in cases of chronic backache, relaxed or paralyzed muscles, and certain joint troubles. It consists in alternate application of hot and cold water to a part. When applied to the spine, the part is first

sponged with water as hot as can be borne, and alternating it with rubbing with a piece of ice. When the treatment is to be applied to the knees or ankle pass a turn of a roller bandage around the part to conduct the drip into a basin below. Have at hand hot water and ice water, and pour slowly, alternating about every minute.

The salt rub consists in applying salt of medium fineness, and slightly moistened, to the surface of the body. The amount of pressure needs to be regulated according to the sensations of the patient. Care must be used that the skin is not permanently irritated. The patient may sit, stand or lie down during the treatment. The salt rub is followed by a spray bath and a brisk rubbing with a coarse towel. It is useful in mild forms of nervous exhaustion, in cases of general debility, and as a tonic measure for people who are tired in body and mind.

Points to be Remembered.—Water is the most valuable of all home remedies. It can be used for a greater variety of conditions than any other remedy.

Every home nurse should study the methods of using simple natural remedies such as water, including ice and steam, heat, rest, light, etc., and use them in preference to drugs in a great many conditions.

The method of giving a sponge bath to reduce fever will greatly influence the result.

Never try to hurry through a fever bath. Plenty of time must be taken if it is to do any good.

Always endeavor to avoid unnecessary exposure in giving all treatments.

Follow a foot-bath with a brisk rubbing of the feet and legs and be careful to avoid chilling.

A tepid pack is one of the best remedies for excessive nervousness and sleepiness.

Alternate applications of hot and cold water are helpful in a variety of conditions.

A great many of the benefits which are received at health resorts might be secured at home by the systematic

use of water, internally and externally, salt rubs, rest, fresh air, regular breathing exercises and freedom from worry.

REVIEW QUESTIONS.

1. Mention some of the uses of water as a remedy.
2. How should a cold sponge bath be given?
3. Describe a method of giving a foot-bath to a patient in bed.
4. What measures should be used in giving a foot-bath to a patient out of bed?
5. How would you give a cold pack?
6. For what purposes are cold packs useful?
7. What precautions would you take in giving a hot pack?
8. How would you give a Scotch douche to a knee joint?
9. Mention some treatments which may be taken at home when a general tonic is needed.
10. Describe the method of giving a salt rub.

CHAPTER XII.

HOME TREATMENTS AND HOW TO GIVE THEM.

Demonstration and Practice Work.—How to prepare and give a soapsuds enema. Preparation and application of mustard plaster; ice compress. How to fill an ice cap properly and apply it.

In almost all cases of illness when the patient is confined to bed it becomes necessary to assist nature to effect a movement of the bowels. This is usually done by the use of laxative medicines, but there are many cases where it is unwise to give medicine for this purpose or to wait for it to act and an injection into the lower bowels is required. This is called an **enema.**

In many cases also it is necessary to give injections into the rectum for other purposes.

The purposes for which rectal injections are commonly given are: To move the bowels; to help to expel worms; to relieve pain; to check diarrhea; to stimulate, in case of shock or much loss of blood; to nourish the patient.

In all such treatments there are a variety of details to be observed which will greatly influence the result. For instance, in some cases it is desired for the fluid to remain in the bowels and be absorbed into the system. In such cases it is necessary to be careful not to give too much and the fluid should be only lukewarm. In other cases it is desired to have the fluid expelled promptly and the bowels flushed out. In these cases more fluid is given and it is given warmer.

Purgative Enema.—To give a purgative enema a fountain syringe is preferable to the bulb syringe found in so many homes. Soap suds made with castile or ivory soap is commonly used for this purpose. Occasionally glycerin or some other drug is added. Make a good

frothy soap suds and have it as hot as the patient can take it comfortably. Never use the common brown or laundry soap for this purpose. For an adult from two to four pints will be needed, and for a child from one to two pints.

Place the patient on the left side with the knees bent. It is a good plan to protect the bed by slipping a thick newspaper under the hips. The bed-pan or commode should be at hand, ready before the injection starts.

The fountain syringe or enema can is arranged with a rubber rectal tip or nozzle attached. Sometimes a rectal tube which will carry the fluid high up into the bowel is necessary for the best results.

Oil the rubber tip and let the fluid run through the tube till the air is expelled and the fluid runs warm. Pinch the tube just above the rubber nozzle and slowly insert the nozzle, directing the point backward and toward the left for about three inches. Do not hold the can high unless so ordered by the doctor, and never hurry about such a treatment.

Soon after the fluid begins to enter the bowel there is a slight spasm of the rectum and the patient will feel he must expel it. This passes away in a few seconds, and it is always better to wait until it does before proceeding. As a rule it is best to give as much fluid as the patient can take. Encourage him to retain it as long as possible. In occasional cases the water is not expelled, but this need cause no special alarm. In about an hour repeat it when a free movement of the bowels will be the result.

The salt solution enema is one that has been much used in recent years and has helped to save many lives. It has been found that salt solution resembles closely the composition of the human blood and mixes well with it. It is frequently given for stimulation and to increase the volume of the blood after serious hemorrhage, or in cases of marked exhaustion.

To make normal salt solution dissolve one teaspoon-

ful of table salt in a pint of water. This solution is also much used in the dressing of wounds and has a cleansing, healing effect on body tissues.

To give an enema of salt solution which is to be retained, place the patient on the back and proceed as previously directed. The rectal tube will be necessary. It should be slowly inserted (after being boiled) for about 14 inches. The doctor will usually order the amount he wishes given. As a rule when an enema is to be retained it is better not to give more than a pint

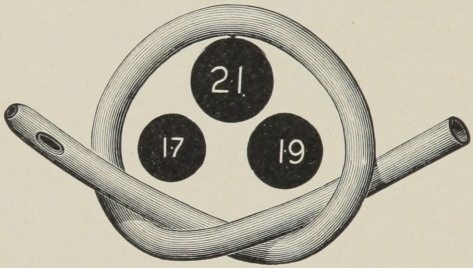


FIG. 25.—Rectal and colon tube.

at a time. If too much is given it is likely to be expelled and the patient will not get the benefit of it. When given the patient for stimulation the salt solution enema is given warmer than for other purposes as the heat adds to the stimulating effect.

Rectal feeding has sometimes to be resorted to in cases of persistent vomiting, and for a variety of other conditions when the patient is unable to take food by mouth. Such cases are always serious and life may depend on the patient being able to retain the food given him by rectum.

A patient who is being fed by rectum should always be given a purgative enema daily. Once in four or six hours is as often as these nourishing injections should be given. The doctor will always show how to prepare the fluid to be injected if asked and if the home nurse

is not certain how to proceed. Milk which has been predigested, egg, and sometimes beef juice are substances commonly used. Four ounces or about eight tablespoonfuls are as much as are likely to be retained. The food is given lukewarm, very slowly, and the tube withdrawn very slowly. The patient may be either on the left side or the back. If on the left side, place a pillow under the hips before giving, and let it remain there until danger of the fluid being expelled is past.

To Check Vomiting.—When the patient is seized with persistent vomiting the following measures may be tried:

Stop all food.

Keep the head low.

Allow no talking or excitement, but keep him quiet.

Keep the patient on the back with a pillow under his knees.

Try giving bits of ice, to be swallowed whole before being dissolved.

If ice is not at hand try small sips of hot water or clear hot tea.

Apply a mustard plaster over the stomach.

To make a mustard plaster mix one teaspoonful of mustard to three of flour. Use only half the quantity of mustard for a child. Blend to a thick, smooth paste with lukewarm, not hot, water. Spread it on a thin cloth, leaving an inch margin at the edge, which is turned back over the paste to prevent its escaping and smearing the clothing. When the patient is a child or an aged person it is wise to add the white of an egg to the paste or a little oil or vaseline. Apply and leave the plaster on till the skin is well reddened—usually about 20 to 30 minutes. After removal, smear the part with vaselin, olive oil, or cold cream.

Cold compresses are much used as a method of checking inflammation, especially where the eye is concerned. Small compresses are made of several layers of soft clean old linen or gauze cut about two inches square. A piece

of ice is placed in a basin and the little eyepads wrung out of water are placed on the ice, and renewed at least every five minutes. If the inflammation is very severe, they may need to be changed every two or three minutes, as they quickly absorb the heat from the part. If there is any discharge from the eye, the home nurse should be extremely careful not to carry the infection to her own eye when giving this treatment. The soiled compresses should be put in a paper sack, when removed, and burned. Never use a compress a second time if there is a discharge from the eye. The hands should be as clean as it is possible to have them before handling these compresses.

Fig. 26.—"Perfection" ice bag.

Ice poultices are as a rule used only when an ice cap is not available. To make an ice poultice secure first a piece of table oilcloth twice the size of the area to be covered. If it is to be used on the chest or abdomen, a piece of oilcloth that when doubled will be about nine by twelve inches should be prepared. With the glazed side inside fold the two sides in toward the middle, letting the edges overlap about an inch and stitch firmly twice with the sewing machine, using a short stitch. This makes a firm bag. The ice is broken in pieces about the size of a small egg, mixed with bran or sawdust, and put into the bag. A piece of soft cotton or gauze or a soft old towel may be pinned around it. Pass a bandage or roller towel lightly around the bag and abdomen to keep it in place, and yet allow some freedom of motion to the patient.

Ice Caps.—In filling rubber ice caps, lay the cap on a flat surface and put the pieces of ice in gently. The sharp corners of ice will quickly puncture a tiny hole in the rubber cap which will cause leakage. Be sure not to bottle up any more air in the ice bag than can be helped. If there are two ice caps in use, be sure that the screw caps are not interchanged or there will probably be leakage around the cap. Always fold a towel or piece of clean cotton around an ice cap, but use no pins if you would avoid punctures.

. When ordered to keep an ice cap on a patient be sure to see that the ice is replenished as soon as needed. Otherwise the cap had better be removed.

To Give a Sweat.—The hot pack when properly given is one of the best means of giving a sweat. These packs are often used when the kidneys for any reason are not doing their work properly, to help the system to throw off waste matter through the skin. The method of giving the hot pack was described in a previous chapter. When the object is to produce free perspiration, several hot bricks will be needed. Place on the hot pack covering the patient, four hot bricks at each side, and one at the feet. Do not let the bricks touch the body or rest against it in any place. Pour on each brick a teaspoonful of alcohol and double the side of the blanket or pack over it. Cover quickly with a heavy dry blanket or quilt so that no air can get under the covers. Watch that the bricks are not close enough to the patient to burn. Keep the blankets tucked in snugly at the neck and feet. Give plenty of hot lemonade to drink, or hot drinks of any kind, but do not allow the arms to come out of the covers at any time while drinking. Always keep a cold compress on the head during the treatment.

To avoid chilling after the pack, wrap the patient in a warm dry blanket for an hour, and keep heat to the feet. To secure a good sweat with ordinary home appliances is not as easy as many suppose, and the home nurse needs to watch every detail if she is to succeed. She

must be quick in movements and watchful to see that cold air is not allowed to enter at any place to undo what she is trying to do.

A hot air bath may be used when the patient is not confined to bed by placing the patient without clothing in a cane seated chair, and with the feet on a hot brick. Wrap a heavy blanket around the chair, pinning it securely at the neck and over this pin a heavy quilt or comforter. Place a small low lamp—an alcohol lamp is the best—under the chair, and pin the outer coverings securely to prevent the cold air getting under. Give the patient plenty of hot drinks and keep him warm afterward.

A hot air bath for a patient in bed requires a body cradle of some kind. These body cradles are frames used to support the bed clothing. Such a cradle can be made at home by using parts of three barrel hoops—securing the ends to a strip of straight wood. The patient with the clothing removed, is placed on a blanket with heat to the feet and around the sides. Over the cradle another blanket and a thick comforter is placed. At the foot of the bed, a coal oil or gas stove is arranged with a stove pipe or elbow to conduct the hot air under the covers. Keep a wet cold compress or an ice cap to the head, and be careful to avoid chilling afterward. This treatment is continued from a half hour to an hour.

Points To Be Remembered.—In giving all treatments be sure to study the details of the instruction and carefully observe them.

Ask the doctor about any point regarding which you are in doubt.

In giving an enema the amount of fluid, the temperature, and the force of the flow will all influence the result.

If a patient vomits, let his stomach rest.

There is a right and a wrong way, a neat and a slovenly way to make a mustard plaster. Try to manage it the right way.

Never use a compress or dressing the second time if it is soiled with discharge.

In filling an ice cap be careful to avoid puncturing the bag with the sharp corners of the ice.

Remember that when giving a sweat the results desired may be easily undone by being careless about details.

Be sure that cold air is not allowed to come in contact with the body during a sweat, and be careful to avoid chilling afterward.

REVIEW QUESTIONS.

1. For what purposes are rectal injections given?
2. State the difference in the methods used in giving a rectal injection which is to be retained, and one that is to flush out or cleanse the bowel.
3. How should a purgative enema be given?
4. Mention some of the values of a salt solution injection.
5. Describe some methods that have proven useful in checking vomiting.
6. How should a mustard plaster be made? What precautions should be observed in its use?
7. How would you apply a cold compress to the eye? How often should these be renewed?
8. What precautions should be taken in filling and applying an ice cap?
9. Describe one method which may be used to produce sweating.
10. Mention some general precautions which should be used in giving treatments to induce perspiration.

CHAPTER XIII.

HOME TREATMENTS AND HOW TO GIVE THEM (continued).

Demonstration and Practice Work.—Making and application of a linseed poultice. A bran poultice. A turpentine stupe. How to arrange for an eye-bath.

Poultices are much less used now than in former years. They were used formerly chiefly as a means of applying heat and moisture to a part. They have the effect of softening the tissues, dilating the superficial blood vessels, and relieving pain. But poultices as ordinarily made have many disadvantages and have been largely supplanted by hot fomentations. When properly made and applied they may serve a useful purpose.

Flaxseed or Linseed Poultices.—To make a linseed poultice have a saucepan two-thirds full of boiling water on the fire, and stir the meal into it gradually till it is thick enough to cut with a knife. It should then be beaten free from lumps, and spread evenly, while hot, on a poultice cloth, leaving an inch margin all around the edge which is turned back over the mass. This makes what is called an "open poultice" and allows the linseed to come in direct contact with the skin.

The closed poultice requires a cloth twice the desired size of the poultice. The linseed mass is spread on half of it, leaving the margin as directed. A little oil of some kind will make it easier to remove from the cloth. When applied, the poultice should be covered with a thick layer of cotton batting. A piece of oilcloth or thick paper is laid over the cotton to keep the heat from escaping. A bandage should be applied to secure it in place. Once poulticing is started provision should be made to continue it regularly. Every two or at the most three

hours (depending on the thickness) the poultice should be renewed. A cold poultice does more harm than good. Before removing the old cool poultice, the fresh hot one should be on hand ready to apply. Never allow the patient to remove the cold poultice till you are ready with the fresh hot one. Try to keep in mind the following points about poulticing:

1. Be sure not to have the poultice mass too thin in consistency.

2. When made, carry to the bedside in a basin, which is also used to carry away the old one.

3. Remember that a cold poultice does more harm than good.

4. Never take off a cold poultice till you have the hot one at the bedside ready to put on.

5. Cover every poultice with a thick pad either of cotton batting or flannel, and heavy paper, and secure it in place with a bandage.

6. Apply the poultice as hot as a patient can bear it, but not hot enough to burn. Let it come in contact with the skin very gradually, a few inches at a time, and it is less apt to cause discomfort.

7. Test the heat of the poultice by holding it to your cheek before putting it on. A hot water bag may be laid over the poultice to help to retain the heat.

8. Smear the skin with vaselin before applying the poultice.

9. A thin poultice will need to be renewed much more frequently than a thick one.

10. If there is no discharge from the part to be poulticed, the cold poultice may be cut into pieces and reboiled once or twice, adding a little fresh meal each time. If used too often it will become sour.

Bread poultices are easily and quickly made by pouring boiling water over bread without crust. The water is then drained off and the softened bread spread on a cloth and applied as previously directed. This poultice is used chiefly because it is convenient to get, and affords

temporary relief from pain in case of slight inflammation from bruises or other causes. Bread poultices cool very quickly and soon become hard and dry. They should be renewed about every half hour to be of any real benefit. Milk should never be used to make such poultices.

Starch poultices are occasionally used. They are made with laundry starch and in the same way as for laundry purposes. They should be made quite thick and applied as hot as possible. A starch poultice applied overnight and renewed at intervals during the day, is an excellent method of softening the crusts that form as a result of eczema. If applied to a child's head for this purpose, the hair should first be cut short.

Bran poultices are sometimes used instead of linseed meal and for the same purpose. To make the bran poultice, take a piece of flannel twice the size of the desired poultice. Spread a thick layer of bran over half of it. Turn the other half over it; turn the edges in and stitch around the edges and through several times to keep the bran in place. Wring this out of hot water. Apply as with a linseed poultice, cover, and secure in place with a bandage. Two of these poultices should be made so that they can be alternated, and no time elapse while the poultice is being prepared.

Hop poultices are made in much the same way as bran. The dry hops are sewn into a thin bag, which is dipped in hot water and applied. This poultice, applied to the back of the neck is an old-fashioned remedy in case of sleeplessness.

Hot fomentations or stupes constitute a most valuable remedy which is available in any home. A piece of flannel, some boiling water and a stupe wringer are necessary. The backs of old flannel undervests or a a piece of old blanket folded till it is four thicknesses answer very well for stupe cloths.

A fomentation or *stupe that is cool enough to be wrung out with the hands is too cool to do any good.*

A stupe wringer is made by taking a piece of heavy towelling or ticking, putting a wide hem in it on each end through which a stick is passed. A piece of broom handle 20 to 24 inches long is often used. The flannel is put in a pan of water on the stove and allowed to boil. It is then picked out and dropped in the stupe wringer. The sticks are twisted in opposite directions to wring it as dry as possible. It is then shaken and placed over the part complained of, letting it down by degrees, and withdrawing the hands from under it very gradually.

Stupes or fomentations need to be covered with a thick pad of cotton batting over which a piece of oilcloth or several thicknesses of paper are laid, and a bandage should be passed around the part to keep it in place.

The nurse who is expected to keep hot fomentations on a part cannot do much, if anything, else but attend to them. The fomentations need to be changed about every fifteen minutes or at the outside every half hour. Always have the fresh fomentation at the bedside before removing the cold one.

In the absence of a properly made stupe wringer a heavy towel doubled may be used, and the ends twisted to press the water out.

Laudanum is often added to the water in preparing hot fomentations, especially in cases of severe pain. The doctor will always order this treatment and prescribe the amount of laudanum which should be used. But in the fomentation wrung out of plain hot water, and changed frequently, the home nurse has a valuable remedy especially useful in cases of severe abdominal pain, or pain in the bladder, or rectum. It can also be applied to arm, leg, or chest, but should not be applied where there is an open wound.

Turpentine stupes are frequently prescribed in case of abdominal distention in typhoid fever, or in inflammation in the abdominal region. The turpentine is sometimes put into the water, using about a teaspoonful to a quart, before the flannel is wrung out, but this method carries

with it more danger of blistering from the turpentine. The turpentine should be used only about once in four times. A better method is to mix two parts of olive oil (lard will do) with one part of turpentine, and apply to the skin about every three to six hours, and apply over this a fomentation using only plain hot water.

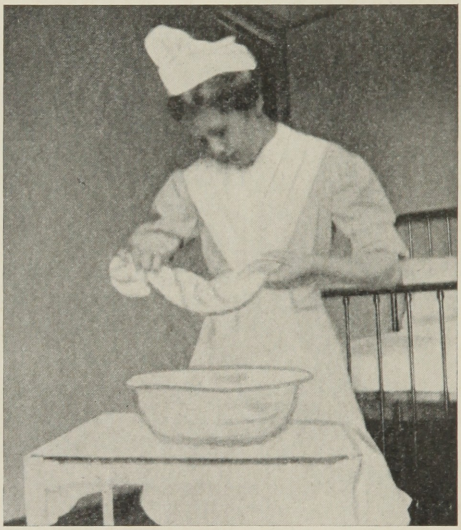


FIG. 27.—Wringing hot fomentations with towel.

Antiseptic compresses are used hot in case of wounds of various kinds, also bruises, to soften the tissue, relieve pain, and check the growth of germs.

The term "antiseptic" means opposed to the growth of germs. Chemicals such as creolin, carbolic acid, bichloride, green soap, etc., are added to the water. Salt solution is an antiseptic solution and one very frequently used. Absorbent cotton, clean gauze or soft clean old linen, are wrung out of the hot solution, applied to the part, covered, and renewed frequently.

An eye-bath is one of the simplest and most effective treatments for aching, tired, or inflamed eyes. Take a

small cup; fill it with water as hot as can be borne, and hold the eye down in it. This treatment continued for at least five minutes for each eye, and repeated two or three times a day gives much relief in cases of simple inflammation of the eye.

Points To Be Remembered.—Poultices may do harm if proper precautions are not observed in making and applying them.

A poultice spread thinly cools much more quickly than a thick one.

Always be careful when poulticing to cover the poultice as directed, to prevent the heat escaping.

A hot water bag may be laid over the poultice to help to retain the heat.

Smear the skin with vaselin or lard or cold cream before applying the poultice.

A fomentation or stupe that is cool enough to be wrung out with the hands is too cool to do any good.

In applying either a poultice or fomentation be sure to let it down by degrees on the part and withdraw the hands from under gradually.

Remember it is the heat with the moisture which gives relief, and be very careful to guard against heat escaping.

REVIEW QUESTIONS.

1. What effects are poultices intended to produce?
2. How should a linseed poultice be made and applied?
3. Mention some general rules that should be observed in regard to poultices in general.
4. If asked to prepare a bran poultice how would you do it?
5. Describe the method of preparing and applying a hot fomentation to the abdomen.
6. What precaution should be used in preparing a turpentine stupe?
7. Mention the general rules that must be observed in using stupes if one is to get the best results.
8. For what purposes are antiseptic compresses used?
9. How should an antiseptic compress be prepared and applied?
10. Mention a simple treatment for an inflamed eye and tell how it should be taken.

CHAPTER XIV.

THE GIVING OF MEDICINES.

Demonstration and Practice Work.—Measuring fluid medicines. Administration of powder, capsule, castor oil, seidlitz powder, suppository, iodin, liniments.

Most medicines are given by the mouth, and unless orders to the contrary are received, it is generally understood that medicines are to be given that way.

Care of Medicines.—Carelessness about medicines in a home is a sure sign of lack of intelligence. Those who know most about drugs and their uses are most careful that all bottles are properly labeled and kept in a safe place. The custom of making the top shelf of the pantry or cupboard, a dumping ground for a miscellaneous collection of drugs labeled and unlabeled, or of leaving bottles on the sideboard, or window ledge, within reach of children, cannot be too strongly condemned. Every little while one sees a newspaper report of some child that has come to an untimely end, through the carelessness of somebody, by getting hold of a bottle or box of some poisonous drug. One of the recent cases reported was that of a little two year old toddler who had pulled open a sewing machine drawer, found therein a small bottle of laudanum, and drunk the contents. Such accidents are of far too frequent occurrence.

It is not uncommon to find in the drug collection of some other wise wellkept homes, a motley array of bottles and boxes each containing some drug preparation which the housewife or home nurse thinks may come in handy some time. Some of these bottles date back for from five to ten years. There is probably on some of them the name of the doctor and druggist with perhaps the illumi-

nating direction "a teaspoonful three times a day." There is of course nothing to say what the nature of the medicine is, or what it is to be used for. It might be for rheumatism, or biliousness, or nosebleed, or colic.

Be careful, is therefore the first and most important rule in regard to medicines.

Medicine will enter into the circulation and act more quickly if the stomach is empty. Medicines given in fluid form act more quickly than if given in the form of pills or powder.

Promiscuous experimenting with drugs is a foolish and unsafe practice. Many much lauded headache powders contain substances that are powerful heart depressants, and many deaths have occurred from their use.

Most of the pain-relieving drugs are violent poisons. They act by stupefying and temporarily poisoning the nerve centers. Continued use of opium and many other drugs given to relieve pain usually ends in habit. The writer has seen a child of four who was a confirmed paregoric fiend, clamoring incessantly to be put under the influence of the drug. Adults, especially those who have chronic headache or chronic disease of any kind easily become addicted to bromides and other sleep producing medicines.

Alcohol is a powerful drug which needs to be used with great caution. It is by no means the cure-all which many believe it to be, and often adds to the disease it is used to help. Over-stimulation may easily be disastrous, and it is unwise to add alcoholic poisoning to other poisons which the system may be laboring to combat unless it is definitely ordered by the doctor. When it is ordered it should be measured and handled as carefully as any other medicine. Do not give it promiscuously on the principle that if a little is good, more must be better. Many families use it in every case of faintness and without stopping to consider that its effects may be decidedly detrimental. In head injuries it is decidedly dangerous, also in most cases of serious hemorrhage and in various

other conditions. When alcohol is ordered the nurse should get definite instructions from the doctor regarding:

1. The time of day and frequency of doses.
2. The quantity at each dose.
3. Whether it is to be diluted or not.
4. The time the alcohol treatment is to cease.

The latter point is especially important, for the habit is soon acquired. Every nurse who carelessly administers alcohol in any form undertakes the risk of helping some one to contract the habit.

Do not use alcohol for flavoring eggnogs or foods of any kind. Choose some other flavoring substance. A tablespoonful of whiskey carelessly added to an eggnog for flavoring, has started afresh a craving for liquor that a man had been fighting for years.

Fluid Medicines.—1. It is a general custom to dilute with water most fluid medicines, but judgment should be exercised as to the amount of water that is added. It is unnecessary to prolong the unpleasantness of a disagreeable dose by adding too much water.

2. It is a safe rule to shake all bottles before measuring the dose. In a great many mixtures the important part of the remedy is in the form of a sediment, the liquid being simply the vehicle used to convey it.

3. Bottles should be carefully corked after the dose is measured. Many medicines contain substances that readily evaporate.

4. The regular graduated glasses and dropper should be used to measure. Spoons vary in size and are most unreliable measures.

5. When minims are ordered, they should be measured in the minim glass. Minims and drops mean very different quantities in many medicines.

6. Measure exactly. Never guess at doses of any medicines. A great many nurses, who measure other medicines very carefully, guess at doses of whisky or brandy,

and often twice the quantity intended is given. Hold the glass on a level with the eye when measuring.

7. Always pour from the side of the bottle opposite the label. This is a well-known rule that is often disregarded.

8. Give iron through a tube, as it discolors the teeth. If no tube is obtainable, and it has to be given without, allow the patient to brush his teeth with a solution of soda bicarbonate and water afterward.

9. A little ice held in the mouth before a disagreeable dose helps to dull the sense of taste and renders it less unpalatable. Vichy or seltzer are excellent for removing a disagreeable lingering taste.

10. Always keep a separate glass for very strong-smelling substances, such as cod-liver oil.

General Precautions.—Familiarity with drugs is apt to lead to carelessness in handling and using, unless emphatic teaching and instructions are given. If the following general precautions regarding all drugs are observed, accidents from wrong doses will rarely, if ever, happen.

1. Remember that there is an element of danger in every drug.

2. Read the doctor's directions about drugs. Be sure that you understand.

3. Never give or use a drug of any kind that is not plainly labeled.

4. Never give a drug in the dark or in a dim light. Neglect of this precaution has caused numerous accidents.

5. Always read the label twice before pouring out the dose and again before giving it. Violation of this rule is the most frequent cause of deaths from wrong doses.

6. Keep your mind on the work in which you are engaged.

7. Measure the dose accurately. Give no more and no less than the order calls for.

8. Never give a pill, capsule, or tablet that has accidentally been spilled or escaped from its container.

9. Never give a medicine which you have a shadow of a doubt about. If you are not sure, and there is no one at hand to inquire of, it is better to omit the dose.

10. Never jump at conclusions regarding fractional doses. For instance, do not give two 1/30-grain tablets of strychnin because 1/60 is ordered, and you happen to know that twice 30 are 60. Stop long enough to calculate how much 2/30 grain really is. Innumerable accidents have occurred with tablet medicines in this way because of mistakes in arithmetic.

11. Give the medicine on the hour it is ordered.

Sleep-producing Medicines.—Practically all sleep-producing medicines are ordered conditionally. There is a subtle danger in every one of them that is recognized by all who have had experience, and they are regarded as emergency remedies to be given if the need is imperative, and after ordinary simple measures to secure sleep have been tried and proved unsuccessful. When it is necessary to give them, have the patient ready for sleep, treatments all attended to, bed throughly comfortable, temperature of the room right, visitors excluded. If these have to be attended to after the dose has been given, it may have lost its effect before the patient is allowed to sleep.

Giving Medicines to Children.—In the case of children who lie in a half-unconscious condition, it is impossible to give medicines in the ordinary way. Much can be accomplished in these cases by using a medicine-dropper and taking plenty of time. The mouth and teeth can be held open slightly and the medicine slowly dropped in. Usually, with children, it is sufficient to insert the dropper beside the teeth, and when the contents are slowly dropped they will usually be swallowed.

Each sick child is more or less of a problem, but there are a few general principles that apply to children as a class. Sometimes firmness and insistence on being

obeyed will be all that is needed in giving medicine. When that fails, bribery of some form will often succeed. It is not good moral training to bribe a child to do what he manifestly should do without bribery, but sickness is not the time to teach good habits. If a child is persistently obstinate, it is unwise to spend time in pleading or arguing. The last resort in such cases, if it is important for him to get the medicine, is to hold the nose and give the medicine. Wrap a bath-towel about the body to confine the arms, hold the nose gently, and when the mouth is opened for breathing, insert the spoon as far back in the mouth as possible, empty slowly, and withdraw it. If a child persistently struggles and resists, the matter is one to be reported to the physician. Very often the struggle and consequent exhaustion will overbalance any good the medicine might do.

In giving medicine to young babies, press the chin backward and downward with the finger, and the mouth will usually be opened sufficiently to pour in the medicine gently.

Alcoholic stimulants should be diluted eight times before administration to children.

Doses for Children.—A common rule for computing doses for children under twelve years of age is: Add 12 to the child's age and divide the age by the sum. For example, if a child is four years of age, the dose would be figured in this way: $\frac{4}{4+12}=16$, $\frac{4}{16}$ or $\frac{1}{4}$ of the adult dose would be an average dose. This rule does not apply to castor oil nor calomel, of which larger relative doses are borne by children than of most other drugs.

Pills.—If difficulty is experienced in swallowing a pill, the addition of a small bit of bread to its bulk will usually remove it, or the pill may be disguised in preserved fruit for children. Pills should be placed far back on the tongue and followed at once by a little water.

Powders.—There can be no fixed rule for giving pow-

ders. Effervescent powders or crystals are dissolved in cold water (usually at least one-half a tumblerful) at the bedside and taken before the bubbling ceases.

Seidlitz powders are prepared usually in white and blue papers. The contents of the papers are dissolved in cold water, in separate glasses. Before giving to the patient they are mixed. This causes effervescence. The mixture should be taken before effervescence ceases.

There are several kinds of powders which will not dissolve in water. These are given dry on the tongue and followed with water.

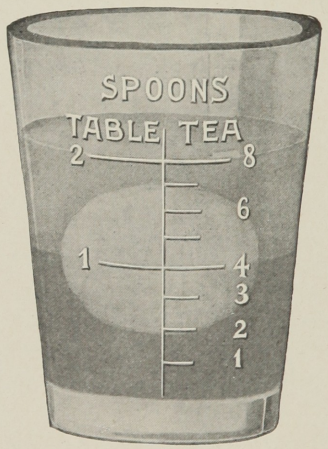


Fig. 28.—Castor oil in glass ready for administration. (*De Lee.*)

Capsules, pills, and tablets are given from a spoon followed by water. Arrange the capsule or tablet on the spoon on a small tray or plate, with a small glass of water beside it before carrying it to the patient.

Oils.—The disagreeable taste of oils may be lessened in various ways. Castor oil may be given to children in hot milk or a little coffee. Grape-juice, and orange or lemon flavor are favorite vehicles.

It is better to moisten the sides of the glass with the

wine or diluted juice, pour a couple of drams in the bottom of the glass, drop the oil carefully in the center, add another dram of the juice, and direct that it be swallowed quickly.

Ice-water, with a few drops of peppermint, taken before and after meals helps to dull the sense of the taste.

A strong lemonade is one of the best methods of disguising the disagreeable taste. Put part of it in the bottom of the glass, add the castor oil, then the remainder of the lemonade. Just before drinking, stir in a half teaspoon of baking soda. The patient will not know he has taken castor oil if he is not told.

Turpentine and croton oil are best given on sugar from a spoon, followed by a mouthful of water.

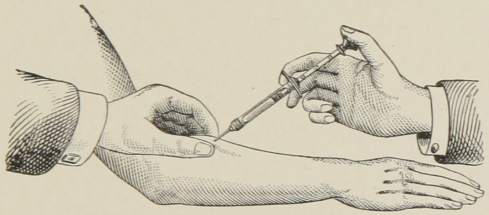


FIG. 29.—Method of giving a hypodermic injection. (*Thornton.*)

Hypodermic Injections.—Medicines are given by hypodermic injection when very quick action is desired, and in some cases in which the patient is liable to vomit medicines given by the mouth. As a rule only powerful drugs are given in this way. A hypodermic syringe is needed to give these injections. The cases are rare in which the home nurse will be required to give medicine in this way. She should never attempt it on her own responsibility, never without being shown how by the doctor or other responsible person, and never without fully understanding the dangers and the harm that might follow.

Points to be Remembered.—If you would avoid serious accidents keep all drugs labeled and always out of the

reach of children. See that medicine cupboards are kept locked.

Medicines do not cure. Nature must work her own cure and the promiscuous experimenting with drugs is often a hindrance.

Most pain relieving drugs are violent poisons and should never be used except as ordered by the family physician who understands the special needs of the patient.

Measure medicines exactly. Every household should have a small graduated measuring glass to be used in preference to spoons which vary in size.

Study carefully the directions given as to how to avoid mistakes and accidents in giving medicines. Numerous accidents and deaths have been caused by giving or taking medicine out of the wrong bottle in the dark or in a dim light.

There is a refined, neat way of giving medicines, and a slovenly way which is an index to the character of a nurse and the general quality of her work. Try to cultivate refined, neat habits.

Before giving sleep-producing medicines to any patient, see that conditions are all favorable for sleep, quietness, darkness, comfort, good air in the room, all visitors banished, duties done for the time.

If you are ever in doubt about whether to give a medicine or not, it is better to omit it till the doctor can be consulted.

If you give the wrong dose, you may never be able to undo the results of the mistake.

REVIEW QUESTIONS.

1. What precautions would you use in regard to the care of all medicines in the home?
2. Give ten rules that should be observed in handling and giving fluid medicines.
3. Mention some general precautions you would use in giving all kinds of medicines.

4. What special rules would you use in regard to sleeping medicines?
5. How would you compute the dose that should be given to a child?
6. How would you give medicine to a child who was half unconscious?
7. If a patient had difficulty in swallowing a pill how would you manage it?
8. Describe your method of administering a seidlitz powder.
9. How should capsules and tablets be administered?
10. Mention one way of disguising the disagreeable taste of castor oil.

CHAPTER XV.

EVERY-DAY CARE OF THE BABY.

Demonstration and Practice Work.—Bathing and dressing a baby. Making and care of a baby's bed.

Of all the duties that fall to the lot of woman, the care and proper rearing of children is the most important. Of all professions open to women, motherhood is second to none. Yet it is termed and rightly so "the unskilled profession." The price of ignorance in how to take care of babies is suffering, disease, and death. It is estimated that every year in the U. S. 375,000 babies die, mainly from diseases that could have been prevented if their mothers had known how to prevent them. It should surely be considered as important for a girl to be taught how to take care of a baby as to be taught algebra, or French or history.

The baby's clothing is among the first essentials that need to be considered. Comfortable clothing for the baby means clothes that are loose, soft, warm enough, clean, and not too fussy or elaborate. They should be made so that they are easy to get off and on. Swaddling clothes for babies which are common in some countries, are objectionable for several reasons. Among the chief reasons are that the baby is wrapped up like a bundle, in such a way that motion of the legs is hindered; and it is hard to keep the body clean.

The baby's first clothes usually consist of:

A binder about 20 inches long and 5 inches wide; a shirt; a flannel "pinning blanket" or barrow coat. (This consists of a piece of flannel about 29 inches square plaited into a band about 18 by 6 inches and open in front. It is turned up over the feet, and secured with safety pins.) A petticoat; a dress; a diaper; a woolen

blanket or shawl; a night dress. The number of these articles that should be provided will depend on the family purse, and how often the washing of the clothes can be done.

The material for the binder should be very soft white flannel or flannelette. The edges should be pinked rather than hemmed if only one thickness is used. If flannelette is used the bands should be double, and seamed together on one side. After the first two months a knitted circular binder is preferable.

The shirts for a winter baby are best made of soft white flannel. In summer a finely woven cotton shirt may be substituted. If the shirts are made at home the hem should be made on the outside as the hem next to the baby's tender skin may cause soreness. The most important points about shirts are that they should be warm, clean, and of a material that will not irritate the skin. A quality of soft flannelette is preferable to coarser flannel.

All-wool shirts are almost certain to shrink in washing, and become tight and uncomfortable. In hot weather the all-wool garment is very likely to irritate the baby's skin. For these reasons a shirt made of a mixture of cotton and wool is often preferable. If fine wool or mixed shirts cannot be obtained the next best thing is a fine soft white flannelette. Little babies need to be kept very warm. The shirts should be made with long sleeves and to come well up to the neck. Chilling of the chest and abdomen should be prevented. To keep the shirt from slipping up and leaving the chest and abdomen bare, pin it to the diaper.

The petticoat and dress for little babies are made long, partly for the sake of warmth and partly to make handling of the baby easier. The petticoat should be of flannel or heavy flannelette. If the skirts of the petticoat are made too long it hinders the exercise of the baby's legs. From six to ten inches below the feet is long enough.

The dress material will vary according to climate and season. It should be soft, with no rough edges anywhere, and loose enough for comfort.

The diapers should be of soft, light, absorbent material. For the first three months a diaper one yard long by one half yard wide will be sufficient. As the baby grows the diaper must be larger.

The diapers should be changed as soon as they are wet or soiled. In washing them a good quality of soap should be used without too much lye; they should be rinsed thoroughly in several waters to remove all traces of soap. Carelessness about washing and rinsing of a baby's diapers has often caused a severe inflammation of the baby's tender skin, around the hips, abdomen and legs.

Short clothes are substituted for long at about three or four months of age. When it can be avoided the change should not be made in cold weather. Shoes and stockings will then need to be provided. The stockings should be long enough to come up well over the knees. These are pinned to the diaper with safety pins. The shoes should be carefully chosen so that they do not pinch, chafe, or bind the foot. They should have broad toes. Care should be used from the beginning to keep the shoes left and right.

The Baby's Bath.—Every baby (unless it is so weak that it should not be handled) should have its daily bath. Its own wash cloth, towels, and soap should be provided, and kept separate from those used by the rest of the family.

The bath hour may be either in the morning or evening. It should not be right after the baby has been fed. If the baby is troublesome at night, an evening bath will tend to better sleeping habits. In the morning, if the full bath is given at night, the face, hands, and buttocks should be washed.

The room in which the bath is to be given should be warm and free from draughts.

The clean clothing should be well aired, all ready to

put on. A tub or large basin of lukewarm water should be ready, with soft towels, and wash cloths, pure soap, free from injurious ingredients, and some bits of old cotton or linen for washing the baby's mouth.

The head, neck and ears are washed first. The scalp needs to be soaped daily to ensure cleanliness. When the baby is a month old he can be put in the tub or basin to have the body washed. Tub bathing is always preferable for larger babies.

The drying is done by soft patting rather than vigorous rubbing. Special care should be taken in the drying of the armpits and groin, where chafing is liable to occur.

Chafing is caused chiefly by failure to keep dry the folds of skin in the armpits, groin, about the neck and ears, and sometimes behind the knees, and at the elbow-joints; by lack of cleanliness; or by too rough clothing. To guard against it in the folds of the skin, these points at which chafing is liable to occur are dusted with a fine powder. Talcum powder is commonly used. If the skin around these parts is dry and inclined to peel, a little cold cream, or zinc oxide ointment may be used instead of powder.

Chafing in a baby is nearly always due to neglect. It shows at once that a baby's mother or nurse has not given it the intelligent and constant care it should have.

To wash a baby's mouth, a little clean lukewarm water with a pinch of borax dissolved in it is used. A bit of clean cotton wrapped around the little finger is dipped into the water and the inside of the mouth swabbed out at least twice a day. Babies are very liable to develop sore spots on the tongue. These can be prevented by proper care and careful daily washing. The utmost gentleness should be used in doing the washing, as it is easily possible by too vigorous rubbing, to break the delicate lining of the mouth.

The eye-lids of a little baby sometimes become red, and swollen, with sometimes a creamy discharge. This is always a serious condition and the doctor should be told

of it at once. Many babies have become blind because the doctor was not called soon enough to treat the sore eyes.

In putting on the baby's clothes after a bath, care should be taken not to have the binder too tight. Much discomfort is caused the baby by a binder or bandage so tight that neither lungs nor abdomen have a chance to expand. It should be free from wrinkles and should be changed as often as it becomes soiled or wet. Its chief use after the first month is to prevent chilling of the abdomen. If it is not managed, so that it does this, it had better be discarded. Safety pins, not too large, should be used to keep it in place. Common straight pins should never be used in a baby's clothes.

Sleep.—A very young baby should sleep most of the time. As it grows, it will sleep less. When it is six months old it should take a morning nap of from one and a half to three hours. Regular hours for its sleeping should be planned and adhered to as much as possible. Some babies from six months to a year old take an afternoon nap, but it is better to put the baby to bed early (about 6 P. M.) for the night, and try to teach it to sleep well at night, than to allow it to sleep in the afternoon, and stay up late in the evening.

The Baby's Bed.—The baby from the beginning should have its own little bed. It may be a basket or a cradle or a box but any of these or even a thick cotton quilt folded and laid on two chairs is preferable to having it sleep with its mother. Both will rest better if the baby has a bed of its own. This is especially true in summer. A great many babies have been killed by being smothered between two adults, or by being overlaid by its mother or father during a heavy sleep.

The hair mattress, covered with a rubber sheet over which is laid a quilted pad, is probably the most desirable for a bed. If the hair mattress and crib are not available, a sack filled with clean straw is probably the next best thing. This also should be covered with a rubber

sheet which is soaked in hot suds at intervals. Over this a thick quilted pad should be placed.

Feather pillows when used for a baby's bed cannot be kept clean and sanitary. A small feather pillow for the head is not so objectionable, though a hair one is preferable.

Air is the first great essential to life. No one can live many moments without air, and no baby can be healthy and strong and grow as it should without plenty of fresh air. It is not enough that it is sent out daily in its carriage for an airing, but the air in the room in which it eats and sleeps should be kept pure as possible, and as free as possible from bad odors. Except in severely cold weather, it is a good plan to wrap the baby up warmly, and put it in its buggy to sleep out of doors during its daily naps. At night the window of the room in which it sleeps should be opened either at the top or bottom, to let in the fresh air.

Points to be Remembered.—The baby's clothing should be loose, soft, warm enough but not too warm, clean, and not too elaborate.

The binder should not have rough edges next to the skin and should not be too tight.

Shirts should have high necks, long sleeves, and be of a material that will not irritate the skin.

Shirts and bands should come well down over the abdomen and should be pinned so as to prevent chilling.

Skirts of petticoats and dresses should not be so long that the baby cannot exercise his legs.

Diapers should be changed as soon as they are wet or soiled. They should be well rinsed after washing to remove every trace of soap.

Badly washed diapers may cause inflammation of the skin around the hips.

Stockings should come well up over the knees. Except in the warmest weather the baby's legs and knees should not be left bare.

Shoes should have broad toes, and left and right kept for proper feet from the beginning.

The baby should have a bath every day.

Crusts on a baby's head are a sign that it has not been kept clean.

Chafing of the skin at the arm-pits or groin is usually caused either by lack of cleanliness or by too rough clothing. It can be prevented by keeping the parts dry and clean.

Babies are prone to develop small sores in the mouth. To prevent this the baby's mouth should be washed gently every day, at least twice.

Every baby needs plenty of fresh air if it is to grow and be healthy and strong.

REVIEW QUESTIONS.

1. Describe an average outfit of clothing for a baby.
2. About what age should a baby be put in short clothes?
3. Mention some precautions you would use in regard to a baby's shirts, diapers and shoes.
4. How would you prepare for and give a bath to a baby?
5. What precautions would you use in regard to the binder?
6. What measures would you use to prevent chafing in a baby?
7. Why is it important to wash a baby's mouth, and how would you do it?
8. Describe what you would consider proper arrangements in regard to baby's sleep.
9. Why is fresh air in the sleeping and living rooms important for every baby?
10. What would you do if you noticed that a baby's eyes were sore or inflamed?

CHAPTER XVI.

EVERY-DAY CARE OF THE BABY (continued).

Demonstration and Practice Work.—How and how not to carry a baby. How to apply artificial heat to a baby. Show picture of a baby's stomach; tell its position and explain why a baby vomits so easily when the stomach is overfull.

Feeding.—A baby will survive a great deal of neglect in other ways if it be properly fed. If it be not properly fed no amount of attention in other ways will compensate for ignorance or carelessness in this respect. The result of ignorance or unwise feeding is usually a funeral. There are parents who would not think of experimenting with the mechanism of a ten dollar watch when it refuses to do its work properly, who nevertheless experiment with the delicate machinery of a baby's digestive apparatus in a manner that is simply appalling. When there are signs that the baby's digestive organs are not working properly, they will, acting on the well meant advice of some neighbor as ignorant as themselves, give it one thing after another in turn because the neighbor said "it did her baby good" at some previous time. It requires but a very small amount of promiscuous experimenting with a baby's food to produce a sick baby. The only safe way, if the baby's food seems not to agree, is to consult a reliable physician and follow his directions to the letter.

The best food for a baby is its mother's milk. The baby who is breast fed has more than ten chances to one in its favor for growing up strong and healthy, as compared to the bottle-fed baby.

The baby's stomach at birth holds only about two tablespoonfuls. At six months it holds about three-

fourths of a cupful. The baby needs to be fed more frequently than grown folks because its stomach is small, but it is a bad practice to train the baby to expect to be fed every time it cries.

Regular hours for feeding should be established from the very beginning. Every two to two and a half hours during the day, and once between ten o'clock and early morning, are often enough to feed the baby. After the first three months the daily feedings may be three hours apart.

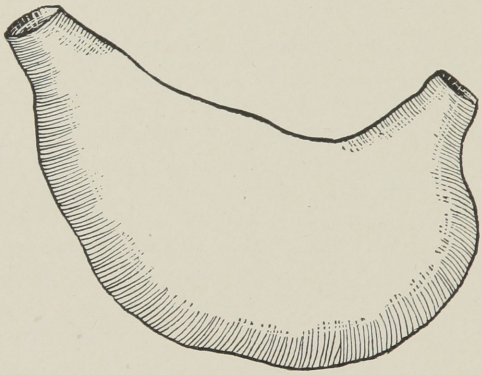


FIG. 30.—Stomach of infant at birth, natural size. (*J. P. C. Griffith.*)

To train the baby to do without nursing at night from ten o'clock till early morning is easy, if it is started at birth and it is better for the baby, the mother, and all concerned.

Water should be offered to every baby two or three times a day. Quite often a baby cries because he is thirsty. Cool boiled water should be given it in preference to the water from the faucet or pump.

When the baby cries do not think, every time it is crying from hunger. It may be crying from indigestion. If more milk is offered it, the warm milk entering the stomach may relieve it for a time, only to increase it in a short time. The baby may cry because it is too cold or

too warm; its clothing may be wrinkled and uncomfortable, or wet; colic or indigestion from overfeeding may cause it to cry. The baby may be hungry, or it may be lonesome.

Gentle patting in the crib or turning over to the other side will often soothe a nervous baby. It is never a good plan to practice taking the baby up every time it cries. Babies who have been trained to expect to be taken up every time they cry, may easily become veritable little tyrants and upset the peace of the entire household.

Colic is often relieved by a drink of warm water, by a hot flannel to the abdomen, by gentle rubbing of the abdomen, beginning at the right groin and going up and around, or by laying them on the stomach over a hot plate or a hot water bottle. If the pain persists an enema to empty the lower bowel may have to be given.

Drugs should never be given to a baby to relieve pain, except on the definite order of a doctor. Many of the pain-relieving medicines contain opium or some other substance which acts on the baby's brain causing a stupor, and seriously damaging the baby's general health.

Hundreds of babies are killed every year as a result of promiscuous drugging on the advice of neighbors and friends. Beer, wine or liquor of any kind should never be given to a baby.

The Baby's Diet.—Bringing the baby to the table with the family has often proved to be the first step to a sickness which caused its death.

The baby who is being nursed at its mother's breast does not need potatoes nor a pork rind to suck, nor bread and gravy, nor crackers and milk. If these are not given to the baby by some injudicious person, he will not know anything about them, and will not want them.

It is not unusual in some homes to find that a baby of a few months has been given beer or sausage, or a richly iced cake, or candy, or decaying fruit. Cucumber pickles have been given to a baby of a year, while boiled

tea and bread constitute a staple article of infants' food in thousands of homes. Where such blunders in feeding are persisted in, deaths among babies under two years, as might be expected, are common occur rences.

A good general rule is to give the baby no solid food till it has teeth. No food should be given a child which it is not able to digest, or which will not nourish it. The question is not whether this article will do the baby any harm, but will it do it good? Until a child is seven or eight months old its digestive organs are not able to digest starchy foods or solid foods of any kind.

If a baby gains in weight, is ordinarily contented, does not vomit, his food both in quality and quantity must be pretty nearly right. It is a good plan to weigh the baby every month for the first year.

Every change in a baby's diet should be made gradually. Before weaning, it should be gradually accustomed to other foods. It is a very bad plan to wean a baby in hot weather.

Teething.—The process of teething is purely natural, and a baby in ordinary good health will have very little discomfort. It is a common mistake to attribute all sorts of symptoms to "cutting teeth." Babies have been allowed to suffer and die because the mother ignorantly believed the fretfulness of the baby, and other signs of illness, were due solely to teething. In excessively nervous or poorly-nourished children, the coming of the teeth may exaggerate other symptoms, but if the baby seems sick or is unusually fretful it is well to examine for other causes of discomfort.

The first teeth usually make their appearance about the sixth or seventh month. Some babies have their first teeth earlier than this, and others later. No teeth at the end of the first year is a sign that his general condition is not as good as it should be, even if he appears well. The two lower central incisors usually come first. There are twenty milk teeth or temporary teeth. A

baby a year old should, under ordinary conditions, be expected to have at least six teeth. By the time it is two and a half years old it should have all its temporary teeth. As a rule nature will attend to the cutting of teeth unaided. The giving of the baby a hard rubber to "bite on" or the rubbing of the gums with a thimble in an effort to help the teeth through, are foolish practices which do no good, and may do much harm.

Comforters or Dummies.—The "dummy" is an unnecessary evil, the foolish contrivance of some ignorant woman in past ages whose example is no safe guide for the mothers and nurses of the present. The "comforter" is a constant menace to the child's health, and it usually utterly fails to produce the desired "comforting" result. It was no part of the Creator's plan that any infant should be kept constantly sucking, exercising the muscles of its mouth and jaws in all its waking hours. Such muscles are over-exercised. Physicians have found that babies who have been trained to acquire this habit are more frequently the victims of adenoids, and other throat troubles than other children. The dummy is constantly dropping out of the baby's mouth, and he is kept in constant agitation till some one puts it back again. It gathers to itself germs and dirt of various kinds which are carried into the mouth, there to do their work in causing inflammation and ulcers in the delicate lining of the mouth.

Exercise.—From the time a baby is three months old, it is a good plan to lay it flat on the floor on a blanket every day where there are no draughts and let it stretch and kick. If it attempts to stand up on its feet too soon, as many active babies do, its efforts should be discouraged. The bones are soft and "bow-legs" may be the result of too early attempts at standing or walking. Trotting the baby on the knee is one of the worst forms of exercise.

When a baby is out of doors its eyes should be protected from the strong glare of the sun. A white or bright

lining for the carriage is very trying on the eyes. Dark green or brown are suitable shades.

Flies are carriers of disease wherever they are found. For this reason flies should be banished from the rooms occupied by the baby, and when out-of-doors it should be protected from flies.

The baby's bowels should move every day; four passages may be expected during the first few weeks, after that two passages a day are to be expected. No baby should be allowed to go over 36 hours without a movement.

Regular habits in this direction can be greatly aided by the mother or nurse. From the time a baby is four or five months old, training in controlling the bowels should begin. Many babies of a year old who have been carefully trained can be trusted to tell when the bowels are going to move, and it is usually a mother's or nurse's fault if a baby at eighteen months does not know enough to save soiling or wetting himself during the daytime.

Points to be Remembered.—The baby's stomach is a very delicate piece of machinery to experiment with. Do not go to the neighbors and friends for advice about a baby's food. If it cannot have the natural food consult a doctor and let him decide what food should be given.

The best food for a baby is its mother's milk. Do not feed a baby every time it cries. Have regular hours for feeding and stick to them.

Give the baby water to drink two or three times a day.

The cry is the baby's language. The mother or home nurse should try to understand this language.

Do not bring the baby to the table or give it the food prepared for the family if you want it to live and be healthy.

A baby cannot digest starchy foods in the first six months.

Make the changes in a baby's diet very gradually.

Don't blame the teeth for all the signs of sickness a baby shows.

If a baby is a year old and has no teeth it is wise to consult a doctor and try to find out the reason.

The dirty custom of thrusting a "dummy" into the baby's mouth and trying to keep it exercising its jaws all the time, is one to be ashamed of. It proclaims to the world the ignorance of its mother. Besides it may be the cause of serious throat trouble in the baby later on, even if it does not cause present trouble.

Protect the baby's eyes from the bright sunlight when it is out of doors.

Keep flies away from the baby. Flies are disease carriers.

REVIEW QUESTIONS.

1. What do you consider the best of all foods for a baby? How often should a baby be fed?
2. Mention some reasons why you would consider regular hours of feeding important.
3. Give some reasons besides hunger that might account for a baby's cry.
4. What rules would you observe in regard to giving drugs to a baby?
5. How would you ascertain whether or not a baby was thriving?
6. About what age should a baby's first teeth be expected to appear?
7. Mention some reasons why the "dummy" or "comforter" adversely affects the baby.
8. How does a six months' old baby get exercise?
9. How often should a baby's bowels move?
10. At what age should efforts be made to teach the baby to control the bowel movements?

CHAPTER XVII.

THE BOTTLE-FED BABY.

Demonstration and Practice Work.—Preparation of modified milk for a baby. Care of bottles and attachments. Preparation of barley water. Right and wrong kinds of nursing bottles.

It is always a calamity when a baby has to be deprived of its natural food. In spite of what advertisments say, a perfect substitute has never been found for mother's milk. When artifical feeding has to be resorted to for the baby the smallest details become exceedingly important.

Cow's milk differs in several ways from mother's milk. Cow's milk contains more solid matter, is apt to form tough curds in the baby's stomach, and is harder to digest. In the mother's milk, harmful germs are not present.

The most important thing in preparing milk for a baby is to secure milk from a healthy cow, and be sure that it has been carefully and cleanly handled from the time it issues from the cow till it reaches the baby.

Mothers and nurses who have seen one baby do well on one special kind of food often make the mistake of suggesting it for other babies. No food will suit all babies. One baby will die when fed on the same kind of food on which another baby flourished. There are some babies with whom cow's milk, however carefully handled, acts as a poison and some other food must be given.

Pasteurized milk is milk which has been heated to about 167° F. and kept at that temperature for twenty minutes. See page 67.

Sterilized milk is milk which has been heated to boiling-point (212° F.), and kept at that point long enough to kill

all germs which it may contain. This milk is harder for babies to digest, and is less nourishing than pure raw milk.

Modified milk is cow's milk which has been altered by diluting it with water and adding cream and other substances that will render it easier to digest.

In emergency the following formula may be used to prepare food for the baby:

Milk.....two tablespoonfuls.
Cream.....three tablespoonfuls.
Milk sugar.....three and one-half teaspoonfuls.
Soda solution.....one tablespoonful.
Water enough to make one-half pint.

The soda solution is made by adding one-half teaspoonful of baking soda to one pint of cold boiled water. This solution will keep indefinitely.

It is better to prepare enough food for the baby for 24 hours each morning, and keep it on ice. It can be prepared in a glass jar and kept tightly covered and put in a cool place. In summer the baby's food should always be kept on ice. It is warmed before giving to the baby by setting the bottle in a tin of warm water for a few minutes.

To pasteurize the modified milk, set glass jar with the milk or the bottles in a bucket of water over a slow fire. Heat the milk to about 167° F. Do not let it boil. (See rules for using the pastometer, page 68.) The milk is then removed from the fire and as soon as it is safe to avoid cracking the glass, it is plunged into a bucket of cold water, and when cold is placed in the refrigerator.

The quanity of milk for each feeding will vary with the age and size of the child. A large plump baby will need more food than a smaller baby of the same age.

Right and Wrong Kinds of Nursing Bottles.—A nursing bottle should have no sharp corners. One with a rounded bottom is best. It should have the number of ounces marked plainly on the bottle so that one can see at a

glance how much milk the bottle contains. Bottles with long rubber or glass tubes should never be used as the inside of the tube cannot be kept clean. The rubber tips or nipples should have a hole large enough to drop rapidly, but not to run in a stream when the bottle is turned downward.

Bottles, tips, and everything used about the baby's milk need rigidly careful cleaning. The milk should never be left in the bottle after the baby has finished with it, neither should left-over milk be offered the second time to the baby.

As soon as the baby has finished feeding, the bottle should be taken away and washed. It is then put in a basin of cold water to which a little baking soda has been added and allowed to come to a boil on the stove. It remains immersed in this water in a covered vessel till it is needed.

Tips or nipples should be thoroughly cleansed after use, boiled every day and kept in borax water, a half teaspoonful to a cup of water. To cleanse the nipples it is necessary to invert them. Just before using, pour a little scalding water over the tips. The tips or nipples do not last long and if boiled too often cause trouble when the baby is trying to feed, by collapsing. Be very sure that your own hands are clean before you touch the rubber nipple.

In many large cities milk already prepared for babies can be had at milk stations. Nipples already sterilized and wrapped in waxed paper are furnished with each day's feeding. Directions about how to care for the milk are given also in such cases.

During feeding the baby should not be left alone with its bottle. If left alone it is likely to drink too fast, or too slowly so that the milk cools; to lose the nipple and get it dirty, or to take too little, all of which can usually be prevented if the mother or nurse holds the bottle and encourages or checks as occasion requires. Never give cold milk to a baby.

Condensed milk is not a good food for the average baby. Very often babies on it grow fat and plump but the flesh is not healthy flesh, and babies fed on condensed milk are not likely to grow strong. It is sometimes useful as an emergency food. When a tin of condensed milk is opened, the milk should be removed from the tin at once and put in a covered glass jar on ice or in a cool place. The same rigid cleanliness about bottles and utensils should be observed as with raw milk. It should be diluted with cold boiled water, the mixture being re-heated by standing the bottle in a tin of warm water for a few minutes before using.

Barley water is often prescribed to dilute the baby's milk, thus rendering it easier to digest. The prepared or ground barley is more convenient to use than the pearl barley.

To make it, cook one level teaspoonful of barley flour in one and a half cupfuls of hot water for fifteen minutes. Blend the barley flour to a smooth paste with a little cold water before adding it to the water, and stir constantly. This is used instead of clear water to dilute the milk.

Oatmeal water is made by pouring a quart of cold water over a teacupful of oatmeal. Let it soak for an hour. Squeeze the water and starchy part through a colander, and boil one hour in a double boiler. This makes a thick jelly. One or two teaspoonfuls of this jelly are dissolved in a pint of water and added to the food instead of plain water, to dilute the milk.

Food During the Second Year.—Until a baby has passed its second year its food should be most carefully watched. By the end of the first year well-cooked oatmeal, cream of wheat, farina, or rice may be given with milk. Soup, free from fat, and slightly thickened may occasionally be given. Mashed or roasted potato, sago, tapioca, junket, blanc mange, bread and milk, milk toast, or a soft boiled egg may be gradually added to its diet, but milk should still be the chief food up to eighteen months. After the eighteenth month, bread and gravy, rice pudding, egg

custard, a baked apple, and a small amount of seedless fruit may be given. Meat if given at all should be minced up finely. No child under two years can be depended upon to chew meat sufficiently, and undigested pieces of meat in the body are fairly certain to ferment and cause trouble. A great deal of bowel trouble in children of this age is due to giving them unmashed potatoes, meat, and other food which is swallowed in chunks.

Foods Forbidden to Young Children.—The following articles are said to be particularly hard for children to digest and should not be allowed them under four years of age:

Fried foods of all kinds, pork, pickles, salads, mustard and pepper, liver, kidneys, tomatoes, corn, cabbage, beets and the coarser vegetables, confectionery, fancy cakes and pastry, pancakes, cheese, rich soups, nuts, gravy, fruits with large seeds such as grapes, the skin of all poultry, fruits and vegetables, dried or unripe fruits, and canned foods of all kinds.

This list and the list of rules that follow are taken from Practical Dietetics, by W. Gilman Thompson, M. D.

General Rules for Feeding Young Children.

1. Allow time for meals.
2. See that the food is thoroughly masticated.
3. Do not allow nibbling between meals.
4. Do not tempt the child with the sight of rich and indigestible food.
5. Do not force the child to eat against its will but examine the mouth, which may be sore from erupting teeth; and examine the food which may not be properly cooked or flavored.
6. In acute illness reduce and dilute the food at once.
7. In very hot weather give about one-fourth or one-third less food and offer more water.

What kills the babies? "In each 100 deaths among children under two years of age thirty-seven are caused by diseases of the digestive system; twenty-three by impure air; nineteen by defects and accidents at birth;

nine by acute contagious diseases; 3 by disease of the nervous system; two by tuberculosis; two by violence; while a variety of ailments contribute to make up the balance" says the Chicago Department of Health.

Summer Care of Sick Babies.[1]—"3929 babies died in New York City last summer from diarrheal diseases. Most of them died because they were given improper food. They could have been saved if they had been taken to the doctor at the beginning of their illness, and had been properly fed.

"In hot weather, two or three loose movements a day, even though the baby seems to be well, may indicate the beginning of serious illness; a doctor should see the baby at once. Remember that it is far easier to keep the baby well than to cure it when sick.

"The baby is sick when it vomits or has diarrhea, and it is seriously sick when it has several loose green passages a day containing mucus and curds. Improper food is the cause of such illness; therefore stop all food, give cool boiled water and take the baby to a doctor at once. In summer it is dangerous to wait.

"*Breast-fed babies* often vomit or have diarrhea because the mother is sick or tired out and her milk is poor.

"Improper food, irregular meals, lack of rest and sleep, too frequent or too prolonged nursing, weaken the mother and injure her milk. These causes act especially in hot weather.

"*Nursing mothers* should therefore keep themselves well and their milk in good condition, by eating at regular hours, three plain, well-cooked meals a day, and they should drink water between meals. They should nurse the baby at regular hours. They should keep their bowels regular; constipation in a nursing mother often causes colic in her baby. Large quantities of tea, coffee and beer do not improve the quality of a mother's milk and may be injurious to her baby. So long as the mother keeps well the baby will be well.

[1] Instructions issued by the New York Department of Health.

"If the mother is ill or 'run down' or the baby has diarrhea and vomiting, she should consult a doctor at once and before giving the baby other foods or bottle-feeding. The quality of the mother's milk may be improved by improving her health.

"*Bottle-fed babies* often have diarrhea and vomiting because the milk used is bad and old, or the feedings are not properly prepared or properly kept, or the nursing-bottles and nipples are dirty.

"Bottle-fed babies must be given only good milk which is kept constantly covered and on ice. Use milk furnished by the milk depots or diet kitchens; if the milk stations are not convenient, get good bottled milk which is delivered every morning. If the milk cannot be kept properly cooled, it should be boiled as soon as received.

"Prepare the feedings for the baby exactly as the doctor directs. Feed the baby at regular hours. Each feeding should be heated to a proper temperature in the nursing-bottle before it is given to the baby. Taste a spoonful of the milk immediately before giving it to the baby to be sure that it has not soured. If the milk is not sweet, do not give it to the baby.

"As soon as the bottle used by the baby is empty, it should be thoroughly washed with cold water, then cleansed with borax and hot water (teaspoonful of borax to a pint of water). The empty bottles should be put upside down on a shelf. The bottles should be boiled just before filling for the next feeding. The nipple should be thoroughly washed after each nursing with hot water, and when not in use should soak in borax water in a covered glass; the nipple must be rinsed in boiling water just before the baby uses it.

"*Clothing.*—During the very hot days, or if the baby has fever, remove nearly all the clothing. A muslin slip or gauze shirt is enough. A baby with fever will not catch cold.

"*Bathing.*—A baby should have one tub bath every

day; on very warm days from two to four general sponging with cool water. If the baby has fever sponge it with cool water every two or three hours and place cool, wet cloths on its head.

"*Fresh Air.*—Babies, sick or well, must have fresh air. Keep the baby in the largest, coolest room in the house or apartment. Keep as little fire as possible. Keep the rooms free from garbage, soiled clothes and rubbish. Leave the windows open day and night. Avoid the sun on hot days. Select the shady side of the street and the shade of the parks, recreation piers and roofs.

Sleep and Quiet.—Keep the baby quiet. Let it sleep alone and let it sleep as much as possible. Lay it on a firm bed, not on feather pillows. Keep the baby and bedclothes clean. Change the diapers and bedclothes as soon as soiled, and sponge the baby with a soft cloth and cool water. If this is done the baby will not be so restless and will sleep better. Do not give 'soothing syrup' to make the baby quiet, and do not let the baby hang on the nipple or suck a 'baby comforter.'

"*Diapers.*—Diapers should be carefully washed as soon as they become soiled, and then dried in the open air. Do not use a soiled diaper a second time before washing it."

Points to be Remembered.—The bottle-fed baby is always in danger of being killed through the carelessness of its mother or nurse.

Cow's milk needs to be modified or changed to make it a fit food for the baby.

It is very important to get clean milk for the baby.

Milk which has been carelessly handled contains disease germs which threaten the life of the baby.

No kind of food will suit all babies. Do not give advice to other people as to what food they should give their babies. Your well-meant advice may lead to the babies death.

You cannot be too careful about the cleanliness of nursing bottles and tips.

Always wash and boil the bottle after using.

Never offer left-over or cold milk to a baby.

Do not leave the nursing bottle in the cradle or crib after the baby has finished feeding till it smells sour. Wash it at once.

Stay with the baby and hold the bottle while he is feeding.

Condensed milk is not a good food for the average baby.

Do not give a child food which needs chewing till it has sense enough to chew it thoroughly.

A great deal of bowel trouble among children is caused by giving them meat, corn, potatoes in chunks, and such foods that are not chewed and therefore can not be digested properly.

Do not tempt a child with rich or unwholesome food which it is not allowed to have.

REVIEW QUESTIONS.

1. Tell why it is important to secure perfectly clean cow's milk for baby.
2. What is modified milk? Give one formula for preparing it.
3. Explain what you would consider the right kind of a nursing-bottle and attachments.
4. How would you care for the bottle and attachments before and after using?
5. What other precautions would you observe in the artificial feeding of a baby?
6. Why is barley water sometimes mixed with milk for a baby?
7. Describe what you would consider suitable foods for a baby during the second year.
8. What precautions should be observed regarding the meals of all young children after they are given solid food?
9. Mention several different kinds of food which you would not give to a child under four years of age.
10. Outline the routine care you would give a six months old baby during the summer.

CHAPTER XVIII.

HOUSEHOLD DISINFECTANTS, AND HOW TO USE THEM.

Demonstration and Practice Work.—Making and labelling of disinfectant solutions.

In every home that is kept in a sanitary, healthy condition some household disinfectants are needed. The term disinfectant may not be used but the custom of making use of some disinfectants is general in every well kept home.

A disinfectant is a substance that kills all germs that have power to infect or cause disease. We learned in a previous lesson something about germs and will remember that there are good and bad germs. All germs are not infectious, or disease, germs. Some infectious germs are much harder to kill than others.

An antiseptic is a substance that prevents the growth of germs but does not necessarily kill them.

Natural Disinfectants.—Without knowing exactly why she does so, except that "it is healthier" the housewife puts bedding, clothing, etc., out to sun and air them. Experiments with different kinds of germs have shown that exposure to bright sunshine for a few hours is one of the best ways of killing a great many kinds of germs. Letting the sunlight flood the room helps to check the growth of germs of all kinds.

Dampness favors the growth of germs and therefore, sunlight by drying out a room, helps to keep it free from infectious germs.

Soap and water also are important aids in this work. The housewife who uses soap and water liberally in every part of her home, admits the sunshine freely, and prevents dampness, has done much to keep it healthy.

Heat.—Boiling is one of the easiest and best of all ways of killing disease germs, and wherever boiling can be used without damage to the article, it should be used in preference to all other methods. Fire is the greatest of all purifiers and should be used to dispose of infected material in the form of soiled dressings from wounds, and useless dangerous materials. All such materials should be wrapped in newspapers and promptly burned—never left to lie around carelessly.

Boiling of all basins, instruments used about wounds, sputum cups, dishes, glasses, and general sick-room utensils, is the easiest way of disinfecting them and making them safe for well people to use.

Infected clothing which must be washed, before boiling, should be soaked in a disinfectant solution long enough to really disinfect. All disinfectant solutions require time to do the work. Momentary contact with such a solution is never to be depended on for safety. Most disinfectants are more powerful if used hot.

A solution that is highly recommended for disinfecting washable clothing contains the following:

Carbolic acid three parts; common soft soap one and one-half parts; water 100 parts. Common laundry soap is first dissolved in water, the carbolic acid is added, and the mixture is vigorously stirred. Commercial carbolic acid may be used which is less expensive than the purified product. If this solution is used hot, infected clothing that is soaked in it for one hour may be considered safe and may be mingled with other clothing.

When removing sheets or bed linen from a patient with a communicable disease, first wring a sheet out of the disinfectant solution and spread it on the floor to receive gowns, towels, pillow covers, etc., as they are removed until thorough disinfection of each article can be attended to.

Woolen clothing that should be washed should not be allowed in the room with a patient who has a communicable disease. It often happens, however, that the

suit the person has worn while the disease was developing must remain there. All such clothing should be thoroughly fumigated and afterwards well aired.

Fumigation is the exposure of articles to a gaseous disinfectant. Formaldehyde and sulphur are the two drugs which are commonly used for this purpose, but formaldehyde has within recent years almost entirely displaced the old-fashioned sulphur fumigation.

Several things should be borne in mind in regard to formaldehyde:

1. It does not disinfect beneath the surface of an article.
2. It is necessary in order to get the best results to obtain a large volume of gas in a short time.
3. It has no injurious effect on fabrics or colors.
4. It should never be used in a room in which the temperature is below 50° F.
5. A higher degree of heat helps the disinfecting power of the gas.
6. A bucket of boiling water should be placed in the room just before disinfection as a certain amount of moisture helps to thorough disinfection.
7. It does not kill insects, and has practically no effect on bed-bugs, roaches, and such vermin.

Methods of using formaldehyde vary. One of the simplest ways is by the sheet method.

To fumigate a room, first close all windows, fireplaces, all cracks and ventilators. The cracks should be stopped with cotton batting. A rope is strung across the room. All bureau drawers, trunks, etc., are opened. Mattresses are thrown over the foot of the bed so as to expose as much surface as possible. Rugs and other articles are arranged in the same way. The gas cannot be depended upon to disinfect the interior of a mattress or quilt—only the surface. Have a dry sheet ready in a basin and the formaldehyde, which is purchased in a 40 per cent. solution, ready to pour over it. Bring in then the tub or bucket of steaming boiling water. Pour the formalde-

hyde over the sheet in the basin, throw the sheet over the line prepared for it, and beat a hasty retreat. Close the doors and cracks around them with cotton batting or by sealing with paper over the cracks.

Quantity.—One pint of formaldehyde for every 1000 cubic feet of space should be used.

The disinfecting power of formaldehyde gas is increased by combining it with another drug known as potassium permanganate in the proportion of 3 1/2 ounces to 1 pint of formaldehyde. The potassium crystals are put into a large tin vessel or pail which is set inside a wooden or pulp bucket and the formaldehyde is poured over them after the room has been prepared.

The room should remain closed for at least twelve hours and afterward be thoroughly sunned and aired. Liquid ammonia sprinkled about the room after it is opened helps to get rid of the lingering fumes of the drug.

When a suit of clothes or small articles require to be fumigated, a large box rendered airtight by papering it inside may be used, or a hogshead or galvanized iron can. A slat shelf with iron or wire hooks that fasten over the top may be used, the whole being tightly covered. This contrivance confines the fumes in a small space and a twenty-four hour exposure will render the contents safe. Care should be used to expose all possible surfaces of the garments.

Sulphur gas is a good surface disinfectant. It also requires moisture in the room to do its best work. It injures metal and cotton and linen materials. It has the advantage of cheapness and can usually be readily obtained.

Quantity.—Authorities on disinfection recommend the use of five pounds of sulphur to every 1000 cubic feet of space.

The room should be kept closed at least sixteen hours. In arranging the sulphur, place it in three or four vessels, rather than all in one thus creating a stronger volume of gas. Old tomato cans are often used to hold the sulphur.

These should be placed in tin dishes of water, which are raised from the floor by bricks, as a precaution against fire. Alcohol is poured over the sulphur powder, and a match applied to it sets the gas free. The same care should be used in exposing surfaces as in formaldehyde fumigation.

Chloride of lime is said to be one of the strongest disinfectants known. It is used to disinfect excreta, sinks, water-closets, and drains, but should never be used to disinfect clothing as it ruins the fabric. Chloride of lime is used in a 4 per cent. solution which requires approximately six ounces dissolved in a gallon of water.

The custom of setting dishes of chloride of lime moistened with water in a sick room in the hope that the fumes will disinfect the air, or the room, is a vain delusion that does not spell "safety." It may help to neutralize a bad odor by substituting a different sort of odor, but such methods do not disinfect. They give a false sense of safety. Hiding a bad smell by a powerful drug is not remedying the evil.

Milk of lime is the least expensive of all disinfectants. It is made by adding one pint of water to two pounds of dry quick-lime. This produces slaked lime. After bubbling ceases add four times as much water as the volume of slaked lime. Solutions should be made at least once every two days. Lime which has been exposed to the air loses its strength soon and should not be used.

To disinfect the waste from the human body the milk of lime should be used in quantity equal to the amount of excreta to be disinfected, thoroughly mixed, and allowed to stand two hours. This solution is useful also to disinfect sinks, drains, or to whitewash exposed surfaces.

Bichloride of mercury or corrosive sublimate solution is one of the most powerful of disinfectants, but there are many limitations to its use. It corrodes metal of all kinds and should not be used to disinfect sinks, plumbing of any kind, or metallic instruments. It is sometimes

used to disinfect washable clothing. When so used it is made in a solution of one 1:1000 or 1 part of the drug to 1000 parts of water. It should be used hot whenever possible, and the clothing allowed to soak at least one hour. It is not a safe disinfectant for sputum or excreta of any kind.

Bichloride of mercury when used in the home is best made from the tablets specially prepared for that purpose. These may be procured from any druggist. Each tablet contains enough of the drug to make a 1–1000 solution when dissolved in a pint of water. This solution if used too strong may produce a distressing burn which will be slow in healing. All disinfectant solutions should be carefully labeled and kept where children cannot reach them.

Caution.—The solution closely resembles water and mistakes are easily made and usually fatal.

The poisonous nature of all such drugs should be impressed on all who have responsibility in the sick-room. Many deaths have been caused by disinfectants being taken for something else and given to the sick.

Carbolic acid solution is used for disinfectant purposes in a solution of from 3 to 5 per cent. To make a gallon of a 5 per cent. solution of a solution in which one part of the drug is used to twenty parts of water, dissolve seven fluid ounces (an ounce is two tablespoonfuls) of carbolic acid in a gallon of boiling water and shake till all the globules of acid are dissolved. Extensive burns have been caused by the neglect to have the acid thoroughly dissolved. Should a burn from carbolic acid occur, apply alcohol to the part at once. Cider vinegar is also an antidote.

Boracic (or boric) acid is a mild unirritating solution much used in eye treatments, and in surgical work in general. It is generally used as strong as it can be made. A solution in which the water cannot dissolve any more of the drug is called a saturated solution.

Salt solution is made by dissolving one teaspoonful of clean table salt in a pint of water. Because of the

ease with which this solution is obtained it is one of the most valuable for home use. It should not be used to disinfect clothing or utensils, but in dressing wounds and for irrigating any part it has a wide field of usefulness.

Peroxide of hydrogen is one of the safest of all disinfectants for household purposes. It is powerful in its action on disease germs, and yet practically harmless if taken internally. Care should be exercised to secure a pure peroxide of hydrogen for use in the sick-room and for the personal toilet. There are different grades or qualities of this article and an adulterated commercial product sold for bleaching purposes to mills and factories is sometimes sold as a substitute for the medical article.

Peroxide of hydrogen is much used as a mouth wash in measles, typhoid fever, pneumonia etc., when fever is present. A teaspoonful to a quarter glass of water makes a good mouth wash or gargle. In small wounds such as cuts, or scratches, it may be used to prevent infection and promote healing. Its uses as a disinfectant are mainly about wounds, or to disinfect the mouth and throat. It should not be used to disinfect sick-room utensils.

Points to be Remembered.—Of all means of keeping well the best is to keep clean.

Nature provides in abundance two powerful disinfectants, sunlight and oxygen.

Dampness and dirt favor the growth of germs.

Mattresses, beds, and bedding should be sunned and aired frequently.

Boiling even for a few minutes will kill most of the disease germs, such as typhoid fever, diphtheria, tuberculosis, pneumonia.

Boiling for ten minutes will render drinking water safe.

Most disinfectants are more powerful if used hot.

Fumigation can only be depended on to disinfect exposed surfaces. Gaseous disinfectants are more

effective if used in a warm room with moisture in the air.

Freezing cannot be depended on to kill germs.

Infected ice has caused some very serious typhoid fever epidemics. Be sure that all disinfectant solutions are labeled and kept out of the reach of children.

Always allow a disinfectant plenty of time to do its work.

In making a carbolic acid solution be sure that all the globules of acid are dissolved.

Remember that alcohol is an antidote for carbolic acid burns. Cider vinegar is also used as an antidote.

Bichloride of mercury should never be used to disinfect metallic substances of any kind.

REVIEW QUESTIONS.

1. What is a disinfectant? Name four methods of disinfection that may be used in a home.
2. What effect does bright sunshine have on disease germs?
3. What precautions should be observed in the handling of infected clothing which has been removed from the patient or bed?
4. Name two drugs that are used for fumigation and state how much of each drug is required.
5. How would you disinfect a suit of men's clothes or a woolen, or silk dress?
6. How should a room and contents be prepared for fumigation?
7. What substances may be properly disinfected with chloride of lime? What effect would this drug have on cotton?
8. What precautions should be observed in making a carbolic acid solution? What is the best antidote for a burn caused by carbolic acid?
9. How would you prepare a quart of salt solution?
10. How would you disinfect the following articles; infected sheets; sputum from a tuberculosis patient; an enameled basin; a kitchen sink; a mattress?

CHAPTER XIX.

COMMUNICABLE DISEASES IN THE HOME.

Demonstration and Practice Work.—Preparation of room for fumigation, with dresser drawers opened, and articles arranged so as to expose all possible surfaces.

When one of the acute communicable or "catching" diseases enters the home, the welfare of the members of the family who are not sick must be considered, in common with the sick one. Every possible precaution must be used to prevent the disease spreading.

Isolation of the sick one is the first step. This requires first of all that the patient have a room as far away from the rest of the family as possible and that he have a nurse to himself—someone who assumes the responsibility for his care entirely. This person must not be responsible for any other duties of the house except the care of the patient, however mild the case may be. If in the city, the Board of Health usually enforces more or less rigid quarantine rules as to communication with those who live and work in the outside world, but with all these safeguards and precautions much must be left to the good judgment and good conscience of the home nurse. In the country, supervision by health authorities is less strict, unless the disease is especially virulent.

The Room.—Usually the doctor will decide about the room. In measles and diphtheria it is often best to leave the patient in the room in which he was taken sick, rather than infect another room, since the time of these illnesses is comparatively short. In cases of scarlet fever or typhoid fever the illness may be expected to last for weeks, and the change to the most suitable room obtainable is very desirable. The room should be one which

the family does not need to use at all, and it should have good light and ventilation. Very often the sitting room or parlor is more suitable than a bed-room and more easily given up to the use of the sick. All unnecessary articles should be removed including draperies, rugs, bric-a-brac, pictures, etc.

Isolation.—When the patient has been moved, the room just vacated should be thoroughly fumigated, cleaned, and aired, before using it. For directions for fumigating see page 153.

The next step in the isolation process is for the home nurse to provide herself with utensils for the sanitary care of the room and patient. The broom used in the sick-room should not be used elsewhere in the house. A separate bucket, floor cloth or mop, dust cloth, hand basin, supply of old newspapers, and a tub or large bucket for disinfecting will be needed. Also an old sheet should be in readiness to be wet with the disinfectant to receive the sheets and clothing when they are changed, till they can be disinfected.

The custom of keeping a sheet wet with a disinfectant hanging before the door is an old-fashioned custom which many of the best modern authorities do not recommend. It is doubtful if it ever did any real good. It takes for granted that infection is commonly communicated by means of the air, which theory is no longer accepted at it once was.

Contact infection is the greatest danger in all such cases. It has been proven that infection is much more likely to be carried by the hands, by utensils which have come in contact with the patient, and by the clothing of the nurse or attendant than by means of air.

The following rules are enforced in one of the newest contagious disease hospitals and are equally applicable to the care of the patient at home:

"To Avoid Taking and Carrying Infection.—Keep fingers, pencils, pins, labels, and everything out of the mouth; keep and use your own drinking glass; do not

kiss a patient; wash hands often and always before eating. Keep out of doors as much as possible, and always sleep with the windows open; do not touch face or head after handling a patient until after hands are washed.

Do not allow patient to cough or sneeze in your face; do not allow patient to touch your face; do not eat anything the patient may wish to give you. If taking a drink or lunch, be sure and use the nurses' dishes; put on gown or change uniform when going into the ward; on leaving ward always wash hands. Always remember that infectious diseases are taken and carried by contact and not by air infection."

General Precautions.—*Soap and water applied to the hands and utensils freely and frequently is a thousand fold greater safeguard than a wet sheet before the door.*

The patient's dishes, glasses, etc., should not be returned to the kitchen till they have been thoroughly disinfected either by boiling or by chemicals. The tray used for either nurse or patient can be covered with a paper napkin which can be burned after use. Usually it is better to keep a set of dishes for the patient in the room, and transfer the food to them.

Use the old newspapers to wrap garbage or trash in and put promptly into the fire.

Wipe up the bare floors daily, using a disinfectant in the water. This should be done as soon as possible after the patient's clothing is changed and the bed made. A wet floor cloth over the broom is preferable to a mop. See Fig. 3, page 23.

Before removing any clothing from the patient or bed have spread out a sheet wet with disinfectant, to drop them into until they can be disinfected.

The hair has been found to be effective in spreading disease. If obliged to leave the sick-room to go to another room the nurse should cover it with a cloth wrung out of water in which some of the disinfectant solution was used. After the illness is over the hair should be thoroughly washed. Tar soap is recommended for this

purpose, or a thorough washing with soap followed by a rub with alcohol.

The germs of disease are found in the discharges from the bowels, in the urine, in vomited matter, and in expectoration.

In diphtheria, whooping cough, and influenza, the discharges from the throat and nose contain the infectious matter.

In scarlet fever, measles, and chicken-pox, the disease is believed to be communicated by particles of skin that peel off, and also through the discharges from the mouth and nose.

Infection may take place through actual contact with one who has the disease, through books, clothing, food, toys, etc. Pet animals if allowed to enter the sick-room may easily carry the disease to others. Flies are dangerous visitors to allow, owing to their habit of carrying germs and depositing them wherever they happen to light. Toys, dolls, picture books, used during sickness or convalescence by a child, should be promptly burned.

Many cases of contagious disease have been traced to toys which were thought too valuable to destroy, but which communicated the disease to neighbors' children months afterward.

The doctor usually directs about how disinfection is to be accomplished. When chemicals are used always allow time for the disinfectant to do its work. The following rules for prevention are recommended in diphtheria and with slight changes are equally applicable to scarlet fever.

Rules for Avoiding Diphtheria.—Avoid contact with a diphtheria patient. Even the mildest case of diphtheria is dangerous. The germ from a mild case may impart the disease in its most virulent form.

Do not let a child go near a case of diphtheria. Children under ten years of age are in much greater danger of death from diphtheria than are adults. But adults

TABLE OF INFECTIOUS DISEASES (FEVERS)[1]

DISEASE	AGE	WHEN MOST PREVALENT	MODE OF INFECTION	INCUBATION PERIOD	SYMPTOMS ON INVASION, ADVANCE, ETC.	
Diphtheria.....	All ages, Nurses very liable, and children (2 to 8 years especially).	October to December, Epidemics.	Air, Clothing, Room, Saliva, Nasal Discharges, etc., *Infected milk*, Cat, Toys, Bacillus Diphtheriæ.	Usually 2 days; it may be 2 to 10.	Grayish-white membrane—second day of illness. On tonsil, uvula, etc. Advance: fever, great debility, *weak heart.*	Sore throat may resemble Scarlet fever. Great danger from weakness of heart on exertion. Only free from infection when germs are absent from throat, etc. (Bacteriological examination necessary.)
Pneumonia.....	Any age, chiefly old people.	Spring and Winter.	Bacillus Pneumoniæ.	Short: 2 to 3 days.	Early rigor. Lung symptoms.	Infectious during attack.
Scarlet Fever or Scarlatina.	All ages, specially children 4 to 7 years.	November and December, Epidemics.	Direct Contagion, Breath, Skin, Clothes, Books. Milk specially (cow may probably get the disease). Discharges from ears and nose of patient are very infectious. Special germ unknown. Epidemics vary in intensity.	Usually 2 to 4 days (1 to 7).	Rash on second day of illness on upper part of chest, front and sides of neck, sore throat. (In children vomiting is an early symptom.) Fever later—finally desquamation ("skinning").	Resembles Small-pox, Measles, Diphtheria, Sore throat. Is one of the most fatal diseases of children. Free from infection after six weeks from commencement of disease, and when discharges from ears, nose, etc., and desquamation have ceased, probably after six weeks of commencement of illness. (Bacteriological examination necessary.)
Erysipelas.....	Adults over 40. Surgical and Post Partum cases. Children.	Spring.	Contagion. Inoculation wounds. Germ of erysipelas.	Usually 3 days (3 to 7).	Redness on second day of illness on inner angle of eye, internal ear, etc. "Blebs," swelling of face, high fever, delirium, etc. Desquamation later.	Dangerous for old people and chronic alcoholics, and in puerperal cases. Free from infection when skin has finished peeling.
Measles.....	Young children chiefly.	June and December. Epidemics differ in severity.	Specially infectious before and during rash. Neighborhood of patient, Air, Clothes. Discharges from nose, mouth, skin.	10 to 12 days.	Rash on fourth day of illness. Usually first on forehead, at roots of hair and behind ears. "Koplik's spots" (inside cheeks).	Resembles *German Measles*, Small-pox, Scarlet fever. Infected child should be isolated. Causes many deaths, and predisposes to *"Consumption" of the lungs later.* Free from infection after all rash, etc., has disappeared, probably three weeks after commencement of disease if attack is mild.
Small-pox.....	Any age if unvaccinated.	Spring and Autumn, Epidemics.	Patients are infectious before rash appears. Air, Clothing, Skin, etc. Germ uncertain.	Usually 12 days.	Rash on third day of illness, usually first on face. Previously, intense backache. Headache, vomiting or earlier red "blush." Later, secondary fever, "blebs," pustules, desquamation, etc.	Resemble Measles, Scarlet fever. Free from infection after all scabs and desquamation have disappeared.
Typhus Fever.....	All ages.	Winter Epidemics severe but infrequent.	Very infectious, especially near patient and during second week of illness. Bedding, Clothing, Furniture long retain poison. Germ not known. Especially among filthy surroundings. Overcrowding. Nurses are very liable to infection.	Usually 12 days (2 to 14).	Rash ("Mulberry") on fifth day of illness. Usually on abdomen, chest, backs of hands. *Face and neck usually free.* Symptoms rapidly developed: rigors, vomiting, flushed face and eyes. Disease usually terminates with *a crisis.*	One of the most infectious diseases. Now seldom seen except among very poor and dirty people. Deaths among children few. Free from infection after cessation of fever, probably six weeks after commencement of disease.
Typhoid Fever.....	Chiefly young male adults.	October, November, December.	Water and Milk, Oysters, Cockles, Vegetables, Defective drains, etc., Flies, Excreta. Bacillus Typhosus.	About 14 days (5 to 23).	Rash at end of first week: *few* small rose-pink spots on abdomen, chest. Later intestinal symptoms. Characteristic temperature chart. Lysis or crisis at end of fever.	Resembles Influenza. Later appearance of rash distinguishes it from Scarlet fever, Small-pox, and Typhus fever. Relapses may occur. Convalescence slow. Free from infection probably after six weeks. Bacteriological examination necessary.
Chicken-pox or Varicella.	Children specially.	Spring, Autumn, Epidemics.	Germ unknown. Air, Clothing, Contacts.	Usually 14 days.	Rash (seen first day of illness on chest, back, etc.). Slight fever, successive crops, each lasting 3 to 4 days.	Free from infection after skin has become normal. Probably two weeks from commencement of illness.
German Measles..... (Rotheln)	Children or adults.	March to June.	Immediate neighborhood of patient, infectious Clothing, etc.	Usually 16 to 18 days.	Rash on second or third day of illness. Pink spots on face first. Enlarged glands in neck. Sore throat. Slight fever—3 days.	Free from infection when skin is normal, probably after three weeks from commencement of illness.

Nurses should make it clear to Parents, etc., that mildness of the attack in one person *does not lessen the chances of another taking the infection*, or of having a *virulent type of the disease.*

[1]From Hygiene for Nurses, Herbert W. G. MacLeod, B. Sc., M. D.

frequently get and spread the disease. Mild cases among adults may cause fatal cases among children.

Do not allow a dog, cat, or other animal to enter the sick-room; a pet animal may carry the disease to a child.

Allow no persons to visit the sick-room. When leaving the infected home the attendant should bathe the body and hair with some antiseptic soap and disinfect the clothing.

Discharges from those sick with diphtheria retain the virulence for a long time. Care must be taken to allow no clothing in the room that cannot be washed or fumigated.

Food into which the diphtheria contagion has gained entrance should be most carefully avoided. The germ of diphtheria is so tenacious of life that it may be carried long distances. Milk has been the means of imparting the disease in many instances.

Abrasions of the skin must be carefully covered with court (or adhesive) plaster, as they afford favorable opportunity for the contraction of diphtheria.

Avoid any exposure of the throat at times when diphtheria prevails. Influences which promote sore throat tend to the spread of the disease.

Use no dish used by the sick. Allow no child to use any dishes, toys, etc., that have been in the sick-room.

In epidemics regard all persons having sore throat as probable diphtheria patients. Never kiss such patients; observe all care about allowing children to touch their clothes or dishes. Keep children away from them as much as possible.

Responsible persons should see to it that in times of epidemics individual drinking-cups are supplied to and used by the children in schools. Diphtheria germs have been found on cups in actual common use in schools. A fountain-cup would be less liable to spread disease than an ordinary cup, because the water continually overflows the sides and tends to wash away any infection which might otherwise collect on the edges of the cup.

When the patient is recovered and released give him a thorough bath, hair included, put on clothing which has not been in the infected room and let him go at once into another room.

The Room and Contents.—After a diphtheria case is concluded, the room in which there has been a case, whether fatal or not, should, with all its contents, be thoroughly disinfected.

Because of the innumerable ways in which the contagion may be scattered about the house and premises, the entire house and outbuildings, including cellar, garret, woodshed, and privy, will usually need to be disinfected.

The disinfection must include not only the room, but also all articles, etc., which have been in the room. All clothes and furniture must, therefore, not be removed, but must be left in the room for disinfection.

It is best to burn all articles which are not too valuable, especially if they have been soiled by discharges from the nose or mouth of the patient. This applies particularly to thick, resistant cloths. If the burning is done in open air, it should be far from dwellings and by a quick, strong fire.

All articles which are too valuable to be burned should, if washable, be treated to thorough boiling in some disinfectant solution. This should include all cotton, linen, flannels, blankets, etc. These should be introduced into the solution piece by piece, so as to make certain of thorough wetting, and the boiling should be for at least half an hour. The solution of which formula is contained on page 152 is especially suitable for flannel articles.

Heavy clothing, silk, or furs should be hung in the room for fumigation, pockets being turned inside out, and the whole garment thoroughly exposed. Mattresses should be hung up or otherwise placed so as to expose both sides. Carpets are best taken up and laid out on chairs, but may be fumigated on the floor if they are

afterward removed to the air and thoroughly beaten. Pillows and upholstered furniture, after being disinfected on the outside, may well be cut open and their contents again exposed to the distinfecting gas.

In no case should disinfection of every article of clothing, and bedding be omitted. As already directed they must be left within the room for this purpose. Infected clothing and bedding have been known to communicate diphtheria months after the case had subsided. Be sure that all possible surfaces are exposed.

Tuberculosis is not one of the highly infectious diseases but it is spread by a germ which may enter the body in several ways.

It may be breathed into the body by means of floating dust in the air.

It may be taken into the body with food and drink.

It may enter through a wound in the skin.

It may get into the body by means of dishes and table utensils, through saliva, through kissing, and in other ways.

It is believed not to be directly transmitted from parent to child, but may be contracted through close contact in infancy, if the parent has the disease.

Prevention.—When there is a consumptive in the home the following rules should be observed:

"1. The sputum or matter coughed up by a consumptive should not be spit upon the floor, carpet, stove, wall, or sidewalk, but always, if possible, in a cup kept for that purpose.

"When a metal, glass, or earthenware cup is used it should contain 5 per cent. solution of carbolic acid, to prevent the sputum from drying and destroy the germs. The cup should be emptied into the water-closet at least twice a day and thoroughly washed with boiling water.

"When consumptives are away from home the sputum should be received into a pocket-flask of glass, metal, or pasteboard.

"Whatever receptacle is used it should have a cover, so that flies may not have access to its contents.

"Patients too weak to use a cup should use moist rags, which should at once be burned.

"If cloths or handkerchiefs are used by a consumptive they should not be carried loose in the pocket, but in a waterproof receptacle, such as a tobacco pouch, which should be frequently boiled. If handkerchiefs are used they should not be put in a laundry bag or receptacle with other soiled linen, but should be kept immersed in a 5 per cent. carbolic solution, or should be boiled at once in water for at least half an hour.

"A consumptive should never swallow his sputum. Sputum swallowed may spread the disease to other organs. The hands should be washed and the mouth rinsed out before eating.

"2. Great care should be taken by the consumptives to prevent their hands, face, and clothing from becoming soiled by their sputum. If they do thus become soiled they should at once be washed with soap and water.

"3. Consumptives should always hold a cloth or handkerchief before the face during coughing or sneezing, lest germs be scattered in the small particles of spittle that are then forcibly expelled.

"4. A male consumptive should be clean shaven. Hair about the face is apt to retain the germs existing in particles of spittle ejected during coughing or sneezing.

"5. A consumptive should have his own bed and, if possible, his own room. Both the bed-room and living-room should have as much direct sunlight as possible, and should always have an abundance of fresh air—the window should be open day and night. Many consumptives have benefited greatly from sleeping out of doors in tents, on roofs or piazzas.

"6. The rooms should be cleaned daily, but, to prevent the raising of dust, all dusting should be done with damp cloths, and before sweeping floors must be well

sprinkled with sawdust, small scraps of paper, or tea leaves, all thoroughly moistened.

"7. A consumptive's soiled clothes and bed linen should be handled as little as possible when dry, but should be kept immersed in water until the washing is to be done.

"8. All rooms or apartments which have been occupied by persons suffering from consumption must, on death or removal, be thoroughly disinfected. No other persons should be allowed to reside therein until this rule has been complied with.

"9 A consumptive woman should not nurse an infant. It drains the strength of the mother and subjects the child to the danger of infection."[1]

The *room occupied* by a consumptive patient should be well lighted and ventilated, even if there is no hope of a cure. The dangerous qualities of the sputum are diminished quickly by exposure to sunlight and fresh air. Sunshine is one of the best disinfectants, and a room flooded with sunshine is far less dangerous to those who are associated with the patient. The dilution of the atmosphere with fresh air also lessens the danger of contracting the disease.

Predisposing Diseases.—Patients who have suffered from grippe, pneumonia, measles, bronchitis, and other diseases in which the respiratory organs have been affected, should especially guard against this disease. The diseases mentioned have paved the way for consumption in many cases. These patients should remain under treatment and avoid exposure to cold, damp, or sudden changes of temperature until their normal health has been fully established.

The *infectious character of consumption* has been overestimated by many. Tuberculosis is not contagious in the same way as diphtheria, scarlet fever, or small-pox, and much harm is done through a totally unwarranted fear of consumptives. It is said by eminent authorities

[1] Bulletin Ontario Board of Health.

that one is less in danger of contracting the disease in a sanitarium for this class of patients than almost anywhere else. In localities where such institutions are located the mortality from consumption has markedly decreased. The patient is only a source of danger through discharges from diseased tissues, chiefly the sputum, and if these are properly cared for, contact with the consumptives is practically free from danger.

The danger of infection is greatest in the house or workshop or office where the sun has less opportunity to do its preventive work than outside. Dark rooms or dwellings are always dangerous, and alleys, courts and dwellings shut off from light are especially good breeding places for the disease.

Points to be Remembered.—A good conscience as well as intelligence and judgment should be possessed by the home nurse in charge of an infectious patient.

"Nothing unnecessary in the room" is a good rule in such cases.

A broom or dust cloth used promiscuously when an infectious patient is being nursed may easily spread the disease.

Nothing is small enough to be careless about in dealing with communicable diseases.

Contact infection is the chief danger to be feared.

Soap and water applied freely to the hands and utensils is a thousand fold greater safeguard than a wet sheet before the door.

Floors and woodwork should be gone over every day with a damp cloth wet with a disinfectant.

The germs of disease easily find lodgment in the hair and may be spread through the house in that way.

A toy or book too valuable to be burned should not be given to a child who has an infectious disease.

The home nurse who is in charge of a patient with diphtheria, scarlet fever or any acute communicable disease should study carefully the rules given for prevention of the disease.

One little article which was not disinfected or which was too valuable to burn has held the germs for months and caused the disease which resulted in death.

Four things are essential to a cure in a consumptive patient: rest, freedom from worry, plenty of good food, plenty of fresh air.

If proper care is taken of the matter which a consumptive spits up, there is little danger of contracting the disease.

The tuberculosis germ flourishes in dark, unventilated rooms which are not kept clean.

Remember that sunshine is an efficient germ destroyer. Give it a chance when dealing with communicable diseases.

REVIEW QUESTIONS.

1. How would you arrange the room for the care of an infectious patient?
2. What utensils should the home nurse secure for the proper sanitary care of the room?
3. In doing the routine work of caring for infectious patients what measures should a nurse use to avoid contracting the disease herself?
4. What precautions should be used in regard to dishes and utensils?
5. How may the germs of disease be spread in the following diseases: typhoid fever, diphtheria, measles, scarlet fever?
6. Outline the general preventive measures that should be observed in regard to diphtheria and scarlet fever.
7. How should a room and contents be arranged for fumigation?
8. How may the tuberculosis germ gain entrance to the body?
9. Give a complete set of precautions which should be observed to prevent a tuberculosis patient spreading the disease.
10. Mention some conditions which render it easier for a person to contract tuberculosis.

CHAPTER XX.

A LESSON ON BANDAGING.

Demonstration and Practice Work.—Application of roller and triangular bandages to human subject.

There are very few homes in which bandages do not at some time become a necessity. Bandaging, like most other useful arts, is one that requires practice. The first attempts may be bungling and discouraging, but even without a teacher a good deal of skill can be developed, simply by following the pictures and the printed directions.

Skill in bandaging depends on two things:

A keen perception of the purpose for which the bandage is applied.

Manual dexterity in putting it on.

The neatest looking bandage is not always the best, though neatness is to be cultivated. The proper amount of pressure made by the bandage and the amount of support given to the part are important points to be kept in mind when putting on any bandage.

Uses of Bandages.—1. To retain dressings or splints in position.

2. To support injured parts.
3. To make even, steady pressure on a part.
4. To check hemorrhage.
5. To protect wounds from exposure.

The roller bandage, the abdominal, and the triangular bandage are those best adapted for home use. To make a roller bandage see below.

From four to five yards should be provided for bandaging a foot and ankle. Two and a half inches wide is a good width for bandages for the head, arm, or leg. For

a roller bandage for the breast, three to three and a half inches is better.

The following rules for applying a roller bandage will be helpful to keep in mind:

1. Have the bandage tightly rolled before applying.

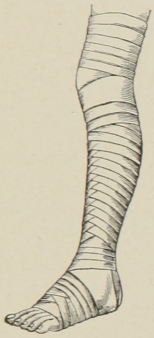


FIG. 31.—Spiral reversed bandage of the lower extremity. (*DaCosta.*)

FIG. 32.—Spica of the instep. (*DaCosta.*)

Study to apply it smoothly and never attempt to reapply without first winding it up.

2. The limb to be bandaged should be held in the position it is to be kept with the bandager standing in front. An arm should be held with the elbow flexed and the thumb pointing upward.

FIG. 33.—Spiral reversed bandage of the upper extremity. (*DaCosta.*)

3. Apply the outside of the bandage to the inside of the limb and fix the end with a couple of turns around the limb in starting.

4. Bandage from below upward and from within outward over the front of the limb.

5. Allow each turn of the bandage to overlap by about

two-thirds the preceding turn, and never unroll more than 2 or 3 inches of the bandage at a time.

6. Apply the bandage firmly, but never too tightly nor too loosely. The bandage is too loose if the edges turn up on running the hand down over it after the bandage is on.

7. Endeavor to use firm, equal pressure. The pressure of red lines on the surface of the skin after removal of a bandage indicates unequal pressure.

8. Leave the tips of fingers and toes uncovered. If these become blue the bandage should be loosened.

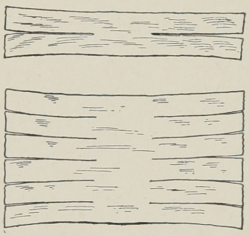


FIG. 34.—Four-tailed and many-tailed bandages. (*Stoney.*)

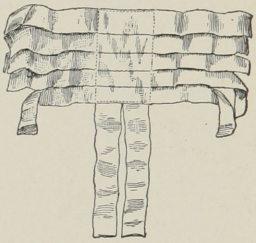


FIG. 35.—Scultetus bandage. (*Stoney.*)

9. Never apply a bandage wet. When dry it will shrink and be too tight.

10. Avoid reversing over a sharp, bony prominence, and keep the reverses in a line on the outer side of the limb.

11. In bandaging a joint always use a figure-of-eight.

12. In removing a bandage gather up the loose part and carry it around the limb.

An abdominal bandage may be needed for support under various conditions. A roller towel can be used in emergency, or a bolster cover. If a bandage has to be made for the purpose it should be double and deep enough to come well down over the hip bones, and long enough to lap two inches on each side in front. To apply it, arrange it evenly and begin to pin in the middle of the bandage in front using strong safety pins. Pin

as tightly as it can be drawn, with the hand underneath. When the hand is withdrawn it should be comfortably snug. Pin first downward from the middle, then up-

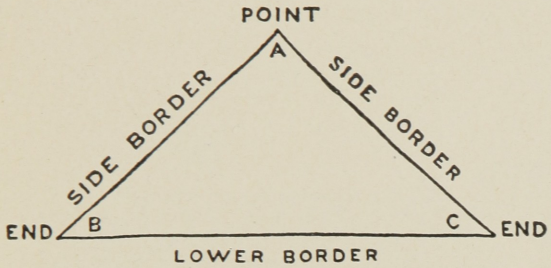


Fig. 36.—Triangular bandage. (*Warwick* and *Tunstall.*)

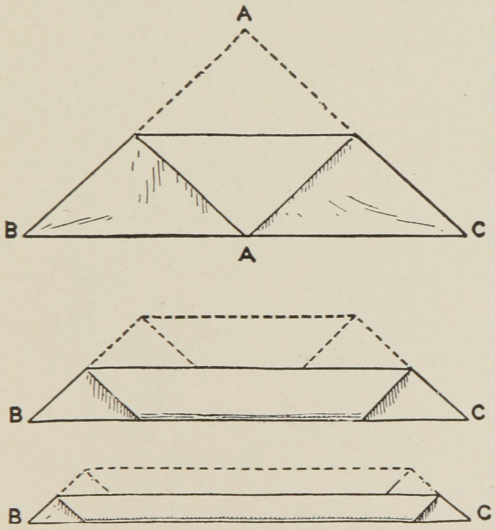


Fig. 37.—Method of folding triangular bandage broad and narrow for use. (*Warwick* and *Tunstall.*)

ward, fitting the bandage in at the waist by pinning a gore in at each side. Such a bandage needs to be re-adjusted and tightened often, especially if the patient is

moving around. If it is not kept in place and fitting snugly to the form, it is not giving support and might as well be discarded.

The triangular bandage is made by taking a piece of

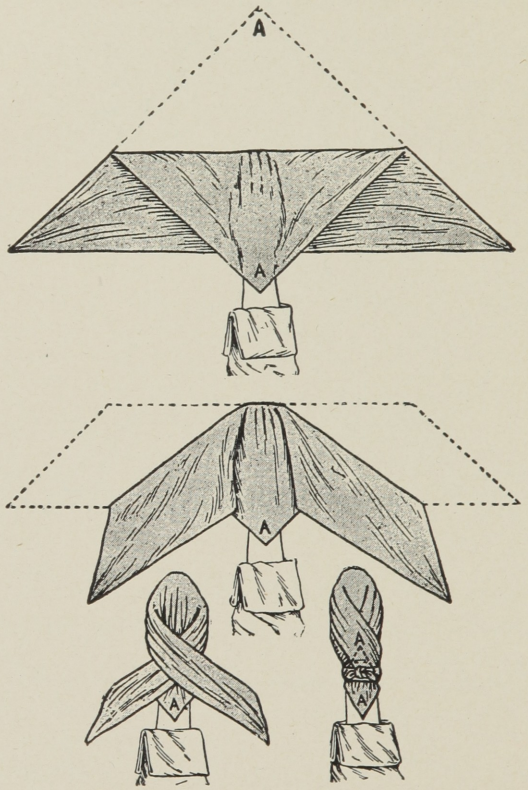


Fig. 38.—The triangular bandage for the whole hand. (*Warwick* and *Tunstall.*)

cotton about one yard square, folding it diagonally and cutting it along the fold. Each of the triangles thus secured forms one bandage.

The base of the triangle forms the lower border; the

two sides, the side borders; the apex, the point; the remaining corners of the triangle, the two ends.

The triangular bandage has the following advantages:[1] "It can easily be made from a handkerchief and is therefore well suited for an emergency bandage. Its application may be easily acquired; temporary dressings

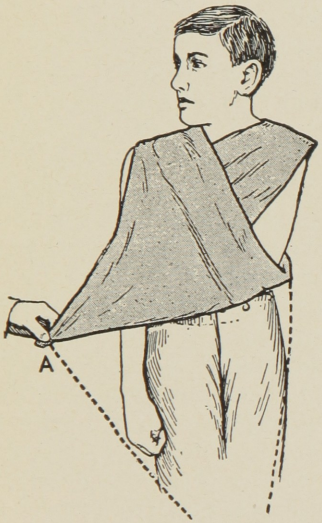


FIG. 39.—The large arm sling applied as a support for the elbow. (*Warwick* and *Tunstall.*)

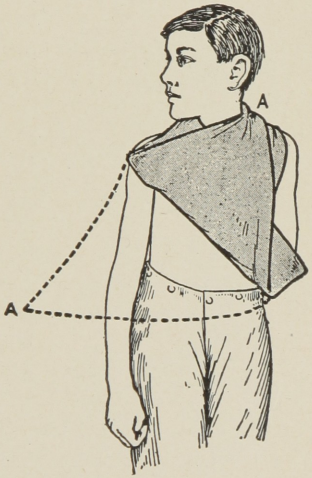


FIG. 40.—The large arm sling applied as a support for the elbow. (*Warwick* and *Tunstall.*)

may be fixed better with it than with a roller bandage and it can be used for almost every purpose for which a bandage is required."

"*The Narrow Arm Sling.*—This is applied by first folding the bandage narrow, then placing one end over the shoulder of the uninjured side and allowing the other end to hang down in front. The forearm is now bent to the required height, and the hanging end is drawn up in

[1] *First Aid to the Injured,* Warwick and Tunstall.

front of it and over the shoulder of the injured side, and the two ends are then tied behind the neck."

"*As a Support for the Elbow.*—Place the triangular bandage with one end on the shoulder of the injured side and the apex pointing in the opposite direction to the elbow; then flex the forearm on the injured side, and place it across the front of the chest, with the fingers touching the opposite shoulder. Now draw the lower end over the elbow, and across the front of the chest to the top of the shoulder on the uninjured side and tie it to the upper end. Then take the apex, fold it well over the forearm, and pin it to the bandage above on the injured side."

FIG. 41.—The triangular bandage for the head. (*Warwick* and *Tunstall.*)

"*For a Wound of the Scalp.*—First fold the lower border of the bandage lengthwise to form a hem 1 1/2 inches wide, then place it with the middle of the hem over the center of the forehead just above the root of the nose, and the point hanging over the back of the head to the neck. Now carry the two ends backward above the ears which are left out, cross the ends behind at the nape of the neck over the point; bring the ends forward and tie them in front on the forehead. Next draw the point down to make the bandage fit well over the head, then turn it over the top of the head and pin it.

"*For a Wound of the Hand.*—Spread out a bandage unfolded, place the hand upon it with the wrist on the center of the lower border, palm downward and the finger toward the point. Turn the point over the fingers and carry it across to the back of the wrist, then draw the bandage downward on each side of the hand, and pass the ends upward round the back of the wrist; cross them over the point, then carry them in front of the

wrist; bring them back again, and tie them over the point. Now draw the point over the knot and pin it to the bandage below.

"*For a Wound of the Foot.*—Spread out a triangular bandage unfolded; place the foot on the center of it with the toes toward the point, draw the point upward over the instep. Take one of the ends in each hand close up to the foot, bring them forward round the ankle to the front and over the point, cross them on the instep, carry the ends back round the ankle, cross them behind, catching the lower border of the bandage, bring them forward again, and tie in front of the ankle. Now draw the point well over the knot and pin it to the bandage below."

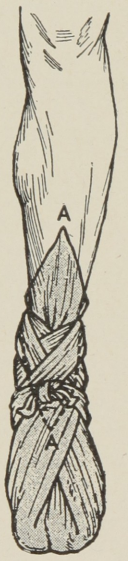


Fig. 42.—The triangular bandage for the foot. (*Warwick* and *Tunstall.*)

Points to be Remembered.—Have your bandage properly made and rolled, and know what you want to use it for before you try to apply it.

Always have the limb in the position in which it is desired to remain before beginning to bandage.

Be sure always to leave the tips of the fingers and toes uncovered. A bandage too tight may cause serious trouble by interfering with circulation.

In removing a bandage always gather the loose parts and carry around the limb.

Bandaging like playing the piano requires practice if one is to become expert.

The triangular bandage is one of the most useful and most easily obtained of all bandages. It can be applied to almost any part of the body to retain dressings or give support to an injured part.

The abdominal bandage needs frequent readjustment or it will ride up over the hip bones. It should be pinned

as snug as can be comfortably borne, beginning to pin in the middle and fitting it in with pins at the waist.

REVIEW QUESTIONS.

1. On what two things does skill in bandaging chiefly depend?
2. How would you prepare a roller bandage for a fracture of the upper arm?
3. For what purposes are bandages useful?
4. Outline the rules which should be observed in putting on a roller bandage.
5. Mention some precautions which should be used in bandaging an injured foot and give reasons.
6. How would you make a triangular bandage?
7. How would you apply the triangular bandage as a sling to support an injured forearm?
8. If obliged to bandage an eye with the triangular bandage how would you do it?
9. Describe the method of applying a triangular bandage to the whole hand.
10. How would a triangular bandage be applied to the knee?

CHAPTER XXI.

ACCIDENTS AND EMERGENCIES.

Demonstration and Practice Work.—Methods of checking hemorrhage and rendering first aid in various emergencies. Removing dressings from a wound (imaginary or real) and applying fresh dressings. Disinfection of hands.

Wounds of some kind constitute a considerable portion of the accidents with which the home nurse will have to deal. These will vary from a scratch or abrasion of the skin, or superficial cuts, to deep wounds with serious hemorrhage which call for prompt heroic action.

Common sense is the first requisite in emergencies of all kinds. Some women and girls pride themselves on being so sympathetic that they are useless when a real emergency happens. They relate with an air of pride how near they came to fainting when this or that accident happened. This is a weakness which can be overcome and the best way to do it is to resolve first of all to forget self, and do as they would want others to do for them if they were injured. Such tendencies are increased by boasting of them and will-power can overcome them in any one who earnestly desires to be useful.

Wounds.—In dealing with wounds in general the first things to be done are:

To check the bleeding.

To cleanse the wound.

To keep the wounded parts at rest.

To protect the wound from outside dust or dirt by means of some clean dressing material.

Do not touch a wound with dirty hands or instruments. Do not apply cobwebs or tea leaves or any such substance to check the bleeding. Even if the wound and surround-

ing parts seem to be dirty there is no justification in introducing more dirt. If it is impossible to cleanse the hands before rendering first aid, cover the wound with a piece of clean old linen soaked in a solution made by dissolving a teaspoonful of clean table salt in a pint of boiled water, and keep this dressing in place with a bandage.

To Check the Bleeding.—In superficial wounds the cut blood-vessels tend to close readily by the formation of a clot. If bleeding continues apply clean water as hot as can be borne, or clean ice cold water if it is at hand, or use direct pressure with a bit of clean cotton held over the bleeding point.

If bleeding is excessive apply firm pressure over the main blood-vessel from which the bleeding comes. Pressure with the thumb may be maintained until further aid can be secured. Pressure with the thumb is especially applicable to wounds about the face and neck.

If bleeding is from a leg or arm, elevate the injured part and keep it elevated for several hours after bleeding has ceased. Direct pressure may be made by means of what is called a tourniquet which may be improvised from a bandage or handkerchief.

Do not give stimulants such as whiskey, brandy, or wine, unless ordered to do so by the doctor. Stimulants tend to increase the bleeding. In cases of extreme exhaustion or shock, stimulation may be necessary, but should be used with great caution.

In surface wounds, an application of gauze or linen soaked in Friar's Balsam (obtainable at any drug store) is an excellent dressing. It tends to prevent infection and promote healing. Iodine painted on cuts is now much used.

Disinfect the hands before beginning to dress any wound and scald or boil every basin and instrument before use, to guard against introducing anything injurious into the wound. When a basin has been boiled always handle from the outside. If necessary to sterilize a couple of basins quickly place one over the fire with a little water

and place the other inverted over it. Boil for ten minutes.

Cleanse the hands by scrubbing hard with hot soap and water and a stiff hand brush for at least three minutes. Underneath the finger-nails is a favorite lodging place for dirt and germs of all kinds which readily gain access to a wound through the handling of dessings, etc. To guard against this see that the finger-nails are clipped

FIG. 43.—**The** wrong way to handle a surgical basin.

short, and scraped underneath before beginning to scrub. After the nails have been thoroughly scraped, rub the hands with a piece of washing soda and water and afterward soak them in some disinfectant solution such as bichloride of mercury one part to two thousand parts of water or carbolic acid solution (see page 156). If neither of these is at hand, soak the hands after thorough scrubbing, in hot salt solution for five minutes. Hand disinfection cannot be accomplished in a minute or two. It takes time to scrub and soak the skin so that

the germs from the hands will not get into a wound and into the blood through carelessness. A large proportion of wounds become infected and are hindered from prompt healing because poisonous germs from the fingers of nurse or attendant have gotten into the wound during the dressings. This is one point which home nurses cannot be too particular about. If a thing is worth doing at all it is worth doing in the right way.

FIG. 44.—The right way to handle a basin.

Dressings for wounds are commonly made of absorbent gauze and cotton. Any clean old linen such as old handkerchiefs, table napkins, etc., may be used. It is wise to soak even the cleanest dressing material in some disinfectant solution especially if the wound has been made by a dirty instrument or by machinery. In removing a dressing or adhesive plaster from a wound avoid pulling the edges of the wound apart. Loosen the dressing gradually from both sides toward the wound.

Burns.—One of the best emergency dressings is made

by soaking a piece of clean gauze or cotton in a solution made by dissolving a teaspoonful of baking soda in a cup of water. When there is need for a complete dressing olive oil may be put on, or if obtainable a preparation known as unguentine which can be gotten at most uptodate drug stores.

Carron oil is made by mixing equal parts of linseed oil and lime water. This is an old fashioned application for burns which is always useful.

When the clothing is on fire make the unfortunate one lie down and wrap tightly around him a blanket, rug, large coat—anything large enough to cover the body. Everything possible should be done to keep the flames from the face, and the hot air from entering the lungs.

Frost Bites.—The best treatment is friction using ice or snow. The temperature of the room should be very gradually elevated.

Sprains.—Put the part at rest. If an arm, support in a sling. If a leg, apply a splint or support and keep it slightly elevated. The pain may be relieved by the use of hot fomentations or an ice poultice. In all such cases the injured tissues may be expected to take from two to six weeks to repair. For a sprained ankle it is best to get a doctor to firmly strap it with adhesive strapping. This strapping needs to be renewed after about four to six days. Deep rubbing is helpful in the later stages.

Drowning.—Usually, restorative measures are directed to filling the lungs with air and trying to force the blood on through the left side of the heart. The mouth is cleared of mucus with the finger, the tongue drawn forward, and the clothing removed, keeping the patient on the left side if possible. Depress the tongue with the curved forefinger, turn the face downward, slap between the shoulders to remove as much of the accumulated water and obstruction to breathing. Keeping the tongue drawn forward, commence artificial respiration. The arms are drawn away from the sides and upward so as to meet over the head. They are then brought down to

the sides, and the elbows made to almost come together over the chest. These movements are continued at the rate of about sixteen to the minute, till breathing is started or till pulse and respiration have ceased for an hour. Smelling salts are helpful in encouraging breathing. Friction, warm blankets, and external heat, are needed when the breathing has started.

Internal Hemorrhage.—In severe hemorrhage from the lungs or stomach:

1. Send for medical assistance.
2. Keep the patient on his side or back, with head and shoulders slightly elevated by pillows, and absolutely quiet. Allow no talking or exertion.
3. Admit plenty of fresh air and remove all constricting bands.
4. Give bits of ice to swallow, strong iced tea, or vinegar and ice water.
5. Apply an ice-cap over the chest.
6. If the patient is faint apply warmth to the feet and smelling salts to the nostrils. Stimulants if used at all should be used with extreme caution in such cases.

Hemorrhage from the Nose:

1. Keep the patient sitting up.
2. Never allow him to hold his head over a basin.
3. Give plenty of fresh air and keep the arms stretched upward, above and behind the head.
4. Pinch the nose below the bridge between the thumb and forefinger.
5. Spraying the nostrils with an alum solution, using one to two teaspoons of alum to a pint of water, may be tried in extreme cases.

If these measures do not check the bleeding a physician should be summoned.

In shock (a very severe depression) the face is pale, pinched, and anxious. There is great prostration of strength, coldness of the skin, cold perspiration, pulse weak and rapid, pupils dilated. Temperature often subnormal, but not always.

Keep the patient lying down, absolutely quiet, with head low. Apply friction and heat to the extremities. Stimulation by mouth should be given, or a stimulating enema of hot coffee or salt solution.

Shock may easily be mistaken for concealed hemorrhage, as many of the same symptoms are found in both cases.

Fainting is caused by an insufficient supply of blood to the brain. Remove all tight bands and constricting clothing. Keep the patient flat on his back, with feet elevated. Dash cold water on the face. Hold smelling salts to the nostrils and give stimulants.

Apoplexy is due to the bursting of a diseased blood-vessel into or on the surface of the brain, causing compression of the brain. It occurs most frequently in elderly people. Elevate slightly and apply cold to the head. Loosen all clothing. Apply heat to the feet. Give no stimulants, fluid, or food of any kind by mouth and secure a physician as quickly as possible.

Sunstroke.—There are two conditions which are similar—heat exhaustion and heat-stroke. The former is a condition of extreme prostration, collapse, and sometimes delirium, caused by prolonged exposure to a high temperature. It may occur at night or in any season of the year. In heat exaustion the temperature may be subnormal and stimulants and hot baths are frequently needed.

Sunstroke proper occurs as the result of exposure to the sun rays while taking active exercise or doing hard physical work. Persons addicted to alcohol are more susceptible than others. Death may occur instantly or in a very short time, the patient remaining in a condition of stupor till death occurs. Temperature may reach 108° to 110° F. The temperature should be reduced as rapidly as possible by ice-baths, ice-packs, or ice-water injections into the bowel. Get the doctor as soon as possible.

Foreign bodies on the surface of the eye, such as

cinders, dust, etc., may be removed in most cases without much difficulty. If under the upper lid the lid should be everted. To evert the upper lid draw the lid down hold a toothpick or probe or lead-pencil across it, and roll the lid back over the instrument. This exposes the upper part of the eye-ball and a large part of the surface inside the lid. A twist of absorbent cotton around a probe or toothpick or a clean camel's-hair brush dipped in water may then be swept over the exposed surface very gently.

The lower lid may be everted by drawing it down, the patient being directed to look upward.

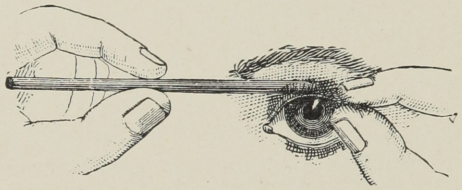


FIG. 45.—Method of everting the upper eyelid. (*J. P. C. Griffith.*)

Lime splashed in the eye should be first thoroughly washed out with warm water and bland oil, such as olive oil dropped in, if the pain continues. A teaspoonful of vinegar added to a glass of the water used for washing the eye will help.

Fractures are of different kinds. A fracture is a broken bone. In simple fracture the bone is broken but there is no external wound.

A compound fracture is more serious because there is, besides a fracture, an open wound through which germs may enter. Blood posioning frequently results in cases of this kind. Therefore it is highly important to keep such a wound as clean as possible from the beginning.

In all such cases, send for the doctor as soon as possible. Support the injured part by the use of splints. If the patient has to be moved any great distance bandage a pillow around the fracture with two or three pieces of

board outside the pillow as supporting splints. Always remember that a simple fracture may be made a compound fracture and a much more serious accident by improper handling

Poisoning.—The general practice when the cause of the poisoning is unknown is to remove the unabsorbed poison as quickly as possible from the system by the use of emetics and quick acting cathartics; to counteract the depression or shock by heat, stimulants, etc., and to relieve the pain by the administration of quieting medicines and soothing drinks.

Emetics are substances that cause vomiting. Those obtainable in the average home are:

Tepid water—two to four glasses.

Salt solution freely, given warm, using as much salt as the water will dissolve.

Alum (powdered) may be given in 1/2 teaspoonful doses for a child and a teaspoonful for an adult. Mix well with honey or syrup.

Mustard is given in doses of from 1/2 to 1 teaspoonful for a child and double the quantity for an adult stirred in a glass of warm water and quickly swallowed. It may be followed with copious drinking of tepid water.

Stimulants used are aromatic spirits of ammonia, 1/2 to 1 teaspoonful in water; brandy, or whiskey in doses of from two to four teaspoonfuls; strong tea or coffee; hot and cold douches alternately. If the patient cannot swallow give a stimulating injection into the rectum. A cupful of black coffee may be given by rectum.

Demulcents are soothing substances which relieve the internal irritation and pain. Among these are milk, white of egg and milk, flour and water, arrowroot, flaxseed tea, olive oil and gruel.

Food Poisoning, (Ptomaine Poisoning).—The prominent symptoms are usually those of acute inflammation of the stomach and bowels, agonizing pains, cold sweats, sometimes chills and extreme prostration. In meat or fish poisoning occurring as the result of putrefactive

changes in the food, the change may be imperceptible to the individual. It occurs frequently in canned goods as the result of chemical action on the food from the tin. Foods cooked and allowed to stand in brass or copper vessels have caused severe poisoning and death. One of the common forms of ptomaine poisoning is by ice cream made in large quantities and kept in unsanitary conditions.

To get the offending substance out of the system is the first step. Washing out the stomach, castor oil by mouth, and irrigation of the bowel are among the common measures used to relieve.

Poisoning by Inhaling Gas.—The first thing is to remove the patient from the poisoned air as rapidly as possible. Use artificial respiration as described under "drowning" (page 183) if necessary to start breathing. Alcoholic stimulation by mouth and an injection of salt solution into the rectum may be used if the condition is serious. Treatment must be persisted in for some time in many cases before a reaction from the effects of the poisoning occurs.

HOUSEHOLD ANTIDOTES.[1]

For bedbug poison For corrosive sublimate For blue vitrol For lead-water For saltpeter For sugar of lead For sulphate of zinc For red precipitate For vermilion	Give milk or white of eggs, large quantities.
For Fowler's solution For white precipitate For arsenic	Give prompt emetic of mustard and salt, tablespoonful of each; follow with sweet oil, butter, or milk.
For antimonial wine For tartar emetic	Drink warm water to encourage vomiting. If vomiting does not stop, give 1 grain of opium in the water.

[1] Table of Household Antidotes, quoted from *Pocket Cyclopedia of Medicine and Surgery*, Gould and Pyle.

For oil of vitriol For aqua fortis For bicarbonate of potash. For muriatic acid For oxalic acid	Magnesia or soap, dissolved in water, every two minutes. For oxalic acid, give calcium carbonate or hydrate (lime-water, chalk, wall-plaster, in water).
For caustic soda For caustic potash For volatile alkali	Drink freely of water with vinegar or lemon juice in it.
For carbolic acid	Give flour and water, glutinous drinks and a form of alcohol.
For chloral hydrate For chloroform	Pour cold water over the head and face, with artificial respiration; galvanic battery.
For carbonate of soda For copperas For cobalt	Prompt emetics; soap or mucilaginous drinks.
For laudanum For morphin For opium	Strong coffee, followed by ground mustard or grease in warm water to produce vomiting. Keep in motion.
For nitrate of silver For strychnin For tincture of nux vomica.	Give common salt in water. Emetic of mustard or sulphate of zinc, aided by warm water.
For iodine and iodides	Prompt emetic; solution of starch, flour and water.

Points to be Remembered.—To keep a wound clean is one of the most important duties.

Direct pressure is one of the most effective methods of checking excessive bleeding.

If a torniquet or tight bandage around a limb is necessary, do not leave it on too long or serious results may follow. It is better to remove it after two hours and if the bleeding commences again to reapply the pressure.

Be sure that your hands are clean before touching a wound. Take time to scour them thoroughly with soap and water if possible.

Stimulants tend to increase the flow of blood and should be used with great caution.

The dirt that gets underneath finger-nails may cause blood poisoning if it gets into a wound.

When removing a dressing a little carelessness may tear the wound open and undo the healing.

In serious burns the danger is usually in proportion to the area involved. Shock is always to be feared in serious burns. It is easy for an extensive burn to become infected and blood poisoning may develop even after the first danger is past.

In case of freezing, always be sure that the temperature of the room in which the patient is placed is slowly and gradually raised.

Sprains require time for the injured tissues to recover and patience is very necessary.

Every home nurse should know the substances which can be used in an emergency to quickly empty the stomach and be quick to use them when necessity arises.

Many deaths occur every year from children accidentally drinking lye, carbolic acid, laudanum, or other poisonous substance. Prompt use of an emetic may save a life.

In all forms of food poisoning, cholera morbus, etc., the first and most important thing is to get the offending substance out of the body as quickly as possible. Even if diarrhea is present a dose of castor oil should be given to quickly clear out the food tract.

REVIEW QUESTIONS.

1. State the first aid methods that should be used in case of wounds.
2. What measures would you use to check excessive bleeding from the arm? From the head?
3. In case of excessive bleeding from the nose what should be done to relieve it?
4. What is a torniquet? What precautions should be observed in using it?
5. How would you disinfect your hands before dressing a wound?
6. Outline the emergency management of a superifical burn of extensive area.
7. What should be done if the clothing gets on fire?
8. When fainting occurs what should be the first aid measures?

9. Distinguish between heat exhaustion and heat-stroke and state how each condition should be managed.
10. Outline the nursing measures that should be used in case of sprains.
11. What are emetics? Name some substances which may be used as emetics.
12. Outline the general methods used in case of poison being accidentally swallowed by mouth.
13. How would you deal with a case of food poisoning till the doctor could be secured?
14. In a case of poisoning by illuminating gas what methods would you use to restore?

NOTES ON SOME COMMON DISEASES AND CONDITIONS.

PART II.

CHAPTER XXII.

MATERNITY NURSING.

Demonstration and Practice Work.—Care of depressed nipples; preparation of vulva pads; preparation of room and bed for a birth; methods of preventing hemorrhage after childbirth.

Whether or not the average woman or girl ever expects to do nursing outside of her own family circle, she should seek intelligent practical information regarding the care which should be given to a woman before, during, and after childbirth, and the care of the new-born infant. This form of illness is one that practically every woman encounters at some time. Every community has its traditions regarding the care that should be exercised, and there is no lack of women who regard themselves as competent to advise the expectant mother. The "mother of eleven who has buried seven" is more than likely to regard herself as a walking encyclopedia of maternity wisdom. When there are reasons for believing that a baby is to be expected it is wise to consult the most reliable physician available and act on his advice rather than the neighbors' suggestions.

BEFORE THE BABY COMES.

The care which a pregnant woman gives herself or has given her by others has an exceedingly important bearing on the child's welfare as well as her own. Greater care than usual should be exercised to observe the common laws of health and keep the functions normal as far as possible.

Diet.—Most pregnant women suffer from constipation to a greater or less degree. Occasionally diarrhea recurs

again and again. Since the mother must not only eat for two but excrete for two as well, it is most important that the digestive system and excretory organs be kept in as good condition as possible. De Lee recommends for the relief of constipation the establishing of regular habits of attempting to empty the bowel, the use of laxative fruits, and a glass of cold water on rising in the morning and at bedtime; the abandonment of tea, and a diet containing fruits and vegetables in abundance, especially spinach, peas, beans, barley, tomatoes, corn, and foods of this kind. Davis advises a diet based mainly on milk, bread, and fruit. Most authorities advise that very little meat be used, and many prohibit beef entirely in the last three months, and earlier, if the kidneys seem to be performing their functions imperfectly. The chief reason for advising the curtailment in the amount of meat is because of the extra burdens always thrown on the kidneys in this period. Meat not more than once a day is a good rule for anybody, and especially desirable in the case of pregnant women. Wilson suggests the use of fish, oysters, lamb, fowl, salt meat, and eggs in moderation in normal cases. When morning sickness interferes with appetite and digestion in the early stages it is necessary that the patient take food at irregular hours. While that distressing period lasts it is wise to cater to the appetite within reasonable limits. The longing or craving for certain articles of food, if these are not likely to upset or interfere with the digestive functions, may be gratified, but rich foods, pastry, fried stuff, pickles, and sweets in excess are better avoided.

Clothing.—Most women need some caution along this line. As far as possible all clothing should be suspended from the shoulders, and pressure of any kind on the abdomen avoided. The lungs should be given plenty of room to expand. Because of the tendency of some women to varicose veins, pressure from circular garters should also be avoided.

Exercise is exceedingly necessary to the welfare of the

pregnant woman. It should never be violent, and should stop short of fatigue. It is just as well to avoid exercise which requires much upward stretching of the arms. Bicycle or horseback riding, or running a sewing machine for hours at a time, are not advisable.

Baths are needed for cleanliness, comfort, and health, but cold baths should not be taken. Hot baths also are best omitted, especially in the later months.

The *urine* needs to be constantly observed as to quantity and general character. Where constipation exists, extra burdens are thrown on the kidneys. After the fifth month frequent and regular examination of the urine is desirable, and for this reason it is always well for the pregnant woman to decide early on the physician she desires to attend her, so that general conditions may be under observation and danger signals promptly recognized.

Vaginal discharges should be inquired for at intervals throughout the pregnancy. There is usually more or less leukorrhea. Bleeding from the vagina has special significance. This, and any signs of a purulent, or unusual or offensive discharge, should be promptly reported to the physician.

The *nipples* should receive some attention. If depressed, some measures may be used to draw them out, and compression should be avoided. Authorities vary as to the necessity or value of applying lotions to the nipple. The common method of bathing them in whiskey or alcohol to harden them is condemned by most modern medical authorities, who say the nipple should rather be kept soft and pliable. If there is a physician in charge he will advise regarding this point. If the breasts are heavy they should be supported by a binder.

The *mental condition* is important. As far as can be the patient should be protected from petty irritations, shock, or worry. Especially is it desirable that well-meaning friends and neighbors are not allowed to fill her mind with tales of coming ills. Such patients are only

too prone to become "blue" and despondent, and all reasonable means should be used to combat this condition.

Preparations for the Birth.—Most women know by instinct or observation the articles for the baby's use which will be needed. Decisions in this manner are always influenced by the financial condition of the family, and extravagant preparations should never be advised. The list of articles below will be possible for even those in very moderate financial circumstances to secure, and can be added to as can be afforded:

Three flannel bands, 6 ins. wide by 18 ins. long. (Edges should be torn and not hemmed.)

Three shirts (long sleeves) of cotton and wool.

Three petticoats with sleeveless waists.

Three soft linen towels.

Three to six dresses of outing flannel or lawn, according to time of year. Night gowns if desired.

Two to three dozen light-weight cotton diapers, which should be washed well, rinsed, and ironed before using.

Besides these it will save much washing if three or four dozen or more 12-inch squares of clean old linen be provided, which can be used inside the diaper and burned after use.

A couple of little quilted pads of cheese cloth or soft cotton with a layer of cotton batting are often provided to slip between the diaper and skirts, and are a great help in keeping the clothing dry.

Two little comforts, made of thin white outing flannel or cheese-cloth and cotton batting, are useful to wrap the baby in. About a yard and a half square is a good size. A piece of old clean blanket or flannel to receive the child at birth will be needed.

A much appreciated convenience is a flannel bath apron. Inside the center half is tacked a strip of oil-cloth or rubber about a half yard wide. Most young mothers will be glad to provide this, which will be useful during the baby's bath hour as long as needed. The nurse will find it saves much washing of aprons.

Four ounces of olive oil; a rubber sheet or new oil-cloth to protect the mattress; one new hand basin of enameled ware. To this list may be added the things usually contained in a baby's toilet basket—a cake of white castile soap, soft washcloths for body and mouth, talcum powder, plenty of safety pins, large and small; common pins, vaselin.

The following general supplies are desirable for the prospective mother to provide if possible:

One 4-ounce bottle of carbolic acid.

One 4-ounce bottle of alcohol.

One-half pound boric acid powder.

One-fourth pound of absorbent cotton.

One bed-pan.

One small granite basin holding about a quart.

Two quart bottles or jars for carbolic and boric acid solutions.

Sufficient bedding and towels to allow for a change once in two days.

Two or three quilted cotton hip pads for the bed made about 1/2 yard by a yard are most useful in preventing soiling of the sheets during the whole confinement. Afterward they can be used for the baby's basket or crib.

During the first week it is necessary to change the vulva pads or napkins worn by the mother, about every four hours. In order to save washing and also to prevent infection it is wise for the expectant mother to provide about three dozen pads made of cheese cloth and cotton batting or absorbent cotton. These pads may be made from old soft clean sheets or night gowns if these are to be had. They should be made about 12 to 18 inches long and 4 wide when finished, the padding to be about an inch thick. A layer of absorbent cotton on a layer of cotton batting makes a good pad. If cheese cloth is used it should be boiled in soap and water, well rinsed, dried and ironed, before making it up.

When the pads are made, pin them up in packages of one dozen each, wrap them in a piece of cotton or thick

clean paper, and bake them for about three-quarters of an hour in the oven. The packages are then laid aside where they will not be disturbed or opened, till needed after the baby arrives.

Preparations for Labor.—The preparation of the patient includes a cleansing bath, an enema to flush the lower bowel, the thorough washing of the vulva, buttocks, lower abdomen, and thighs with green soap and water, and afterward with an antiseptic solution. A sterile or antiseptic vulva pad should then be put on the patient and a clean gown.

In olden times the loss of life from child-bed fever, so-called, was great. It took mankind a long time to discover that the cause of the trouble was that infectious or disease-producing germs were somehow carried into the blood through the birth canal and that this trouble was preventable if reasonable precautions were observed.

It is important for the nurse to remember that from the beginning of the case of labor till at least ten days after delivery there are possibilities of infection to the patient. Practically no birth is accomplished without fissues or tears of some kind occurring in the birth canal. These may be very small, but the possibility of infection is there. Besides, there is the large, raw surface inside the uterus or womb from which the placenta or "after-birth" has separated or is gradually being separated; therefore the reason for surgical cleanliness is clear.

Infection may take place from the clothing of the patient or bed; from the hands of the patient, nurse, or physician; from dressings; from water, basins, or other appliances used about the delivery room.

The *bed* should have the mattress protected with a rubber sheet or oil-cloth. The regulation delivery bed has an extra delivery rubber and sheet placed over those ordinarily used in the care of such cases, which is removed when the birth is concluded.

The *room* should be cleared of unnecessary articles which collect dust easily and require to be dusted fre-

quently or moved about. It should be clean, well ventilated and lighted, and moderately warm. Newspapers or some protection for the carpet should be made before delivery in a private home.

Plenty of hot boiled water is always needed. Both hot and cold water should be provided if there is time. Physicians differ as to the solutions used, but usually it is safe to prepare a half gallon of corrosive sublimate, or at least to have the water ready in which to dissolve the tablets. The boracic acid solution also may be prepared in advance of the physician's coming.

A great many of the directions given may seem to the untrained woman as entirely unnecessary. It is true that many women have survived after bad care. Some women have an unusually strong constitution that easily throws off disease germs. Others have not, and every community has had enough deaths from fever developing after childbirth to show clearly the dangers.

A doctor who makes a specialty of maternity work has arranged a series of directions on a printed slip which he gives to each nurse who cares for his patients in private homes. The following directions are taken from this printed slip:

"1. *When labor begins* give patient a large enema of soap and water. Then give a general bath. Then scrub the genitals, perineum, lower abdomen, thighs, and buttocks with soft soap and warm water—using a soft brush. Wash off soap with boiled water.

"2. Then the nurse should disinfect her hands as follows: (*a*) Trim finger-nails short and clean under them. (*b*) Scrub hands and forearms vigorously with brush, soft soap, and warm water—giving special attention to the irregularities about the nails. Rinse off the soap with boiled water. (*c*) Then scrub them in bichloride solution (1:1000) with a separate brush kept for that purpose.

"3. Then wash patient (genitals, lower abdomen, etc.), with bichloride solution (1:1000), using absorbent cotton, and after the washing cover the genitals with a thin

pad of absorbent cotton wrung out of bichloride solution (1:1000) and wipe the other parts dry from bichloride solution with a towel. The bichloride pad may be held in place by a piece of gauze fastened to a gauze strip around the abdomen. The patient may then sit up or walk about until the pains become severe enough to confine her to bed.

"4. When any manipulation is to be made about the genitals (catheterization, change of pad, douche) the hands are to be sterilized as above directed, and after the manipulation the pad is to be replaced by the sterilized hand. No unsterilized object—hand, instrument, or dressing—is to be allowed to touch the genitals.

"5. Immediately after the child is born, the nurse is to place one hand over the uterus or womb and keep it there until the binder is applied. When the uterus relaxes it is to be gently stimulated to contraction by the hand placed over it. After the placenta has been expelled and the hemorrhage has ceased, the genitals are to be washed off with bichloride solution (1:1000) and the dressing applied and the binder put on.

"6. When the patient wishes to urinate, or the dressing has to be changed from other causes, proceed as follows: (*a*) Slip bed-pan under patient, remove dressing, and allow patient to urinate. (*b*) Cleanse hands as previously directed. (*c*) Wash genitals by allowing a warm bichlorid solution (1:1000) to flow gently over them, and then apply a fresh dressing and reapply the abdominal binder.

"7. No douche is to be given except by special order. The patient need not be catheterized unless she experiences difficulty in urinating or has a severe laceration. Catheters, douche-nozzles, and everything else coming in contact with the genitals must pass through the process of sterilization and *nothing* unsterilized is to be allowed at any time to touch the genitals.

"8. As soon as the child is born, before the cord is tied, and, if possible, before the eyes are opened, wipe all secre-

tions from the lids with gauze or cotton and wash the eyes with boric acid solution (3 per cent.) or boiled water. After the baby is bathed, wash the stump of the cord with bichloride solution or alcohol and apply a dressing of sterile gauze. After that keep the cord dry and covered with dry sterile gauze or cotton. Do not remove the gauze as long as it remains dry.

"9. As soon as the mother is rested after labor, that is, within six to twelve hours, the baby should be allowed to nurse. After that, until a free flow of milk is established, it should nurse only about every four hours. As soon as the milk flows freely the baby should nurse every two hours, from 5 A. M. to 11 P. M., and not between times, except for some special reason. If before the flow of milk is well established the child becomes restless and apparently hungry, in spite of nursing its mother, it may be given a small amount of boiled water frequently, and if that does not suffice, then milk prepared as directed.

"10. In allowing the baby to nurse, open the breast binder and wash off the boric acid powder with a little boiled water. When the baby has finished nursing, cleanse the nipples with the boiled water, wipe dry and dust over them boric acid powder and place around them a small piece of cotton and reapply the breast binder. If nipples are tender, wash them with diluted alcohol after each nursing. Keep the baby in crib except when nursing."

The *nurse's duties* differ under different conditions and at different stages. If she arrives before the physician has been called she can report to him her observation as to character and frequency of the pains, and whether other signs of labor are present. She will, of course, be expected to prepare the patient and room, to assist the physician in every way possible, and render such assistance to the patient as she can. What can the nurse do to render labor more tolerable for the patient is a question

often asked? Sometimes rubbing or pressure on the lower part of the back during a pain seems to afford relief. Occasionally a cramped limb can be rubbed and relieved. In the first stage a change of position can be suggested. Many patients are loath to change position lest their pains increase. Exhaustion of strength by useless thrashing around in bed can be prevented. Light nourishment in the early stages of labor is permissible. If difficulty is experienced in voiding urine the catheter should be used. A distended bladder may retard progress. It is a mistake for the nurse to allow the patient to drag on her arms in the bearing-down efforts, especially if the labor is protracted. Other mechanical means can be provided. In the last few expulsive pains firmly gripping of the patient's hands will help the patient and not unduly exhaust the nurse. In all cases the nurse can give sympathy, encouragement, and moral support.

Points to be Remembered.—A good deal of trouble can be avoided by proper care of the expectant mother before the baby comes.

Very little meat in the diet is a good rule.

Tight garters and bands should be avoided especially in the later months.

Consult the doctor not later than the fifth or sixth month—earlier if there are any unfavorable symptoms.

As a general rule unless the nipples are flat or depressed very little attention to them is needed before the baby comes.

Lying-in women are especially liable to infection.

Remember that it is the unseen dirt—the germs too small to be seen—which usually cause the trouble in such cases.

Nothing is small enough to be careless about in caring for such patients.

A careless nurse with unclean hands may easily infect a maternity patient.

Proper case of the baby's eyes is an important duty during and immediately after birth.

Always wash the hands thoroughly before changing the pads of the mother.

REVIEW QUESTIONS.

1. What advice regarding her own health would you give to a prospective mother?
2. What if any changes in clothing would you recommend?
3. Give reasons why it is important to have the urine examined at frequent intervals.
4. Outline some recommendations in regard to the breasts and nipples before the birth.
5. What recommendations would you make regarding napkins or pads for the mother and why?
6. How would you prepare the patient for labor? What preparation would you make regarding the bed and the room?
7. How may "child-bed fever" be caused and what preventive measures would you use?
8. How may infection take place under such conditions?
9. Write a synopsis of the directions given for the guidance of the nurse in general care of the patients?
10. What can a nurse do to render labor more tolerable for the patient?

CHAPTER XXIII.

MATERNITY NURSING AFTER THE BIRTH.

Demonstration and Practice Work.—Application of abdominal and breast binders. Use and care of breast pump and nipple shield. How to massage breasts. Preparation of menus for first five days after birth. Bathing and dressing new-born baby. Care of cord. Irrigation of baby's eyes.

After the birth as a rule six weeks elapse before the patient may be considered to have entirely recovered. Often this period extends to three months.

Involution is the return of the womb to its normal size after the birth. If abnormal conditions develop the process of involution may be incomplete and the womb remain permanently enlarged. This condition is termed subinvolution. During the period of involution the lining membrane of the uterus and other tissues no longer needed are cast off and a new lining is formed.

The *lochia* is the term given to the discharge from the vagina in the first few weeks following child-birth. This discharge is first bloody. Besides the discharge from the uterus, there may be blood from slight lacerations in the vagina. The bloody discharge in three or four days gives place to a watery pinkish discharge. After the eighth or ninth day the lochia becomes pale, almost white, and is more like mucus in character. The lochia has a characteristic odor of its own from the beginning, but the normal odor is never offensive.

Any sign of an offensive odor or special change in the discharge should be reported to the physician. It may be caused by retained blood-clots which are decomposing in the uterus, or by retained membranes or placenta. All these conditions require attention. The presence of large blood-clots in the discharge should be reported.

The First Day.—After the mother has been made comfortable following the birth the most immediate necessity for her is rest. A hot drink of some kind may be given her. Then the room should be darkened and she be allowed to rest or sleep for a few hours. Careful watch must be made all through the first day for signs of hemorrhage. The temperature and pulse should be noted before she goes to sleep and about every four hours unless she is sleeping.

Before changing the vulva pads the hands should be disinfected. If there are stitches in a lacerated perineum these require special attention. The same surgical precautions are needed as in dressing a wound. The puerperal woman is a surgical case with wounds, visible or invisible, ready to receive infection. The vulva pads for the first day should be changed every three, or at most four hours. (For the next four or five days a change of pads about every four hours should be made. Then the discharge has lessened, so that once in six hours should be sufficient.)

The *diet* for the first day should be mostly liquid, though in a normal case toast or some other light nourishment may be added if the patient seems hungry. This will depend somewhat on how long or exhausting the labor has been, and the general condition and appetite of the patient. There is no special reason for starving a patient at this time.

The *colostrum* is the name given to the milk contained in the mother's breast at and immediately following delivery. It is a thin fluid, saline and laxative in character, and not very nutritious. The baby needs just this laxative, and when the mother has rested the baby should be put to the breast and encouraged to nurse. This not only helps to stimulate the baby's bowels, but also promotes contraction of the uterus, stimulates the secretion of milk, and helps to draw out the nipple.

Cleanliness and Neatness.—A nurse may be very careful in observing the rules for surgical cleanliness and yet

be a very untidy obstetric nurse. Wilson says, "the efficiency and thoroughness of a nurse are often judged by the cleanliness in which she keeps her patient. A soiled bed and unclean vulva pads may be the measure of the nurse's indifference to the proper care of her patient." The criticism of untidiness is often made about maternity nurses. There are so many little things which can be left lying around the lying-in chamber, and some nurses seem to be blissfully oblivious to an untidy room. They have evidently never formed the habit of having a place for everything and keeping it in its place when it is not in actual use. Order is quite possible in the average sick-room, and the home nurse who fails to secure it fails of her highest success as a nurse.

The Catheter.—To catheterize or not is a question that often presents itself in the first day or two following delivery. There has been much bruising and stretching of the parts. The urethra has been drawn from its normal position, and more or less swelling of the vulva is usually present. Unless the patient is suffering and unable to urinate, twelve hours or even longer may be allowed to pass before trying to have the bladder emptied. Most physicians prefer that the catheter be not used unless it becomes an absolute necessity. Before resorting to its use several other methods to induce urination should be tried. Some patients from sheer nervousness cannot relax to empty the bladder if anyone is present. See page 228.

The Obstetric Binder.—The usefulness or uselessness of the abdominal binder during the period after childbirth is a question on which many conflicting opinions exist. A great many physicians advise using one during the first forty-eight hours. Others recommend its use only for the first few days after the patient gets out of bed, while the latter procedure is regarded as useless by many eminent physicians. In general when its use is recommended it is for one of three purposes:

To aid in preventing relaxation of the womb.
To support the abdominal muscles.
To promote the comfort of the patient.

This latter point is the one considered by probably the majority of the physicians. When used to prevent hemorrhage a folded towel is placed underneath it, directly over the upper part of the womb. Too great pressure is not desirable, and has been assigned as a cause for backward displacement of the womb. Neither is a loose-fitting binder to be recommended. If used at all it should be snugly adjusted, and will need frequent tightening as the uterus contracts. Unless a nurse will properly adjust a binder and keep it adjusted it is of very little use, and might as well be discarded. It should not reach too high, should not be allowed to "ride up" over the hip bones, and needs to be changed, as a rule, every day. In pinning a binder it is customary to begin pinning at the middle, pinning downward first, and then upward. Side gores should be made with the pins so that it fits snugly. It is better when possible to have the binders made with a curve in the back, to prevent soiling.

The Care of the Breasts.—Lactation is the term applied to the period in which the mother nurses the child. It terminates with the weaning. Before and after each nursing the nipple is washed with a saturated solution of boric acid. This solution should be kept in a convenient-sized bottle and never allowed to stand in an open glass, as is so frequently seen. Solutions handled in this careless way are apt to apply as many germs to the nipple as they remove. If there is tenderness of the nipple some simple antiseptic ointment or sterile albolene or olive oil are often ordered. Sometimes a breast binder is necessary if the breasts are large and heavy. Davis says, "the test of the value of a breast binder is the comfort which it gives the patient. It should hold the breasts gently but firmly, raising them and drawing them inward toward the middle line." If cracks or abrasions appear, or the patient complains of soreness of the nipples, it is a wise precaution

to keep them covered with sterile gauze. Some physicians recommend the use of cotton pledgets on toothpicks when washing the nipples as a preventive of infection, thus avoiding possible infection from the fingers. A breast-pump should not be used unless the physician orders it, nor should the breasts be massaged or rubbed without an order, as a general rule. If a nipple shield is used it should be sterilized by boiling twice a day, washed after using, and kept in clean boric acid solution covered.

After-pains are, as a rule, due to muscular contraction as the uterus returns to its normal size, but may be caused by blood-clots being retained. They are not frequent after the first baby, but are sometimes very annoying in later cases. Various means are used to relieve. Sometimes letting the patient sit up to urinate will help to dislodge clots, and many physicians recommend this as a routine practice to promote drainage. If the pains are sufficiently troublesome to prevent the patient getting needed sleep, the doctor's attention should be called to the matter.

Bathing.—The general rule is a bath once a day for an obstetric patient, with at least a morning and evening bath for hands and face besides. The patient's wishes regarding the frequency of the bath should be considered, but cleanliness must be maintained. The hair should be combed every day.

Bowels.—Constipation is a common, almost universal, experience in such cases. The physician will usually order any medicine that is to be given. There should, as a rule, be a good movement within forty-eight hours after the birth, and each day thereafter.

If the breasts become engorged Epsom salt is often ordered to relieve the condition. Otherwise some simple, nonirritating laxative is given (castor oil is one of the best) and an enema as may be needed. Compound licorice powder or a compound cathartic pill are common cathartics in these cases.

Visitors are more difficult to control in this form of illness than in almost any other. As a rule, until the mother is able to be out of bed the fewer outside visitors admitted the better. Such patients do not crave visitors, as the baby is a source of never-failing interest. They are easily upset and excited, and rise of temperature, disturbance in the flow of milk, and other undesirable conditions not infrequently result from bad management of the problem of visitors. The physician should be consulted before visitors are admitted. His orders will greatly help the nurse to manage this matter without offense to family or friends. Letting visitors see the baby will often satisfy them and do no harm.

Getting out of bed is a matter for the doctor to decide. The tenth day is the time fixed for this event by the laity, but many physicians prefer to keep the patient in bed the full two weeks. Much depends on the individual patient and her condition. A change from the bed to the couch can usually be made in normal cases by the tenth day, but so long as there is a free reddish discharge the patient should not be upon her feet.

The *nurse's reports* should begin with the labor if she is present at that time. Time of stages of labor, birth of child, sex, and weight should be recorded. If stitches are taken these should be noted. Pulse, temperature, respiration, condition of bowels, kidneys, lochia, breasts, milk, time of nursing, diet, and after-pains should be observed and recorded. The physician's attention should be called to rise in temperature, abnormal pulse, sleeplessness or headache, severe after-pains, changes in the amount, odor, or general character of the lochia; constipation, inability to urinate; pain or special tenderness in the abdomen if it continues for any length of time; any soreness of breasts or nipples; any swelling or pain in the limbs; any tendency to chills or complaint of chilliness; any special change in the flow of milk.

Diet.—For the first few days a light diet is usually prescribed for such patients. Thompson says, "the

patient's own appetite is a better guide for feeding than are any rules as to the exact time which has elapsed since the birth. She should not be urged to take foods unless greatly exhausted, and the stomach must not be overloaded. The occurrence of fever is a contra-indication for giving much proteid food except milk, but extreme exhaustion without febrile reaction demands it."

The flow of milk should modify the diet to some extent. If the flow is very great and the breast engorged fluids should be restricted. If the milk secretion is deficient nutritious fluids should be increased. The nurse should remember that there is a possibility of increasing the quantity by adversely affecting the quality. Giving too much water, tea, or such fluids as do not really nourish is equivalent to pumping water into the milk pail to increase the quantity of milk. Buttermilk is one of the best fluids to use to increase the flow of milk. Gruel, cocoa, and broths thickened are also useful. The following dietary is arranged not to be followed invariably in any case, but simply as a guide or suggestion as to suitable food and variety:

FIRST DAY.

Breakfast:
Cereal and cream or gruel.
Toast. Poached egg in milk.
Coffee or tea.

Lunch or noon meal:
Beef broth. Crackers.
Custard, baked.
Zwieback.
Milk, tea, or cocoa.

Supper:
Baked rice and cream.
Farina jelly.
Tea or hot milk.
Buttered toast.

SECOND DAY.

Breakfast:
Cereal and cream.
Toast. Scrambled eggs.
Coffee, milk, or cocoa.

Lunch or noon meal:
Oyster soup and crackers.
Orange jelly.
Cocoa or milk.
Toast or bread and butter.

Supper:
Chicken or beef broth with crackers.
Milk toast.
Stewed prunes or apple sauce.
Milk or cocoa, bread and butter.

THIRD DAY.

Breakfast:
Cereal and cream.
Toast. Soft boiled egg.
Chipped beef or sliced bacon.
Coffee or milk.

Lunch or noon meal:
Noodle soup and wafers.
Baked potato.
Baked sweet apple.
Bread and butter.
Tea or coffee.

Supper:
Creamed sweetbread.
Bread and butter. Prunewhip.
Tea, milk, or, cocoa.

FOURTH DAY.

Breakfast:
Orange or grapes.
Cereal and cream.
Toast. Creamed beef.
Coffee, tea, or cocoa.

Dinner:
Baked fish, cream sauce.
Lamb chops, broiled.
Baked or mashed potatoes.
Tapioca cream.
Tea or cocoa.
Bread and butter.

Supper:
Blanc mange or boiled rice.
Buttered toast.
Creamed oysters.
Fruit.
Bread, butter, and tea.

THE NEW-BORN INFANT.

An infant is termed new-born till the cord by which it has been attached to its mother has been entirely separated. At the time of birth the eyes and mouth of the infant are washed. When the cord is severed and regular respiration established the baby is received by the nurse or other assistant in warm flannel. When possible it is desirable to have a warm sterile towel first wrapped round the infant before being wrapped in the flannel, a preventive of possible infection of the cord. It may then be laid aside in a warm place till the mother has been made comfortable. Care should be observed that there is an opening for air to reach the child, and for the first hour or two it is well to examine the cord at frequent intervals for hemorrhage. If flat tape has been used for ligating the cord there is more danger of leakage, and the loss of even a small amount of blood may be serious. In such cases no time should be lost in tying again above the first ligature.

The first bath may very properly be delayed a few hours. In fact, immediate washing is condemned by many obsetricians. Great physiologic changes take place in the little being in the first few hours or moments. The lungs unfold and the respiratory organs begin their functions. Great changes in the circulatory system take place, the opening between the auricles of the heart closes, and the blood begins to follow a different course. The blood itself undergoes a change. The kidneys, liver, and digestive organs share in the general process of readjustment to the new state of existence, all of which need to be considered and which serve to show the wisdom of delaying the first bath for some hours. No bath, however gently and carefully given, can be managed without considerable handling, and there is more or less shock to the nervous system in consequence.

Preparatory to the bath the baby should be smeared with warm olive oil, or vaselin. Fresh lard can be used if none of these are at hand. If this is done a half hour or so before the bath the cheesy substance (vernix caseosa) which is on different parts of the body will be easily removed. Setting the bottle of olive oil in the basin of warm water for a short time will make it sufficiently warm.

The *room* should be well warmed—temperature above 70° F. Everything needed for the bath should be conveniently in reach before the baby is uncovered. The bath should proceed as rapidly and systematically as possible, the child being covered on the nurse's lap as much as can be arranged. First the head and face are washed, great care being observed to avoid soap entering the eyes. The softest material should be used for washing and drying. Unless the baby seems blue or chilled a tub bath is not advisable. The arms and hands, the chest, abdomen, the legs, and lastly the back, is washed, the water used being kept at from 100° to 106° F. throughout the bath. Gentle patting rather than rubbing is preferable when drying the skin. Powder may be used in

the groin and under the arms. Eyes and mouth should both be cleansed during the daily bath.

Dressing the Cord.—The physicians usually direct how the cord is to be dressed. The dry methods, using dry boracic acid, baked starch, talcum powder, or zinc oxide powder and sterile gauze, all have their advocates. Others prefer an oily dressing, such as balsam of Peru and castor oil or zinc ointment. The important thing is to have the dressings and material as nearly aseptic as possible—nurse's hands also—during the dressing. The stump of the cord is turned upward on the abdomen, and the dressing held in place by the abdominal band. The cord should in a few days be dry and shrivelled up, and should separate without leaving any erosion of the surrounding skin between the fifth and fifteenth day. As a rule, unless the dressing becomes wet or soiled, it is best to let it alone and disturb the drying stump as little as possible. If the healing around the cord is not perfect when it finally separates an oily dressing may be applied.

Clothing.—The band may be discarded when the cord comes off, but is usually worn from two to three months. In applying it see that it fits snugly and yet is not too tight. It should be sewed rather than pinned, and should easily admit a finger underneath it. A band too tight interferes with both stomach and lung expansion and causes much discomfort. The diaper also may cause discomfort by being too tight. It should be fastened to the shirt and not the band. The other articles of clothing should be put on with as little turning and handling as possible, the skirts being drawn up over the feet rather than down over the head.

Air.—The first immediate necessity of life for the newborn infant is air, and the nurse should insist on fresh air being admitted at intervals to the room in which the baby is kept. Holt, one of the leading authorities, emphasizes the necessity of fresh air for young babies, and believes it even more important than when they are older. To secure this the baby's mother and grandmother may

need tactful management, but if care is observed to protect the baby from draughts objections can usually be overcome. As a rule, it is better for both mother and child that the child be kept away from the mother most of the time.

Urine should be voided within the first few hours, and the nurse should make careful observation regarding this point. The first urine voided may be so small in amount that it might pass unnoticed. Very often there is a reddish deposit in the urine which on the napkin resembles blood. This is an evidence that the body needs more water to dilute the urine and flush the kidneys. If the nurse is faithful in administering water to the baby, it is seldom that the time-honored remedy, sweet spirits of nitre, will be needed to stimulate the urinary apparatus. Give the baby plenty of cool water to drink from the very first day.

The bowels should move thoroughly some time during the day. For the first two or three days the movements have a dark appearance resembling tar. The term meconium is given to these first discharges. After the third or fourth day the character of the discharge changes. The color is lighter, somewhat brownish, occasionally greenish. By the end of the first week the movements are yellow in color. This is the normal color. The odor resembles that of sour milk and is not offensive. If the stools remain brown in color after about the sixth day it might be well to see whether or not the food is deficient. If the stools are foul smelling, slimy, or frothy there is some abnormal condition present. Castor oil is usually given if any laxative is needed.

Sleep.—The normal infant should sleep most of the time during the first few weeks. It should be roused at regular intervals during the day for its food, and from the beginning trained to sleep at night. The question of waking hours is pretty largely a matter of training in the first few weeks. A baby that is allowed to sleep all day will be more likely to be active and awake at night.

Nursing.—Until the flow of milk is established every four hours is often enough to allow the baby to nurse. The first milk acts as a laxative and helps to clear the intestines of the meconium which has been accumulating from the early months of fetal existence. Considerable difficulty is sometimes experienced, by young inexperienced mothers especially, in getting the baby to nurse, and often the attempt is abandoned in despair, a most unfortunate abandonment in many cases. Much of the difficulty is because the inexperienced mother does not know how to arrange for the business. She should lie on her side with the shoulders slightly elevated. A second pillow slipped under the head helps in the success of the operation. The arm should support the baby and the nipple be placed squarely in front of its mouth, so that it may take hold easily and be able to retain its grasp. If the breast is heavy it should be supported. If the nipple is small and flat it can be drawn out with a breast-pump or a bottle from which the air has been exhausted.

Trouble in nursing may come from too full breasts, depressed nipples, because the milk supply is deficient or hard to get. Sometimes it flows more freely from one breast than the other; sometimes the baby seems too weak to nurse satisfactorily. It is never a good plan to resort to a nursing bottle in such cases, for the baby will soon learn that he can get the milk more easily from the bottle and refuse to try it from the breast. A little milk and water may be dropped over the nipple while the child is nursing to induce it to take hold. A hot wet-compress over the breast will help to make the milk flow more easily, or the flow may be started with the breast-pump, and when it is flowing the baby may be put to the breast.

If the baby is very tiny, weak, or premature the milk will have to be pumped out and fed to it. Patience will usually overcome difficulties in this manner. The establishing of regular habits of nursing at the very beginning

will mean much in comfort for the mother and health for the baby. As a rule, for the first few months a baby should be nursed once in two hours during the day up till about 10 o'clock at night. Once between 10 P. M. and 5 A. M. is sufficient, and most babies can be easily trained to good habits. If the nipple is thrust in its mouth every time it cries digestive disorders and troublesome days and nights may be expected.

Weight.—During the first four or five days the infant loses in weight, which is usually regained in from eight to twelve days. Growth is retarded by impure air, poor nourishment, and other adverse conditions.

THE PREMATURE BABY.

Few kinds of nursing are a greater test of a nurse's skill than the care of a premature baby without the aid of an incubator. It is a mistake, however, to settle down to the idea that very likely such babies will die. Even if the child does die (a great many survive and develop into strong, vigorous babies) her best efforts have been worth while.

The *first great essential* is to prevent heat loss, and for some weeks this is one of her most important duties. Such babies have a low vitality and very little subcutaneous fat. The first few days are especially important. If such a child is allowed to become chilled and cyanosed at birth, or in the first few days, the chances for its survival are small. Therefore special care must be used to prevent chilling. Plenty of hot water and a bathtub in which it can be dipped and warm towels and flannels should be in readiness when it is born. It is a mistake to wrap such babies in cotton batting or wool unless covered with gauze. The body soon after birth should be rubbed with warm olive oil, and may then be wrapped in warm wool flannel. If a shirt is used it should be roomy and should open down the front.

The *clothes-basket incubator* is the one most easily avail-

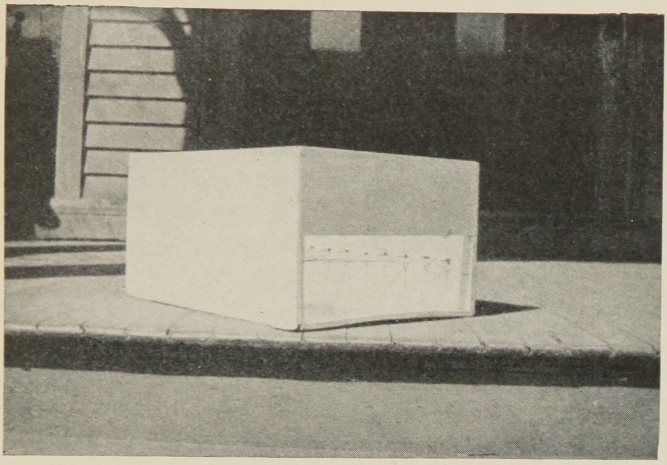


FIG. 46.—Improvised incubator. (Courtesy of "The Trained Nurse and Hospital Review.")

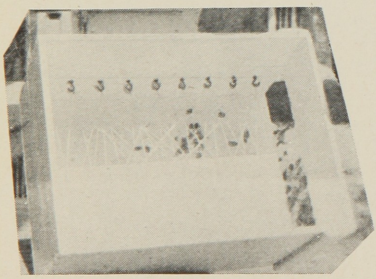


FIG. 47.—Improvised incubator, showing arrangement of screw-hooks in soap box. (Courtesy of "The Trained Nurse and Hospital Review.")

FIG. 48.—Gown for premature baby.[1] (Courtesy of "The Trained Nurse and Hospital Review.")

[1] Infants' Hospital, Boston.

able in the average home and hospital. Where specially designed incubators are to be had there will also be directions as to how to manage them. An ordinary clothes-basket, lined on the sides with a blanket with pockets for hot-water bottles, is about as good an arrangement as can be improvised hurriedly, but other methods give better results, especially in winter. *An improvised incubator* made of a soap box, as follows, has given excellent results in some hospitals. These improvised incubators are used for all small or frail infants, whether of premature birth or not:

Take an ordinary soap box and knock one end out gently, since they are rather flimsily constructed. Remove the lower half of the end and put the upper half in place again, nailing a couple strips, made out of the discarded piece, at the bottom or sides, to make stout support.

Inside the box, and *above* this opening, all the way around, screw in two dozen little brass picture hooks, eight at each side and four at each end; crossing in both directions, string these with twine.

Underneath this quickly lay four hot-water bottles with covers, and fill at 120° F., but only about two cupfuls of water in each, or a warm soapstone, or an electric warming pad, or bricks baked in the oven, or a warm stove-lid on an asbestos mat, but do not let the box stand on a rubber sheet in any bed, since the continuous heat will soon destroy it.

On the cord lay a pad, then the premature infant wrapped *closely* in cotton and old, soft blankets. In one corner of the box, near his head, hang a wall thermometer to show the temperature of his air.

Over the box lay a soft piece of blanket, leaving a vent at the head equal in space to the open, uncovered end at the bottom for free passage of cool, fresh air, which is to be heated, then rising about him.

If the hot-water bottles are regularly shifted and changed, the box can be kept at 90° F., with the surrounding air at 60° F.

Neither pillow for the head nor rubber sheets are needed.

Clothing.—De Lee recommends as clothing a simple bag, 34 inches long and 20 inches wide at the bottom, and without sleeves; a light wool blanket to cover the child, which can be brought around the head; an abdominal binder of wool, and a soft cotton diaper. Others recommend a shirt of flannel and a little flannel cap in addition. The gown shown in Fig. 48 is simple and quickly made of gauze and cotton quilted. Cap is made separately and sewed to upper edge. The baby wears besides this a flannel band and diaper. Many prefer to use also a fine flannel shirt opening down the front.

Cleanliness.—As a rule, oil rubs in the beginning take the place of regular baths till the child gains strength sufficient for a full sponge bath. The hands, face, and buttocks are gently sponged with warm water as required. Great care is needed, as the skin is so very tender that it is easily abraded or irritated.

Feeding.—Mother's milk is almost an absolute essential in rearing such babies. Until the baby is strong enough to nurse, the milk must be pumped from the mother's breasts and fed from a medicine-dropper. Until the mother's milk arrives some other food is usually ordered by the physician.

Fresh air is even more necessary for these infants than the normal baby, and many babies die in incubators because of insufficient ventilation. This fact has led to the condemnation of more than one costly incubator, and many physicians prefer the home-made kind because of better ventilation.

Infection.—The restive powers of all such babies are very low, and they are more liable to infection of the eyes, cord, or infection from any source than ordinary babies.

All such infants should be handled as little as possible. As a rule, they cry but very little. Some authorities advise putting the baby in the bed with the mother during the day, and state that they have found marked improvement when hot baths and artificial heat had failed to correct a subnormal temperature.

The Baby's Eyes.—A large proportion of the cases of blindness that exist among us are due to improper care of the baby's eyes at birth and within the first few weeks. The disease resulting in blindness is caused by a germ. It sometimes gets into the eyes during the birth but infection may be caused by carelessness on the part of nurse, physician or mother after the birth. The early symptoms are redness and swelling of the eyelids and a thin yellowish discharge which accumulates in the corners of the eyes. If the disease is not arrested in the first twelve hours or so inflammation spreads very rapidly. The discharge accumulates very rapidly; the eyelids are swollen till they are closed. If the progress of the disease is not arrested the vision is soon destroyed.

To keep the eyes free from the discharge is an important part of the treatment. No time should be lost in getting the doctor to prescribe and attend to the case. The eye needs to be irrigated very frequently, in some cases every fifteen minutes. The battle is won or lost in a few days and the least neglect will easily result in blindness. It requires some one person to give exclusive attention to the baby and provision must be made to relieve the nurse for sleep. The physician will prescribe the fluid to be used for cleansing the eye and how it is to be done. The discharge from the eye is highly contagious and the nurse should be careful not to infect her own eyes by rubbing them carelessly with the hands. Until the doctor comes, use a warm solution of boracic acid as strong as it can be made; with a bit of cotton let the fluid enter at the inner corner of the eye after the lids are separated and continue till every bit of discharge is washed away.

Points to be Remembered.—Getting up too soon after childbirth is a fruitful cause of "female diseases."

The young mother should be very little on her feet for the first six weeks after the birth, till the parts have returned to their normal condition.

Be sure to report any sign of offensive odor about the discharge to the physician.

If there is a cessation of discharge too soon it also should be promptly reported.

Keep careful watch during the first day for signs of hemorrhage from the mother.

Be sure to cleanse and disinfect your hands before changing pads or cleansing the parts.

There is no special reason for starving such patients, but it is well for the first few days for the diet to be either nourishing fluids or quite light foods.

A patient may be allowed to go from fourteen to eighteen hours without passing urine, but it is quite possible to allow them to go too long.

Every home nurse should know the methods that may be used to induce the natural voiding of urine.

If there are fissures or cracks in the nipples there may easily follow an abscess of the breast. Always report cracked or sore nipples to the doctor.

If the breasts are becoming engorged decrease the amount of fluids in the patient's diet.

One bowel movement each day is a good rule to observe in caring for mothers.

It is a serious mistake to allow a great many visitors, or even a few if they are apt to be tiresome—until the the patient is out of bed.

In caring for weak and delicate or premature babies, important points to keep in mind are to prevent heat loss, to prevent bad air, and to prevent infection.

Watch the stump of the baby's cord for several hours for hemorrhage.

Do not be in a great hurry to give the baby his first bath.

Give the baby plenty of fresh air and plenty of water to drink.

If there are signs of a reddish sediment on the baby's napkin after urine has been passed give him more water to drink.

If the baby is slow in voiding urine, try giving him a hip bath in a basin of warm water. It often works like a charm.

Try to establish regular habits of nursing and sleeping with the baby from the beginning.

REVIEW QUESTIONS.

1. What do you mean by involution and how long, as a rule, does the process take?
2. Why is it important to report promptly any sign of cessation of the discharge from the mother and any offensive odor?
3. Beginning with the birth what care would you give the mother the first twenty-four hours?
4. Outline a diet for a lying-in woman having a normal recovery, the menus to cover four days.
5. What special effect is the first milk expected to have on the baby?
6. What methods would you use to induce a patient to void urine when it seemed necessary, but she was unable to accomplish it?
7. What are the uses of an abdominal binder for such patients and how would you apply it?
8. Outline the care you would give the breasts and nipples in a normal case.
9. What measures would you use to prevent infection through the nipple?
10. Mention some measures which may be used to give relief in case of after-pains.
11. How long should a lying-in woman remain in bed after the birth as a rule?
12. Give some reasons why it is desirable to postpone the baby's bath for a few hours after birth.
13. What care would you give the baby's cord, give reasons for what you do?
14. What would you do if the baby did not urinate in due time?
15. How often should a new-born baby nurse?
16. Mention some conditions which may cause trouble in nursing.
17. Why is it necessary to be especially careful of a new-born baby's eyes?
18. What care should the eyes have to prevent trouble?
19. What are the early symptoms of infected eyes?
20. What general measures would you use to prevent serious trouble till the doctor arrived—after a discharge from the eyes started?
21. Outline the care that should be given to a premature baby.

PART III.

CHAPTER XXIV.

PRACTICAL NURSING POINTS IN SPECIAL DISEASES AND CONDITIONS.

Demonstration and Practice Work.—Arranging a steam tent for a child with croup. Proper methods of gargling and swabbing the throat. The use of the catheter. Preparation of menus for a tuberculosis patient.

Sleeplessness or Insomnia.—Many persons suffer from this trouble who are not really sick. Good management will do much to lessen it. Avoid mental excitement of any kind for three or four hours before bedtime. This may require the prohibition of reading, of concentrated thought, exciting games or discussions, or anything that tends to stimulate the brain. Tea or coffee should not be taken at the evening meal.

Have the sleeping-room dark and quiet, and filled with good air. Those who adopt tent life for a time experience a disposition to sleep more than usual. The outdoor life is conducive to sleep. Have the body warm, but avoid having the air in the room warm. A tepid bath or pack lasting twenty minutes to a half hour before bedtime helps to promote sleep. Remove all causes of physical discomfort as far as possible. See that bed clothing is free from wrinkles and crumbs.

A gentle rub all over the body followed by rubbing up and down the spine is often helpful.

Do not give the patient a full meal at bedtime, but a stomach entirely empty is not conducive to sleep. A cup of thin gruel or hot milk or cocoa sipped slowly at bedtime is a great help to many persons who suffer from this trouble.

Difficulty in passing urine can often be relieved by one or more of the following methods:

1. Dry heat or a compress over the bladder.
2. Place the patient over a warm bed-pan or vessel partly full of hot water, cover her, and leave the room.
3. Let her hear the sound of running water.
4. Apply a hot wet napkin over the bladder and between the thighs.
5. Try gentle pressure with the hand over the bladder.
6. Pour a stream of water as hot as can be borne over the parts with the patient on the bed-pan.
7. Give a warm enema. When the bowels move the patient may be able to pass urine naturally.
8. Raise the patient to a half sitting position on the bed-pan unless there is some reason why she should not sit up.

If all these measures fail and the bladder should be emptied without further delay, the catheter will have to be used to empty it.

The catheter is an instrument of danger unless it is kept absolutely clean. Carelessness or lack of intelligent

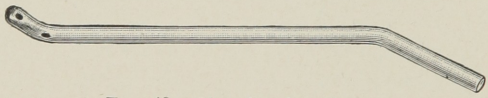


FIG. 49.—Glass female catheter.

precautions in using the catheter is the most frequent of all reasons for inflammation of the bladder developing. As a general rule, the doctor will show how it is to be done. Few home nurses will have to use the catheter until asked to do so and shown how by a doctor or fully trained nurse.

The catheter may be made of rubber, glass or silver. In the hands of those who are not well skilled in how to use it the rubber catheter is probably the safest.

Before using the catheter it should be placed in a clean basin and boiled in a little water for three minutes. It is carried to the bedside in the basin in which it was boiled.

The patient is placed on her back with the knees bent and separated and a sheet is thrown over the knees to prevent exposure. A good light is necessary. Catherize by sight, never by touch, or under the cover. It is very easy to blunder and bungle and cause the patient suffering, even with the best light possible. The patient should be on a bed-pan, or, if not, a basin should be placed to catch the urine.

Before touching the catheter, after it has been boiled, the home nurse should thoroughly scrub her hands, using a brush and soap and plenty of warm water. If no other disinfectant is at hand, soak the hands in a warm salt solution. Have some bits of clean cotton boiled in the basin with the catheter. Separate the parts with the left hand, wash them off with the right, using the cotton and the boiled water. Find the opening from the bladder and slowly insert the "eye" end of the catheter. Never use force. When it reaches the bladder the urine will begin to flow. If it ceases flowing before the bladder is apparently emptied move the catheter slightly, when it will start to flow again; withdraw slowly. If a patient has gone a long time without emptying the bladder and it seems overdistended, do not empty it all at once, but repeat the effort in a few hours.

A douche is a stream of water, medicated or otherwise, directed against a part or into a cavity.

The *vaginal douche* is given for purposes of cleanliness, to check hemorrhage, arrest inflammation, as an astringent to contract tissue and check secretions, to relieve pain, and as an antiseptic to promote healing of wounds or abraded surfaces. An important point in the giving of such douches is the temperature. The hot vaginal douche, given to check hemorrhage, should be as hot as can be borne—usually from 110° to 115° F. When given for the relief of pain or to arrest inflammation, the hot douche will be more effectual than a tepid douche. The temperature should be tested with a thermometer.

When given for cleaning purposes a temperature from 98° to 105° F. may be used.

Astringent douches, in which alum, tannic acid, or some astringent drug is used, are employed sometimes in cases of leukorrhea or relaxed vaginal walls.

Quantity.—The quantity of fluid is also important, as well as the speed at which it is given. In many cases the prolonged effect of the heat is the chief thing desired, and the nurse can easily miss the main object by allowing the fluid to flow too quickly or using too small a quantity to be of any use. In most cases a gallon douche is preferable to a smaller quantity.

Position.—Douches are commonly resorted to by the laity, and no form of home treatment is more abused or less understood than this one. In untrained or careless hands a douche is quite capable of causing disease even if none existed. It is quite common for women who have the douche habit to take douches in a squatting position, sitting over a slop-jar. In such cases the fluid is rarely likely to remain long enough in the vagina to do any good, though it may do harm. If a patient must give herself these treatments the best position is either on her back in a bath-tub or on a board fitted over the tub. If the hips can be elevated the fluid will have a better chance to do its work.

The *irrigator* should be suspended so as to give a flow of from 6 inches to 2 feet, and the tubing should be rather small or clamped in such a way as to prevent too rapid escape of the fluid.

It is probably true that the cleansing effects of the vaginal douche are greatly overestimated and the methods used are often careless in the extreme. A flow of water, medicated or otherwise, over other parts of the body does not ensure the cleanliness of the part. Some discharge is usually carried away, but investigation after routine treatments of this kind has shown that a considerable amount of discharge still remains.

Precautions and Dangers.—There is much need of cau-

tion regarding vaginal douches. Needless to say that surgical cleanliness should characterize the fluid, nozzle, and entire apparatus used in the treatment. Serious burns have resulted from using fluid that was too hot. A solution of bichloride of mercury that was too strong has resulted in mercurial poisoning, and in other cases in severe injury to the vaginal walls. A solution of carbolic acid in which the acid crystals were not well dissolved has resulted in painful serious burns, and several deaths have occurred from this cause.

In inserting the nozzle it should be handled so as not to touch it with the fingers, and not to allow it to come in contact with any unsterilized substance before introducing it into the vagina. The labia is separated with the one hand, while with the other the nozzle (after allowing a little of the fluid to escape) is directed downward and backward for about 4 inches. The douche should be stopped before the entire amount of fluid is exhausted, and the entrance of air into the cavity thus guarded against. Care should be used that the fluid does not flow with too much force. The injection of air into the uterus is a serious accident. In all douches there is always present the danger of infecting the patient. No nurse should advise such douches nor give them without a doctor's order.

Typhoid Fever.—In typhoid fever the bowels are the chief seat of the disease. Patches of the bowels become ulcerated.

In severe cases the ulceration may extend into the important blood-vessels causing serious hemorrhage, and occasionally perforation of the bowel occurs.

The management of the feeding problem will have a good deal to do with the successful outcome of the disease.

Keep the patient lying down, do not let him sit up or raise up or get out of bed for any purpose.

When milk is given, give in small quantities, letting him sip it slowly.

Give plenty of cold water to drink. A glassful every

hour is not too much. On account of the fever, the body needs more fluid than usual.

Never leave a delirious patient for a moment without someone to watch him. Neglect of this precaution may cost a life.

Watch for bed sores and use measures to prevent.

Remember to avoid unnecessary exposure during the doctor's examination of the abdomen.

Avoid sudden turning over in bed.

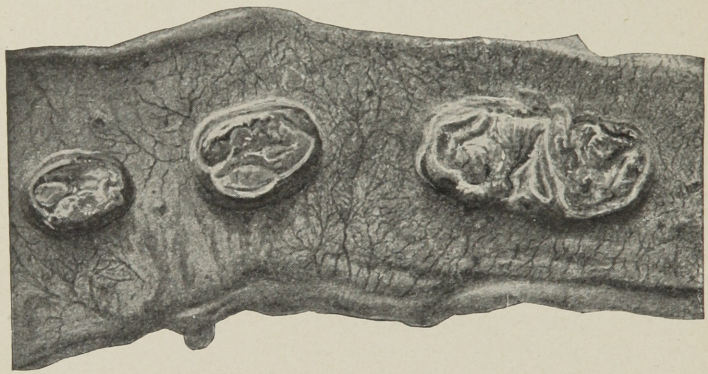


FIG. 50.—Typhoid fever, showing necrosis of Peyer's patches and intense congestion of the bowel. (*Modified from Kast and Rumpel.*)

The cleansing of the patient's mouth is an important part of the nursing. It should be done every four hours during the day and twice during the night.

The home nurse should always wash her hands after waiting on a patient and should invariably give them a good scrubbing before going to meals, using a hand brush and plenty of hot water. Scald the brush after using.

All dishes and utensils used for such patients should be kept separate and boiled daily. Bed and body linen should be disinfected.

Watch the stools for signs of undigested milk and for traces of blood.

Notify the doctor at once when blood in the stools is noticed. Keep the patient absolutely quiet till he comes. Apply an ice cap to the abdomen. Exercise great care to avoid bodily movement while the bed-pan is being used. See that the patient tries to avoid straining of the bowels when using the bed-pan.

Convalescence after typhoid fever requires as careful management as when the disease was at its height. Relapses are common, and occur, in the majority of cases,

FIG. 51.—Examination of the abdomen in typhoid fever.

as a result of indiscretions in diet. No solid food till the temperature has been normal ten days is a rule that is quite generally observed. Semisolid foods, such as custards, milk-toast, cereals, etc., are permitted within a few days after the temperature drops to normal. Many practitioners allow solid foods earlier in convalescence, but the matter is one in which the nurse should exercise great caution. In other respects, the management of

the convalescent period after typhoid fever does not differ much from that in other diseases.

Typhoid Fever Diets.

Dr. Shattuck's Typhoid Fever Diet:
Milk.
Mellin's Food.
Ice cream.
Milk whey.
Slip.
Finely minced chicken.
Eggs, soft boiled or raw.
Milk-toast without crust.
Macaroni.
Blanc mange.
Broths.
Special Diet:
Steak; chop; white meat of chicken in small amounts.
Toast; bread; cereals.
Eggs in any form.
Mashed potato.
Tomatoes, strained.
Oysters.
Stewed fruits.
Crackers.
Patients must be told to chew all food well.

Liquids and Soft-solid Diet (Hewes):
Weak stomach. Weak heart. Typhoid:

First Day.

Breakfast: Indian meal mush with cream and sugar, or with salt only (hot); milk, three ounces.

10–11 A. M.: Crackers and milk, or egg-nog.

Dinner: Pea purée or potato; soft or cream toast, and soft-boiled egg.

3–4 P. M.: Custard or tapioca.

Night: Rice; milk.

Second Day.

Breakfast: Wheat germs; milk.
10–11 A. M.: Crackers and milk.
Noon: Finely-cut chicken; wine jelly.
3–4 P. M.: Chocolate or crackers and milk.
Night: Cream toast; apple sauce.

Third Day.

Breakfast: Wheat flakes; milk.
10–11 A. M.: Crackers and milk.
Dinner: Two soft-boiled eggs; rice (custard or corn starch at 3–4 P. M.).
Night: Potato purée; toast.
Alternate diets.

Pneumonia. *Important Nursing Points.*—1. Conserve the strength of the patient in every possible way. Mental and physical effort are both to be avoided.

2. Attend carefully to ventilation. In no acute disease is fresh air more important, but avoid draughts. The cold-air treatment of pneumonia, in which the patient is treated on the roof, porch, or in a room with the windows all open, is advocated and practised by many of the leading medical men, and has proven successful in cases that at first seemed hopeless. *There is no disease that is not made worse by foul air,* and this is particularly true of respiratory diseases.

3. Change the patient's position often, but with as little exertion as possible.

4. Encourage the patient to restrain ineffectual coughing as far as possible.

5. Keep the patient quiet, exclude unnecessary visitors, even from the family. In no disease is absolute rest more essential.

6. Be prepared for possible contingencies and secure orders from the physician as to what he wishes done.

7. In the use of alcohol be especially careful to give

the exact dose ordered. The laity, many of them at least, are firm believers in the value of alcohol to tide over critical points. They act on the principle that if a little is good more will be better. There is a danger of overstimulating the heart and of giving more alchool than the nervous system can tolerate, thereby producing a condition of poisoning of the nervous organism. This is more likely to occur in patients who in health are unaccustomed to any form of alcohol. This point may need a word of special caution from the one in charge.

8. Sleep is especially important for such patients, and to combat sleeplessness frequently requires more than ordinary judgment.

9. Remember that there is a possibility of heart failure even two or three days after the crisis in the disease. Sudden deaths have occurred in convalescence as the result of sudden sitting up in bed. Throughout the disease be constantly on the watch for evidences of serious circulatory embarrassment.

10. Be alert, observant, and closely attentive at all times. Do not leave such patients alone. Keep full, accurate records.

The *diet* in pneumonia is the ordinary fever diet carefully administered. Vomiting must be guarded against if possible, and the food should be such as will not create gas in the stomach and still further embarrass breathing.

Infantile paralysis occurs at intervals in epidemic form. It is always serious and often fatal. Scattered cases are liable to occur in any locality. Epidemics occur, as a rule, in the hot, dry months from June until September, which lends strength to the belief that dust and flies are active carriers of the disease germs. The term "infantile paralysis" is misleading, as adults are occasional victims. The great majority of cases occur in children under ten years and most of them in children of less than five years.

The germ enters the body by means of the throat and nose it is generally believed, and discharges from the throat

and nose as well as the urine and bowel discharges should be disinfected.

Management.—When it is known that cases of this disease exist in a locality consult a doctor promptly in all forms of sickness in children. The early symptoms are not well marked, but every child with fever, diarrhea, vomiting, and slight cough should be regarded as a "suspected" case.

Hospital care for all such patients should be secured if possible. If the child has to be cared for at home, use the same precautions as are advised in a case of diphtheria in regard to disinfection and prevention, and disinfect urine and bowel discharges as in typhoid fever.

Until the doctor arrives give water freely. Hot lemonade or orangeade is better than cold, and usually more acceptable than plain water. Place the child in a darkened room, *cool and well ventilated.* Allow no one in the room but those who are absolutely necessary for the care of the patient. Avoid pressure and heat to the spine. Prevent the patient from throwing himself from side to side. Absolute quietness must be secured. Assist the patient to turn from one side to the other. Wrap the affected limb in cotton or wool and secure in place by a light bandage. A small pillow under the knees may be used.

Authorities differ as to the length of time in which such patients should be isolated. Some require at least six weeks. With proper precautions used to prevent contact infection, the nurse usually does not need to be strictly isolated from family and friends.

In no disease is strict attention to small details more essential. Sand-bags to head and body to prevent motion and cushions to keep the limbs straight and the feet in position are important. As a rule, the quieter the patient is kept and the less movement of the body, the less damage will result to the affected part.

Baths and other nursing measures which are used in other diseases need to be given with extreme caution in this disease because of the movements involved.

The *after-care* of all patients who have had this disease is exceedingly important, and sometimes needs to be continued for years in order that deformity due to the disease may be overcome as far as possible.

Without proper care such patients often suffer all their lives from deformity that might have been overcome or corrected had the case had good management from the beginning.

Eczema (otherwise known as tetter or salt rheum) is a noncontagious inflammation of the skin. It occurs at all ages and under all conditions of life. About one-third of all cases of skin diseases are eczematous in character. It may be acute or chronic. There are several distinct varieties of the disease.

There is no doubt that many individuals who suffer repeatedly from this disease have a predisposition to it, and the disease is provoked by very slight causes. Internal causes include disorder of the digestive organs, nervous affections, general debility, rheumatism, kidney diseases, and in some cases uterine affections.

Among external causes are strong soaps containing too much alkali, friction of the skin surfaces, or by clothes, dust, or any irritation to the skin.

Management.—The best authorities are agreed that in a great many cases the disease is due to errors in dieting. The disease often runs a chronic course, may persist indefinitely, and recur again and again unless the individual will change his habits of life and especially of eating. A prominent physician[1] in charge of a skin clinic said, "For every patient suffering from an inflammatory skin disease who was eating too little and suffering from lack of nourishment there were a score or more who were eating too much, and thus feeding the eruption. The character of the food in the treatment of cutaneous and other diseases is of less importance, perhaps, than the manner in which the food is taken. Hasty eating, irregular eating, and meals taken under the stress of excitement

[1] C. J. Fox.

and worry were the daily experience of most of our patients."

The skin is an important secretory organ, and when waste products accumulate in the blood faster than they can be gotten rid of, the glands that assist in throwing off waste are overworked. The secretions of the skin are altered. Irritation and finally eruption results.

Diet.—The regulation of the diet is largely an individual matter, but rich foods, and especially fried foods, should be avoided. Oatmeal is believed to intensify the disease, and in individuals who are predisposed to this affection should be used sparingly, if at all.

Foods prohibited by some leading medical authorities are sweet potatoes, fried egg-plant, cabbage, cheese, bananas, apples, soda-water, syrups, salt ham and pork, and corned beef, fried oysters, fatty foods, rich gravies, preserves, and fancy desserts of all kinds.

Foods allowed are whole-meal bread, freshly-cooked vegetables, eggs, milk, and fresh fish or meat not oftener than once a day. Obstinate cases have improved markedly on a diet of bread and milk only, continued for two or three weeks. A diet consisting of boiled rice, bread, butter and water has produced marked results in many cases. The results of the diet are usually apparent in four or five days. In most cases overeating and constipation need to be strictly guarded against. Local treatment varies with the type and stage of the disease. In acute cases water acts as an irritant, and is used only sufficiently to secure ordinary cleanliness. Bran, starch or borax added to the water lessens the irritant effect. In chronic cases soap and water may have a therapeutic value. Linseed or olive oil are used to soften the crusts, and occasionally starch or linseed poultices are applied if the crusts are very adherent. In applying a starch poultice to the head, thick, boiled, laundry starch is used and applied while warm on a piece of cheese-cloth. A little cap fitted over the head and tied under the chin is better for keeping it in place than a bandage. It

needs to be renewed about every two to three hours. Very tenacious crusts are sometimes loosened in a night under this treatment. A great variety of powders, lotions, and ointments are used in dealing with this affection, but the hygienic and preventive treatment is the one most important to nurses.

Itch is a contagious animal parasitic disease characterized by intense itching, which is worse at night. The parts frequently attacked are the hands between the fingers, the wrist, axilla, breasts, buttocks, and the inner side of the legs and toes. The disease is highly contagious, and may be contracted through the medium of towels and bed clothes or by direct contact.

The disease yields readily to treatment, but persists indefinitely if neglected. Sulphur ointment is one of the most common and effectual of all remedies, or suphur may be combined with balsam or Peru or other drugs. A vigorous, prolonged hot soap-and-water bath is given before the ointment is applied.

Hives.—Tnis trouble is usually caused by some disorder of the digestive tract. A great many people have an idiosyncrasy regarding certain foods which others may take without inconvenience. Foods liable to produce hives are cheese, lobsters, crabs, sausage, pork, nuts, strawberries, oatmeal, tomatoes, and mushrooms. Many drugs produce rashes, and the sting of the nettle, mosquito, or wasp, may also cause hives.

The *treatment* is directed toward clearing out the stomach and intestinal tract and the allaying of the itching. An emetic, followed by a dose of Epsom salt and an alkaline bath, using a tablespoonful of washing soda to every four gallons of water, are useful measures. To relieve the itching equal parts of vinegar and water or a carbolic solution, 1:40, may be applied locally to the spots. Water in large quantities internally is recommended. In cases which recur the diet should be most carefully watched to try to discover the cause.

Boils.—This affection is a circumscribed inflammation

due to the introduction into the skin of pus-producing germs. Impoverished health may render the soil favorable, but it does not produce the boils. One boil is very likely to infect the surrounding area and cause numerous others unless careful disinfection is practised. Abortive treatments usually fail. Hot antiseptic compresses till the softening takes place and the slough or core separates, careful disinfection of the surrounding area, and an antiseptic ointment after are the usual forms of treatment.

Chafing is a reddening of the skin where the surfaces are in apposition, such as the groin, axilla, neck, etc. This is preventable in most cases by cleanliness and the use of an astringent dusting-powder or vaseline. A good astringent dusting-powder is made of equal parts of zinc oxide powder and carbonate of magnesia. Boric acid and zinc-oxide powder in equal parts is also good. The frequent application of zinc ointment where there is much moisture often gives better results than the powder.

Poison-ivy Rash.—One of the best treatments for this is the application to the inflamed parts of black wash and before the part is quite dry smearing with oxide of zinc ointment. Carbolized olive oil applied locally often gives good results in these cases.

When erysipelas is suspected send for the doctor at once. Till he comes, apply to the inflamed part a compress wet with a strong solution of Epsom salts and water as much of the salts being used as the water will dissolve. Keep the dressing quite moist with this solution and give only fluid diet.

Appendicitis.—If this disease is feared put the patient to bed and do not let him get up for any purpose. Send for the doctor at once. In such cases the doctor is never called too early, he is often called too late. Apply an ice cap to the abdomen. Give no solid food. Milk, broths, ice cream, and fruit juices may be given. Give no medicine without a doctor's order.

Surgery is usually resorted to sooner or later.

Appendicitis tends to return in many cases. In the recurrent cases the diet should be carefully regulated. "The patient should be cautioned to eat moderately and avoid all coarse or hard foods such as grits, coarse oatmeal, tough meats, fibrous vegetables, the skin of fruits or potatoes, in short everything likely to overload the intestine with accumulated waste. Recurrent attacks of appendicitis are more apt to be excited directly by overeating and improper food."—Thompson.

Diphtheria.—Remember that rest in bed is of the utmost importance till all danger is past.

Heart failure is to be feared at any time during the course of the disease and often occurs during convalescence. Sudden exertion is to be avoided.

If there is difficulty in breathing, moist air will usually help to relieve it.

Paralysis in some form is not uncommon, but recovery is the rule. See that the patient has plenty of pure air to breathe day and night.

Whooping cough runs a certain course and there seems to be no way of cutting it short. The sickness may be lengthened by bad management.

Avoid sudden changes of temperature and chilling.

Keep the patient's strength up by careful and wise feeding. Nourishment is of special importance.

The purity of the air in the room has a good deal to do with the frequency and severity of the spasms. Bronchitis and pneumonia are always to be feared as complications.

Hot baths toward evening are strongly recommended by some prominent physicians. The child should stay in the bath about fifteen minutes, a cold cloth being kept on the head.

Put on fresh clothing twice a day. Reinfection often occurs. Careful attention to the purity of the air in the room, to clean clothing, and the warm baths at night, will help to lessen the attacks of coughing, and allow the little patient to gather strength through sleep at night.

Bronchitis.—Mustard foot baths are often helpful in the early stages. Inhalations of steam tend to loosen the secretion and relieve difficult breathing. Flaxseed tea is a useful drink in cases of this kind. A mild mustard plaster to the chest is often recommended. Sudden changes of temperature should be avoided. The air in the room should be moist. Mild laxative medicine of some kind is usually needed. The diet while there is fever should be liquid or very light.

Measles.—Keep the patient in bed in a well ventilated room. Exclude the light wholly or partly owing to the inflamed condition of the eyes.

While the fever lasts give liquid diet.

A warm bath every day may be given.

The complications to be feared are bronchitis and pneumonia. Whooping cough frequently follows measles and many cases of tuberculosis have been traced back to this disease which weakens the body and leaves it in good condition for the development of other diseases.

German measles is a different and distinct disease, though the management of the two is the same.

Mumps.—Isolate the patient. Keep in bed. Give liquid diet, either hot or cold, during the acute stage. Acid foods or highly seasoned foods are wisely avoided. Applications for the relief of pain may be either hot or cold. Consult a doctor. Complications may occur, and the seat of the disease sometimes changes from one part of the body to another. Most cases occur between the ages of five and fifteen, but occasionally adults contract the disease.

Summer diarrhea is one of the exceedingly fatal diseases among infants. It is especially prevalent in densely populated communities. Occasionally the disease persists for several weeks, and complications are numerous. As a rule, it is rapidly fatal unless checked. The immediate cause is due to posion developed in the food by the action of germs as a result of high temperature, and the disease is readily communicated by means of soiled hands or utensils. See page 147.

Preventive treatment consists in keeping the babies clean and as cool as possible in hot weather, and in most careful attention to the cleanliness of food and utensils. Hygienic management is the first step in the prevention.

General Management.—When the disease manifests itself the first essential is to clear the offending contents of the stomach and intestines out as rapidly as possible. Diarrhea and vomiting are efforts in this direction, but prompt assistance is needed.

Irrigation of the bowels is one of the most effective of all treatments. The child should be placed on the back, hips elevated, and a large soft-rubber catheter used. In a baby of six months a pint of salt solution will usually be sufficient and a quart for a child of two years. The tube should be well oiled and passed up from 6 to 8 inches. If there is high fever ice-water is sometimes used for irrigation, but normal salt solution, luke warm, is the most common fluid. The stools should be closely watched and changes in character reported.

Borax solutions, using a dram of borax to a pint of water, is occasionally resorted to. Ask the doctor before giving it.

Diet.—Milk is very generally withheld for a few days. Albumin-water, with or without the addition of a little brandy; barley-water, arrowroot gruel, milk whey, or koumiss, and beef juices and broths are all recommended. Osler says that in these cases "there is no form of nourishment so readily assimilated and apt to cause so little disturbance as egg albumin or the simple beef juices. When a return to milk diet is made the milk should be sterilized.

Frequent baths, either tub or sponge, help to keep the child cool, which is an important aid in tiding over the disease. A change to the cooler air of the seashore or even to the parks in the daytime is often helpful.

Starch and laudanum injections are useful aids in this disease.

Water given freely, even when immediately vomited, is recommended by some medical writers.

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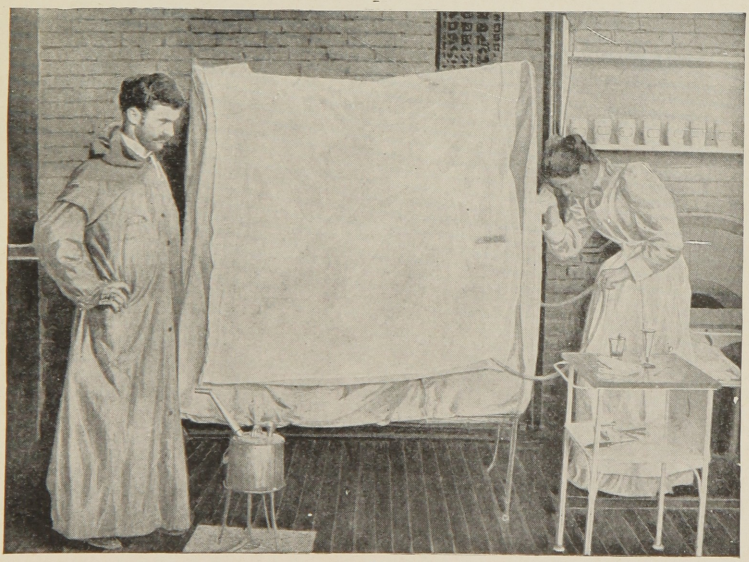

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FIG. 52.—Croup-tent for steaming and calomel-fumigation: 1. Croup-tent open. The fumigation apparatus, standing on the table, consists of a Bunsen burner, a tripod, and a plate containing calomel. 2. Calomel-fumigation: croup-tent closed, nurse watching the child while fumigation is going on. (*Northrup.*)

Croup (Spasmodic).—Apply hot compress to the neck. Keep the air in the room moist. Encourage vomiting if the attack is very severe. Ask the doctor about emergency medicines if the child is subject to frequent attacks. Syrup of ipecac is often recommended for the purpose of assisting vomiting, the dose being graded according to the age of the child.

A steam tent is often needed in cases of croup or bronchitis. To arrange this, drape a sheet over the crib, supporting it at the head of the bed by fastening it to the wall or to a pole resting against the wall at the head, and on the mattress at the foot of the crib. The steam may be conducted from a small kettle at the side of the bed, heated by a gas or coal-oil stove. A tube of thick paper fitting over the spout of the kettle conducts the steam under the tent.

Inhalation for larger children, or in adults to relieve difficulty in breathing or influenza and bronchitis, may be arranged by wrapping a shawl or small blanket around the head and shoulders, the head being held over a pitcher filled with boiling water. A few drops of carbolic acid or Friar's balsam may be dropped in the water. The shawl should envelop the pitcher and keep the steam from escaping into the room.

Colds.—When a cold is developing one of the first things to be done is to give castor oil, salts, or a cathartic of some kind. If there is fever give fluid or light diet, and keep the patient in bed. Give plenty of fresh air to breathe day and night and *wait.* Relief where breathing is difficult may be obtained by steam inhalations. Warm olive oil dropped into the nose helps to clear the passages. Colds tend to run a definite short course. One day cold cures are apt to be disappointing.

Gargles.—When it is necessary to gargle the throat, instruct the patient to fill the mouth with the fluid, close the nose tightly, throw the head backward, and gargle. Unless used properly, gargles are of little value.

Coughs.—In general it may be said that a cough is a

protest against irritation. The causes of the irritation are as numerous as the variety of coughs. The cough is one of nature's methods of dislodging or ejecting matter which is harmful to the body if retained.

The *troublesome "tickling" cough* is frequently caused by elongation of the uvula, which irritates the mucous membrane of the larynx. It is often called the "uvula cough" and is frequently associated with enlarged tonsils.

Adenoids in children are a frequent cause of short dry coughs. Mouth-breathing resulting from adenoids is another cause. As a result of mouth-breathing the throat becomes dry and irritable from taking in air that has not been warmed, filtered, and moistened.

Catarrhal coughs frequently result from diseased nasal bones and inflamed nasal mucous membranes.

Changes in temperature are causes of coughs in susceptible people, especially if the change be a sudden drop.

The *nervous* or *hysteric cough* frequently heard is usually a short bark, and is apparently beyond the power of the individual to control. Its aggravating persistence is often more annoying to those who have to listen to it than to the one who does the coughing.

The *coughs* occurring in bronchitis, pneumonia, and tuberculosis are usually an effort to clear the air-passages of harmful secretions.

Cough remedies frequently contain harmful drugs and a physician should be consulted in regard to their use.

Convulsions in children are often caused by indigestion. Send for the doctor as soon as possible. Empty the lower bowel by an enema. Get the child to vomit.

If the stomach seems to be overloaded, use a little mustard and luke-warm water as an emetic if necessary. Give a hot mustard bath as soon as possible, leaving the child in it till the skin is well reddened. About two tablespoonfuls of mustard may be used to a child's bath tub of water, blending the mustard to a smooth paste in cold water before stirring it in.

Constipation in Babies.—Griffith suggests as possible

remedies an increase of fat in the food or more cream to the bottle or fed from a spoon.

A teaspoonful of olive oil daily.

A teaspoonful of "drug store syrup" two or three times a day.

Oatmeal water instead of plain water in preparing food.

Orange juice.

A baked apple or stewed fruit may be tried in children over one year of age.

Strained prune juice.

Cultivation of regular habits in evacuating the bowels.

Increase of fluids and laxative foods.

Massage.

Occasional enemata.

Lastly, laxative drugs, of which cascara or syrup of senna are two of the best.

Plenty of fresh air and outside exercise are important factors in management. It is well for nurses to remember that the tendency of lime-water in food is toward constipation.

Habitual constipation in adults is rarely if ever cured by drugs. In fact in many cases drugs seem to increase the trouble. Careful attention to diet and to habits of living is necessary.

The **normal condition** regarding bowel movement is that each individual should have at least one evacuation of the bowels each day. There are various deviations from this rule in the way of increased movement, which up to a certain point do not affect the general health, but if at least one bowel movement does not take place each day the health is sure, sooner or later, to suffer from retention of waste products in the system.

Habit is a strong controlling factor in this matter, and an effort to empty the bowel at a regular time each day should be made until the habit is established.

Water.—Copious drinking of pure water tends to promote the normal action of the bowels, but too much water

should not be used at meals. For laxative purposes, a glass of either hot or cold water, with or without the addition of a pinch of salt, taken on rising in the morning, proves a sufficient remedy in a great many cases.

Food.—The character of the food also has a decided action on peristalsis. A great many vegetables have a tough woody fiber which, though indigestible, performs a useful function in contributing to the bulk of food needed, and thus stimulate peristalsis. Of these, green corn and turnips are examples. Coarse cereal foods, such as hominy, oatmeal, and crushed wheat, brown bread, and bran biscuits, all have a slight laxative effect. The addition of cream to an infant's food will often correct any tendency to constipation. Olive oil is a laxative fat and its use has been followed by very beneficial results in many cases. Those who dislike it as an addition to salads, etc., may take it clear two or three times a day.

A biscuit made from whole wheat flour and bran, according to the following recipe, has been successfully used in relieving constipation:

Wheat Bran	1 pint.
Whole Wheat Flour	1 quart.
Milk	1 pint.
Salt	1 pinch.
Old-fashioned Molasses	6 tablespoons.
Baking Powder	3 teaspoons.

Bake in gem tins. Use from one to three or four each day.

Fruits act as laxatives through their seeds and through the action of the acids and salts they contain. For laxative purposes fruits should be eaten between meals and on rising in the morning. The laxative action is increased if the fruit is followed with a glass or two of water. Preserved fruits are not so effectual as fresh, and bananas are said to cause constipation. The following list of fruits have a laxative effect: Prunes, oranges, grapefruit, apples, cooked or raw, peaches, berries.

Butter-milk, apple cider, koumiss, honey, rhubarb, walnuts, almonds, and fresh green vegetables are all useful articles of diet when there is a tendency to constipation.

Exercise.—Active exercise of the body tends to promote the normal action of the intestines. Those who lead a sedentary life or are confined to bed require that special care in diet be used if constipation is to be avoided.

Massage of the abdomen is used with especial benefit in children, where natural simple measures are not sufficient to produce a normal action of the bowels. Begin at the right groin and follow the course of the colon around the abdomen.

Abortion or Miscarriage.—The terms "abortion" and "miscarriage" are used interchangeably by most people

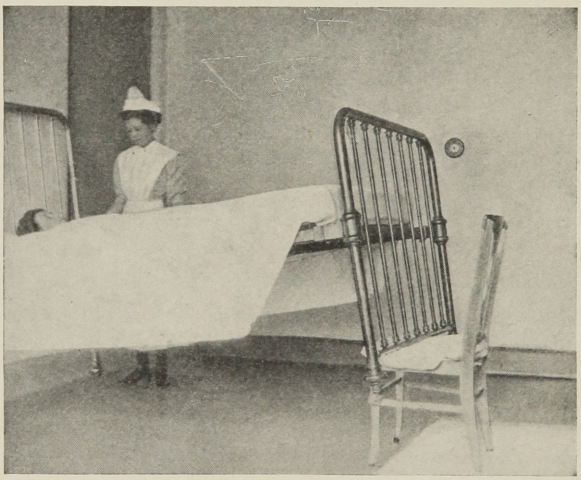


Fig. 53.—Bed elevated at foot, showing chair protected to prevent scratching.

though in medical circles there is a distinction made in the use of the terms. The condition is due to a variety of causes. The immediate danger in either case is from hemorrhage. A more remote but no less real danger is from infection which results in a form of blood poisoning.

The important symptoms are a slight flow of blood from the vagina, and a sense of pain or uneasiness in the abdomen after pregnancy has begun. Abortion occurs most frequently in the third month of pregnancy. In

cases where repeated abortions occur, treatment should begin as soon as pregnancy begins or before. In many cases the symptoms subside under appropriate management and the pregnancy continues without further interruption. Even large hemorrhages are not always followed by abortion or miscarriage.

When a miscarriage is threatened "it is a good plan to keep the patient on her back, with the foot of the bed elevated from 10 to 12 inches, and only a small pillow under her head. This posture reduces the flow of blood into the abdominal organs, and has a marked tendency to empty the veins. The importance of absolute mental quietude cannot be overestimated, nor too much impressed upon the patient's friends."

Opium in some form is usually given as an emergency remedy in small doses and often repeated; asafetida is given in many cases where treatment needs to be continued for a considerable time.

Hemorrhage—In all such cases a physician should be secured at the earliest possible moment. If the bleeding is profuse, Davis recommends a vaginal injection of hot sterile water. This might be done while waiting for the doctor if his coming was delayed. Other stimulants or hot drinks should not be used without special orders. Ice may be applied over the uterus. The patient should not be allowed to get out of bed or raise up in bed for any purpose. All napkins or discharges should be saved for the physician's inspection.

Convalescence after abortion is a much slower process than after a full-term birth. The latter is a natural process, the former a diseased condition. Chronic diseases or conditions often result. In all cases there is the danger of infection from retained placental tissues or membranes. It is said that "most women at the time of an abortion or miscarriage are prone in an exceptional degree to infection." Hemorrhage after curettement in such cases frequently occurs.

NURSING IN CHRONIC DISEASES.

Tuberculosis.—*Advice to Patients Having Tuberculosis.*[1] —"Anyone suffering with consumption in its early stages should remember that this condition is a very common one, and one from which large numbers of people have fully recovered. It is only necessary to firmly implant in the patient's mind that his condition is very serious unless he follows out with the greatest care the necessary rules of living; with this latter provision he may look forward with confidence to a cure.

The condition is one which should cause no fear if the most simple laws of animal health are observed. The benefit derived, or the completeness of the cure, depends almost entirely upon the earnest and sincere efforts of the patient. The doctor, except in an emergency, can act only as an advisor.

The cardinal features of the cure of this disease are:

1. Rest.
2. Good food.
3. Fresh air.
4. An easy and composed mental condition.

In addition, one must be willing to sacrifice temporary pleasures, to live a most monotonous life, to have an intense desire to get well and an honest belief in ultimate recovery.

Sufficient resources are required for all necessities, such as re-arrangement of sleeping quarters, proper and sufficient food and correct wearing apparel.

The hygiene of self and surroundings is of the greatest importance. It must be understood that a great battle is to be fought, lasting at least a year; therefore, as in all such cases ammunition must be available.

We shall take up first, the question of **Rest.** This means rest in the truest sense of the word—not simply to stop work, but rest in bed, chair or hammock, all depending on the condition of the patient. When there

[1] Bulletin Ohio State Sanatorium, Mt. Vernon, Ohio.

is fever or exhaustion, bed is the proper place, and even though one feels almost well, the hours of quiet must be five to one of exercise or excitement. The manner of rest, the place, surroundings and number of hours should be arranged by the physician.

Good food and plenty of it is essential, the amount and variety depending upon the patient and his ability to utilize what is given. The great desire in feeding is to have a gain in weight, every ounce of increase meaning an advance toward health. In most cases, it is best to take food regularly and, of course, faithfully remembering that water must be classed as a food. A definite schedule should be made for the day.

For instance, at 6.30 a glass of hot water while still in bed; at 7.15 or 8 A. M. breakfast, to consist of fruit, cereals, toast, eggs, and perhaps a little meat, with milk or water; the largest meal of day must be at 12.30 or 1 P. M., consisting of almost anything, within reason, that the patient may desire. (A rest on the couch of an hour should then be taken.)

The evening meal at 6 P. M. must be of light easily digestible food and eggs with milk.

At 9.30 preparation for bed should begin and all be asleep by 10 o'clock.

In some cases special diet in addition may be necessary, viz.: egg-nogg with crackers at 10.30 A. M. and 3–3.30 P. M.; also a glass of hot milk with crackers at bedtime. This, however, is to be determined by the physician.

The stools of all tuberculous patients should be observed for signs of undigested food.

Medicines in this disease have no special effect as cures, and are used principally to relieve symptoms, improve digestion, etc.

Coughing can occasionally be temporarily relieved by simple inhalation of steam, the head being wrapped in a bath towel or small blanket and held over a pitcher of boiling water. An irritative cough often exists without much expectoration. In this kind of cough education of the

patient will help to suppress it. All patients who have respiratory ailments are prone to cough more frequently and violently than is necessary. They should be encouraged to control the cough whenever they can. Tuberculous patients need especial instruction to cough as gently as possible, as there is danger of spreading the tuberculous process over a larger area in the lung and also a danger of hemorrhage from violent coughing. The irritative cough without much expectoration may persist in spite of all efforts until some form of opiate is given.

The *following rules* regarding "how to cough" are given by A. A. Pleyte, M. D.:[1]

"Fold your handkerchief so that it is about 5 inches square. Place it flatly in the right hand, if you are right-handed, and with this hand hold it tightly over the mouth. Press the hand on the mouth, since to hold it loosely over the mouth will not accomplish our purpose. Instead of coughing and trying to muffle the sound in your throat or mouth, muffle it with your handkerchief. Practice it until a person 10 feet away cannot hear you. The sound made in coughing is due partly to air passing over the vocal cords, partly to air going through the bronchial tubes and trachea, and partly to the resonance produced in the chambers lying above the trachea. This sound can be almost wholly avoided and the irritation to the lungs and air-passages prevented by keeping the air-passages open and letting your handkerchief do the muffling. Instead of expelling 120 cubic inches of air at each expiration, you will expel a smaller amount, with more comfort to yourself and to those around you, and with much less harm to your lungs.

Fresh air is of almost as much importance as good food, for while food is necessary to the entire body, fresh air is equally essential to the diseased and starved lung cell. Few people appreciate what is meant by fresh air; it means the open—the sky above and earth below. Of course, we are compelled to have some protection from the weather, hence several different modes

[1] Journal of Outdoor Life.

of living are suggested. First, and best, is a tent or modified tent house put up in the yard; next, a remodeled porch (first or second story), as a sleeping-room, or, for a moderate sum, a porch can be built out from window or door; third, is a bed-room arranged for sleeping only, with a window tent under which to place the bed; as a last resort, the bed-room with open windows and properly arranged furniture, may be used to good advantage. The physician can easily give information about all the necessary things and their arrangement, to suit the condition of the patient.

One of the most important aids in the cure of the patient—one without which we are practically helpless—is a **proper condition of mind.** Very many patients put all dependence in the doctor and nurse, making not the least effort to help themselves. This indifference, or perhaps depression, on the part of the patient, is one cause of the frequent failures. To succeed in any battle, one must have knowledge and pluck a great determination to win and to not be discouraged by few or many backsets. The time will surely come when one is tired of resting, tired of fresh air, tired of eating eggs and milk, tired of everything, in fact almost ready to cry "quits." At this time the patient must appeal again to his courage and determination to win, or the doctor, nurse, fresh air and good food are of but little use. The great hope, the chance of success, is in the patient's desire and determination to win, no matter what the odds may be. A strong effort and the burden will be lifted, with a further advance along the road to recovery.

Another thing to consider is the **proper wearing apparel.** So many times the patient comes to the doctor wearing one or more heavy fleece lined undervests, and often a thick flannel chest protector (so-called), thick clothes and overcoat in winter, with a long muffler wrapped several times around the neck, while frequently the feet will be poorly protected—perhaps wet. Even in the house and in bed the weight of so much heavy clothing tires the patient.

The patient must, of course, be warm and comfortable out of doors, in the house and in bed. Usually the physician can advise as to the needs. The following dress, under ordinary circumstances, will be found comfortable in winter, spring and fall; a thin summer under suit, next to the skin, over this a medium weight cotton or wool garment. The thin material absorbs perspiration and the body heat quickly dries it, so there is constantly a warm volume of air between the two suits, the heavy outer one retaining the warmth; whereas, when one thick garment is worn and becomes wet with perspiration, it rarely dries, hence causing a cold, clammy sensation, and then the loading on of more clothes in a vain endeavor to get warm. The outer apparel may be of any light, warm material, depending upon the means of the patient; a warm overcoat, when necessary, and good strong shoes. While sitting out of doors in cold weather, foot-warmers, extra blankets and a good warm cap with ear coverings, may be needed.

The bed clothes should be light and warm; some people prefer sleeping between blankets which is allowable if changed sufficiently often.

Outdoor sleeping in cold weather needs to be carefully managed if the patient is to be kept comfortable. To keep the feet warm, a thick bag long enough to reach to the knees is often used. These can be made at home, using a partly worn blanket and a few layers of cotton batting inserted for extra warmth.

In very cold weather it may be advisable to lay thick layers of newspapers between the bed-springs and the mattress.

A patient who successfully managed outdoor sleeping for years even in very cold weather gives the following directions for arranging the bed:

"Lay on the mattress the two sheets, which preferably should be either woolen or cotton blankets, then add other coverings as required, two, four, or six blankets, letting all hang over the sides as you would ordinarily before tucking

in. Now turn under each side as it lay in the order named, that means both sheets also, so that the edges of the cover-

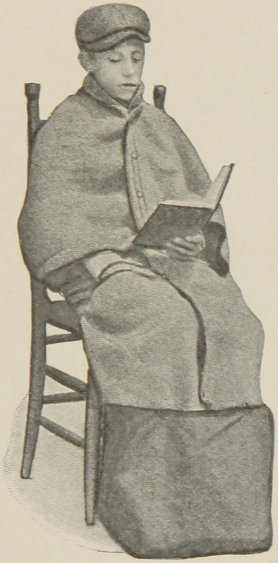


Fig. 54.—Sitting-out bag. (Journal of Outdoor Life.)

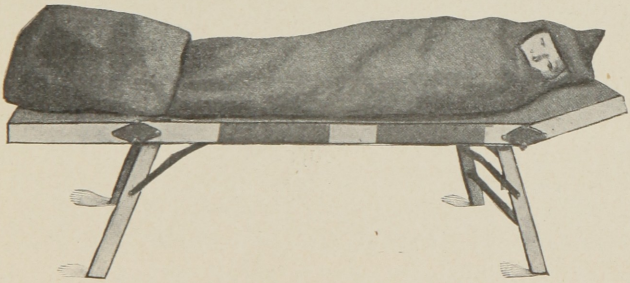


Fig. 55.—Sleeping-bag. (Journal of Outdoor Life.)

ings meet underneath, or nearly so, and tuck the foot end under the mattress if it is long enough to permit. When

you open the sheets at the top you then have the Klondike sleeping bag to crawl into. Over all throw a dark blanket if the climate requires much covering, and for this purpose a good horse blanket answers the purpose; allow this covering to hang loosely over the edges. To get into this bag with ease, put the pillow in the center of bed, stand at the head of the bed, and open the sheets. Get your feet in between these sheets and gradually work the body down into the bag. After a few trials this will come much easier than at first supposed. When well down into the bag,

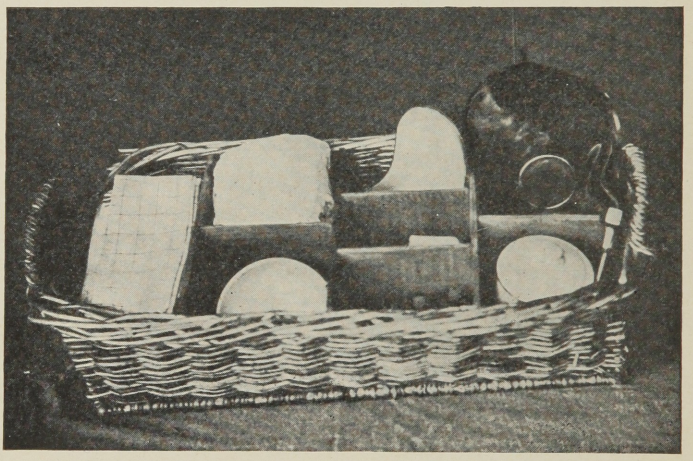


FIG. 56.—Hemorrhage basket. (Cook County Tuberculous Hospital, Oak Forest, Ill.)

throw the pillow behind you and arrange. With a bed of this kind no air can get at you, as you are lying on the edges of the covering, and an extra scarf or shawl can be put over shoulders if necessary."

Hemorrhage.—One of the serious developments to be feared in pulmonary tuberculosis is hemorrhage. This occurs frequently as a surprise when a patient is feeling as well as usual, and the condition is always alarming to the patient. Prompt aid is needed, whether the patient is at home or in a hospital.

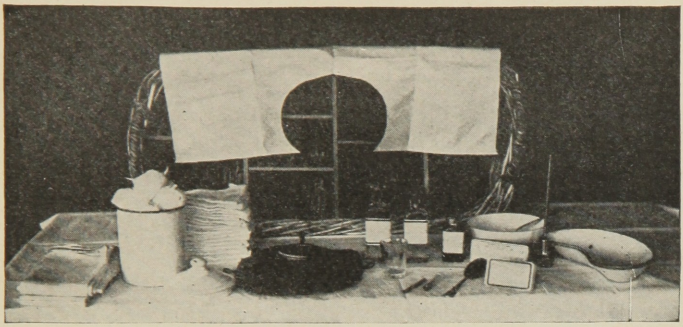


FIG. 57.—Contents of hemorrhage basket.

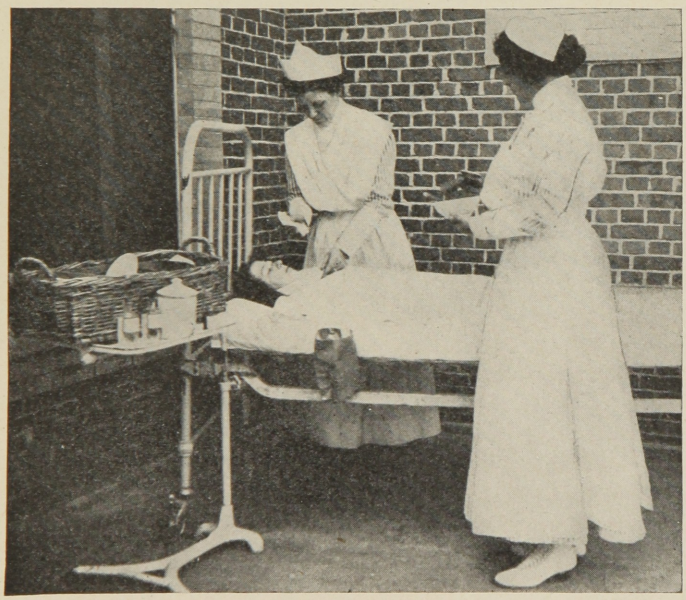


FIG. 58.—Hemorrhage basket in use.

Management.—Rest in bed, lying down. Quietness. The mental treatment in most cases is important. Fear must be combated by all possible means. An ice-bag over

the heart; chipped ice to swallow are usual nursing measures. Every nurse should secure standing orders from a physician as to further measures to be used should the physician's arrival be delayed and the hemorrhage continue.

A *hemorrhage basket* containing all the requisites for prompt treatment is in use in many of the well-equipped tuberculosis hospitals.

Personal hygiene is, of course, important. A daily bath in luke-warm or cold water, followed by a brisk rub, is helpful, keeping the skin in good condition and aiding elimination. Even though confined to bed, a sponge bath should be given, with a weak alcohol rub and thorough drying afterward.

The greatest care must be taken of any expectoration. Some prefer cotton or gauze handkerchiefs, others special vessels made for the purpose, all to be burned after using.

The room furnishings should be arranged under the physician's direction; absolute simplicity with subsequent cleanliness being the important feature.

One more item in this abbreviated routine for living must be mentioned; in plain words—**money.** The amount will not be very much if wisely used. An ordinary tent 10×12 costing about $25.00 with a built up floor may be used; better, a shack with tar paper or shingle roof and canvas or wooden sides, to be raised or lowered, as the weather demands. The remodeling of a porch is many times easier to arrange, simple canvas curtains being all that are necessary if properly placed. If a room in a house must be used, a very satisfactory **window tent** can be obtained at small expense. Gauze for use as handkerchiefs is very cheap and individual expectoration cups are comparatively inexpensive. Blankets and head coverings can be had in almost every home, as well as hot bricks or hot irons for foot warmers.

In **convalescence,** when exercise is permitted, it should

be carefully graded, and medical advice secured at every step of the way.

Occupations for both men and women are now carefully graded in the best managed institutions. *Suitable* employment for the hands is a wonderful aid in counteracting the unwholesome mental depression from which some patients suffer. The nurse who has the care of a convalescent tuberculosis patient in the home, after exercise is permitted, needs to be able to suggest useful things to

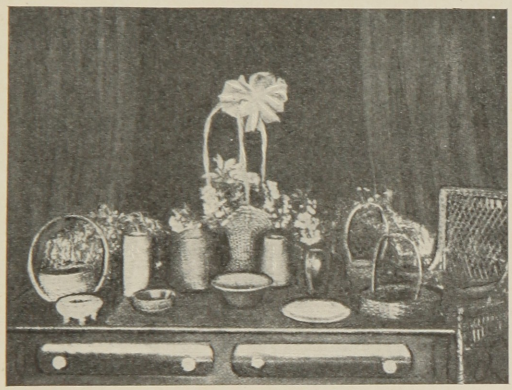


Fig. 59.—Articles made by tuberculosis patients in a sanatarium. (Journal of Outdoor Life.)

be done which will occupy both mind and hands in wise ways. The "work cure" at the right time and place is quite as much needed as the "rest cure."

Nursing the Aged Person.—A large part of the work of the home nurse is with chronic invalids and aged patients. The nurse who is successful with aged people needs first of all to be kind, thoughtful, and a close observer, she needs to have a sunny disposition and to be able to create an atmosphere in the sick room that is conducive to health. She must be willing to make each patient a special study, and to give to them her sympathy. Most aged patients demand sympathy, yet resent pity.

Many old people feel that they are no longer needed, that their work is done, and often feel that they are in the way or a burden. In sickness this often results in a mental depression, and the desire to get well or to live must be created. The best work of the physician will fail of the desired result unless the nurse is able to create this desire to live, and to show the patient that he has "something to live for"—that the world needs its old people, with their store of human wisdom and experience with life.

It is well to humor aged people in the matter of seeing at proper times their relatives and friends, whom they desire to see. A great mistake is often made by nurses by banishing the daughter or the family from the sick room, and making them feel that they are intruders if they try to help in the care of their own loved one.

Fresh air in the sick room is so often associated in the minds of old people with "catching cold" that the nurse should be most careful in planning to freshen the air of the room. It is often better to wait until the patient is asleep, and then cautiously raise or lower the window, always being careful to add extra coverings if needed.

Objections to baths are sometimes hard to combat. Where there is a strong objection to a full bath, try bathing face, neck, arms, and feet, always having the room warm. The patients will probably feel so much better after this partial bath that their objection to a full bath will die away.

The *feather bed* has been so universally condemned that modern nurses wish, as a rule, to at once banish it. It is an unsanitary article, yet many good, clean, respectable elderly people cling to it, and feel they cannot rest comfortably without it. If to remove it seems, in the mind of the patient, a cruelty, the wise course in many homes is to endure it.

The *removal of unnecessary things* from the sick room is one of the first lessons taught in nursing, but in dealing with aged patients it may be wise to disregard it, and let them keep their precious belongings in sight.

The *nourishing of aged patients* frequently furnishes a special problem. Their digestion is usually impaired, and many articles of food do not agree with them. For this reason special pains must be taken to choose for them the most nourishing foods, and to prepare them so as to suit the tastes of the invalid as far as possible. Much care needs to be used in regard to seasoning during cooking. Too much or too little salt will often result in the refusal of the food.

Concentrated liquid foods can often be given as medicine when they would be refused as food. Most aged patients are firm believers in medicine and demand it even when not specially needed.

Warmth.—Aged patients need to have more attention paid to warmth and are easily chilled. Heat to the feet, bed slippers, and a shirt worn under the night dress are usually needed in cold weather.

The *power of close observance needs* to be especially cultivated with this class of invalids, and "comfort" methods must be adapted to each individual patient.

Nursing in Chronic Diseases of the Heart.—Next to tuberculosis, diseases of the heart and circulatory system probably claim the largest number of victims of chronic disease. While deaths from tuberculosis are decreasing, the number of deaths from heart and kidney affections are increasing. Though sudden deaths from heart affections are not uncommon, the disease has probably existed for years—often unknown to the patient. When it is known that the heart action is impaired, much may be done to prolong life and add to the comfort of the patient.

General Hygienic Management.—The following directions have proved useful in dealing with patients with chronic heart disease:[1]

Remember, with good care and by obeying instructions you may live many years with little discomfort.

[1] Leaflet issued by Cornell University Medical Clinic. Arranged by William Hills Sheldon, M. D.

INSTRUCTIONS.

1. Hurry, worry, hard work, drinking too much liquor of any kind or beer will shorten your life.

2. Get work where you never have to lift or strain, such as tailoring, operating machines, etc.

3. Live on the ground or first floor, as climbing stairs is very harmful.

4. Never hurry. Do everything slowly. Don't run or walk fast. If you get short of breath, or feel dizzy or faint, stop and rest. Don't walk against a strong wind or when it is very cold.

5. Rest all you can, lie down as much as possible. Have at least eight hours' sleep every night.

6. Be sure to get plenty of fresh air. Keep your windows open at night.

7. Wear flannels the year round, warmer in winter.

8. Avoid getting your feet wet.

9. See that you have one free passage of the bowels every morning, and never strain at stool.

10. Indigestion is very bad for persons with heart disease, as it is a strain on the heart. So eat very slowly, and chew your food well. Rest after meals. Do not eat so much that you gain weight.

11. *Diet.—Meat:* Boiled, broiled, or roasted meat once a day. *Dairy Products:* Milk, cream, and butter in moderation. *Cereals:* Rice, hominy, Indian meal, barley, cracked wheat, oatmeal, cream of wheat, etc. *Bread* (at least a day old): Whole wheat, rye, graham, corn bread. *Eggs:* Cooked in any way except *fried*. *Vegetables:* Potatoes in small quantities, beets, carrots, squash, lettuce, spinach, tomatoes, peas.

Avoid canned, salted, or fried meats. It is better to eat small meals frequently than too much at one time.

Do not drink much water or fluid of any kind at one time; it overloads the stomach and strains the heart. Drink water several times between meals, not with meals, and do not take more than a tumblerful at one time.

Points to Observe in Nursing Patients with Advanced

Heart Disease.—The position of the patient afflicted with heart disease is important. Almost every such patient assumes a characteristic position in which he is able to secure a greater degree of comfort than in any other. Many cannot lie down; others lie on the back or side; others sit up and lean forward. If a change from the ordinary position is assumed by the patient and maintained, it is worthy of being reported to the doctor. Difficulty in breathing is always to be noted. It may be due to a variety of causes, but should never be overlooked.

Likewise, the color and expression of the face are important indications. This may vary from a fleeting pallor to a dark bluish color which persists, and very frequently, owing to liver involvement, the complexion may become jaundiced.

Many heart patients have a persistent cough. In cases in which the heart is largely dilated there is apt to be expectoration also. The character of cough and expectoration and any variation from the ordinary are points to be observed and reported. Always note the presence of dropsy. As a rule this is first noticed in the lower extremities, and appears last in the face.

Mental changes in heart patients are always to be looked for. The brain may be anemic or, owing to lack of oxygen, may be in a state of congestion. Either condition will cause mental changes, which are usually more pronounced at night. The patient's statement as to pain should be carefully noted.

In the nursing care two points are of special importance: the position of the patient—which requires close attention to the little details which make for comfort in each individual case, and calls forth the resourcefulness of the nurse in improvising means to promote comfort—and the question of diet. The observations regarding urine, which should always be made in such cases, will have much to do in deciding the question of diet.

The **diet** should be nutritious, and should be such as will not inflate the stomach or bowels with gas, which would

interfere with heart action. Large meals are usually prohibited as imposing unnecessary labor on the heart and mechanically interfering with its action. Small meals at frequent intervals are the rule.

Albuminous foods and fatty foods are allowed. Starchy foods are restricted. Cabbage, potatoes, peas, beans, and aërated beverages are prohibited because of their tendency to create gas. Liquids are reduced, and often a salt-free diet is prescribed.

In many heart cases in elderly people the complete loss of appetite and a persistent insomnia are the most distressing symptoms. The loss of appetite is sometimes sudden, and often never returns. The patient's strength and tissues slowly waste, with little pain. An intense weariness is the chief difficulty complained of. No diet seems suitable in such cases and the patient's tastes are the best guide.

Dropsical conditions occur frequently as a result of heart disease. Nursing in such conditions consists in large measure in securing for the patients the greatest degree of comfort possible. Most of such patients are unable to lie down, and a comfortable chair or bed-rest with arms and, if possible, with projecting sides that will support the head when it falls over during sleep, should be provided. Plenty of pillows are a necessity. There is a great difficulty in breathing, which is usually worse at night. Sleeplessness is common. The urinary secretion is diminished. Saline purgatives are used to drain off the excess of fluid, and tapping is often required. Canton-flannel bandages on the legs may be used. Good air is important, but sudden changes of temperature or a chilling should be avoided. Heat to the feet is nearly always needed.

Nervous affections of the heart are common, and often very distressing. The heart participates constantly in the emotions of the individual. In nervous patients the heart action is easily disturbed. The slightest approach of a physican to some nervous patients causes the heart to beat more rapidly. In others a constant state of fear

or apprehension exists which causes various heart symptoms.

Difficulty in breathing due to nervousness is not unusual and is met with in individuals who are in fair health. Many imagine that this condition is indicative of heart trouble. Quite frequently the difficulty in breathing is entirely overcome by a rest or change of environment for a time.

The moral influence of the nurse in overcoming the fears of such patients and assuring them again and again that they have no organic affection will often accomplish what no amount of medicine will. When they fully understand that many of the symptoms they complain of are nervous symptoms, not heart symptoms, much has been gained.

Directions for Patients with Kidney Disease.—There are many forms and degrees of kidney disorders. Some are slight and comparatively unimportant, others serious and requiring most careful management. When it is known that a chronic disease of the kidneys exists, the following hints regarding the adjustment of the patient's mode of life will be found helpful:

"*First, remember*, with good care and by obeying instructions you may live many years with little discomfort.[1]

INSTRUCTIONS.

I. *To Avoid Taking Cold.*—(1) Wear flannel underclothes all the year, warmer in winter. (2) Keep the feet dry, wear warm socks. (3) Do not get wet or chilled. (4) Keep in the open air and sunshine all you can. (5) Keep your rooms at an even temperature, not too hot.

II. *To Relieve the Work of the Kidneys.*—(1) Take a hot sponge-bath every night at bedtime to keep open the pores of the skin. (2) Keep the bowels open; have at least one good passage every morning.

III. *Occupation.*—(1) Get work in which you never have

[1] Cornell University Medical Clinic.

to lift or strain, such as tailoring, operating, etc. It is harmful to lift heavy weights, walk too fast, stoop, or climb long stairs. Rest as much as possible, with not less than eight hours sleep. Do not worry or get too tired.

IV. *Diet.—Dairy Foods:* Milk, cream, butter, and a small amount of cheese. *Cereals:* Rice, hominy, Indian meal, barley, cracked wheat, oatmeal, cream of wheat, etc. *Breads:* Whole wheat, graham, rye, corn bread. *Vegetables:* Potatoes, beets, carrots, onions, turnips, squash, lettuce, spinach, tomatoes, peas. *Fruits:* All the fresh fruits except bananas. *Liquids:* Drink no alcoholic liquors of any kind, not even beer. They are all absolutely poisonous to anyone with kidney disease, and are likely to cause dropsy, shortness of breath or convulsions, and destroy your eyesight, besides shortening your life. Do not drink large quantities of water or other liquids.

Avoid all red meats, and eat eggs only in moderate quantities. *Avoid* all salted or dried or canned meats and vegetables."

Apoplexy, or sudden paralysis, or "stroke of paralysis" is the result of hemorrhage or escape of blood or serum from some of the blood-vessels into the brain or spinal cord. It occurs usually in patients beyond fifty-five years of age. The attack is sometimes slight, and many of such patients recover and eventually die of some other disease.

The *nursing* of such patients is important. The head should be elevated and turned to one side. Bed-sores are to be guarded against. Fluid food must be carefully administered. Rectal feeding is often needed. The bladder must be emptied at frequent intervals. Ice to the head and perfect quiet are necessary in the early stages. Usually some purgative is given. Medicine to aid in the absorption of the clot which is making pressure in some part is frequently ordered.

The first treatment is directed to preventing further hemorrhage. *Stimulants should never be given.* Later the remedies are directed to improving the paralyzed parts and lessening the danger of future attacks. All such

patients should be cautioned to lead a quiet life, avoid alcohol or excesses, or excitement of any kind.

The Nervous Patient.—No patient afflicted with a chronic disease is so misunderstood as the patient afflicted with some chronic nervous affection, and, as a rule, none receive so little sympathy. Because there is generally no rise of temperature, no wound or swelling that is visible, the family often refuse to believe that such patients suffer, and class the ailment as *imaginary*. It is true that there are various conditions or disorders which are the result of fear. The individual *fears* that he has this or that disease, and as he concentrates his attention on this or that organ or function a train of symptoms resembling disease is sometimes produced. As the patient broods over his condition the symptoms grow more severe. His friends perhaps suggest the serious outcome of this disease—telling him of certain persons who died of a disease similar to his, and his symptoms grow markedly worse. Such a patient *suffers* keenly, though there may be no degenerative disease in the organ of which he complains.

The *mind* exercises a powerful influence over the functions of the body—over the digestive organs, the urinary organs, the heart, the nerves, the sexual organs, and often over the functions of walking or talking.

Neurasthenia, or lack of strength in the nervous system, is probably the most common of all nervous affections. It is a depression due to exhaustion of nerve force, which frequently occurs as the result of overwork associated with worry. Work alone is less frequently responsible for the ailment than worry. It may affect, markedly, certain organs of the body, and is always accompanied with a condition of general bodily weakness. Under the stimulus of certain conditions which bring pleasure or excitement the neurasthenic patient may appear as if he were perfectly well, and his friends are thus easily deceived into thinking that the weakness from which he suffers is unreal or imaginary. They can understand shattered bones, but not shattered nerves, or how the latter may profoundly affect the

general working of the body machinery. There are a variety of types of neurasthenia which cannot be described here.

Management.—Rest in bed for a time is nearly always needed, though some light occupation from which the patient derives pleasure and which diverts his mind from himself is often very valuable. Most neurasthenic patients rest better away from home and recover more quickly if they can have a month or two of outdoor life with freedom from regular work and from care and worry. Nature will often work a complete cure if given a chance. Outdoor sleeping is nearly always helpful to such patients, even if they remain at home.

Isolation from friends is often necessary to a cure, and mental treatment is always important. Nearly always it will be found that fear of losing a job, of being a burden, of becoming a chronic invalid and of no further use in the world, worry over debt or over business or domestic affairs, has to be combated by some one who is able to exercise a steady, firm, hopeful influence over the patient's mind. Those who exercise the opposite kind of influence should not be allowed to see such patients.

Worry exercises such a disastrous influence over such patients that little permanent improvement need be expected unless the cause of the worry is removed. Frequently a change of occupation for a few years, with careful avoidance of late hours, excesses of any kind, and overfatigue will do more to restore the neurasthenic patient than any other measure. Daily cold baths have a tonic effect and are nearly always beneficial.

The **insane patient** is nearly always cared for in the home in the early stages of his affliction. A careful study of causes of mental derangement and methods of prevention in recent years has led to a wide-spread movement to prevent insanity. Every home nurse should strive to have an intelligent understanding of what may be done to prevent a mental breakdown, since no one knows but that some member of one's own family circle may become a mental patient.

Mental hygiene has been defined as "the prevention of mental disease and the maintaining of mental health. It must consist of an education which takes into consideration, in a given case, peculiarities of constitution and temperament, the choice of appropriate occupation and pursuits, the avoidance of errors in religious teachings, the right attitude toward, and the regulation of, the sexual life, training in right thinking, and encouragement to right responses when the various influences call for action" (Barrus). A sound body will have a great influence in maintaining a sound mind. The mental breakdown in a great many cases has been preceded by physical ailments of various kinds. In a large proportion of the cases of suicide which occur a prolonged period of ill health has preceded the rash act, committed in a moment of intense discouragement or mental depression, due to the general physical condition.

Why Should Anyone Go Insane? is the title of a leaflet issued by the State Charities Aid Association of New York, with a view to the prevention of mental diseases. It has the endorsement of a number of prominent specialists in this field and is worthy of a careful perusal by nurses. It emphasizes the necessity of preventive measures, stating that of the 32,000 persons in that state who are being cared for in the hospitals for the insane, most of them might have remained "sane and lived useful, happy lives if they had known certain facts and acted accordingly."

Causes.—The causes of insanity have been classified as follows:

"Direct physical causes, 36 per cent.

"Indirect physical and emotional causes, 8 per cent.

"Vicious habits, 25 per cent.

"Constitutional and evolutional causes, 28 per cent."[1]

Among the *direct physical causes* which may lead to prolonged mental unsoundness blows on the head or other injury; debilitating disease, cancer, syphilis, consumption, Bright's disease, child-bearing, or prolonged nursing, etc.,

[1] Burr.

are mentioned. Through interference with the blood-supply of the brain, through accumulation of deleterious substances in the system, and in various other ways any of these may act as causes.

Indirect physical and *emotional causes* include fright, grief, worry, mental shock, domestic unhappiness, etc. These causes operate indirectly through the physical system, producing loss of sleep, loss of appetite, imperfect digestion and assimilation, etc., which interfere with the normal process of repair.

Vicious habits include drug addictions, such as morphin, chloral, etc.; excessive indulgence in alcohol, self-abuse—any habit which tends to weaken and undermine the health.

Constitutional and *evolutional causes* include hereditary tendencies and the critical periods in life—puberty, adolescence, the climacteric period, and the period of decay, known as the senile period, when bodily and mental feebleness are prone to manifest themselves.

Heredity.—Most persons think that insanity may be directly inherited. This belief is undoubtedly wrong. One may inherit a greater or less tendency toward insanity. Mental instability may be inherited just as weak constitutions may be inherited. Those who have reason to believe that there was mental disease in their ancestry should not be unduly alarmed. The fact that some of their ancestors suffered from mental trouble does not make it certain that they will suffer likewise. These tendencies toward insanity may lie dormant during the whole life of the individuals, but such persons should take proper precautions to prevent the development of this tendency. As a weak constitution may be built up by healthful habits, so may mental instability be made stable by good mental and physical habits. The individual whose family has had mental trouble may often escape the disease by proper surroundings, healthful and temperate activities, and proper mental and physical habits. The most important fact in heredity is that the vast majority of ancestors of every individual

were normal. Heredity tends, therefore, rather more strongly toward health than toward disease.

The fact that heredity plays a part in the causation of insanity should create a public conscience regarding marriage. Marriages should not be contracted by two persons who have insanity or feeble-mindedness in their immediate families without first seeking the advice of a competent physician.

Immoral Living.[1]—"One kind of insanity is known popularly as 'softening of the brain.' It is known scientifically as general paralysis or paresis. It is incurable by any means now known to the medical profession. Those afflicted with it suffer gradual mental and physical decay. The very substance of the brain becomes changed. They usually live but a few years. It is now agreed by the medical profession that this disease is caused by an earlier disease known as syphilis. Syphilis is a germ disease. It is usually the result of immoral habits, though one may get it innocently. Every man and boy should know that by yielding to the temptation to go with immoral women he is exposing himself to the probability of getting this disease, which may result, years after, in incurable insanity. Over the door of every immoral resort might truthfully be written, 'Incurable insanity may be contracted here.' If self-respect, the desire for good opinion of others, the influence of religious training, and the attractions of home life are not sufficient to prevent this kind of wrong-doing, the danger of contracting a disease which may result in incurable insanity should be sufficient.

"The number of patients having paresis or 'softening of the brain' admitted to State hospitals during the year ending September 30, 1910, was 600 men, or 17 per cent. of all men admitted, and 263 women, or 8 per cent. of all women admitted.

"*Alcohol and Other Poisons.*—Another group of mental diseases are due directly to the habitual use of alcohol. Alcoholic insanity may be brought on by the regular use of

[1] From leaflet, "Why Should Anyone Go Insane?"

alcohol even in 'moderate' quantities not producing intoxication. The close relation between alcohol and insanity has only recently been fully realized. Statistics as to the number of cases in which alcohol is the direct cause necessarily vary in different localities. Fully 30 per cent. of the men and 10 per cent. of the women admitted to the State hospitals are suffering from conditions due directly or indirectly to alcohol. So marked is the effect of alcohol upon the brain and the nerve tissue that it helps to bring about a number of mental breakdowns in addition to the alcoholic insanities.

"Alcohol is a poison. A long series of careful tests performed by eminent authorities showed that even small quantities of alcohol may lower the mental capacity, and that it takes much longer than is usually supposed for this effect to wear off. These are scientific facts. It is difficult, however, to state the facts as now agreed upon by the highest medical authorities without seeming to preach.

"In this day of keen competition every man needs the highest possible development of his mental capacities. Not only is the highest mental development impossible in the presence of the continued use of alcohol, but impairment of the mental faculties is likely to follow. The children of those addicted to alcohol often start in life with morbid tendencies or mental defects.

"Other poisons, such as opium, morphin, and cocain, which with alcohol are the principal parts of many patent remedies, often weaken the mental powers and produce insanity.

"*Physical Diseases.*—Some mental breakdowns may be traced to the effects of other physical diseases. Typhoid fever, influenza, diphtheria, and some other diseases often so poison the system that for some time after the disease has left the regular functions of the body are seriously interfered with. It is probable, also, that the poisons so produced interfere with the nervous system. Consequently, a mental breakdown is sometimes a delayed result of such diseases. Among other physical causes of insanity are

tuberculosis and diseases of the arteries, heart, and kidneys. Aside from the direct physical effect of these diseases, they have a tendency to disturb the mind by discouragement. A person suffering from any such disease should have good nursing, skilled medical treatment, pleasant surroundings, and freedom from anxiety. Often these can be had only in a hospital. Prejudice against hospital care is largely unjustified.

"Overwork is often spoken of as a cause of insanity. This is not correct. Hard work alone rarely causes a nervous breakdown. It only becomes a menace to health when associated with worry and loss of sleep or causes mentioned under other headings.

"The control of infectious diseases, protection of food and water, temperance, healthful homes and factories—all these help to prevent mental as well as physical diseases.

"*Mental Habits.*—Aside from physical causes, there are also mental causes. They are the most important causes of some forms of insanity. The healthy state of mind is one of satisfaction with life. This does not depend so much upon our surroundings, or how much money we have, or how many troubles come to us, as upon the way in which we train ourselves to deal with difficulties and troubles. Anyone who departs too far from this state of satisfaction must be regarded as tending toward an unhealthy condition. Of course, not all persons start with the same kind of mental makeup. Some, owing to heredity, unusual experiences, or bad training, have what is called a morbid disposition, but disposition is not something fixed, like the color of our eyes. It must be looked upon as made of many tendencies, which often can be changed or modified by training and proper mental habits. *Health is a duty* which the individual owes to himself and to others. Mental health is as important as physical health. The average person little realizes the danger of brooding over slight injuries, disappointments or misfortunes, or of lack of frankness, or of an unnatural attitude toward his fellow-men, shown by unusual sensitive-

ness or marked suspicion. Yet all these unwholesome and painful trains of thought may, if persisted in and unrelieved by healthy interests and activities, tend toward insanity. Wholesome work relieved by periods of rest and simple pleasures and an interest in the affairs of others are important preventives of unwholesome ways of thinking. We should train ourselves not to brood, but to honestly face personal difficulties. We may not like even to admit the existence of these difficulties, but they are often the real cause of the brooding. To start doing something, to change the situations about which we fret, is the healthiest way to avoid aimless fretting. We should not hanker after the impossible, but learn to get satisfaction from what is at hand. We should not give ourselves up to day-dreaming, but try to do something, no matter how small it is. Delicacy or shame often prevent people from seeking advice, especially in regard to sexual problems, when such advice might be of the greatest service. Frankness should be encouraged by a sympathetic and helpful attitude toward those who are inclined to brood or seek solitary pursuits and pleasures to the exclusion of healthy social relations."

NURSING IN OTHER PEOPLE'S HOMES.

The woman or girl who knows even a little about proper care of the sick is fairly certain whether she desires or not to be called to assist in nursing in other people's homes. In entering another home in time of illness, the home nurse gets possession of family secrets. The most frequent complaint made about "practical" nurses is that they do harm with their tongues. They may be willing and helpful and the doctor would gladly recommend them and employ them on other cases were it not that they have an uncontrollable desire for gossiping about people.

The most important things to remember in starting to nurse in other people's homes are that the nurse must not allow herself to discuss the doctor, to criticise or com-

plain about his habits, manner or methods. She must not carry tales about one home or family to another person or home.

These two habits, if the nurse is known to have them, will lead both doctors and patients to refuse to employ her. Therefore if she wants to succeed she must learn to control her tongue.

Do not discuss your own affairs and especially your ailments in a patient's home. This is another common failing.

Give the patient and relatives a chance to be alone occasionally. Always leave the room during the doctor's visit to give him and the patient an opportunity for private conversation. It is better to make a practice of doing this than to wait to be asked to do it, as sometimes happens.

Pleasing the patient is an important part of nursing. Make as few demands as possible and ask nobody to do for you what you can do yourself. Learn from the beginning to wait on yourself if you would be welcomed in a home. Avoid needless expense. Try to be resourceful and make the best of the things you find at hand.

Get important things done punctually at the time ordered if you possibly can. Get other less important things done when you can. Give way to the patient as to the time for baths and such things when the time does not matter.

When the patient is getting regular meals, be sure to see that she (or he) is fed or has her meal served before going to your own meal. Prepare the patient's tray yourself and serve all trays and food as daintily as possible.

Never forget to be loyal to the doctor and do everything possible to have things done as he wishes. Remember that confidence in the physician and treatment is a great help in many cases.

Keep your patient's room tidy and clean. Lack of neatness about the nurse's own person and lack of tidi-

ness about the room are two common complaints about practical nurses.

The sick-room is no place to display the latest style of hair-dressing. It is no place for "rats" or "puffs" or false head gear of any kind. The sensible nurse will show her appreciation of the fitness of things by leaving them outside. Neither is the sick-room a place to display unnecessary jewelry, or lingerie.

No nurse is called on to sacrifice her own health in devotion to the patient. She owes it to herself as well as to the sick one to keep in as good condition for work as possible. If she is to do this she must have proper hours for sleep and a chance to get away from the sick-room every day for a while. The obligation to arrange for this is one that the family is prone to overlook. Usually the nurse can ask the doctor to speak to them about some one to relieve her if she hesitates to do so herself. Nothing more quickly unfits a nurse for her best work than loss of sleep. She will of course try to take her hours off duty at the time most convenient for the family.

Study constantly to improve your methods. Do not rest satisfied that if you have done satisfactory work in one home, therefore you know enough. Those who expect to nurse for hire should be always on the alert to add to their knowledge of sick-room methods and requirements.

CHAPTER XXV.

INVALID COOKERY; SELECTED RECIPES.

LEMONADE OR ORANGEADE

Ingredients: 1 lemon or orange, 1/2 pint of water, 2 tablespoonfuls of sugar, 1 tablespoonful of crushed ice.

Method.—Roll lemon or orange until soft; remove juice, being careful to exclude seeds; add sugar; mix; add water; mix well; pour over ice and serve at once. May be made with hot water if desired.

EFFERVESCING LEMONADE

Ingredients: Same as above, with 1/4 teaspoonful of soda added just before serving.

Method.—Stir well; serve while effervescing.

FLAXSEED LEMONADE

Ingredients: 2 tablespoonfuls of whole flaxseed, 1 tablespoonful of sugar, 2 tablespoonfuls of crushed ice, 1 quart of hot water, juice of 1 lemon.

Method.—Look over and wash flaxseed; pour boiling water over the seed and steep (do not boil) for two hours; strain; add lemon juice and sugar; cool, and pour over ice. May be served hot if desired.

ALBUMEN-WATER

Ingredients: White of 1 egg, 1/2 lemon or orange, 2 tablespoonfuls of crushed ice, a little sugar, water enough to fill glass.

Method.—Beat egg slightly; add lemon juice and sugar; strain through fine strainer over ice; mix well; fill glass with water and serve.

TOAST-WATER

Ingredients: 1 thick slice of bread, 1/4 teaspoonful of salt, 1 cupfull of hot water.

Method.—Cut bread in cubes; toast brown in oven; pour water over toast; add salt; let stand covered until cool; strain; serve either hot or cold.

SLIPPERY-ELM TEA

Ingredients: 2 teaspoonfulls of slippery-elm powder or a piece of slippery-elm bark (about 2 ounces), 1 cupful of hot water, 1 tablespoonful of sugar, 1 teaspoonful of lemon juice.

Method.—Pour hot water over powder; let stand covered until cool; strain; add sugar and lemon juice; serve either hot or cold. If bark is used, steep one-half hour before straining.

BEEF-TEA

Ingredients: 1 pound of lean beef, 1 pint of cold water, 1/2 teaspoonful of salt.

Method.—Wipe meat with damp cloth; cut in 1/2 inch cubes; put in quart jar; add salt and water; cover, keep in cool place for four hours until juices are well started, then place jar in pan of cold water on back of stove and bring slowly to a boil; strain and serve. It may be served hot or frozen if desired.

BEEF JUICE

Ingredients: 1/2 pound of lean beef (round steak is best), 1/4 teaspoonful of salt.

Method.—Wipe meat with damp cloth, place in wire broiler; heat over hot fire, but do not brown; cut in small pieces; press through meat press (always heat the press and bowl); add salt; serve in colored glass. If meat press is not to be had the meat may be pressed in a small colander using a heavy flat iron on a saucer, letting it stand over night.

If meat is heated in a frying pan, a bay leaf or celery stalk may be heated with it, giving it a different flavor. Beef juice may be made like beef-tea by omitting water.

COFFEE AND EGG

Ingredients: Yelk of 1 egg, 1/2 cupful of hot coffee, 1/2 cupful of hot milk.

Method.—To the well-beaten yelk add coffee and milk.

COCOA

Ingredients: 2 teaspoonfuls of cocoa, 1 teaspoonful of sugar, 2 teaspoonfuls of hot water, 1 cupful of hot milk.

Method.—Mix cocoa and sugar; add hot water; stir until dissolved; add milk and bring to a boil; beat with a Dover egg-beater until it foams or place a spoonful of whipped cream on top of cup before serving it; serve hot.

WHEY

Ingredients: 1 pint of milk, 2 teaspoonfuls of essence of pepsin.

Method.—Heat milk to 100° F.; add pepsin; whip lightly with a fork to separate the curd; strain through a fine strainer. Serve cold.

MILK-PUNCH

Ingredients: 1/2 pint of milk, 2 teaspoonfuls of sugar, 2 tablespoonfuls of brandy or sherry.

Method.—Dissolve sugar in milk; add brandy; mix well, and serve.

EGG BROTH

Ingredients: 1 egg, 1/2 teaspoonful of sugar, 1 pint of boiling water, 1/2 teaspoonful of salt. Milk may be used instead of water and a small piece of butter added if desired.

Method.—Beat egg and sugar until very light; add boiling water, stirring all the time; add salt. Serve at once.

EGG FLIP

Ingredients: 1 egg, 1/2 teaspoonful of sugar, 1 wine glassful of sherry or brandy if ordered by doctor.

Method.—Beat yelk of egg and sugar until light and creamy; add spirits; beat white of egg till stiff; fold into mixture. Serve at once. Two tablespoonfuls of lemon juice may be used instead of spirits.

EGG-NOGG

Ingredients: 1 egg, 1 tablespoonful of sugar, 1 cupful of milk, 1 teaspoonful of vanilla or 1 tablespoonful of wine or whiskey, 1 tablespoonful of crushed ice.

Method.—Beat egg yelk and sugar until light; add milk; fold in stiffly beaten white; add flavoring; mix well; pour over crushed ice and serve. If wine is used, add ice-water before adding milk. May be served hot by omitting white of egg and heating milk.

PEPTONIZED MILK

Ingredients: 1/2 pint of milk, 1 gill of water, 1 small tablespoonful of liquor pancreaticus, 20 grains of soda.

Method.—Add water to milk; heat to 140° F. (without boiling); add other ingredients; place in bottle; cork with absorbent cotton; keep in warm place for one hour, then bring to a boil. Boiling arrests the fermentation.

MILK COFFEE

Ingredients: 1 tablespoonful of ground coffee, 1/2 cupful of cold water, 1 cupful of hot milk.

Method.—Put coffee in coffee-pot; add water; bring to a boil; let stand for five minutes; strain; add hot milk. Serve at once.

MALTED MILK (COLD)

Ingredients: 1 tablespoonful of malted milk, 3/4 cupful of cold water, 1 tablespoonful of hot water.

Method.—Dissolve malted milk in hot water; add cold water; stir until well mixed or place in a soda-water

shaker and shake until dissolved. A tablespoonful of hot coffee, cocoa, or flavoring of any kind desired may be used.

MALTED MILK ICE-CREAM

Ingredients: 2 1/2 tablespoonfuls of malted milk, 1 cupful of water, 1 tablespoonful of sugar, 1 tablespoonful of cream, 1/2 teaspoonful of flavoring.

Method.—Mix milk and sugar; dissolve in water; add cream and flavoring; stir well; freeze. White of an egg (stiffly beaten) may be added if a richer cream is desired.

CREAMED EGG

Ingredients: 1 egg, 1/4 cupful of milk, 1/2 tablespoonful of butter, 1/4 teaspoonful of salt, 1 slice of toast.

Method.—Beat egg slightly; add salt; heat milk and butter in double boiler; add egg; cook until creamy (about three minutes, stirring all the time); toast bread a golden brown; remove crust; place egg on toast. Serve at once. Garnish with cress.

EGG IN BATTER, OR SCALLOPED EGG

Ingredients: 1 egg, 2 tablespoonfuls of cream, 2 tablespoonfuls of bread-crumbs, 1/4 teaspoonful of salt.

Method.—Mix cream, bread-crumbs, and salt. Butter an egg-cup; put one-half the mixture in cup, then the egg, cover with the remainder of mixture; bake five or six minutes in a moderate oven. Serve at once in cup used for baking.

SHIRRED OR BAKED EGG

Method.—Break egg in buttered dish; add salt; bake in moderate oven until white is firm (about five minutes). Serve in same dish. Garnish with strips of bread and butter.

SCRAMBLED EGGS ON TOAST

Ingredients: 1 egg, 1 tablespoonful of milk, 1 teaspoonful of butter, 1/8 teaspoonful of salt, 1 slice of toast.

Method.—Beat egg slightly; add milk and salt; melt butter in frying pan; add mixture; cook until creamy, stirring very gently. If rightly managed, it will be soft, creamy, and toothsome; if wrongly, tough and stringy. Toast bread a golden brown; roll crust; butter and moisten slightly; pour egg on toast; garnish with parsley. Serve at once.

EGG SOUFFLE

Method.—Separate white and yelk; beat white till stiff; place in heavy tumbler; add salt; place glass in pan; add warm water; place cloth in pan to set glass on; have the water about three-quarters up the glass; bring to a boil; cook until white rises to top of glass; make a depression in the center; drop the yelk in very carefully so as not to break; cook about two minutes or until the yelk is set; remove and serve at once, with strips of bread and butter.

OMELET

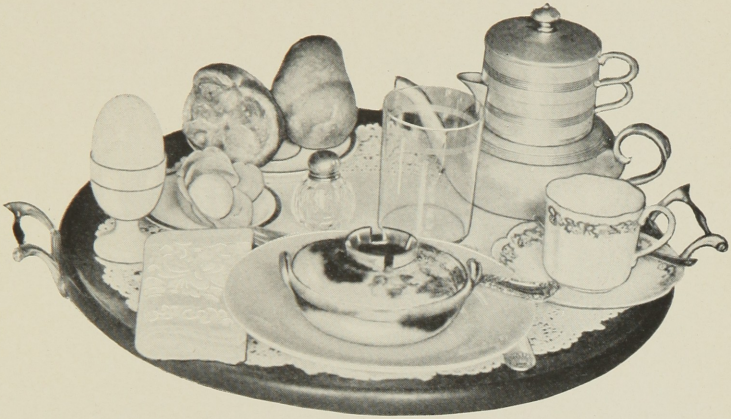
Ingredients: 1 egg, 1 tablespoonful of butter, 1 tablespoonful of milk, 1 tablespoonful of bread-crumbs, 1/4 teaspoonful of salt, a dash of pepper.

Method.—Separate egg; beat white till stiff; cream yelk; add to bread-crumbs and milk; mix; add salt; fold in stiffly beaten white; place butter in well-cleaned omelet pan; heat; add mixture; cook on top of stove slowly until well risen; place on rack of oven until firm; remove carefully to a hot plate; garnish with parsley. Serve at once. May be varied by using minced chicken or meat of any kind, or vegetables in place of bread-crumbs.

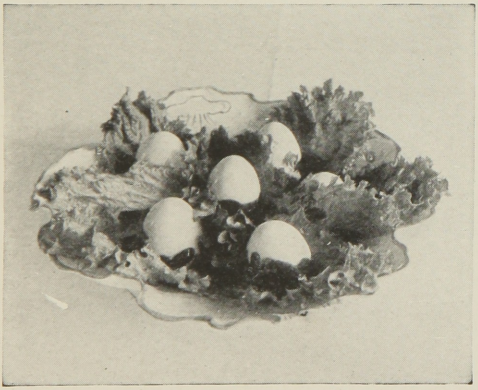
EGG NESTS

Ingredients: 2 eggs, 2 slices of toast.

Method.—Divide the whites and yelks of the eggs, being careful to keep the yelks unbroken; have the toast buttered



A breakfast tray. Note combination coffee-pot, creamer, and sugar bowl. Butter-ball surrounded by rose petals. (Photograph by courtesy of Woman's Home Companion.)



Devilled eggs (Good Health).

and cut in rounds. It may be moistened with a little soup stock if desired. Use only one-half the whites of the eggs; beat to a stiff froth and heap on the rounds of toast. With the ends of the shell make a hollow in the center of the mound, drop in the yolk, sprinkle with salt and pepper. Drop on some tiny pieces of butter and set on the top shelf of an oven not too hot. Allowance should be made for the egg to be in the oven at least four minutes before browning. The toast may be sprinkled with grated cheese or finely minced meat. Tomato sauce may also be served with it.

RICE OMELET

Ingredients: 1/3 teacupful of cold boiled rice, 1/3 cupful of milk, 1 teaspoonful of melted butter, 1 egg, salt as needed.

Method.—Warm the cold boiled rice in the milk and add the melted butter; beat yelk and white of egg separately; stir the yelk into the other ingredients, and, lastly, fold in stiffly beaten whites; pour into a very hot, well buttered, individual frying pan; let it brown for one minute; put on the top of the oven to set the top, and fold and serve as usual.

PLAIN OMELET

Method.—Put 2 eggs into bowl; add salt and pepper as desired; beat vigorously for twelve minutes with fork, and add 1 tablespoonful of milk or cream.

Into a small hot frying pan put a teaspoonful of butter; pour in the egg and shake over the fire till it is set; roll, and serve on a hot dish. Grated cheese or minced chicken or ham may be spread over before rolling it.

CLAM BROTH

Ingredients: 1/2 dozen of fresh clams, 1 cupful of water, 1 cupful of milk, 1/2 teaspoonful of salt, a bit of butter, a dash of pepper.

Method.—Wash clams; cut in small pieces; add water

and salt; bring to a boil; skim; add milk, butter, pepper; bring to boil; strain if patient may not have the clam meat. Serve hot with toast or crackers.

OYSTER BROTH

Ingredients: 1/2 cupful of oysters, 1 cupful of water, 1/4 teaspoonful of salt, a dash of pepper, or 1 cupful of white sauce.

Method.—Wash oysters, place in saucepan; heat; skim; add water, salt, and pepper; bring to boil. Serve very hot with oysterettes.

Oyster stew is made without cutting the oysters, and using milk, crumbs, crackers and 1 teaspoonful of butter. Serve hot, as above.

BEEF OR MUTTON BROTH

Ingredients: 2 pounds of lean beef or mutton (shank of beef or neck of mutton), 2 quarts of cold water, 1 teaspoonful of salt, 3 tablespoonfuls of rice or barley, 2 bay leaves, 1 stalk of celery.

Method.—Wipe meat with damp cloth; remove fat and skin, cut in pieces; break the bones; place all in soup kettle; add salt and cold water; heat gradually to the boiling-point, but do not boil; skim as scum rises to the top; simmer for three or four hours; strain; cool; remove all fat; add rice, celery, bay leaf, and cook until rice is soft, but do not boil. Serve hot with croutons or wafers.

CHICKEN JELLY

Ingredients: 1/2 chicken or fowl, 1 quart of cold water, 1/4 bunch of parsley, 1 teaspoonful of salt, 2 stems of celery.

Method.—Clean, wash, and skin chicken; cut in small pieces, being sure to use all the bones; place in stew pan; add celery, the stems of the parsley, but not the leaves; salt; pour cold water over all; simmer (do not boil) until the chicken falls to pieces; strain; stand over night or until cold; remove fat. Should be clear, firm jelly.

CHICKEN MILK

Ingredients: 1 cupful of chicken jelly, 1 cupful of milk.

Method.—Place in stew pan and bring to boil. Serve hot with strips of toast, or may be served cold in jelly form.

TAPIOCA CREAM SOUP

Ingredients: 1 pint of stock, 1 cupful of cream or milk, 1 heaping tablespoonful of tapioca, 1 small onion, 1 stalk of celery, 2 teaspoonfuls of butter.

Method.—Wash and soak the tapioca and cook in just sufficient water to keep from burning for one hour; cut onion and celery into small pieces and cook for twenty minutes in the stock, add the milk to the stock; stir in the tapioca; add butter, salt, and pepper; simmer slowly until tapioca is thoroughly cooked.

CREAM OF TOMATO

Ingredients: 2 tablespoonfuls of tomato juice, 1/2 cupful of milk, 1 tablespoonful of flour or bread-crumbs, 1 tablespoonful of butter, 1/4 teaspoonful of salt, 1/8 teaspoonful of soda, a dash of pepper.

Method.—Heat tomato juice; add soda; heat milk; add butter, flour, salt, and pepper. When ready, serve at once with croutons or crackers.

CREAM-TOAST

Ingredients: 3 small slices of bread toasted, I teaspoonful of butter, 1 tablespoonful of cornstarch, 1 cupful of milk, 1/2 teaspoonful of salt.

Method.—Have the toast buttered; cut in small squares with crust rolled or removed; place it in hot deep basin or soup plate; let the milk come to a boil and add the butter; blend the cornstarch with a little water; stir it into the milk and cook for five minutes in a double boiler, stirring until smooth. Pour over the toast and serve at once.

MILK-TOAST

Method.—Toast 2 slices of bread evenly; cut in neat squares, removing the crust, and place in a deep basin, which should first be heated; have ready also a hot saucer or plate to cover it; prepare the tray with a small knife, fork, and teaspoon, a little silver pot of hot milk, a ball of butter, and a salt shaker. If the patient is able to butter his own toast and pour the hot milk, he will usually enjoy doing it. If not, the toast should be buttered and the milk added when ready to be eaten. Bouillon or consommé may be used instead of milk.

CLAM-TOAST

Method.—Chop a dozen small clams into small pieces and simmer for a few minutes; beat the yelk of 1 egg with 2 tablespoonfuls of milk; pour it over the clams; let it come almost to the boiling-point and pour over hot buttered toast. Lean ham may be minced, cooked, and served in the same way, a little butter and chopped parsley being used for seasoning.

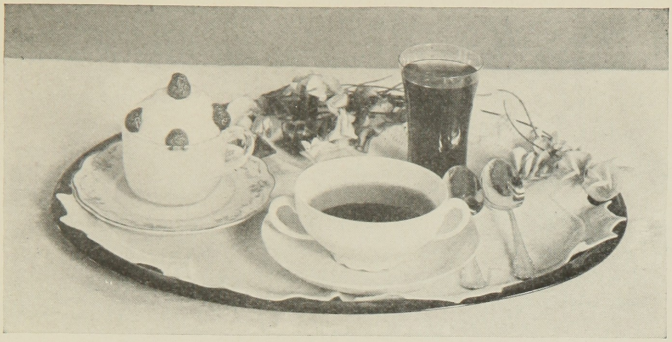
GELATIN FRUIT PUDDING

To a plain lemon jelly, when beginning to set, add sliced fruit, as oranges, pineapples, peaches, bananas, white grapes, strawberries. Or the fruit may be placed in layers and the gelatin poured over and left to set and then another layer of fruit added. Set in cold place until firm. Serve cold with cream or soft custard.

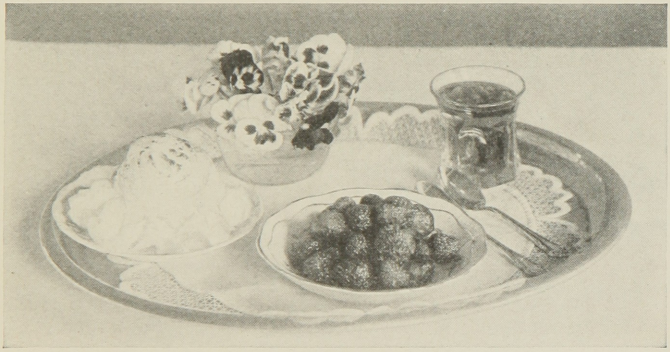
SPANISH CREAM

Ingredients: 1 tablespoonful of granulated gelatin, 2 tablespoonfuls of cold water, 1 cupful of milk, 2 tablespoonfuls of sugar, 1/2 teaspoonful of vanilla, 2 eggs, 1/8 teaspoonful of soda.

Method.—Soak gelatin five minutes in cold water; heat the milk; add soda, sugar, and beaten yelks; stir until it thickens; pour over gelatin, stir until cold; add



Bouillon and arrowroot blanc mange.



Strawberries and a cream puff

Calf's foot jelly and other things.

stiffly beaten whites and vanilla; pour over sliced fruit as bananas, oranges, fresh berries; set in cold place until firm. Serve cold with whipped cream or boiled custard.

RICE AND APPLE SOUFFLE

Ingredients: 1 tablespoonful of rice, 1 cupful of milk, 1 tart apple, 1 egg, 1 tablespoonful of sugar.

Method.—Wash rice; cook in double boiler until tender; add well-beaten yelk and sugar; place in border mold; pare and core apple; cook until tender. When rice is firm, turn on cold plate, place apple in center, and fill core cavity with jelly; cover all with stiffly beaten whites; place in oven until a golden brown. Serve with cream and sugar.

ARROWROOT BLANC MANGE

Ingredients: 1 cupful of milk, 2 tablespoonfuls of arrowroot, 2 teaspoonfuls of sugar, 1/4 teaspoonful of vanilla, 1 pinch of salt.

Method.—Place milk in double boiler; heat; add arrowroot and sugar mixed to a paste with cold water; stir until it thickens; remove from fire; add salt and flavoring; pour in mold; set in cold place until firm. Serve cold with whipped cream. Garnish with candied cherries. Lady fingers may be served with it.

FLOATING ISLAND

Ingredients: 1 cupful of milk, 1 tablespoonful of sugar, 1/8 teaspoonful of flavoring, a dash of salt, 1 teaspoonful of powdered sugar, 1 egg, 1/4 teaspoonful of cornstarch.

Method for the Custard.—Heat the milk in double boiler; add sugar and salt; take from fire; add well-beaten egg yelk, stir until it thickens; add flavoring; turn into a glass dish and set in cold place.

Method for the Island.—Beat white of egg till very stiff; add powdered sugar; drop islands (about 1/2 teaspoonful) on buttered paper; place in oven for a minute; then place on top of custard.

FRUIT SOUFFLE

Ingredients: 1 cupful of stewed fruit, 1/4 cupful of sugar, white of 1 egg, 1/4 teaspoonful of flavoring.

Method.—Cook fruit until very tender; strain through coarse strainer; add sugar and flavoring; cool; then fold in stiffly beaten white; set in cold place; serve cold. Any fruit may be used, either dried or fresh—apples, peaches, prunes, apricots, berries.

IMPERIAL CREAM

Make a plain lemon jelly; divide in thirds; color one-third pink and turn into square mold; mold the plain lemon jelly in a square mold; make a snow pudding of the other third. When nearly ready to harden, drop lemon and pink jelly, cut in inch cubes, into snow pudding; place in mold; set in cold place. Serve on cold dish. Garnish with macaroons. Pour boiled custard over and serve.

PRUNE SPONGE

Ingredients: Juice of 1 lemon, 1/4 cupful of sugar, 2 eggs, 1 tablespoonful gelatin, 1 cupful of water, 1 cupful of jellied prunes.

Method.—Heat juice of lemon; add sugar; stir until dissolved; add well-beaten yelks; stir until thick; pour over dissolved gelatin; fold in stiffly beaten whites; pour into border molds; set in cold place until firm; turn on cold dish; fill center with jellied prunes. Serve with whipped cream.

JELLIED PRUNES

Ingredients: 1/2 cupful of dried prunes, 1/4 cupful of sugar, 1 cupful of water.

Method.—Wash prunes very thoroughly; soak over night; cook on back of stove where they will not boil until tender; remove stones and drop into hot syrup; bring to boil; set aside until wanted. Use as directed above.

PRUNE WHIP

Ingredients: 1 cupful of cooked prunes, white of 1 egg, 1 tablespoonful of sugar, 1 tablespoonful of lemon juice.

Method.—Strain prunes through coarse sieve, removing stones; add lemon juice; fold in stiffly beaten white; add sugar; pile on buttered plate; stand in oven for about one minute or until set. Serve cold with whipped cream or thin boiled custard.

GRAPE FLUFF

Ingredients: 1 tablespoonful of granulated gelatin, 1/4 cupful of cold water, 1/2 cupful of sugar, 1 cupful of grape juice, juice of 1 lemon, white of 3 eggs.

Method.—Soak gelatin in cold water five minutes; dissolve by standing over steam; add sugar to grape juice; stir until dissolved; add gelatin and lemon juice; mix well; stand in cold place until it begins to thicken, then add stiffly beaten whites; beat until light and stiff. Serve cold with whipped cream.

BAKED BANANA

Peel and cut banana in half; place in a shallow pan; sprinkle with sugar, a little lemon juice, and water; bake under cover until soft and light brown (about twenty minutes).

GRAPE FRUIT

Cut in half, crosswise; separate pulp from skin, then make cuts separating pulp from tough portion; remove tough part; sprinkle with sugar; let stand in cold place ten minutes. Serve garnished with a few candied cherries.

BANANA CUSTARD

Make a rich soft custard with yelk of egg, milk, and cornstarch, using any flavoring desired; peel a banana, cut in thin slices, and line the bottom and sides of the glass dish in which the custard is to be served; beat the

white of the egg to a stiff froth; drop in molds on top of the custard; put in oven for a moment to set the white, and serve cold. If desired the bananas may be moistened with lemon juice.

APPLE SNOW

Put a cupful of fresh apple-sauce through a colander to remove any stringy portions; sweeten and flavor to taste; whip 1/2 cupful of sweet cream and the white of an egg separately, then together, and add the apple; pour into mold and set on ice until needed.

LEMON ICE

Ingredients: 1/4 cupful of sugar, 1 cupful of water, 1/4 cupful of lemon juice.

Method.—Make a syrup of the sugar and water, boiling about five minutes. Skim if necessary; cool; add lemon juice, strain, and freeze.

Orange ice is made by using oranges in place of the lemons, or any fruit juice may be used. Sherbet is made by adding the beaten white of egg or 1 teaspoonful of dissolved gelatin when half frozen. If only softly frozen it is called frappé; punch, if fruit is added.

PHILADELPHIA ICE-CREAM

Ingredients: 1 cupful of cream, 2 tablespoonfuls of sugar, 1/4 teaspoonful of vanilla extract or one-quarter of a vanilla bean.

Method.—Place half of the cream in a double boiler; add sugar and vanilla; cook until sugar is dissolved, stirring constantly; strain and cool; add the rest of cream and freeze. Any flavoring may be used. If the fruit cream is desired, use the same amount of fruit as cream, and proceed as above.

FROZEN CUSTARD

Ingredients: 1 cupful of milk, 1 tablespoonful of sugar, yelks of 2 eggs, 1/4 teaspoonful of vanilla, a pinch of salt, 1 teaspoonful of cornstarch.

Method.—Place milk in double boiler; add sugar and cornstarch, well mixed, stir until it begins to thicken; remove from fire; add flavoring and well-beaten egg; stir until mixed; strain, cool, and freeze. These two rules are the foundation for all ice-cream. Add fruit and it is called tutti frutti; nuts, and it is called pistachio. Coffee may be used in place of half of the milk. Different flavors give the name to the cream.

CHARLOTTE RUSSE

Ingredients: 1 cupful of cream, 1 tablespoonful of sugar, 1/4 teaspoonful of vanilla, 1/2 dozen lady fingers, 1 tablespoonful of granulated gelatin, white of 1 egg, 1/2 cupful of water.

Method.—Dissolve gelatin in water; whip cream after adding sugar and flavoring; when stiff, add stiffly beaten white of egg and gelatin and beat well; line with lady fingers; pour mixture in center; set in cool place.

BAVARIAN CREAM

Ingredients: 1 tablespoonful of grated chocolate, 1 cupful of milk, 1 tablespoonful of sugar, 1 tablespoonful of granulated gelatin, 2 tablespoonfuls of cold water, 1/2 pint of whipped cream, 1/2 teaspoonful of vanilla.

Method.—Dissolve chocolate; place milk in double boiler; add chocolate and sugar; heat to boiling-point; remove from fire; add extract; pour over dissolved gelatin; set in cold place until it hardens; then fold in whipped cream; pour in mold; set in cold place until firm. Serve very cold. Any fruit juice desired may be used in place of chocolate.

A pretty way to serve ice-cream is to bake angel cake in cups. When cold, remove the inside; fill with cream; make handles of spaghetti, softened in hot water, formed in loops, and dried; stick in sides of cake, making a basket; place a candied cherry on top. Serve on cold plate. Garnish with rose leaves and buds.

STRAWBERRY BLANC MANGE

Ingredients: 1 cupful of milk, 1 teaspoonful of cornstarch, 1 tablespoonful of sugar, 1/2 teaspoonful of flavoring, 1 egg, 1 cupful of berries (fresh are best).

Method.—Heat milk in double boiler; add cornstarch and sugar, well mixed; stir until it thickens; remove from fire; add well-beaten egg and flavoring, stirring until well mixed; pour in border molds; set in cold place until firm; turn out on cold plate; fill center with the well-washed berries. Serve cold with whipped cream or boiled custard. Flavoring with chocolate or filling the center with bananas make agreeable changes.

ORANGE PUDDING

Slice a sweet orange thin after peeling; remove seeds; cover with sugar. Pour boiled custard over orange; make a meringue; place over all; set in oven until firm (about two minutes). Serve cold.

Do not let the orange heat, as it will become bitter.

LEMON JELLY AND SNOW PUDDING

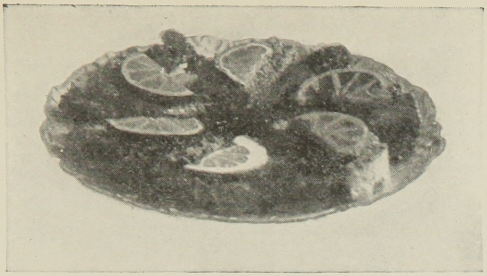
Ingredients: 2 tablespoonfuls of granulated gelatin, 2 tablespoonfuls of cold water, 1 tablespoonful of sugar, 1 tablespoonful of lemon juice, 1 cupful of hot water.

Method.—Soak gelatin in cold water five minutes; add boiling water, stirring all the time; add sugar and lemon juice; pour in mold; set in cold place until firm. By adding the stiffly beaten white of an egg just as it begins to harden, beating until stiff and white, it makes what is called snow pudding. Put on ice. Serve on cold dishes with whipped cream or custard.

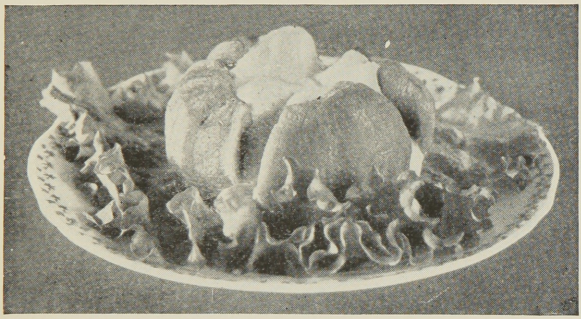
TAPIOCA CREAM

Ingredients: 1 teaspoonful of pearl tapioca, 1 cupful of milk, 1 tablespoonful of sugar, 1 egg, 1/8 teaspoonful of salt, 1/4 teaspoonful of flavoring.

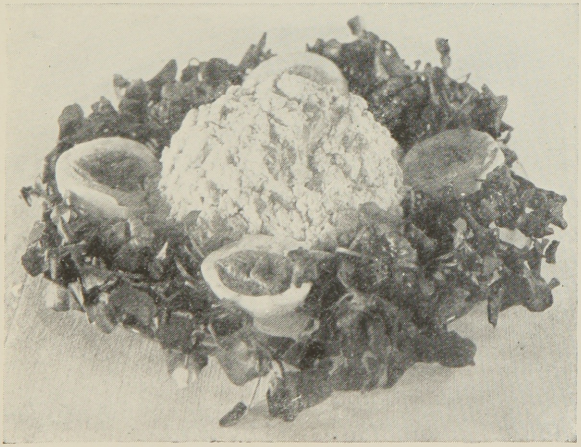
Method.—Wash and soak tapioca in cold water over



Orange salad (Good Health).



Tomato salad (Good Health).



Cottage cheese salad (Good Health).

night; drain; place in double boiler; add milk, sugar, and salt; cook until it thickens; remove from fire; add flavoring and well-beaten egg yelk; turn into serving dish; cover with a meringue made of the stiffly beaten white; place in oven until golden brown. May be served either cold or hot. A few chopped dates may be added when desired.

BANANA CREAM

Ingredients: 1 banana, 1/2 cupful of cream, 1 teaspoonful of sugar, 1 teaspoonful of gelatin, a few drops of vanilla.

Method.—Peel and mash banana; dissolve gelatin in cold water; add mashed banana, sugar, cream, and vanilla; mix well; add dissolved gelatin; turn into mold; set in cold place until firm. Serve cold with sponge cake.

COTTAGE PUDDING

Ingredients: 1/2 cupful of sugar, 1/4 cupful of milk, 1/4 cupful of butter, 1 1/2 cupfuls of flour, 1 egg, 1 teaspoonful of baking powder, 1/2 teaspoonful of flavoring or 1/2 teaspoonful of grated nutmeg.

Method.—Cream sugar and butter; add well-beaten egg and milk, then flavoring and flour, with baking powder sifted together; place in buttered pan; bake in moderate oven about one-half hour or until done; cut in squares. Serve with lemon sauce.

SCRAPED BEEF-BALLS

Method.—Scrape steak until all the soft part is removed; add salt; make into balls about the size of marbles; pan-broil as directed for pan-broiled steak for about two or three minutes. Serve on hot plate. Garnish with parsley.

PANNED OYSTERS

Ingredients: 1 cupful of oysters, 1 teaspoonful of butter, 1/2 teaspoonful of salt, a dash of pepper.

Method.—Wash oysters; drain; place in saucepan; heat until the oysters are plump; add butter, salt, pepper; pour over toast. Serve at once. Garnish with bread sticks piled in log-cabin fashion around the edge of the plate. Serve a slice of lemon with the oysters if desired.

BANANA SALAD

Peel and split bananas; roll in chopped nuts and place on crisp lettuce leaf. Just before serving, place a spoonful of cream dressing over. Serve with small cakes.

MIXED FRUIT SALAD

Three or more kinds of fruit may be used, raw or canned; place fruit in layers, sprinkling each with sugar; pour cream dressing over; let stand to set; before serving, sprinkle thickly with cocoanut. Peaches, oranges, pineapple, banana, etc., may be used.

ORANGE SALAD

Peel large sweet orange and cut in thin round slices; place a layer in the bottom of the dish, cover with Mayonnaise dressing, and continue to alternate the layers, finishing with the sliced oranges. This is a quickly prepared, simple relish when greens or other salads are not available.

COTTAGE-CHEESE SALAD

Ingredients: 1 cupful of cottage cheese, 1/2 cupful of chopped celery, 1/2 cupful of French dressing or cooked Mayonnaise, 1 hard-boiled egg, 4 walnuts.

Method.—Prepare the cheese and drain thoroughly; arrange the cheese in the dish in which it will be served on lettuce leaves or cress, and alternate layers of finely chopped celery, the walnut meat, and a thin slice of hard-boiled egg.

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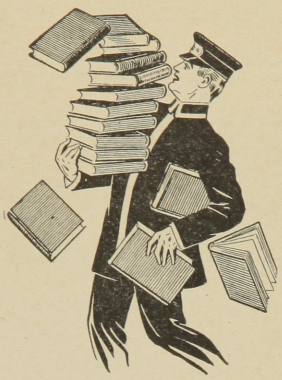

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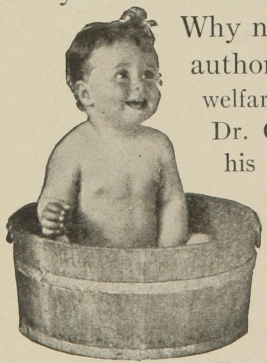

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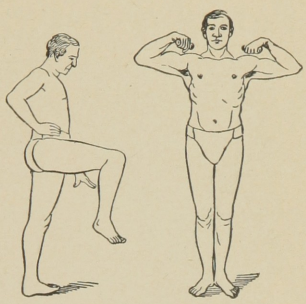

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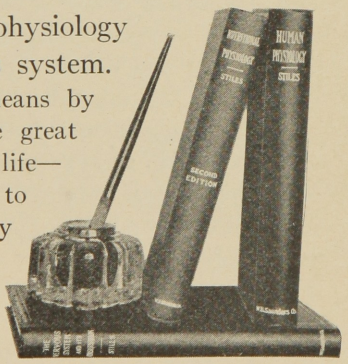

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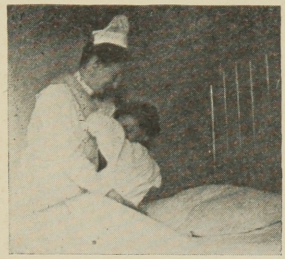

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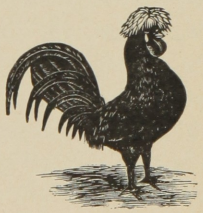

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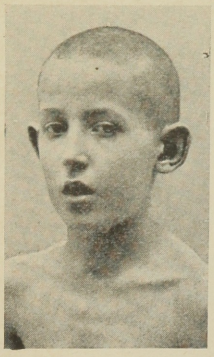

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