HOME MANAGEMENT IN CEYLON

MERCY E. de SILVA

and

DORA KARUNARATNE

W. M. A. WAHID & BROS

PUBLISHERS, COLOMBO

Krishnaveela . Raghunathan

c/o Mrs. T. Coomaraswamy

Moolai

Chulipuram.

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BOOKSELLERS, STATIONERS AND PRINTERS

233, MAIN STREET, COLOMBO

1954

A SINHALESE EDITION OF

HOME MANAGEMENT IN CEYLON

IS ALSO AVAILABLE

PRICE Rs. 3-00

Publishers

W. M. A. WAHID & BROS., COLOMBO

Fifth revised edition
January 1954

Printed by
W. M. A. Wahid & Bros.,
Colombo.

FOREWORD

This book is a most practical addition to those that have already appeared, dealing with Household Management and Domestic Science. It has the distinction of being written by two Ceylon ladies for a Ceylon public, and the average woman will find in it much of interest and value. Practical common-sense is the keynote throughout and the book is well arranged and very readable.

This little volume on Household Management will fill a long-felt want in Ceylon, and should prove invaluable to all women whose homes and children are their dearest care.

I understand the book is intended specially for Girl Guides, and a study of it will well repay them when the time comes for them to undertake the larger responsibilities of life.

(Sgd.) RENIERA STANLEY.

Queen's House,
Colombo.

I should like to urge people to buy thi excellent book, for I consider it fills a long-fel want. There has been a crying need for a book of this kind for years and I am delighted to "Pat it on the back" and wish it a very large Ceylon public.

I particularly hope Guides will buy it and read it.

(Sgd.) PHYLLIS M. WODEMAN,
Girl Guide Commissioner.

In returning "Home Management in Ceylon" kindly sent to me, I would like to say that your book is a most valuable addition to the literature on this subject, in that it combines in one volume a mass of information well ordered and simply stated.

It also fills a gap in the literature required for the present syllabus of work in girls' schools and I hope it may be possible to publish Sinhalese and Tamil Editions suitably adapted for use in such schools. Your book, however, is not merely a valuable addition to school literature, it should find a place in every home as a reference book to be frequently consulted and studied.

I congratulate you on being able to produce a volume which should have far-reaching and beneficial effects on the homes of Ceylon.

(Sgd.) L. MACRAE.
Director of Education

PREFACE

The present work is the response to several letters received from our colleagues and friends, when the New Scheme of Studies was out.

Had it not been for the encouragement received from A. S. Harrison, Esq , Principal of the Government Training College, and Miss E. M. Shire, of Methodist College, to whom our thanks are due, it is quite possible, this volume would not have seen daylight.

We send it out with the hope that it will be useful not only to school children and Guides but also to the young home-makers of Ceylon. We have published a Sinhalese translation of the work in a modified form to suit local conditions as requested by the Director of Education. Text-books on the same subject for Standards 2, 3, 4, 5, 6 and 7 are now available.

We invite useful suggestions, to be considered when this work is to be revised before the next edition.

Our thanks are due to Lady Stanley for her gracious foreword; the Director of Education for his kind approval and sympathy, Mrs. G. S.

Wodeman for her keen interest; Dr. H M. Peries for his skilful help, especially in the Child-Welfare Section; and all others who have helped to make this publication possible.

Finally, we thank Mrs. J. S Corlett (*nee* M. A. S. Choate) our beloved Principal for the introduction to this book. Her mission has been to broaden and deepen the sense of the beautiful and pure in everyone who has had the privilege to be called her pupil, and to her we affectionately dedicate this work as a mark of our love and esteem.

M. de S.
D. K.

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ILLUSTRATIONS

INTRODUCTION

Ceylon is one of the most beautiful countries in the world. Though it is a tropical land the heat is not as excessive as in many other tropical regions. The rainfall is plentiful and the soil fertile. If all people observed the laws of health, as they are now known, Ceylon would be a healthy country.

But in moist heat, germs of all kinds develop and multiply rapidly. Some of these germs are harmless, but others set up disease. Great care, therefore, needs to be exercised in a warm moist country to prevent the development of disease germs. Direct sunlight and cleanliness are the chief enemies of germs.

The Central Government and the different Municipal and Urban Councils can do much to promote health by appointing Sanitary Inspectors. keeping the roads clean, introducing a sound system of sewage and refuse disposal, building hospitals for the sick and injured, but they cannot give the country clean healthy homes. These can be established and maintained only by the women of the land. Every patriotic woman should aim at keeping her own home free from preventible sickness and at caring, immediately

and efficiently, for anyone belonging to her who meets with an accident.

It is sad to see men and women blind or deaf, or lame or deformed, who might have been perfectly developed if they had received proper care in early life. It is said that the Ceylon death rate is still high, and especially the death rate of children, under a year old. These things could be changed if every woman who loves this delightful land would give herself to the task of making her own home as healthy and happy as possible. To help those who would like to know how best to fight against disease, this little book has been written. Those who study it and make use of the advice it gives will be doing service not only to their own home circles, but also to the lovely land of Lanka.

M. A. S. CORLETT

(Neé M. A. S. Choate).

HOUSECRAFT

SITUATION OF THE HOUSE

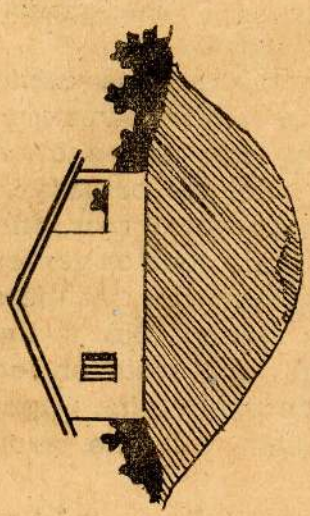
There are three points to be considered in choosing a site for a house: (1) The aspect, (2) The soil, (3) The surroundings.

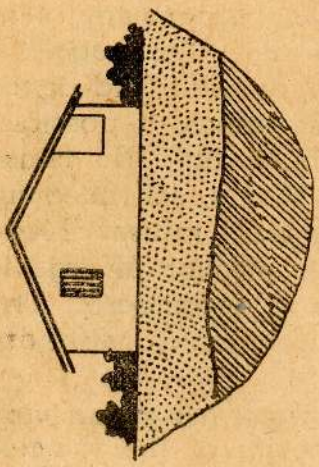
Site—A dry site is desirable because damp buildings predispose people to rheumatism, tuberculosis, etc. Dryness of soil depends on several factors, of which the chief are porosity of soil, depth of the first previous layer of rock, and slope of ground. Permeable soils such as gravel, sand, or chalk make good building sites, for these allow water to pass through freely. But if the first permeable layer is thin and rests on an impermeable layer such as rock or clay, the upper layer will be saturated with water, with the result that the site will be damp.

An impermeable soil which allows no water to pass through and which does not absorb any, also makes a very good building site. Then again if the ground slopes, water will run off it and hence it will be drier than if flat. Therefore, if possible, the house should be built on a hill. No house should be built on made soil, that is, soil filled up with decaying animal or vegetable refuse. Made soils always contain a large amount of organic matter which may take years to decompose. The gases given off by decaying organic matter are injurious.

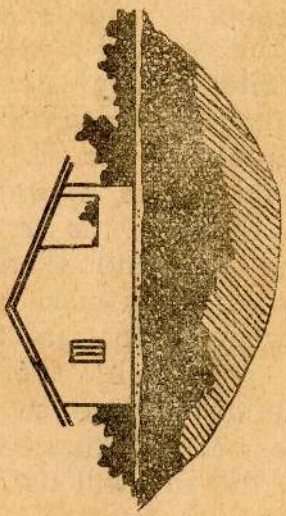
The depth of the ground water has also a very important bearing on the health of the inmates

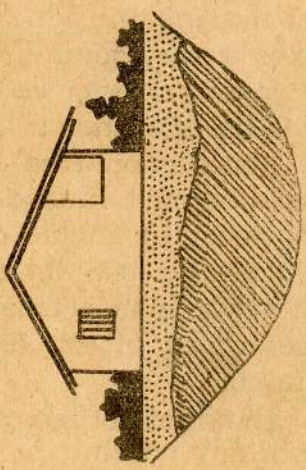
of the house. If the depth is not more than ten feet from the surface the site is unsuitable, without proper drainage.





GOOD SITES FOR BUILDING





BAD SITES FOR BUILDING

Aspect—If possible, the house should stand so as to get the benefit of the prevailing winds, the N. E. and S W. Monsoons. It should be in its own compound, not too shaded with trees. Although trees give shade, too many will keep out fresh air and light, and tend to make the house damp, dark and musty, also they are apt to give rise to a great deal of decaying vegetable matter.

It is very important that there should be a good supply of sunlight and free circulation of air. For this reason there should not be too many trees, shrubs. or creepers too close to the house.

Surroundings—Houses should not be built near:—

(1) Slum areas.
(2) Boutiques.
(3) Stagnant water such as ponds, abandoned tanks, marshes, etc., where mosquitoes can breed.
(4) Graveyards where gases due to decomposition are given out.
(5) Chemical works.
(6) Factories.
(7) Where sewage emanations are given out-cesspools and pumping stations.

INTERIOR OF A HOUSE

Rooms should be large and airy, so when a house is chosen, the housewife must be careful that the rooms are well ventilated and have plenty of light. Rooms should have separate entrances and not have entrances through other rooms. Windows must be such as can be opened wide and should be fitted with metal bars for sake of safety. Windows should be left open both day and night. Night air is *not* dangerous.

A two-storey bungalow is better, and healthier than a one-storey one. The air will be cooler and purer. The house should have a ceiling for this makes it cool. Roofing should also be cool. Cadjan used for thatching roofs makes houses cool but the thatch may prove dangerous if not renewed frequently for it may provide breeding places for insects, scorpions, centipedes and snakes. If possible, the floor should be of cement for the sake of coolness as well as for cleanliness. There should be verandahs to give shade to the rooms. Floors, ceiling and walls should be in good condition and should be smooth without any cracks or holes. All wood-work must be in good condition. Doors and windows should be able to be closed and opened easily, and should be made of well-seasoned wood. Locks, keys, bolts must be in good working order.

The water supply must be clean and well protected. The housewife must be particularly careful about this. Pipes and sinks must be in good condition. If a well is used it must be deep and properly built and protected.

Bathrooms and lavatories should be well built. If the lavatory is served by the conservancy system, it must be a good distance away from the house. If the house has the water-carriage system, drains, traps, gullies and cisterns must be in good working order.

AIR AND VENTILATION

Air is the most essential necessity for life. Without it we cannot live. It is a mixture of gases consisting of:—

78·08 nitrogen
20·94 oxygen
·94 argon
·04 carbon dioxide

1000·00

There are also traces of water vapour and other gases. The air breathed out has about 4½% less oxygen, 4½% more carbon dioxide, is saturated with water vapour, and is warm (98·4°F) and contains organic impurities.

Oxygen—is a clear, colourless, tasteless, odourless gas, essential to all forms of life. It supports combustion. Substances which will not burn under ordinary conditions can be made to burn in oxygen. (No light except electric light will burn without oxygen).

Nitrogen—is a clear, colourless, tasteless, odourless gas and does not support combustion. Its chief use is to dilute the oxygen in the air.

Argon—is a gas which behaves in the same way as nitrogen.

Carbon-Dioxide—is a colourless gas. It has a slightly acid taste and smell. It is very heavy—1½ times heavier than air—and 22 times heavier than hydrogen. It does not support combustion and is very soluble in water. The amount of carbon dioxide found in ordinary air is ·04

Carbon dioxide gets into the air from (1) Respiration or breathing, (2) Combustion or burning, (3) Decay and fermentation.

Water vapour is always present in the air due to the fact that water evaporates at all temperatures. There is always a slow escape of water from the earth's surface into the air. The quantity of water vapour present varies with the temperature of the air.

VENTILATION

The air breathed out through the lungs is impure, containing organic impurities, less oxygen, more water vapour than is in pure air and is at a higher temperature than the air breathed in. So we should not breathe the air that has been breathed before, for it would be harmful.

We must get rid of this breathed out air by ventilation.

Ventilation is the bringing in of fresh air and the getting rid of impure air.

The two natural forces which aid ventilation are:—

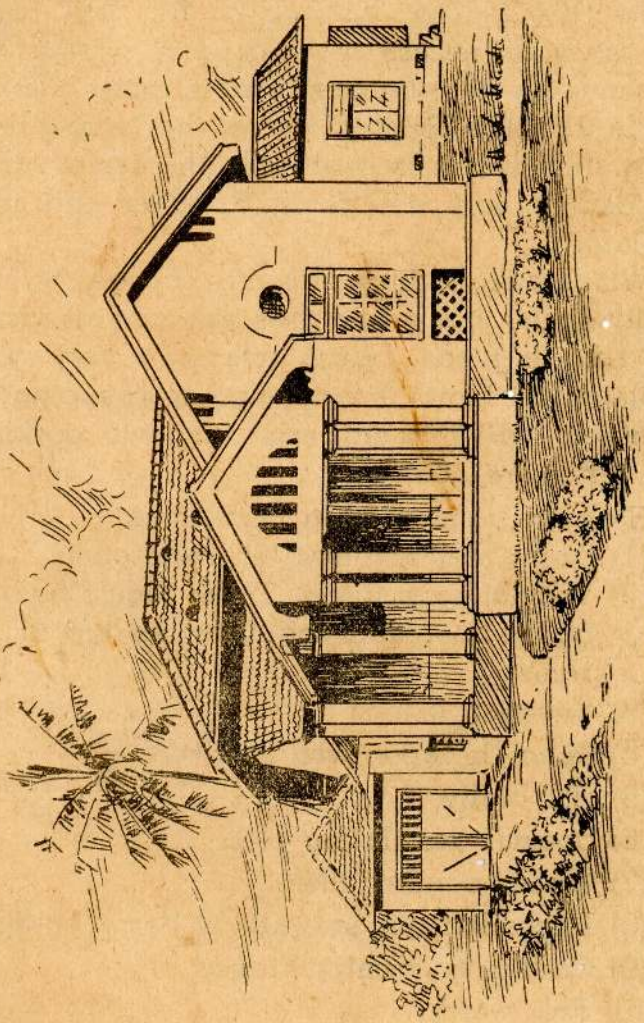
(1) Diffusion of mixing of gases;

(2) Changes in density of air produced by heat.

Diffusion—Air has the tendency to mix up. Pure air tends to mix with impure air and cold air with warm air until they are of the same strength and temperature.

If the air in a room is impure and the air outside is pure, the tendency is for these to mix up until they are of the same strength. The mixing up is greater when the temperatures are extreme, as, if the air outside is very cold and the air inside is warm, the cold air would rush in and the warm air rush out with greater force than if the temperatures were equal.

Changes in Density of Air Produced by Heat. The air breathed out is warm and it rises because warm air is less dense than cold air. Therefore



A WELL VENTILATED HOUSE

outlet ventilators should be placed high up in a room, and because cold air comes in to take the place of the air that has risen, inlet ventilators should be placed low down in the room. This is more necessary up-country where the difference in the temperature is more marked than in the low-country where the temperature inside and outside is practically the same. Here an opening may act as both outlet and inlet ventilator.

Winds are produced due to changes in the density of air. Heated air rises and cold air rushes in to take its place. Wind acts as a very good ventilator. It blows through a room, sweeping out impurities, when doors and windows opposite each other are open.

Here are some Ceylon ventilators.

(1) Doors and windows left wide open.
(2) Ventilating gratings. These should be both on the floor level and near the top of the walls.
(3) Venetian blinds
(4) Space between wall and roof.
(5) Half walls.
(6) Special ventilating tiles.
(7) Porous country tiles.
(8) Bricks left out in walls to form patterns.
(9) Cadjan in country houses.
(10) Fret work.

DANGERS OF IMPURE AIR

Carbon dioxide breathed out is a harmful gas because it is accompanied by organic impurities. We cannot live in air which has more than a very small amount of carbon dioxide in it. Therefore, in an ill-ventilated and stuffy room where several people live in a small space, the air will be impure. If there is more than 06% carbon dioxide in the air the sense of smell will tell us that it is rather stuffy. People who sleep in stuffy rooms feel heavy in the morning and they have no inclination to get out of bed. They may feel giddy, faint, out of sorts, and bad tempered, or may have a sensation of nausea. If exposure to foul air be continued, bodily resistance will be lowered so that the person becomes susceptible to diseases, specially diseases of the respiratory tract, such as colds, catarrh, cough, influenza, bronchitis, consumption and diphtheria.

Breathing impure air also causes indigestion, anaemia, bad complexion, and skin diseases; it also predisposes children to rickets.

FURNISHING OF THE HOUSE

Having chosen a good house, we must now turn our attention to its furnishing. Simplicity with beauty should be the standard. In Ceylon we have strong furniture made of teakwood and jackwood. These can be made to take an excellent polish. Beauty of line and shape in furniture should be thought of rather than a great deal of carving. Only articles that are necessary and those that essentially add to the beauty of the room should have place in the home.

Overcrowding should be avoided, for unnecessary articles collect dust, occupy air space and prevent free circulation of air and will render it difficult to keep the room clean. The amount spent on furnishing should depend on one's means.

In the drawing-room, we should have carefully chosen furniture tastefully arranged. The silver and brass should be bright and shiny. The room and every article in it should be clean. A few well-chosen pictures should hang from the picture rails. It is better not to drive nails into the walls for hanging pictures. The pictures should be beautiful and they will give pleasure and inspiration. In Ceylon it is not uncommon to see calendars, odd certificates and framed bits of fancy work nailed to the walls of drawing-rooms: these are neither beautiful nor inspiring.

Ornaments should be few and they should be chosen for beauty of form and excellence of workmanship.

It is economical, and in Ceylon, more hygienic not to use upholstered furniture. If it is used, the upholstery, must be renewed frequently.

Cushion covers and curtains must be clean and pretty and should be made of washable material. Curtains should be light and made of some porous material such as net.

If the walls of the room are colour-washed, it will add greatly to the beauty if a simple colour scheme is kept in mind and cushions and curtains tastefully matched. If palms in pots are used

to decorate the room, they must be put outside at night. Fresh flowers, tastefully arranged in vases, will beautify the room.

The bedrooms must be airy and full of light. If windows have metal bars, they can be safely left open to let in air.

In many houses in Ceylon we find two or three children put to sleep together in one large bed. This is very unhygienic. It is necessary to health that people should sleep in separate beds. Little children should be put into cots so that from babyhood they will get accustomed to sleeping alone. The bed and bedding should be clean. To keep the mattress clean, a mattress slip or cover tied on with tapes at one end should be used.

In the beds of very young children an oil cloth mackintosh or plastic cloth may be used under the sheet, to prevent the mattress from being soiled.

Trunks, boxes and other articles should not be placed under beds, neither should shoes and oddments be deposited on the tops of cupboards and almirahs. Racks may be used for these.

If means will allow, it is helpful to have a separate nursery or children's room.

The dining-room also must be simply and prettily furnished. Fruits and flowers may be used as table decorations.

FLOORS AND FLOOR COVERINGS

In the tropics a house should have floors which are cool and which will not allow dust to gather on them, nor germs and insects to breed. The floors may be of cement, wood, mud, tile or brick. Some of these are easier to keep clean than others. To prevent germs and insects from breeding, dust should not be allowed to accumulate.

The best floors from a hygienic point of view are those of cement and glazed tiles, provided of course they are not chipped or cracked, for then dust would collect in the crevices. A floor made of either of these materials must have a smooth even surface and the tiles must fit tightly together. In modern houses, floor corners are rounded as they are easier to keep clean. Wooden floors are usually stained and polished. They can be stained with prepared stain, that can be bought, or with permanganate of potash (Coney's fluid) or with a strong infusion of tea. After the stain is applied evenly, the polish can be rubbed on. Polishing will give beauty to the floor, will keep off dust and prevent dry-rot. Floor-coverings may be of linoleum. They are of two kinds: (1) Inlaid block linoleum where the colour runs right through the cork and linseed oil so that it does not wear during use. (2) Printed linoleum in which the colour wears off very soon, making it shabby. This is much cheaper in price but is less economical in the end. Carpets are either hand made or machine made. Hand made carpets are more expensive and they come from Persia and India and are usually pile carpets. Machine made carpets are manufactured in Europe. These have no pile

and are harsher and firmer to the tread than pile carpets.

It is unhygienic to use heavy coir matting to cover the whole floor, for it collects sand and dust underneath and form breeding places for fleas. Coir matting must be used in strips so that they can be lifted up frequently and the floor underneath cleaned. Light coir matting can now be bought.

Rattan and China matting are used in many Ceylon homes and these too require constant cleaning.

STORAGE OF FOOD

In Ceylon it is difficult to keep foodstuffs in good condition for a long period of time. For this reason in the low-country where it is warm, meat, bread and such like things must be bought daily. Rice and currystuffs, however, are bought monthly, or fortnightly in order to save trouble and time. Besides, as most people are paid monthly it is more economical to buy the stock at once when they receive their salaries.

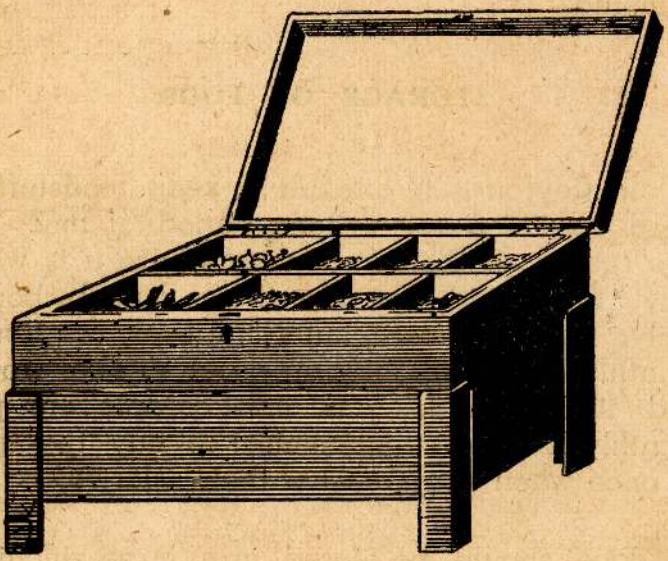
Rice should be stored in a large zinc-lined box, and currystuffs, in a similar box having partitions for each kind.

Smaller quantities for immediate use can go into tins which can be closed with tightly fitting lids. Each tin must be clearly labelled. Before storing coriander, mustard, cummin, dill and pepper, they must be washed and dried perfectly.

Flour, sugar, dhall, and sago must be stored in air-tight canisters

Vegetables keep best when exposed to the air.

Eggs should be fresh before storing. If they are given a coating of grease to prevent air getting in, they keep longer.



STORAGE BOX

Butter may be stored in cool vessels. If there is an ice chest, or refrigerator, it may be put in there.

Cheese must be wrapped in grease-proof paper to keep off mildew.

Maldive fish, dry chillies coconut honey and kitul honey should be suspended by the fire.

Meat and fish can be stored in the ice chest or refrigerator. Upcountry it is easier to store and preserve food, for in the cold climate food does not go bad readily.

In Ceylon it is a common, though by no means a desirable practice, to use tinned foods. Before opening a tin examine it. It must never have a bulge outwards. Eating spoilt tinned food results in ptomaine poisoning.

LINEN CUPBOARD

House linen is one of the most expensive items in the house; so great care must be taken of it. Have a linen cupboard or almirah made of strong mature wood. Tender wood will cause dry-rot, and provide places for the breeding of insects. The door must be fitted with a strong lock and key and it must be kept locked. Inside, there should be movable shelves on which the linen can be arranged. Paper on shelves attracts silver fish and other insects, so have a piece of cloth on the shelf with the flap hanging down, and this can be put up over the linen.

Camphor and naphthalene may be used to keep off insects from linen. Some do not like the scent of camphor and so "Savandara" roots, which can be bought locally, may be used for the same purpose.

The house linen should be arranged in an orderly way and must be used in rotation. The best linen used on special occasions may be kept

LINEN CUPBOARD

on the top shelf. Materials for house linen should be well selected and must be of good quality as these wear best. They should be sufficient in number to have one in use, one with the dhoby and at least one in reserve. If the purse with allow, have more than these, for then articles wear longer as periods of rest allow fibres to toughen again.

Some of the house linen will be, table-cloths, serviettes, sheets, pillow-cases, bed-spreads, toilet-covers, tray cloths, d'oyleys, kitchen cloths, glass cloths, tea cloths and dusters. Nothing should be put into the linen cupboard which requires mending; articles must be mended before being put away. Linen, which is really past mending, can be used as rags or dusters. An inventory of the things should be made and hung up on the door inside, and articles which are lost or destroyed should be put down on it. Linen should be clearly marked with initials. Each set should be identified by a letter, *i. e.*, dusters, D., Glass cloths, G., Sheets, S. etc. If there are 12 dusters in a set we may mark, them D-1, D-2., D-3, etc. Glass cloths, G-1, G-2, G.3, etc. This system of marking will help to identify the article that is lost or destroyed. Keep the cupboard scrupulously clean and tidy, with things in their correct pile.

CLEANING OF THE HOUSE

There are three kinds of cleaning:—

(1) Daily cleaning.
(2) Weekly cleaning.
(3) "Spring cleaning" or annual cleaning.

In the daily cleaning, sweeping comes first and then the dusting. Using a suitable broom sweep in strips, sweeping away from the sweeper. Let each stroke overlap the previous one. Collect the dust into a heap at one end of the room and take it up with a brush and dust pan. A bit of cardboard or stiff paper may be used as a substitute. Do not sweep the dust out of doors. Burn the rubbish or put it into a dust bin. For dusting, use both hands and two dusters. Beginning with the large pieces of furniture, dust all the way round the room, in order, not forgetting the legs of the tables and chairs, window ledges, skirting round the room, picture railings, door jambs and all unseen parts. Next dust the ornaments and put them aside.

Do not use a fluffy duster as bits of fluff will stick to the furniture, etc. Use a plain cloth duster, hemmed neatly all round. Make the duster into a pad, tucking in all the ends. Take the dust into this and afterwards take it outside and shake it out. Do not knock the dust off the furniture by flicking with the duster. This is a method commonly used by servants in Ceylon and merely results in removing the dust from one place to another in the room.

To get a gloss on the furniture rub it hard with a duster. Then replace the ornaments.

Weekly Cleaning:—Rooms should be cleaned out weekly. If the house is large it should be arranged to clean a room each day in rotation.

Dust as much of the large movable furniture in the room as possible and take them out of the room. For wicker upholstered furniture use a furniture brush. These may be kept outside and covered with dust sheets. Dust all the ornaments and take them outside. Take down hangings and shake them well outside. If they are dirty send them to be washed. Rugs and matting should be taken out, swept and beaten. Pieces of furniture, too heavy to be moved, should be dusted and covered with dust sheets. For carved furniture, a furniture brush may be used to get the dust out of the crevices. Next sweep the ceiling and the walls with a long-handled broom or use a bunch of dry coconut leaves fixed on to a handle. Sweep out all dust, cobwebs and insects. Now dust all the woodwork of the room, doors and windows and screens, etc. Clean all glass in doors and windows and last of all polish the floor.

Ordinary cement floors should be washed and scrubbed. For polished wood or painted cement, use a good floor polish. Glazed tile floors should be washed and wiped dry at once.

Annual Cleaning :—It is customary for landlords to get their houses repaired and whitewashed or colour-washed at least once a year. This is usually done in December just before Christmas time. So housewives take the chance to clean

their homes thoroughly then. The roof must be repaired first next the walls, ventilation holes, floors and woodwork of the house should be mended if necessary Then the colour washing or whitewashing must be done. Begin with the bedrooms. Turn out everything—all heavy furniture, beds, etc. Drawers and almirahs must be emptied and clothing aired and sunned. Drawers and shelves and all plain wood should be scrubbed, washed and dried. If the cupboards and almirahs contain paper lining, the paper should be renewed and contents put back. Naphthalene or "Savandara" roots should be put between the layers of clothing to keep out insects. All polished furniture should be cleaned with kerosine oil to keep out insects and prevent dry-rot. Leave the things exposed to the air for about twelve hours and then polish with furniture polish.

If necessary iron beds should be repainted. Wooden beds should be brushed over with kerosine oil. Pay special attention to cracks and crevices in wooden furniture and also to the rattan in chairs and beds as these are often the hiding places of bugs. Floor coverings should be taken out and cleaned and hangings taken down. Pictures should be examined and if the cords are discoloured or worm out, fresh ones put on. Coir from the mattresses should be removed and put into clean cases. Cotton from the pillows

should be turned out of the cases, teased out, and put into clean ones.

If the hangings are faded they should be re-dyed and if they are old and past mending, fresh ones should take their place.

After the whitewashing, the floor must be well scrubbed and washed and dried thoroughly before the things are replaced.

The storeroom and kitchen must be turned out and things well scrubbed and cleaned. After the inside of the home is whitewashed and painted, the outside is done. Great care must be taken to prevent dampness.

CLEANLINESS OF COMPOUND

A great deal of sickness can be avoided if we keep our compounds clean. The front compound is usually kept beautiful with flowering trees and ferns. Trees, however, should not be allowed to grow too close to the house for it will prevent a free circulation of air and prevent sunlight falling into the house. Back compounds in many houses, are sadly neglected. Tins, dried leaves and refuse of all sorts are allowed to be thrown there. This is most unhygienic. The decaying substances give out poisonous gases and the water which may stagnate in tins and neglected

drains provide breeding places for mosquitoes. Hence it is very important to keep the back gardens too clean. If the area is large, a kitchen garden and fowl run can be made. Drains must be carefully attended to. Cracks form lodging places for germs. If slime is formed the drains

SWEEPING A COMPOUND

should be thoroughly scrubbed with an ekel broom, after which they could be flushed with an antiseptic solution. In nc place in the compound should water be allowed to stagnate.

sealed pit
Compost pit

CLEANING A DRAIN

CLEANING AND CARE OF METALS

Brass and Copper—Plain brass and copper—door knobs, hinges, taps, plain brass vases, etc. These should be cleaned with a mixture of wood ash and kerosene oil or with metal polish, such as Brasso, Shinio, etc. Take a little polish on a rag and rub it well all over the metal, taking care not to get it on the woodwork or marks will be left. Wipe the polish off with a duster rubbing hard to get a gloss. Next take a course cloth or old stocking or sock or a price of old silk or stocking and give the article a final rub to give it a high polish.

Ornamental Brass—Do not use metal polish. like Brasso for it will get into carvings and spoil the appearance of the brass. Carved brass should be cleaned with an acid such as lime, *biling-fruit*, *tamarind*, *goraka* or *kambaranka* either alone or with black sea sand or finely powdered and sifted red brick. Put the brass into hot water—as hot as the hand can bear. Whilst still hot, rub on the acid. Then wash in hot soapy water to get all the acid off If any acid is left on the metal it will turn the brass black. To dry it well, use a cloth, rubbing it hard to get a good polish with an old stocking, a piece of silk material or selvyt or chamois leather. Cooking utensils made of brass or copper get verdigris (green rust of copper) on them, so they must always be cleaned immediately before use. Clean with acid fruit and then with hot soapy water.

Do not use metal polish for cleaning cooking utensils, for these contain oxalic acid which is a poison.

Silver—If the Silver is dirty through constant use, wash it in hot soapy water and dry it while hot. To clean silver do not use anything in the least gritty, for silver is a soft metal and is apt to get scratched readily. Plate powder or whiting may be used. Mix either powder into a thin cream with water, or with methylated spirits of the silver is very dirty. Take a little of the cream in a bit of rag and rub it hard on the article. Then put aside to dry and after a few minutes, brush off the powder with a piece of rag or a soft silver brush. Next use a chamois leather or a selvyt to give the silver a good gloss. When

polishing silver do not rest the article on the table or on the floor. Hold it in the hand, otherwise it may be scratched. In cleaning of forks be careful that no powder is left between the prongs.

Silvo is a liquid polish used for cleaning silver. Use it on a soft bit of rag, and clean off with another piece of rag.

Aluminium—is the best metal for use in the tropics because :—

(1) It does not rust under any condition.

(2) Never tarnishes in the air.

(3) Requires very little cleaning and polishing.

For cooking vessels it is the best because :—

(1) It becomes hot very quickly and holds the heat well.

(2) It is very durable.

(3) Does not crack with excessive heat.

Its disadvantages however, are :—

(1) Tarnishes black, if any alkali, like soda or borax is used.

(2) Becomes dented when knocked.

To clean it use whiting made into a cream with water. Rub it on the article and leave it to dry. Then after a few minutes brush off the powder and polish with a cloth.

Washing soda should never be used on aluminium and never use soap for washing it.

Clean sooty aluminium pans with wood ash and scrubbing brush or coconut fibre.

Sprinkle a little wood ash and scrub hard with a moist coconut fibre or scrubbing brush. Then wash off with water and dry with a cloth.

Steel—The most modern knives are of stainless steel and these only need to be washed and dried. Steel which is not stainless should be washed and cleaned immediately after use. With bone handle knives, never put the handles into water as this will dissolve the cement fastening the bone to the steel. If knives cannot be washed at once, put them into a jug of soapy water with handles out. This will make the cleaning easier later on. To remove stains use a piece of raw potato or a cork with bath brick dust in it, and then wash. To polish steel use a board with a piece of well-tanned leather firmly fixed on to the surface. Scatter a little bath brick on it and holding the knife firmly in the hand, place it flat on the board and rub it briskly up and down on it. Polish both sides. Then clean with a duster. To sharpen knives, use a carborundum. The ornamental steel of stoves, etc., may be polished with emery paper which is sold in three grades, or cleaned with a mixture of wood ash and kerosene oil.

Tin—is not used very much in the tropics because it rusts readily unless coated with grease It may be cleaned in the same way as aluminium.

Zinc—is a metal just as iron is, and is easy to keep clean and is therefore used widely. Tubs, basins, tops of kitchen tables, etc., are made of

this material. To clean zinc, scrub the article with wood ash moistened with water or with a mixture of wood ash and kerosene oil and then wash off with hot soapy water.

CLEANING AND CARE OF WOOD

Cleaning of Plain Wood—Plain woods are those which have no polish at all on them. When choosing furniture of plain wood a housewife must be careful to select well-seasoned wood. Seasoned wood is well-matured wood that has been allowed to dry and shrink before use. Tender wood warps very readily owning to the evaporation of water. Insects find their way into such woods. Fungi which cause dry-rot also grow on tender wood.

To clean plain wood tables, use a scrubbing brush or trimmed dried coconut husk. Take a swab, a basin of water and soap. Dip the swab into the water, wring it out and wash the table, a small piece at a time. Soak the brush well in water and scrub along the grain of the wood. This scrubs out all the dirt.

When one piece has been scrubbed, rinse the swab again in water and wipe the wood dry. Then let the wood dry in the air.

Varnished Wood—This is plain wood which has been stained and covered with a coating of varnish. Varnish is a liquid compound which dries quickly in the air.

Polished Wood—In cleaning this,use nothing that will scratch the surface. Home-made polish of turpentine and linseed oil or bees' wax and turpentine may be used. Mansion Polish, Ronuk and other furniture polishes can be bought. But since these are rather of a solid nature they can be thinned down with turpentine. Put a little wood polish into a vessel, cover with turpentine and leave it overnight. Leave the mixture covered, otherwise the turpentine will evaporate. Do not heat the mixture over the fire as it will explode. Bees' wax may be obtained locally. Melt some over a fire and add turpentine to it.

Recipe for a Good Home-made Polish:—

1 part turpentine.
1 part linseed oil.
½ part vinegar.
½ part methylated spirits.

Turpentine cleans and preserves wood. Linseed oil preserves wood. Vinegar cleans and gives wood a good colour. Methylated spirits helps to give a shine.

How to Use Polish—Never keep the vessel of polish uncovered, otherwise the spirits in it will evaporate. Put a little polish on a rag and rub it on the wood beginning with the bottom of the article and working upwards, to prevent soiling the polished parts. Rub the polish on along the grain of the wood. Then, taking two dusters and using both hands, rub over the wood lightly. A test for good polishing is to draw a finger over the

surface. No greasy marks should be left. Before polishing roughly used articles such as school desks, tables, etc., get off the ink marks with lime and chunam and scrape the dirt off with sand paper.

WASHING OF COOKING UTENSILS

Saucepans or chatties in which starchy foods have been cooked, should be washed in plain cold water. Those in which fatty foods have been cooked, and frying pans should be washed in hot, soapy water. Coconut refuse may be used for cleaning frying pans. Aluminium pans should not be washed in soap, soda, borax, or any other alkali. When the bottom of an enamel saucepan has been burnt, put into it some water with soda in it and boil for a while before washing it. Aluminium pans should have plain water heated in them before they are used fo the first time. Chatties and pots used over an open fire should be rubbed with paper, or coconut husk and sand to take off the soot when they are washed. Pans which cannot be washed at once should be put aside with water in them and they will be easy to wash later on.

CARE AND CLEANING OF BRUSHES

Brushes are generally made of two parts:—

(1) **The stock**—into which bristles are fixed in bundles and fastened with copper wire.

(2) **The back and handle** are made of one piece of wood, silver or tortoise-shell. The stock is fastened to the back and handle

with wooden or metal pegs or the stock and back are dovetailed. In cheap brushes the back is only glued on to the stock and comes off very readily.

Hair brushes always collect a great deal of dust and oil, so these should be washed regularly to keep them clean. An alkali such as ammonia or washing soda may be used to remove the oil.

CLEANING A BRUSH

Method of Washing—Take a bowl of warm water and put in a little ammonia or washing soda and make a lather of soap in this. Dab the brush up and down in the water taking care not to get water on the back of the brush. Next do the same in a bowl of lukewarm water to get the soap off. Lastly dab the brush up and down in a third basin of cold water containing a table-spoonful of salt. The salt helps to harden the bristles which have been softened by the action of ammonia. Then shake off the water from the bristles and

gently nip the edges with a piece of cloth. To dry it, leave it out in the draught but not in the sun. Hair brushes should always be put away in a drawer or bag otherwise dust will collect in between the bristles.

Tooth brushes should be washed frequently in an antiseptic solution. Before using new tooth or nail brushes, it is a good plan to soak them for a few hours in cold water with some salt added. This will help to toughen the bristles.

CLEANING A WINDOW-PANE

CLEANING OF GLASS

Plain glass window panes may be cleaned with newspaper. The ink of the print contains a substance which cleans the glass. Wet a piece of paper and clean the glass with it. Next take a fresh dry piece of paper and dry the glass removing all fluff left behind by the wet paper.

Another method is to wipe the glass over with methylated spirits, or rub the glass with paper dipped in acid and water, such as vinegar in water, or lime-juice in water. Do not use a cloth for wiping, for bits of fluff will stick to the glass. A chamois leather, wetted and rubbed over the glass will also clean it. To wash tumblers and lamp chimneys, soapy water may be used. If bottles are very dirty, a little soda and water will clean them, or broken egg shells or husks of paddy with water.

LAUNDRY

In Ceylon the washing problem is made easier than in many other countries. Washing is done cheaply and fairly regularly. Yet it is useful to know how to launder our own clothes so that we may be able to do so if the need arises. Sometimes we like to wash our best garments at home, for dhobies do not take good care of them.

White Cotton Garments—Soak in clean cold water for a few hours, with soap rubbed in the soiled parts. Then rub well in the hands and rinse in clean water till all trace of soap disappears. Next put the garment into water in which a little

dhoby's blue is added, squeeze out the water and wring out the garment and hang it out to dry. If the garments are very dirty, put them into cold soapy water and bring to the boil then rub well, and wash off the soap, and finally rinse in blue water. Very dirty dusters and kitchen cloths are washed in water to which washing soda is added. Dashing the garment on a stone breaks the fibres and ruins the material.

If you want the garments starched, after the rinsing, put them into water containing starch to which a little blue is added. Wring them and put out to dry. Iron while the garments are damp.

Coloured Cotton Garments—These require quick washing and drying. Never boil them and never use hot water for washing. A little salt put in the rinsing water will help to set the colour and prevent it running.

Bran is excellent as a cleaning agent. It prevents colours running too. Get a pound of bran, tie it up in a muslin bag, lay it in the washing tub, pour on to it a gallon of very hot water. Allow it to soak for half-an-hour at the very least. Then remove the bag and the water is ready for use. On no account use soap or soda when washing, as either will cause the colour to run. Just wash the article in plain bran water and dry in the shade.

When ironing be careful not to let the iron be too hot.

Woollen Garments—Never rub soap into any thing woollen, but wash in a lather of soap or lux in lukewarm water. Always wash woollens quickly and dry in the shade. Pull them into the shape with the hands while wet and pull them again once or twice while drying. Do not hang them out to dry. Dry them on a flat surface.

Silk Garments—They are usually dry cleaned. When they are washed, use lux instead of soap. Put some lux into hot water, let it cool and wash the garment in it. Then rinse it in tepid water with a little ammonia in it. When ironing, place a cloth on the silk garment and iron. If the iron is too hot it tends to make the garment creamy.

REMOVAL OF STAINS

Ink Stains—(1) Place the stain in hot milk as soon as it is made and rub and squeeze the spot well and the stain will most likely come out at once.

(2) Rub *biling* and salt over the stain for a few minutes and place it in the hot sun. If the stain is very old the above methods may fail to remove it. Then use salts of lemon which is a very strong acid.

Make the stain wet with cold water and stretch it over a vessel rubbing the salts in it. Do not use your finger. Pour down a little boiling water. The strong acid tends to weaken the fibres of the material over the stained area. Therefore, to counteract the action of the salts of lemon, use a little bicarbonate of soda which is an alkali. Avoid the use of salts of lemon on coloured things

Milton and Hydrogen peroxide are used for removing ink stains from white garments.

Fruit Stains—These should be removed while fresh, for if they are left to dry in, they can only be got out by strong acid such as oxalic acid and salts of lemon which greatly injure the fabric.

If the fresh stain is soaked in boiling milk for a few minutes it will generally come out without further trouble.

Tea and Coffee Stains—Soap must not be used to remove these as it helps to fix them. Stretch the stained area over a basin and pour boiling water on it.

Borax added to the water will bring out the stain more quickly.

Paint Stains—(1) Wash in kerosene oil or turpentine and afterwards wash with soap and hot water. (2) Use equal parts of ammonia and turpentine. For delicate fabrics, use ether.

Mildew—Wet the stain and rub some powdered chalk on it. Spread it in the sun and brush off.

Iron Mould or Rust—Remove with *biling* and put it in the hot sun, or use salts of lemon as for ink stains.

Removal of Candle Grease—Scrape off as much grease as possible. Place a piece of blotting paper over the spot and iron gently with a

warm iron, moving the blotting paper so as to carry off the grease. Do not use a very hot iron.

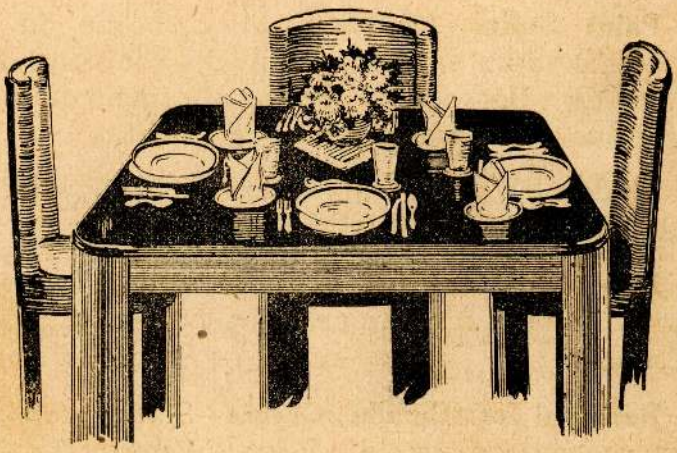
Blood Stains—Soak in cold water for several hours and wash. If still discoloured soak in borax solution. Hot water will help to fix the stains, so it should not be used.

Removal of Grease—Wash in hot soapy water. Grease marks may also be removed by the application of a little benzine with a clean rag.

LAYING OF TABLE

Everything used for the laying of a table should be perfectly clean.

The table cloth should be spotlessly clean and should fit the table and leave about ten to twelve inches hanging all round.



A TABLE LAID

A vase with flowers or leaves will help to brighten up and decorate the table. A prettily-coloured table centre may also be used. According to the number of people places may be laid. The knife and fork are placed on the right and the left side of the plate, respectively.

The cutlery used will depend on the menu. The articles should be placed perfectly straight and parallel to the edge of the table. The soup spoons will be placed on the outermost right. Glass should be placed on the right side of the plate.

For tea, have the tea or coffee pot on a stand or plate, otherwise the cloth on the tray will get stained. Place cups near the person pouring out the tea, and the tea-pot within reasonable distance, beside the cups. D'oyleys are sometimes placed on plates under cake or cut bread and butter.

HOUSEHOLD ACCOUNTS

All housewives should realize that much of the happiness of a home depends on a careful regulation and management of household expenses. Expenses should never exceed the income. A credit system should be avoided. A system of deferred payments and also payments by instalments bring about much chaos and trouble in the end, for once payments of this nature get into arrears, debts accumulate which mean insolvency

in the end. Most housewives think that keeping household accounts is only a waste of time and is useless. In fact there are only a few Ceylon homes where accounts of this nature are kept, and this is a very serious neglect. Keeping accounts helps the housewife—

(1) To be sure that expenditure has not exceeded the income.

(2) To have a reserve fund.

(3) To be thrifty and economical.

(4) To curtail unnecessary items of expenditure.

The housewife should have full control of spending the money for household needs, and money for this purpose should not be doled out to her daily.

It would be a wise plan to give pocket money regularly to children and get them to keep an account of its expenditure. It should be given fortnightly or monthly and it must be done regularly. It would be unwise to give a big allowance. The amount should depend on the age of the child. This is an excellent training for careful management of their money when they grow up.

Home expenses may be divided into (1) Current expenses, (2) Occasional expenses, (3) Emergency expenses.

Current Expenses—for upkeep of house, and everyday expenses—house rent, food, wages and everything necessary for the house.

Occasional Expenses—Money for holiday, extra expenses, entertaining, etc.

Emergency Expenses—Accidents, illness, removal, etc. A rough division of expenditure may be made thus:—(1) Rent, (2) Food, (3) Schooling, (4) Clothing, (5) Wages, (6) Entertaining, (7) Contingencies, (8) Reserve.

Books needed for accounts are:—

(1) Daily Canik. (2) Petty Cash.

Daily Canik—An account of daily expenses. A rough entry is as follows:—

CASH PAYMENT

Date 1930	Vegetables		Fish		Meat		Eggs		Fruits		Total	
Jan.	Rs.	Cts.	Rs.	Cts.	Rs	Cts	Rs	Cts	Rs.	Cts	Rs.	Cts.
26	—	12	—	35	—	35	—	16	—	12	1	10
27	—	09	—	—	—	70	—	—	—	18	—	97
28	—	15	—	75	—	—	—	08	—	—	—	98
29	—	18	—	40	—	54	—	—	—	16	1	28
30	—	—	—	—	—	35	—	—	—	—	—	35
31	—	27	1	25	—	70	—	24	—	48	2	94
Total	—	81	2	75	2	64	—	48	—	94	7	62

The Canik account total for each week or each fortnight will be taken over to the Petty Cash Book—a book for monthly expenses.

(This is a page from the Petty Cash Book)

PETTY CASH ACCOUNT

Date	Receipts	Rs.	Cts.	Date	Expenditure	Rs.	Cts.
Feb. 1	Balance ...	3	87	Feb. 1	House and garden rent ...	40	00
1	Cash ...	160	00		School fees ...	14	00
5	Coconuts (sold)...	17	00		Travelling ...	6	50
					Servant's wages	12	00
					Bread bill ..	4	80
					Laundry ..	5	00
				3	Rice and groceries ...	34	85
					Conservancy...	1	00
					Canik ...	7	00
				5	Shoe mending ...	1	00
					Charity ...	2	50
				7	Canik ...	6	75
				10	Shoes for Manelle ...	4	50
				17	School books	3	20
				19	Canik ...	6	50
				23	Travelling ...	3	00
				25	Canik ...	12	50
				27	Insurance ...	5	00
				28	Savings Bank	5	00
				28	Balance ...	5	77
	Rs	180	87		Rs.	180	87
Mar. 1	To balance ...	5	77				

It is a good plan at the end of each month (and also at the end of the year) to classify the expenditure under various headings—rent, education, wages, clothing, travelling expenses,

food, lighting, etc. The amount required for the full month or year can then be estimated and the expenditure watched more carefully.

At the beginning of the month the rice, currystuffs, and other groceries should be bought to last the whole month through. These articles must be carefully stored and given out daily by the housewife. It would be more economical to buy the whole stock at once, for this saves money and time. Bills should be paid as regularly as possible; do not allow these to go more than one month unpaid.

Receipts should be obtained for all payments and should bear either the firm stamp or the signature of the cashier. Receipts for sums over Rs. 20 should be signed on a six-cent stamp.

A debit is cancelled after a period of one year unless the creditor holds a written acknowledgment of the debt.

Payments are made either in cash or postal orders, money orders or by cheques. When a postal order is used for payment the receiver, before posting the order should fill in the name of the payee and the office of payment. These should also be written with the date of posting on the counterfoil which should be retained till the payee acknowledges the receipt of the amount. A postal order could also be sent crossed for payment through a bank only, thus securing payment. Money orders can be obtained from any post office on application made on specified forms issued free at the post office.

A commission of 20 cents for every ten rupees or a part thereof will be charged The full name

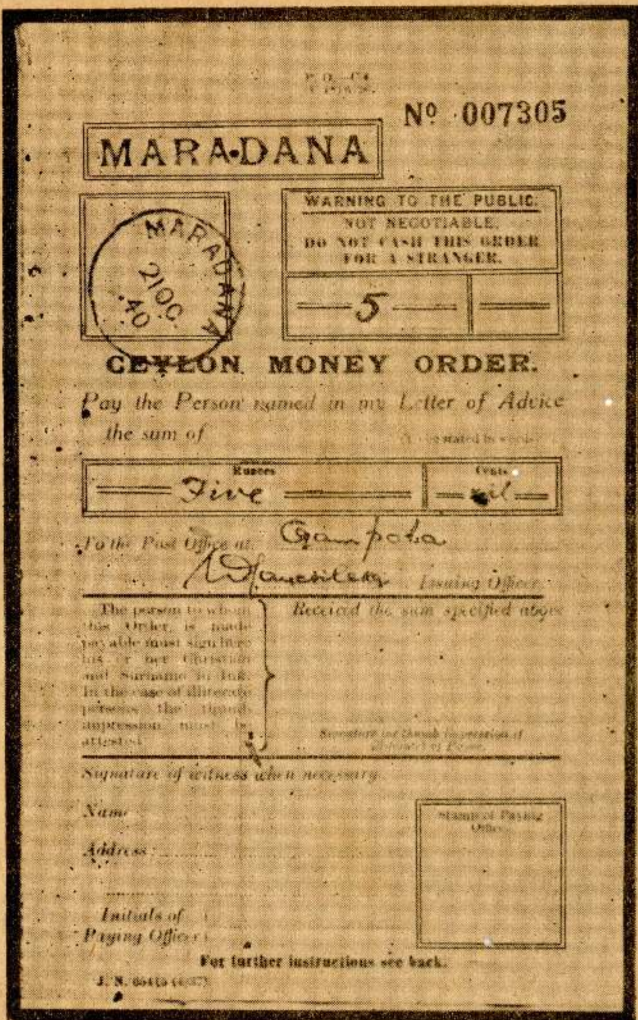
and address of the payee and the remitter, and the office of payment have to be filled in, along with the amount for which the order is required.

A POSTAL ORDER

and handed in with the money and commission at the counter of the post office. The officer attending to the work will then issue an order and hand it over to the sender. This order should be posted to the payee. The remitter should make a note of the number and date to help him in case of the order getting lost in transit.

A money order may be crossed for payment through a bank only.

Payment by cheque is the safest. A cheque is a written order to your banker, asking him to pay a certain specified sum to a person mentioned in the order. There are printed forms issued by banks for this purpose. It is always safe to give crossed cheques as they can be cashed only through a bank and by a person who has a banking account. A cheque issued in favour of "bearer" or "order" could be cashed at the counter of the bank. Never send an uncrossed cheque by post. The counterfoil of a cheque should be carefully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MARADANA

MARADANA 21 OC. 40

WARNING TO THE PUBLIC.
NOT NEGOTIABLE.
DO NOT CASH THIS ORDER
FOR A STRANGER.

5

CEYLON MONEY ORDER.

Pay the Person named in my Letter of Advice the sum of

Rupees	Cents
Five	nil

To the Post Office at Gampola

Issuing Officer.

The person to whom this Order is made payable must sign here his or her Christian and Surname in Ink. In the case of illiterate persons the thumb impression must be attested.

Received the sum specified above

Signature of witness when necessary.

Name

Address

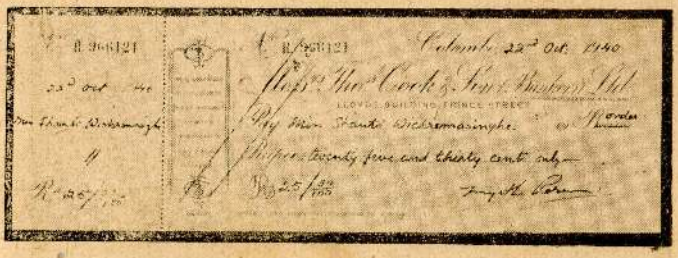
Initials of Paying Officer

Stamp of Paying Office.

For further instructions see back.

A MONEY ORDER

filled in with all particulars. A cheque should be written very legibly and no gaps should be left between words and figures. If any alteration is necessary strike off the portion that needs



A CROSSED CHEQUE

alteration, make the correction above it in a bold hand and sign the alteration. The word "only" should be written after the amount written in words.

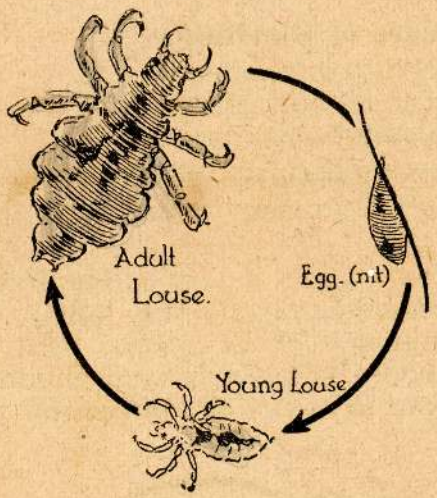
Keep a private account of your cheques received and issued, and compare this from time to time with the official pass book issued by the bank.

SOME ENEMIES OF THE HOUSEWIFE

Lice—The head louse attacks the hair of the scalp. It is provided with a sucker by means of which it sucks blood from the host. It has a sharp borer which pierces the skin and sharp claws with which it clings on to the head.

The female louse lays from 50-100 eggs in its three or four weeks of life. The eggs, known as nits, are usually about an inch from the root, and

are cemented very carefully to the hair. These hatch in about six to eight days and when about a fortnight old, the females begin to lay. As they crawl about in the hair, they suck blood and inject a poison into the wounds which causes itching. The poison gives rise to swollen lymphatic glands in the neck.



LIFE CYCLE OF A LOUSE

Treatment:—(1) Wash the head clean with warm water and carbolic soap rubbing the soap well into the scalp. Then comb with a good fine tooth comb. Repeat the process several days successively. (2) Wash the head in borax and water. This is splendid for getting rid of nits and lice and cleansing the head at the same time. (3) Wash the head with lime (fruit) boiled with dill seed. Cut up a few limes and put them into a chatty adding about a desertspoonful of dill seed. Cover with

water and boil until the lime is tender. Let this cool. Squeeze the lime, strain through the fingers and rub the liquid well into the scalp. Wash the head well in fresh water. Then use a fine tooth comb. *Odu Dehi* may be used, for this frees the head of dandruff too. Dandruff is caused by a fungus which grows on the scalp. This causes the hair to drop.

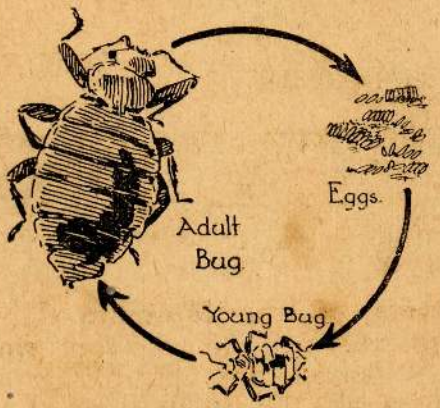
Recipe for Cure of Dandruff—

1 teaspoonful iodine.
1 wineglassful bayrum.
1 wineglassful castor oil.

Mix together and rub into the scalp.

Precipitated ointment is excellent for getting rid of lice.

Bugs—The bug is a very active insect with a most disagreeable odour. The female lays her eggs in furniture such as chairs, beds, sofas, in bedding, crevices in walls, behind pictures, cracks in the floor and in any other convenient place.



LIFE CYCLE OF A BUG

In about from five to ten days, the eggs hatch out into young bugs which run about very actively. Before becoming fully grown the young bug moults five times.

The creature is most active in the night and is very ingenious in getting at its host. It is sometimes known to get into the bed tent and from that position fall on the host.

Its bite is very irritating. When it wishes to suck blood, it injects a poison into the blood. It is known to be a great carrier of disease.

Bed bugs can live for several months without food so we see that when once they are allowed to introduce themselves into a home, it is difficult to get rid of them.

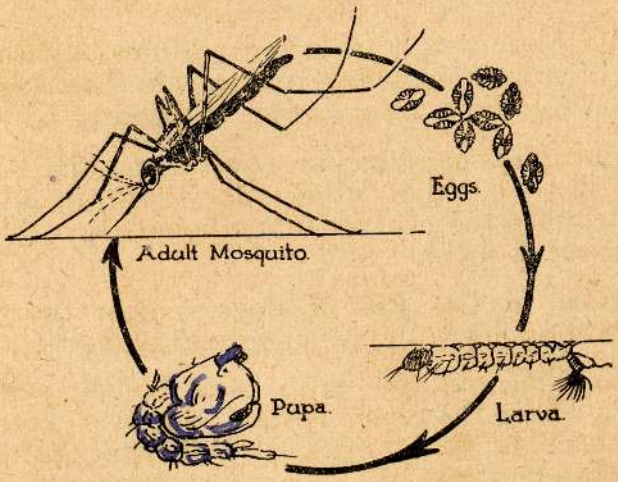
How to Get Rid of Bugs—Smear the place where they are with undiluted carbolic acid.

Another method is to pour boiling water in places where they lurk. Then pour over kerosene oil or carbolic acid. Spray D. D. T. lotol or flit over the breeding places of these creatures. Inspect furniture periodically for these pests.

Anopheles Mosquito—Malaria fever is carried by the anopheles mosquito. It is quite clear that if there were no mosquitoes there would be no malarial fever, so that we must do our best to prevent mosquito breeding.

Life History of the Mosquito—The mother mosquito lays her eggs in stagnant water, *i.* e., the water in a pond, tank, puddle or even in a tin or coconut shell. These float about like little rafts. Each little raft consists of a number of eggs.

In about three days, the eggs hatch out into tiny grubs or larvae. As soon as they come out of the eggs, they swim about very actively. The larva has two large eyes, a thorax an abdomen made of nine segments or parts. It has also a heart, organs of digestion, nervous system and two feathery structures at its tail end. One is a



LIFE CYCLE OF A MOSQUITO

kind of fin and the other is the breathing tube. It swims about in the water eating up any animal or vegetable substance with which it comes in contact, but whenever it wants to breathe, it comes to the surface of the water. After some time the larva ceases to wriggle about in the water. It comes to the resting stage. A split appears on the back and a new creature comes out of the skin. This is called the pupa. The pupa has no mouth therefore it cannot eat but it can swim

about actively. After a few days the pupa case splits and a fully-grown mosquito comes out. Now this mosquito has no malarial germ in its body, but it gets the germ into its system by biting a malarial patient.

Now in order to get rid of malaria, we must prevent the mosquito breeding. Mosquitoes lay their eggs in stagnant water, and if they cannot find stagnant water they cannot lay their eggs. Therefore we must not let water lie stagnant anywhere. Our compounds must be kept clean and free from rubbish. We should not have old tins, bottles, bits of crockery, coconut shells, coconut husks, lying about in the garden.

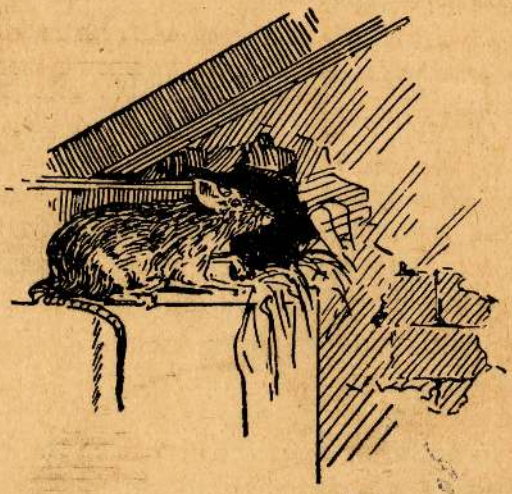
Drains must be kept clean and free from cracks, so that no water may stagnate there. Marshy places and hollows must be filled up.

Tubs and cisterns must not be left open. If there are any ponds with wrigglers in them, kerosene oil or D. D. T. could be poured over them If living in malarial districts sleep under a mosquito net. Quinine is a drug which can kill the germ in the blood.

Rats—Bubonic plague which sometimes breaks out in Ceylon is caused by the bite of the rat flea. The fleas live on infected rats and they carry the plague germs. These germs enter our bodies through the skin by the bite of the flea. To prevent this dreadful disease, destroy all rats. "No rats no plague." Keep the home clean. Take particular care to keep drains and store rooms

clean. Bits of food and refuse attract them and if these are properly disposed of, there will be no rats. In crowded towns where rats are common, it is necessary to catch them by traps. Cats destroy rats, therefore it would be a good plan to bring up at least one cat in each home.

Sprinkle the floor with a strong solution of Jeyes fluid and water to get rid of fleas.



RAT IN ITS NEST

Dry *Vatha Kaha*, ground in water, too is effective in getting rid of fleas.

Fowl lice too can be got rid of by the use of *Vatha Kaha* and water.

FLIES

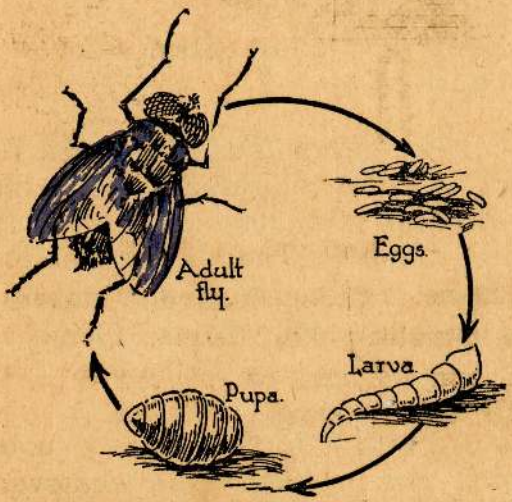
There are many varieties of flies, but the most dangerous in Ceylon is the house fly. The

mother fly lays her eggs in warm moist animal and vegetable refuse, especially in soil containing animal or human excrement.

After a few days the eggs hatch out into small white maggots. These feed on the decayed substances and change into chrysales. Some days later, out of the chrysales come out the full fledged flies. Not only do flies breed in filth, but they eat it too, swallowing with the food, millions of germs.

Their bodies are covered with hairs and these entangle particles of filth and germs which are deposited in food. Many diseases are known to be carried by flies, diseases such as typhoid, cholera, dysentery and diphtheria.

The germs are carried into food, from excreta of patients suffering from the particular disease.



LIFE CYCLE OF A FLY

Prevention—(1) Keep the house and surroundings clean.

(2) Do not let cowdung lie on the compound, for these form excellent breeding places for flies.

(3) Allow no refuse to lie in heaps, as is usual in many houses.

(4) Scrub and wash kitchen and dining room floors frequently, with disinfectant in water.

(5) If flies do come spray with D.D.T.

(6) Use fly paper.

(7) Protect food from flies by keeping all food covered.

(8) Keep lavatories clean. Cover excreta with coir dust.

Lice bugs mosquitoes, rats, and flies, are all enemies of the housewife. But there are greater enemies she has to contend against. These may creep into her home stealthily, and ruin the home, and cause greater misery. Some of these enemies are "Drink, Gambling, and Gossip."

Drink—It ought to be clearly understood that alcohol has no food value whatever. It is only a narcotic or stimulant. It has sometimes

been prescribed in order to meet certain physical conditions, when the action of the heart is needed to be stimulated; but doctors. nowadays, prescribe alcohol less frequently than in former days, it having been discovered that any beneficial effect is only temporary, and that the ultimate effect is often harmful. In no case should alcohol be taken during illness, except under competent medical advice.

Even in the smallest quantities, alcohol may be injurious. One can be the "worse for drink," though not actually intoxicated. Even a small dose makes the reaction to stimulus slower and a large dose paralyses the centres of co-ordination and the brain centres. That is why a drunken man cannot walk straight, he is unable to co-ordinate. But though the effects be not so evident as in such a case, alcohol always causes a fractional slowing down of the communication between any part of the body and the brain; and sometimes that difference may lead to disaster. Thus, alcohol lessons the power of attention and weakens self-control. Work requiring close attention, special skill or great endurance can be best done without it.

Moreover, drink creates a taste for itself, which is apt to lead to excess. The evils of drunkenness are well-known and safety can be ensured by total abstinence. No home can be

happy if either parent be a victim to drink. Children should be brought up without the use of alcohol; there is no natural taste for it, the taste is created by habit.

Let alcohol be devoted to its proper use as a preservative of dead animals in museums, and as a substitute for petrol in driving engines. Put it into the engine, and not into the engineer. Airmen and motorists when engaged in their duties avoid alcohol like poison, and the law rightly inflicts severe penalties on those who are found to have transgressed this rule.

Gambling—Like drink, gambling creates a desire for itself. Once the habit of gambling is formed there is little power of resistance whenever an opportunity for its indulgence is presented. Homes are often wrecked by this habit and safety can only be assured by complete avoidance of it. No real defence can be made of gambling either on moral or economic grounds. Even if the gambler wins, he does this at the loss of others, and thus may rob silly weak people who have staked what they could not afford to lose. Gamblers lose much more frequently than they win. A great deal of poverty, debt and social misery are directly due to this cause. Gambling

often causes crime, when a great loss leads to some dishonest act. In legitimate business, there is always some return for money received, but in gambling money is given and received without any return in the case of the loser or any service on the part of the winner. This is immoral, and the immorality is really intensified if one "gambles on a certainty" for, he then deliberately takes money from others who do not happen to posses his knowledge.

Children should be taught that gambling is foolish, dishonest and socially disastrous.

Gossip—It is natural for people to talk together and for them to talk about other people. That is sometimes called "gossip," but if the talk is good-natured and truthful there is no reason to find fault with it. What should be condemned is unkindly mischievous gossip which exaggerates or twists the truth, which states mere suspicions as though they were proven facts, and which condemns an absent person who has had no opportunity of defence. Many innocent people have been greatly injured by this kind of gossip, even when, sometimes, the talkers have been merely thoughtless and have meant no harm.

Gossip is often the practice of people who are too lazy to find something better to do.

Much time is wasted in silly chatter. Homes and children are neglected while the mothers or nurses talk scandal. Discord in the home often results from other people's gossip The best cure for gossip is to be interested in really useful things, so that there will be no time or desire for idle chatter.

A DAY'S ROUTINE

It will be helpful to a housewife to draw up a rough programme of the day's work beforehand. Where means allow a number of servants, a housewife will not have much of the actual work to do. She will have to superintend the work and give instructions to the servants.

There are some housewives who will have to do almost every bit of the house work. The programme of work for such a one will be different from the one drawn by a housewife with means. Then again some housewives will have to give much time to their children. They will have to attend to the children's food, studies, etc. In other cases the children will be out in boarding schools, and it will be only in the holidays that she will give her time to them.

Given below is a rough programme drawn up by a housewife belonging to the middle class. She has two children who attend school, and a baby at home. She has a cook an ayah, and a servant boy.

PROGRAMME

6 a.m.—Rising time (if there is time to spare, a little gardening.)

7 a.m.—Morning tea.—After morning tea the children can be attended to (bathed, dressed for school.)

8 a.m.—Children sent to school.—Provisions given out for breakfast, and menu planned.

8-15 a.m.—Baby's bath.

8-45 a.m.—Supervision of daily house cleaning, rendering a little help

9-30 a.m.—Daily accounts, correspondence, sewing and shopping, if necessary.

11 a.m.—Despatch breakfast to school and office.

11-30 a.m.—Breakfast.

12-30 p.m.—Rest time (any personal work).

3 p.m.—Children return from school.

3-15 p.m.—Tea.

3-15–4 p.m.—Rest time for children. Baby washed and dressed.

3 30 p.m.—Servants sent to market for provisions for dinner and next day's breakfast, Menu. Provisions given out.

4-15–5-30 p.m.—Children's play time. Visiting, entertaining visitors.

5-30–7 p.m.—Children's study time. Superintend part of the time.

7-30 p.m.—Dinner.

8-30 p.m.—Children's bed time (this will vary with the age of children).

9-30 p.m.—Lights out.

Programmes of daily routine for servants may be drawn up by the housewife so that the work may be methodically carried out by her.

A GOOD HOUSEWIFE

The business of running a household should rest with the housewife, for otherwise she will be at the mercy of the servants. She should have the sole management and responsibility. In order to take this important position she must be efficient.

She must know all about the factors that contribute to her home. A thorough knowledge of hygiene, housecraft, cookery, home-nursing and child welfare will be of immense use to her. Above all she must be clean and methodical. In many a home there is a great deal of unhappiness and misery owing to ignorance and lack of method.

It is the duty of every housewife to be clad neatly and cleanly and be ready to be seen by any visitor who may come at any time.

A good housewife is thrifty. Wastefulness should be prevented and the best use of everything at hand must be made. Whenever possible she must put something by for a "rainy day." If it is possible to put by rather large sums it will be wise to bank the money. If there is a surplus income coming in regularly it can be invested in a good insurance company.

She must be a good judge of character, otherwise she will not be able to sum up quickly the people with whom she has to deal. She should be cheerful and have a keen sense of humour. Many a difficulty can be faced in good spirit if she has this valuable quality.

A good housewife will possess self-control, then she will not display bad temper. She will not become hysterical even when big troubles come her way.

Above all she must be clean, her home must be clean, and her servants must be clean.

———

SICK NURSING

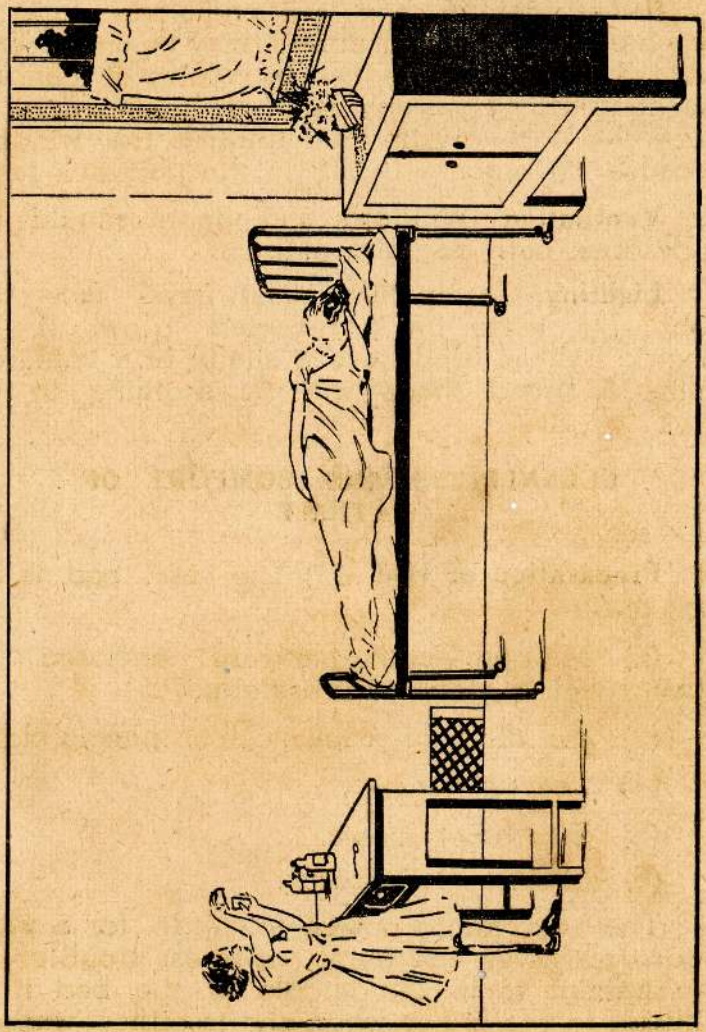
PREPARATION OF THE SICK ROOM

When a person falls ill in a private home, the room chosen for his accomodation should possess certain qualities which are necessary if the patient is to be given the best chance of recovery.

Position—The sick room should be in such a position that the patient is isolated as much as possible from the other occupants in the house. In cases of infectious diseases this is absolutely necessary for the sake of the other inmates of the house, but in the case of non-infectious disease this is done for the sake of quietness.

In a private house the sick room should be far away from the other rooms, and away from the kitchen. The room should be quiet, cool, and well ventilated. Before taking the patient into the room it must be made ready. Remove all superfluous articles, for these serve as lodging places for germs and dust and take up air space.

For long illness or infectious diseases, the room should be as bare as possible with no pictures, no fancy curtains, rugs or carpets. Have a bed, two small tables and a chair. If the disease is non-infectious the room need not be quite so bare. In that case a few pretty pictures on the wall, and a vase of flowers would greatly help to cheer the patient.



SICK ROOM

Bed—The ideal bed is a single one made of iron but any other kind of bed, may be used. The best position for the bed is where it can be reached easily from any side. It is best not to have the foot of the bed towards the window because the glare will fall on the patient's face.

Ventilation—Windows and doors should be wide open both day and night.

Lighting—The patient must never face the light. Let there be a reflected glow. If an electric light is used have a shade or a coloured bulb. A green shade will be soothing to the eyes.

CLEANLINESS AND COMFORT OF PATIENT

Preparation of Bed—(1) The ideal bed is an iron one.

(2) Mattress—coir mattress enclosed in ticking with a clean mattress slip.

(3) Oil cloth or mackintosh or plastic cloth.

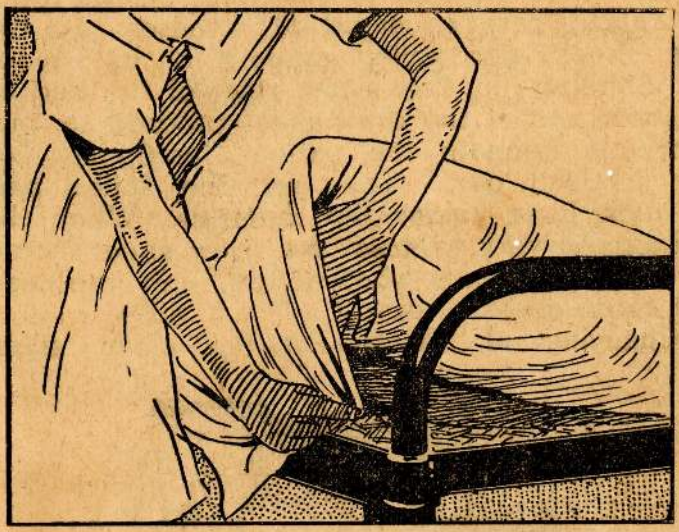
(4) Draw sheet.

(5) Two other sheets.

(6) Blanket if necessary.

The bed should not be too wide, for a wide bedstead gives the nurse needless trouble. If the patient is in the middle of the bed it is difficult to reach her when she is either washed or dressed, or when a wound is dressed. It is best to use a thin cotton mattress over a coir one and the mattresses should be enclosed in

cotton mattress slips. Spread a sheet over the mattress and tuck the edges in neatly under the mattress taking care to have the corners forming right angles. It is most important to keep the under-sheet taut, for if it is allowed to become loose or creased it is not only uncomfortable, but is apt to irritate the patient, or injure the skin, and promote the formation of bed sores.



BED MAKING

In certain illnesses, a draw sheet is necessary, when there is much perspiration, or when the under-sheet is likely to get stained as in cases of ulcers or in paralysis where the patient is unable to retain her excreta. This is a sheet which is placed across the bed underneath the patient, extending from the shoulders to the knees. This should go over a piece of oil cloth or a mackintosh,

or plastic cloth. An ordinary sheet may be folded into two or three, and used as a draw sheet tucking the edges firmly under the mattress on each side.

If the sheet needs frequent changing, it may be prepared in the following manner. Take an ordinary sheet and laying it breadthwise in the middle of the bed, tuck one edge under the mattress. Roll the opposite edge, and pin on the roll to the edge of the mattress on the other side taking care to avoid all creases. As the draw sheet gets soiled, undo it on both sides and standing on the same side of the bed as the short end of the draw-sheet proceed to pull it through beneath the patient, until she lies upon a clean part. Then roll the soiled part and tuck it in under the mattress. When the discharge is very profuse the draw sheet should be removed at once when soiled, and replaced by a clean one.

Changing of Sheets—Put the clean sheet

CHANGING OF SHEETS

under the blanket and let one person hold it and the blanket tightly by the upper and lower corners of one side, while another person on the opposite side of the bed draws away the dirty sheet. To change the under-sheet, roll the patient gently on one side, roll up the soiled sheet until one-half of it forms a roll against the patient's back. Then make a similar roll of the clean sheet and place this against the roll of the soiled sheet. Then gently turn the patient, and pass the two rolls underneath the patient's body. Then remove the soiled sheet and tuck in the edges of the clean one.

Washing of Patient:—In time of illness it is of special importance to cleanse the skin, not only

WASHING A PATIENT

for the sake of cleanliness, but also to get rid of the waste matter produced by excessive burning

up of tissue. The washing of the body must be done cerefully to prevent chills. The patient should be washed at a time during the day when she is at her best. Have everything ready for washing, warm water, soap, soft towel for the face, another towel for the body, wash cloth sheet, slop-pail, tooth brush, and tooth paste. First clean the teeth. Then put a towel over a pillow and wash the face, ears and neck, using a wash cloth or glove. Dry with a soft towel. Then put a towel across the chest, get one arm out of the night dress and carefully wash and dry it, and cover this with a towel. Do the next arm in the same manner. Covering the patient with a sheet, and tucking a towel or sheet under the patient's body, pull down the night dress and wash the front of the body down to the groins. Be careful to rinse off all soap. Then dry the part washed with a towel.

Turn the patient over and wash and dry the back. Having washed the trunk, wash and dry the limbs one at a time. Be very careful to wipe the body dry, or bed sores will occur. If the patient likes it, apply a little powder. Where the patient has long hair, have it plaited into two. Change garments twice a day. Having washed the patient, re-make the bed, changing the sheets and airing the pillows. After the wash give the patient a hot drink whick will serve as a stimulant.

Sponging:—Sponging is ordered in cases of fever to bring down the temperature, and this must be done very gently and carefully. Use a sponge or a small towel. Sometimes cold water

is advised and sometimes warm. Cover the patient with a sheet and as each part is washed, dry and cover it. First sponge the face, then the arms, chest and abdomen, and legs can be done in turn. After this is done, change garments. During the whole process do not expose any part of the body.

Prevention of Bed Stores:—The prevention of bed sores is one of the most important duties of a nurse. Bed sores can be prevented if great care is taken, but once they are formed their cure is most difficult. The base of the spine, hips, shoulder blades, calves and heels—in fact every part of the body that presses on the bed—should be examined daily and washed frequently. The least sign of redness should be treated. The part affected should be washed and rubbed with a teaspoonful of Eau-de-Cologne or rectified spirits and a fine antiseptic toilet powder applied.

To Prevent Bed Sores:—

(1) Remove pressure from part most likely be affected. (The back, hips, elbow and heels).

(2) Change the position of patient when possible.

(3) Keep the bed clothes smooth and dry and free from bread crumbs. In long illness pay great attention to patient's back which should be sponged and thoroughly dried and rubbed over with spirits.

(4) Use water cushions, air pillows or air rings and ring pads.

TEMPERATURE—RESPIRATION AND PULSE

The Temperature of the Body in health varies very slightly with the time of day, but the normal temperature is 98·4° F. Early morning at about 4 o'clock, the temperature is normally at its lowest. A low or sub-normal temperature of the body is present in cases of shock, such as may result from burns, knocks, frights, etc. After accidents and surgical operations or anything that may produce severe shock try to prevent the temperature from being sub-normal :—

(1) Keep patient warm by the use of blankets, and hot water bottles.

(2) Give hot drinks and stimulants.

In very many illnesses there is a rise of temperature of the body.

The clinical thermometer is graduated to register the temperature of the body. It is usually scaled from 95° F to 110° F. which is usually beyond the limits of the range of temperature in disease. In other words, 110° and 95° F. are the maximum and minimum temperatures respectively, of any person.

The normal temperature 98·4° F. is marked distinctly with an arrow head.

(1) The temperature of the body may be taken in the mouth under the tongue.

(2) Under the arm; but care must be taken that the bulb is not in contact with the folds of the clothes.

(3) In the groin. This is convenient with little children.

(4) In the rectum. When the temperature is taken here, the bulb of the thermometer should be rubbed with vaseline.

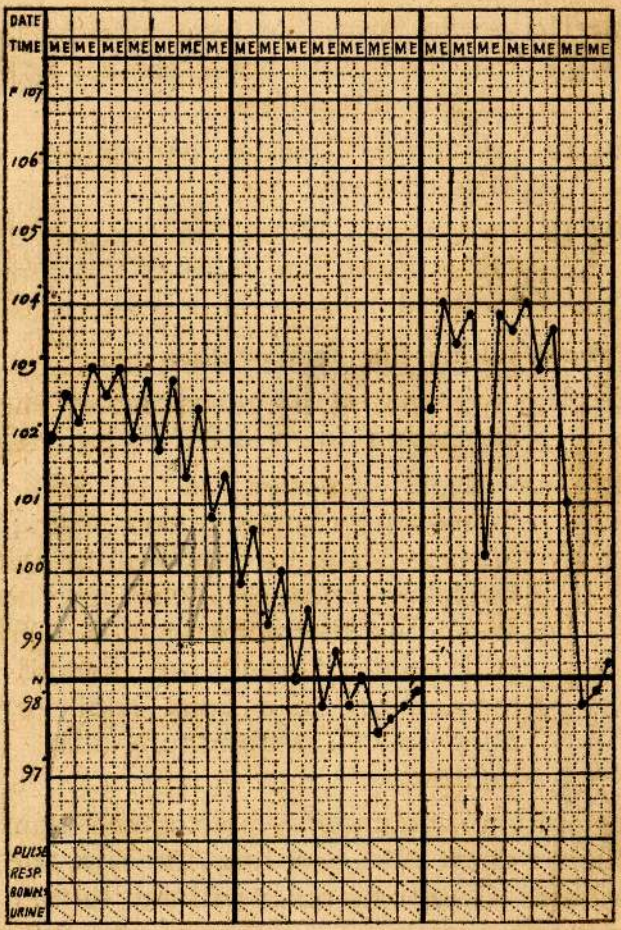
Rules about taking the Temperature :—

(1) The register of the thermometer should be shaken down to 95° F. before use.

(2) The usual practice is to take the temperature morning and night; but in some cases the temperature should be taken once in every few hours. Wash the thermometer in a disinfectant solution after use. Record the temperature in a book kept for this purpose. A temperature chart may be used.

Respiration is counted by placing the hand on the patient's chest and counting the rise and fall of the chest. Count the pulse without letting the patient know that you are doing so, otherwise she will alter the rate. A healthy adult

breathes from 16 to 18 times per minute. But what must be noticed in illness besides the rate of respiration is whether the breathing is easy



FEVER CHART

and regular as distinguished from short and panting, and whether a deep breath can be taken without pain, etc. In all inflamations and fevers the breathing is quick. In respiratory track complaints, breathing is generally laboured. In ailments such as shocks, collapse, opium poisoning, and concussion, respiration as a rule is slower than normal. The proportion of breath to pulse beat in health is one to four.

Pulse:—To count the pulse, three fingers are placed on one of the main arteries going over a bone. The usual place where the pulse is felt is the wrist, above the thumb. Other pressure points are temple, ankle, groin and collar-bone. The thumb itself is a pressure point, therefore it should not be used to take the pulse. The pulse is a great indication of the health of a person. During illness it should be taken every day, at the same time. This should be recorded. It should be taken when the patient is quiet.

INFLAMMATIONS—TREATMENT

Inflamation may occur in any part of the body, and is accompanied by redness, heat, swelling, pain and loss of function. The redness is due to an excess of blood in the inflamed area; swelling is due to the serum of the blood getting round the seat of inflammation; and pain

is due to the pressure on the nerves and the irritation set up by inflammation.

When any part of the body is inflamed, the white corpuscles of the blood pass out through the capillary walls and get into the surrounding tissues.

If there is a cut or sore, these corpuscles come out through the blood vessels, range one against the other and form new tissue, whether bone, muscle or skin.

When there is considerable irritation, the corpuscles come out in such large numbers, that some die and become pus corpuscles or matter. In this way an obscess may be formed.

Either cold or heat may be used to retard inflammation. *Cold* contracts the blood vessels, so that no more blood is brought to the inflamed area. It may be applied in the form of:—

(1) Cold water.

(2) Ice.

(3) Vinegar in water, Eau-de-Cologne.

(4) Evaporating lotions.

Wring out a cloth in cold water and lay on the inflamed part. Keep the dressing cold by dripping cold water on it from time to time.

Ice may be added to water or may be broken up into small pieces, put into a towel or ice bag and applied on the body.

Evaporating lotions are often used for sprains.

Eau-de-Cologne or vinegar in water is used to cool the forehead in fever. As the lotion evaporates into the air, heat is withdrawn from the skin lowering the temperature and contracting the blood vessels.

Heat—The application of heat is to dilate the blood vessels and make the serum in the tissues causing pain and swelling, to be re-absorbed into the blood vessels.

(*a*) *Dry Heat*—For a bruise, take up some hot ash into a piece of cloth with the help of a spoon. Form this into a pad and apply on the area. The heat will send the serum back into the blood vessels easing pain and helping the swelling to go down.

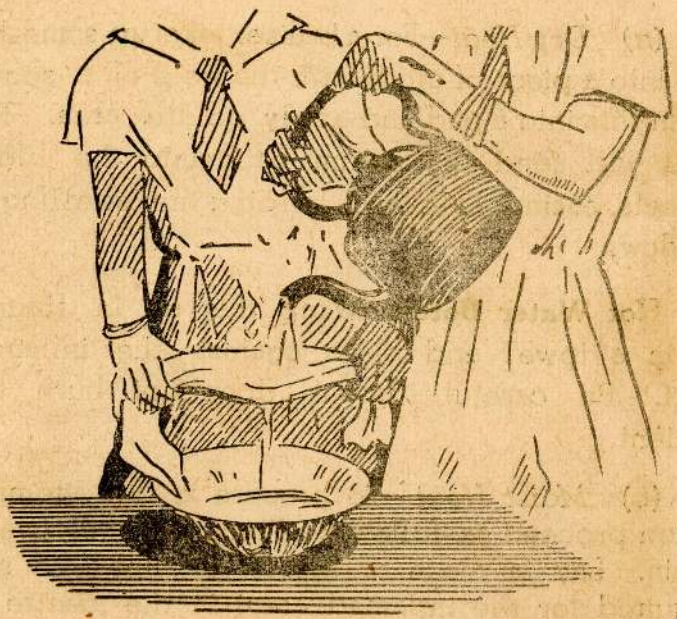
Hot Water Bottle—Wrap this up in flannel or in a towel and place against the inflamed part. Be careful that it does not burn the patient.

(*b*) *Moist Heat*—To prepare a hot fomentation proceed as follows:—Place a towel over a basin. Lay a piece of flannel or lint (the size required for the inflamed area) in the centre of the towel. Pour boiling water over until the flannel is well soaked.

Seizing the towel at both ends, twist in opposite directions. Open out the towel and place the flannel as hot as it can be borne, on the inflamed area. Then cover the flannel with a dry towel.

Another method of applying moist heat is to bathe the inflamed area with hot water —as hot as the patient can bear.

Boric Fomentation—is used to allay inflammation in the case of open wounds.



BORIC POULTICE

Take a piece of boric lint (known by its pink colour), lay it on a piece of cloth, pour boiling water over, wring it out and apply on the sore. Cover with a piece of oiled silk and bandage lightly.

Change dressing every two hours.

Bread Poultice—Place a bit of bread in the centre of a piece of cloth. Dip this in boiling water, wring it dry, open out cloth and apply the bread on the wound.

This is used to bring a boil to a head—when the skin is unbroken.

Linseed Poultice—Boil a little water in a small vessel. Into this gradually add the linseed stirring all the time. When the mass leaves the sides of the vessel, take it to the bedside and quickly spread it on a brown paper or cloth, leaving an inch all round, to turn over. The poultice must be half-inch thick. Before applying the poultice, smear the inflamed area with a little vaseline. Then apply the poultice as hot as the patient can bear. Cover with lint or flannel and bandage lightly. Change every two or three hours. The old poultice should not be taken off until the fresh one is ready to be put on.

Antiphlogistine—Place the tin containing it in boiling water or in a hot even. Open and stir with a knife. Spread this on cloth, with a knife and apply on the inflamed area. Cover with a piece of lint or flannel.

Change every 24 hours.

ANTIPHLOGISTINE PLASTER

Mustard Plaster.—Put some table mustard on the back of a plate and with cold water, mix it into a thin paste. Spread the mass thinly on a piece of brown paper. Cut out a muslin or piece of rag half-an-inch larger on all sides. Lay the muslim on the mustard surface of the brown paper and fold the extra half inch of muslim over the brown paper.

Then lay the plaster with the muslim side next the skin. After about a few seconds the patient may be begin to feel the plaster getting warm.

On no account should the plaster be left long enough to cause blistering.

Keep the plaster on for about two minutes

Very many of the poultices have gone out of fashion, for being a warm and moist mass, it serves to favour the growth of bacteria present in the discharge of open wounds. Therefore poultices such as linseed, bread, etc., should not be used on open wounds but instead use boric fomentations.

ADMINISTRATION OF MEDICINES

In the administration of medicines the nurse must be tactful. The very fact that the substance is termed a medicine is apt to make the patient dislike taking it. Medicine may be given in the from of mixtures, pills, powders, tabloids, catchets, oils, and syrups.

Giving Medicines by Mouth :—

(1) Always read the label on the bottle.

(2) Shake the bottle.

(3) Pour the medicine out with the label held upper-most.

(4) Stand the medicine glass on a level surface while pouring out the dose.

(5) Give the medicine directly it is poured out.

(6) Be punctual in giving the medicine.

Pills:—Put the pill at the back of the mouth and swallow it down with a mouthful of water, or break up the pill and give it in a spoonful of jelly followed by a drink of water.

Powders:—Shake on to the patient's tongue and wash down with water. Or mix it in a little water and swallow. Or take it in a little jam.

Catchets:—Made of rice paper are occasionally used to hold medicine. Soften it in a spoonful of water and swallow or place on tongue and swallow down with water.

Castor Oil:— Cut a lime in two, squeeze the juice of one-half into a cup and swill it round so that the cup is completely moistered with the juice. Get it round the rim too. Then pour the quantity of castor oil into the cup and cover this again with lime-juice. Now get the patient to suck the other half of the lime and then swallow the contents of the cup. In this method the patient does not get the taste of the oil, for the lime-juice covers the taste. When preparing castor oil do it where the patient cannot see it. Make it ready and bring it to the patient.

Effervescing medicines should be given in water and swallowed while they effervesce.

A nurse must always carry out the doctor's orders. Time for giving medicine must be strictly observed and the exact quantity should be given. A little more or a little less may do a great deal of harm.

Measuring of Medicines.

Liquid Measure

1 minim	....	=	1 drop *(mj)*
60 minims	....	=	1 drachm *(zj)*
8 drachms	....	=	1 ounce *(zj)*
3 ounces	....	=	1 gill
4 gills	....	....	1 pint *(oj)*

Dry Measure

20 grains	....	=	1 scruple
30 scruples	....	=	1 drachm
8 drachms or 480 grains		=	1 ounce

DISINFECTANTS AND THEIR USE

A disinfectant is on agent which destroys germs. An antiseptic retards the growth of germs and prevents decomposition, *e. g.*, boracic acid and liquid disinfectants in dilute form.

A deodorant hides disagreeable smells, *e. g*, Eau-de-Cologne, camphor, burning tar.

Disinfectants :—

(1) *Heat* :—

(*a*) Burning.

(*b*) Boiling.

(*c*) Steaming.

(2) *Liquids* :—

(*a*) Carbolic acid.

(*b*) Corrosive sublimate.

Gaseous—

(*a*) Sulphur dioxide.
(*b*) Chlorine.
(*c*) Steam.

Disinfection is one of the ways of preventing disease, by destroying bacterial life. Disinfectants should not be confused with antiseptics and deodorants because these latter do not destroy germs.

Heat—

(*a*) *Burning* is a very efficient method of disinfection, but it destroys the articles disinfected. Articles of no value or of small value may be burnt, *i. e.*, rags used for mopping up discharge of patients, old mattresses, pillows, blankets, may be saturated with kerosene oil and burnt.

(*b*) *Boiling* for 20 minutes is a good method of disinfecting clothing, but the disadvantage is that it is apt to fix stains. Therefore, before boiling, it is best to immerse the clothing in a liquid disinfectant such as carbolic acid or corrosive sublimate.

(*c*) *Steaming*— This method of disinfecting clothing and bedding is usually done by the Health Department. This is a very efficient method, for it destroys germs and also penetrates very rapidly into the article which is being disinfected.

Liquids :—

(*a*) *Carbolic Acid*—in 5% solution acts as a disinfectant and may be used for disinfecting instruments used in a sick room, clothing of the patient, or for sprinkling on the floor of the sick room.

(*b*) *Corrosive Sublimate*:-is a more potent disinfectant than carbolic acid and may be used in one-tenth per cent. Solution, that is, to every thousand parts of water, one part of corrosive sublimate. This disinfectant does not harm either cotton or wood, varnish, paint or plaster.

Gases :—*Sulphur Dioxide* is given off by burning of sulphur in air. This gas is often used to disinfect a sick room, after a patient has left it. Open all cupboards and drawers, remove all metallic articles out of the room after having disinfected them, for otherwise these are apt to get tarnished. Block all crevices, chinks, and ventilation holes. Then wet the walls by sprinkling water all over. The amount of sulphur used should be 1½ to 3 pounds for every 1,000 cubic feet of space. Break up the sulphur into pieces, put them into a vessel and place on a tripod standing in a vessel of water. Place this in the centre of the room, set fire to the sulphur, close the door and leave the room. After 24 hours,

open the doors and windows wide, so as to flush the room thoroughly with fresh air. Wash and scrub the floor with a disinfectant solution and whitewash the walls and ceiling of the room.

Precautions Against the Spread of Disease :—

(1) Isolation or separation of the patient.

(2) Quarantine—separation of contacts.

(3) Disinfection—destruction of germs and their spores.

(4) Acquiring of immunity—that is vaccination and inoculation.

(5) Notification.

(6) By observing the laws of health—securing fresh air, sunlight, good food, exercise and rest.

Isolation is separation of patient from the healthy, by removing to hospital, or if in a private house, treating her in a sick room.

Quarantine—separation of contact *i. e.*, those who are exposed to infection. Period of quarantine varies with the disease. All contacts should be under careful observation during the period of quarantine.

Disinfection—destruction of all germs and spores.

Immunity—persons who are non-susceptible to a certain diseases are said to be immune—for instance, several people may be exposed to an infectious disease and some may contract the disease while others escape it. Those who escape it are said to be immune. Non-susceptibility, *i.e*, immunity to a disease may be naturally possessed by a person or it may be acquired. There are some people who never contract an infectious disease however much they are exposed to germs. Nobody has yet been able to explain why it is so, but there are various theories held.

Acquired Immunity—When a person has suffered from an infectious disease she is less liable to get the same disease a second time; so that one attack of a disease makes a person immune to a second attack. Immunity to some diseases may be acquired by inoculation and by vaccination.

HEALTH SUPERVISION OF SCHOOL CHILDREN

Disease is often spread through carelessness. In schools, large groups of children are kept closely associated for many hours. This is naturally a situation which might easily result in the spread of infection. In order that this difficulty

may be overcome there should be sympathetic co-operation between parents and school authorities.

When there is a case of an infectious disease in the home, parents should not allow their children to attend school until the period of infection is over. Through neglect of this, disease spreads. The quarantine period for contacts varies with each disease.

Diphtheria	14 days
Measles	16 ,,
Whooping Cough	16 ,,
Chicken-pox	21 ,,
Mumps	21 ,,
German Measles	21 ,,
Dysentery	10 ,,
Cholera	10 ,,
Enteric Fever or Typhoid	12 ,,
Plague	12 ,,
Consumption	....

When a child returns to school after a long absence the parents should write to the school authorities, stating the cause of absence. If the child has been ill, a medical certificate should be sent. The school too should be very particular about this matter.

There may be children attending school who are physically defective. The teacher, most probably, will be able to notice some defects better than the parents. She should be ready to note such defects and make it known to them. It is their duty then to obtain medical treatment for such children.

Schools are now annually visited by medical inspectors or inspectresses to find out the general health of children in schools. They have the specialised knowledge and the apparatus necessary for proper health supervision, and so with the help of the teacher who knows the individual child, they can do much.

When the parents are written to about physical defects of their children, they should take note of them and obtain proper treatment for the children.

The question of money for treatment need not trouble the parents very much. There are free hospitals, and now, even teeth are attended to free, at the Dental Institute attached to the Colombo Eye Hospital. Government has provided free medical inspection and free treatment and if only a little trouble is taken, many of the common defects in children can be put to right.

Some of the common troubles noticed among school children are defective hearing, defective vision, bad teeth and gums, tonsilitis, adenoids, rickets, anaemia, skin diseases and general debility.

Most of these troubles can be prevented by the observance of the general rules of hygiene, especially the law of cleanliness. Parents can do much here.

From infancy, children should be trained to be clean in person. This habit will be most useful and it will save the child a great deal of trouble later. The child should learn to keep her hair, finger nails, teeth and skin clean. She should learn not to wear dirty clothes, especially under-garments.

Her socks and stockings must be clean. If the child is not well-to-do she should learn to get her clothes washed at home. If she cannot do this herself, she must get it done.

The teacher too should be very particular about the personal cleanliness of the children in her class. A quick general inspection should be made every morning in school. At least once a week the head should be inspected and very dirty heads reported to parents. Teeth trouble too must be carefully noticed. The state of the teeth has a great effect on the general health. When teeth decay, pus is formed and this, when swallowed sets up slow blood poisoning giving rise to headache and skin trouble.

The poisons produced are swallowed with the saliva and food, and these give rise to digestive disorders.

Decayed teeth are not only injurious to the owner, but they are a source of infection to other people. The pus makes the breath smell unpleasant.

The common eye defects that a teacher may observe in class are: short sight, long sight, squint, astigmatism and cataract. When a child is short sighted, she will bring the work close to the eyes, she may suffer from headache due to eye strain. Her eyelids may be inflamed and she may suffer from insomnia. She may rub her eyes frequently and have styes on the eye-lids. The signs of long sight are much like those of short sight with the exception that the child holds things a long way off from the eyes.

There should be vision tests in schools for children, at least, once a year.

Ears should also receive attention. A child who is even slightly deaf is inattentive in class and may not respond to questions. She may try to listen with one ear well forward, but will soon cease to attend because of the strain. These children should receive attention.

Ear ache is often the result of infammation of the ear. Germs find their way along the eustachian tube into the middle ear, setting up

inflammation which may lead to the formation of matter. The ear drum may get perforated, and the pus trickle externally as ear discharge. Inflammation may even lead to the brain.

Ear trouble may also be due to adenoids or enlarged tonsils due to the possibility of infection through the eustachian tube.

It may also be the after-effects of mumps or malaria. Temporary deafness may be due to the presence of wax in the outer ear.

Adenoids and tonsilitis are two other defects met with in school children. The growth of the adenoids and tonsils close the opening of the nose into the throat and the child breathes through the mouth and hence is susceptible to colds and sore throat. The vitality of the child is lowered. Day breathing is very loud and in sleep the child snores.

In bad cases, the child cannot breathe through the nose and finds it difficult to sound the nasal sounds, *e. g.*, N and M.

This can be easily corrected by a slight operation.

General debility is often due to insufficient or wrong food. It is absolutely necessary that

growing children should take plenty of good nourishing food at regular intervals. Parents and guardians should see to this. If the children come to school from a long distance some arrangement must be made about their meals. Many a child breaks down in health when food is neglected.

Food taken between meals is also harmful. School children should not eat thrash that is sold cheap in the neighbourhood. Gram, unwholesome sweets, and green wild olives, usually infested with files and full of dust, cause indigestion and other diseases. Good wholesome food, fresh air, and clean habits and exercise will do much to keep a child healthy and bright.

GERMS

Germs or microbes are minute living things so tiny that they can only be seen under a powerful microscope, which shows them magnified to many hundred times their real size. They are often named according to their shape. Some germs are tiny animals while others are tiny plants.

The plant forms or bacteria are often known as :—

Cocci or micrococci (bead shaped).

Bacilli (rod shaped).

Spirilli (spiral shaped.)

There are a great many kinds of germs which have been studied with the help of the microscope; some are useful to man while others are those which help bread to rise, cheese to ripen, butter to get a deep cream colour and pleasant flavour, water to be purified and sewage to be made harmless. There is yet another class of useful bacteria which helps the former by turning decayed organic materials into materials which can be absorbed by plants.

The harmful germs give people disease. These are known as disease germs. Those germs which give people pneumonia are called pneumococci; those which give enteric or typhoid fever are known as typhoid bacilli and those which give cholera are known as cholera spirilli.

In malaria and amoebic dysentery, the germ is a minute one-celled creature.

Germs usually increase by fission or splitting. One germ splits into two and each again into two and so on, until there are millions and millions of germs. In some cases germs multiply by producing spores. The spores are harder to kill than the germs.

While living and multiplying, germs produce ptomaines and toxins. Ptomaines produced in badly tinned foods cause severe symptoms of poisoning if the food is eaten.

Toxins produced by the germs get into the blood giving rise to disease.

HOW GERMS GAIN ENTRANCE INTO THE BODY

Germs enter the body in three chief ways :—

(1) Through the air, and by droplet infection —the infected person may discharge saliva or mucus in the form of droplets while coughing or sneezing and talking. Disease transmitted in this manner are :—Influenza, Chicken-pox, Measles, Mumps, Whooping Cough, Diphtheria, Small-pox Pneumonia, and Phthisis.

(2) Through water and food :—Dysentery, Diarrhoea Typhoid or Enteric, Cholera, Diphtheria, Tuberculosis of the bowels.

(3) Through the skin:—Malaria, Plague, Hydrophobia and Tetanus.

SYMPTOMS OF COMMON DISEASES

Chicken-Pox—Incubation period is 14 days. There are rarely any early symptoms but occasionally the child feels a little out of sorts and feverish, and in about 24 hours is covered with a rash. Generally the eruption is the first thing that indicates that the child is ill. It consists of small red widely scattered papules usually appearing first on the face, scalp or shoulders, then spreading all over the body. They change from the small red papules, to pustules, and then they either burst or dry up forming scabs which at about the end of a week fall off leaving marks upon the skin, which slowly disappear. In some cases, especially when irritated, a spot may leave a scar. The temperature is seldom very high. There is quickening of the pulse and some coating of the tongue, but generally the patient complains very little.

Treatment—Isolate the patient. Give liquid diet till temperature is normal. Protect from chills.

Measles—In Measles the incubation period is 7 to 14 days. The onset is gradual. Early symptoms are cold in the head with running of nose and inflamed eyes with watery discharge.

Sometimes the child has a cough, or what seems acute bronchitis. Occasionally there is sore throat. The rash does not appear at this stage, and this is unfortunate as it leads to the disease being overlooked at a time when it is very infectious. The rash appears about the fourth day. It is first seen on the forehead and face and behind the ears and on the neck. It consists of small red spots which are scattered irregularly in form, usually occurring in groups which may be separated by patches of normal skin. The temperature is high. After a few days the rash fades and has gone about on the seventh day. At the height of the disease there is a good deal of swelling of the face usually about the eyes. After the rash, a branny desquammation follows which lasts from five days to two weeks.

Mumps—Incubation period is 14 to 21 days. Mumps or inflammation of the parotid glands is very infectious but not dangerous. It varies much in severity, sometimes being nothing more than a swelling about the front of the ear and angle of the jaw with some stiffness and discomfort. In severe cases there is temperature. During the early stages of the disease, the child may feel sick and feverish and listlessness may be noted.

Generally the first symptom that is noted is definite swelling of the parotid gland, either one or both. The swelling of the glands is painful, the glands themselves being tender. The patient finds it difficult to open the mouth and complains of dryness of mouth. The saliva is sticky and thick.

Treatment—Isolate the patient for three weeks and give fluid diet until the temperature is normal. Protect from chills.

Whooping Cough—Incubation period is 4 to 18 days. This is a highly infectious disease, and if proper care is not taken, serious complications may arise. Bronchitis or Broncho-Pneumonia may arise in neglected cases and in delicate children. Early symptoms are cold in the head, with cough which has a tendency to be worse at night. The characteristic "Whoop" develops after about a week of ordinary coughing. There may be vomiting after a spasm of coughing, and during the spasm, the child may seem unable to breathe and go blue in the face. The disease may last six weeks or longer.

Treatment—Give light food. Follow doctor's advice.

Diphtheria.—This is an extremely infectious and dangerious disease and chiefly a disease of young people. The disease is readily transmitted by those who are in attendance on the sick, also by the patient's discharge, clothes, books, toys and eating utensils. Infected cow milk is occasionally the means of conveying this disease. Persons themselves who are immune to the disease can carry in their throats or nasal passages, the bacilli, and transmit the disease to others. Such persons are known as carriers. The incubation period of Diphtheria is short, averaging from 2 to 7 days and the onset is gradual. The disease seldom begins with well-marked symptoms, the patient sometimes merely feeling out of sorts. Later there will be fever, headache, loss of appetite, lassitude, and difficulty in swallowing. There will also be swelling of the glands in the neck. The throat will become sore and if examined the tonsils, uvula and soft palate will be found to be covered with a whitish membrane, which will gradually spread into the larynx, nose, or even into the ear. A copious discharge from the nose is due to the membrane in the nose. It may extend into the ear, and cause ear ache, and deafness. It may extend into the larynx giving rise to hoarseness, loss of voice, croupy cough or difficulty in breathing. If there is much

growth of this membrane in the wind pipe it will obstruct breathing which will bring on suffocation. Suffocation and paralysis may cause death.

Treatment—Isolate the patient. Follow doctor's orders.

Small-Pox—Is a highly infectious disease. Incubation period is 14 days. The disease begins with headache, shivering, pain across the loins and vomiting. The fever rises rapidly; often to 105° F. and may be accompanied by convulsions in children. There is complete distaste for food, the tongue is furred and great thirst is felt. The characteristic eruption develops on the third day, the whole body sometimes being covered with pocks. In an ordinary case of small-pox the temperature suddenly subsides on the third day, and all the symptoms seem to abate. At the same time many hard spots may be felt and seen just under the skin, like lead shot. These are first noticed in little groups on the face and the head. About six days after the earliest symptoms, the shotty papules are found to contain a little clear fluid and are termed vesicles. Later the vesicles turn into pustules. The skin round each becomes red and swollen so that where the spots are

numerous, especially in the face, they will run together and cause great disfigurement. While this process goes on, the patient will be very ill with high fever, delirium, restlessness and headache. As the pustules dry, scab, and drop off, the fever subsides and the patient slowly becomes convalescent. All children should be vaccinated, when a few months old and re-vaccinated at the age of 12 as a preventive against small-pox.

Treatment—Isolate the patient. Consult a doctor.

Pneumonia—or inflammation of the lungs is caused by a microbe called the *pneumococcus*. The disease is particularly liable to occur after an attack of influenza, measles, or whooping cough, sometimes it is apt to follow exposure. A common form of the disease is broncho pneumonia.

When both lungs are attacked the disease is termed double-pneumonia and is more dangerous. In pneumonia, careful nursing is required, otherwise it is apt to leave the lungs permanently delicate.

Respiration is quick but difficult, the patient finding it difficult to breathe. The face is livid and the nostrils dilate with each breath. The patient finds difficulty in lying down. There may be frequent attacks of vomiting. The temperature is about 104° F.

Treatment—Keep the patient warm in bed, giving plenty of fresh air, but at the same time keeping off draughts. Make her wear a pneumonia jacket next to the skin. Under doctor's orders apply antiphlogistine plasters on chest. If breathing is difficult, prop her up with pillows. Do not let her sit up for it is very exhausting. Give nourishing food in liquid form, served in small quantities. It is most important that food should be nourishing.

Dysentery—The disease is of two kinds according to the kind of germ. One type is caused by an amoeba, while the other is due to a bacillus. The main symptom in each case is diarrhoea. The germ may gain entrance into the intestines through contaminated water or food and by means of flies, or the germ may be present in the intestines and under favourable conditions, such as chill in the intestines, unsuitable food and neglected diarrhoea give rise to dysentery.

Dysentery begins with diarrhoea with much straining, often so severe as to cause prolapse of the bowels. There is much abdominal pain and in bad cases great prostration. Sometimes shreds of the lining membrane of the intestines are passed out with offensive smelling stools.

The excreta is highly infectious. Great care must be taken to disinfect excreta and keep off flies from discharge.

Diarrhoea.—*Cf. Child Welfare Section, page 261.*

Typhoid or Enteric.—is caused by a specific germ carried by food, water, flies and dust. Incubation period is variable extending from 14 to 21 days. Symptoms vary. As a general rule there is persistent temperature, headache and sometimes pain in the intestines.

Treatment.—Absolute rest and quiet are essential and no solid food whatever should be given. All excreta should be carefully disinfected. The excreta must be received into a vessel containing disinfectant. If possible it must be burnt, otherwise buried where it cannot pollute a water supply. All flies must be kept off. Patients must not be allowed to move at all. The after-effects last for about one year, due to accumulation of poison in various parts of the body. After recovery the patient needs a long change, good nourishing food and rest.

Cholera :—it is a highly infectious and fatal disease. It is caused by the spirilli bacillus. The incubation period is very short, averaging 2 to 3

days. The onset is sudden. The patient passes thin watery stools resembling rice conjee with pieces of lining membrane of the intestines. There is great pain in the abdomen, vomiting and cramp. Infection is spread by vomit, bowel discharge and is carried by contaminated water, food and flies.

Tuberculosis :—This is a disease caused by the tubercle bacillus. The bacilli can live in any part of the body—lymphatic glands, bones, joints lungs, brain, abdomen, skin, etc. It is very necessary that parents and guardians of children should understand that tuberculosis is a preventable disease. Children are never born with it and seldom become tuberculous, until six or more months after birth. But the tendency to tuberculosis can be inherited.

The bacilus finds access into the tissues in many ways but its most frequent entrance is through the air passage into the lungs where it sets up a condition known as Phthisis or Consumption of the lungs. Sometimes the bacilli are carried into the bowels by way of the food tract, along with food and water giving rise to consumption of the bowels. Sometimes the bacilli are carried by the lymphatics of the mouth and throat to the glands of the neck. Sometimes

they gain entrance into the blood stream and get into bone, joint, or any organ of body.

The predisposing couses of consumption are:—

(1) *Heredity*—but it must be remembered that i t is the tendency to consumption that is inherited and not the disease itself.

(2) *Alcohol.*—It lowers the vitality of the body and makes the person susceptible to the disease.

(3) *Injurious Occupation.*—Inorganic particles produced in various trade processes get into the air, and these inhaled inflame the respiratory tract, weakening it, and thus predisposing to consumption.

(4) Look of fresh air, sunlight, and good food.

Prevention of the Spread of Tuberculosis.

The sputum of the patient should never be allowed to dry and get into the air. It should be received into an open vessel containing some disinfectant. It is emphatically important that the patient should not spit out. She should use a bit of rag, or handkerchief when coughing or sneezing and this can be either burnt or placed in disinfectant and boiled afterwards. To prevent the spray from the mouth of patient infecting others, when talking, she should not stand too close to them.

A patient should never kiss others. She should sleep in a separate room by herself. The room should be simply furnished. The dust in the room is likely to contain tubercle bacilli, therefore such a room should be cleaned daily with a duster wrung out in disinfectant.

All crockery used by the patient should be washed and disinfected. These should be kept separate for the patient's use.

Treatment:—A consumptive should have plenty of fresh air both day and night. If she has no fever she must spend much of her time out of doors. The room she occupies should have plenty of light and air. Doors and windows must be left open both day and night.

She should have plenty of good nourishing food, such as milk, eggs, butter cod-liver oil and fresh vegetable and fruit.

Malaria.—This is a disease caused by the malarial parasite which belongs to the class known as protozoa, a minute animal consisting of a single-cell, like the amoeba.

This parasite is carried from an infected person to a healthy, by a species of mosquito called the Anopheles.

When the Anopheles mosquito sucks blood from a person suffering from malaria, it takes the

malarial germ into its stomach. Ten minutes to half-an-hour later, the male parasite in the mosquito's stomach, throws out filaments. These unite with the female cells forming a worm-like body. A little later, a tough membrane grows round it. This soon begins to split into seed like bodies called spores. The spores are then set free into the blood stream of the mosquito. These find their way into the salivary glands of the mosquito and when it bites a human being, it injects some of the spores into the blood. Each spore finds its way into a red corpuscle.

Here the parasite grows at the expense of the corpuscle, absorbing its material.

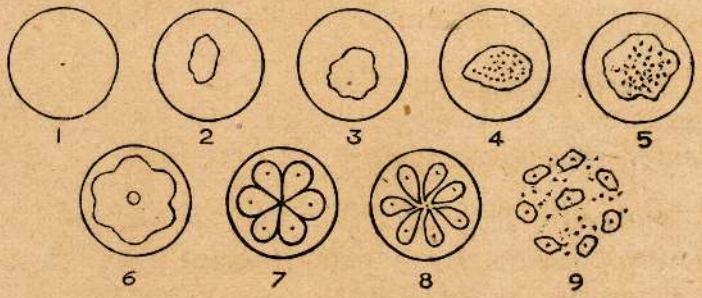


Figure 1.—Illustrates the red corpuscle of the blood.

Figure 2.—The spore within the corpuscle.

In 3, 4, 5 and 6, the spore keeps on growing at the expense of the corpuscle. In Figure 7 it assumes the shape of a daisy and in Figure 8, it breaks up into a number of "petals."

In Figure 9 the wall of the corpuscle is burst open and the "petals," now called "spores" along with their poisons are poured into the blood.

At this stage, the patient suffers from ague. There are three types of malaria :—

(1) Benign Tertian Ague in which the parasite takes 48 hours to complete the cycle of development.

(2) Quartan Ague, caused by the parasite which takes 72 hours to complete its cycle.

(3) Malignant Tertian Ague where the fever is severe.

Treatment :—

(1) Take quinine.

(2) Aim at extermination of mosquitoes.

(3) Protect from mosquito bites.

Also see pages 47, 48 and 49.

Hookworm Disease or Anchylostomiasis—is extremely common in Ceylon.

The larvae of these worms live in contaminated soil and water and gain entrance into the body in one or more ways. They get into the body through the pores of the skin or are swallowed with contaminated food or water.

The larvae are microscopic, but when they enter the intestines they develop into quite new creatures.

They grow large and develop hooks, by means of which they cling on to the intestinal wall. Here they suck the blood rich in food materials, which the person needs for building up and for giving heat and energy. Sucking the blood, the worms move, from place to place and as they move, they leave behind sores. When they are fully grown, they lay eggs, but these never hatch in the intestines. They are sent out of the body with the faeces. If they get into the soil, the warmth and moisture help them to hatch, and out of each egg comes a larva.

Hydrophobia or Rabies—The germs in the saliva of the mad dog gets into to human blood by the bite of the dog or even by its lick. The patient should be removed at once to the Pasteur Institute in Borella, Colombo, where she will be injected with an antitoxin.

This treatment prevents the onset of Hydrophobia.

Tetanus—*See Child Welfare Section, page 277.*

Plague—is caused by a specific bacillus, and the disease can be contracted either by inoculation, by inhalation or by way of the mouth. There are three distinct types of plague:—

Bubonic.

Pneumonic.

Septicaemic.

Bubonic Plague—is the more common type and is caused by the bite of the rat flea. The fleas which live on the infected rat carry the plague germs. These germs enter through the skin, by the bite of the flea. This type of the disease is characterised by swelling of glands.

Pneumonic Plague—is the most contagious. Infection is chiefly by means of the breath and saliva. The symptoms are similar to those of pneumonia.

Septicaemic Plague—The infection here too is chiefly by means of the breath and saliva. Symptoms are similar to those of blood poisoning. To prevent plague destroy all rats.

EYE TROUBLES

Inflamed Eyes—If there is the slightest redness of the eyes they should be bathed carefully with some boric lotion. Put some boiling water

into a perfectly clean vessel, and drop in a little boracic acid. Let this dissolve in the water. Cover the vessel and let the water cool.

Dip a bit of cotton-wool in the lotion and wash the eyes, one at a time, using a fresh piece of cotton-wool for each eye. Everything that touches the eye should be scrupulously clean. Therefore wash the hands well before attending to the eyes. If there is any secretion, consult a doctor.

Sore Eyes—This is a highly infectious disease. The eyes become red and irritating, matter begins to ooze out, and during the night this cakes on the lashes so that the lids are often stuck together in the morning. This discharge is highly infectious. The germs are carried from one to another by eye-flies too.

Treatment—Isolate the patient. Bathe the eyes frequently with Pomegranate, Khomba or Tamarind leaves boiled in water, or with boracic lotion. Light causes pain, therefore do not let the patient face the glare. If proper care is not taken, sore eyes may lead to defective eyesight.

Stye—On the edges of the eyelids, amongst the eye lashes, there are ducts leading from glands called Meibomian glands. The duty of these glands is to secrete a kind of oil. A block in the

duct of one of these glands gives rise to a style. Rubbing of the eyes may lead to a speck of dust lodging in the duct of a Meibomian gland. The tendancy to rub is often due to defective eye-sight and consequent tiring and irritation of the eyes.

Treatment—Bathe the eyelids with warm boracic lotion.

DEAFNESS

Causes of Deafness:—A child may become deaf at birth or she may acquire deafness. Accumulation of wax in the ear often results in temporary deafness. This can be remedied by the removal of the wax, with a whisp of cotton-wool. If there is much wax, it may be removed by syringing the ear with glycerine. The taking of quinine too leads to temporary deafness.

Acquired deafness is nearly always associated with the presence of adenoids or diseased and enlarged tonsils. When the throat end of the eustachian tube is blocked, the air supply of the middle ear is cut off and the result is that the ear drum refuses to vibrate Removal of adenoids and tonsils in time nearly means recovery of hearing.

Then again, mouth breathing means that the air taken is not filtered of germs and dust and these spread up the eustachian tube to the middle ear setting up inflammation, and this leads to the formation of pus. An abscess may form and burst through the drum. Inflammation may even spread to the chain of bones in the ear, and to the brain causing meningitis.

A running ear should be attended to at once. It should never be lightly looked upon.

If there is any sign of discharge from the ear gently syringe it, several times a day with warm boracic lotion and thoroughly dry with whisps of cotton-wool. Then insert a piece of dry antiseptic wool until the next syringing. If discharge continues, consult a doctor.

FIRST AID

Every girl should know how to treat ailments and accidents which are likely to occur unexpectedly and to do what is necessary until the arrival of a doctor, or to prevent things becoming worse.

Fainting—This may be due to various causes—hunger, fatigue, fright, excitement, loss of blood, general weakness and lack of fresh air. It is a form of unconsciousness due to the lack of blood supply to the brain caused by the slackening of the heart's action. Fainting is often accompanied by pallor of face, clammy sweat, staggering hurried and shallow breathing, a sense of giddiness and with lack of consciousness, the patient falls and lies still.

Treatment—Where fainting is due to loss of blood, bleeding must be stopped and the wound dressed, and on no account should the clot be removed until bleeding has been stopped.

If it be due to other causes, should patient be sitting down, bend the body forward until the head is between the knees for two or three minutes, to send the blood to the brain. But if

unconsciousness has set in, lay the patient gently down, flat upon the back, with the head lower than the rest of the body. In fainting, it is most important to get a supply of fresh air. On no account should people be allowed to crowd round. If indoors, throw doors and windows wide open.

Loosen all clothing of patient, and if unconscious, apply smelling salts to the nose. If smelling salts are not handy, use a crushed onion and bring the patient to consciousness. When consciousness is restored give hot tea, coffee, ginger and water or sal volatile, but nothing must be given to swallow until consciousness has returned.

Hysteria—is not very common now as it once used to be. This condition is met with in girls. It is due to lack of self-control. The fit starts gradually with crying, laughing, or other emotional display, then the girl falls with a scream and seems convulsed and insensible but one need not fear injury in falling, for always she has "one eye open" to note the effect on the audience. The phrase merely means, that she is conscious of what is going on.

An intense desire for sympathy is characteristic.

Treatment:—Give no sympathy, turn out sympathisers and speak severely to the girl and tell

her to behave sensibly and not make a fool of herself. If this has no effect leave her alone. Dash a glass of water over the face.

Epileptic Fits :—This is a disease of the brain which commences in youth and may continue to old age.

Symptoms—

(1) Behaves peculiarly.

(2) Becomes unconscious and falls down with a cry.

(3) Gnashes the teeth and foams at the mouth, rolls the eye-balls and tries to bite the tongue.

(4) Limbs work convulsively, and face becomes distorted and blue.

Treatment :—Place in the mouth a pencil or a bit of wood, to prevent patient biting the tongue. Support the head and gently restrain the movement of the limbs. When the fit is over allow the patient to sleep.

Convulsions :—occur in children and are often the result of improper feeding. It is also brought on by high fever, malaria, measles, etc., and during teething time.

Treatment:—Immediately put the child into a bath of warm water at blood heat to which a little mustard has been added. (One level dessertspoonful to one gallon of water.)

When in the bath, keep the head cool, by sponging it with cold water. Let the child be in the bath from 10-12 minutes. Then take out of bath and roll the child in a towel.

(See Child Welfare Section page 267)

Apoplectic Fit.—These occour in elderly people, the walls of whose blood vessels are hard. Alcohol too hardens blood vessels. It is a condition caused by the bursting of one of the blood vessels in the brain. It is often accompanied by unconsciousness and loss of power in one or more limbs.

Treatment.—Send for doctor. Keep patient quiet and apply ice to the head, and a mustard plaster to the back of the neck and warmth to the feet.

Do not give a stimulant.

Concussion or Stunning.—This is due to a shock to the brain caused by a blow on the head. There is a sudden loss of conciousness accompanied by failure of the heart.

Treatment:—Send for doctor. Apply cold to the head and keep patient quiet. Do not give stimulants.

Shock—This is a condition produced by severe burns, profuse bleeding, fracture of a large bone, severe wounds, apparent drowning, and sudden accidents, especially to the head or abdomen.

Signs and Symptoms:—Temperature will be sub-normal. There will be a cold clammy skin, pallor of face, feeble pulse, shallow breathing. If due to bleeding, patient becomes very restless.

Treatment:—Lay patient flat down and loosen clothes. Apply warmth. Wrap patient up in warm clothes, warmed if possible. If she is conscious, give her hot tea and coffee, milk, corriander water, ginger in water or sal-volatile.

Sunstroke:—This is exhaustion produced by the heat of the sun and is common in tropical countries, especially common in those who drink much alcohol.

Treatment:—Remove patient to a shady place, Strip clothing down to the waist and apply cold water or ice on the head, face and neck. Give plain water to drink.

ELECTRIC SHOCKS

Try to get the person away from the current, but it must be remembered that the would be rescuer is very liable to receive a shock if she is not careful to insulate herself. The current may pass through the victim to the rescuer. Therefore it is necessary to place some non-conducting material between her and the helper. The current is less likely to pass through anyone who has between herself and the ground some non-conducting material. If possible, try and turn off the switch. Where this is not possible, stand on a non-conductor of electricity such as rubber, mackintosh, very dry paper, or wood. Anything wet would be a good conductor. Then wrap round your hand something dry and pull the person off from the contact. If the sufferer is insensible give artificial respiration, loosen all clothing and ensure circulation of air.

Drowning :—When a person is in an apparently drowned condition, the first thing to do is to give artificial respiration. Remove any substance that may block the air passage and proceed to render artificial respiration.

Professor Schafer's method may be followed :—

(1) Lay the patient on the ground, back upwards, arms extended and head turned to one side.

(2) Kneel astride or on one side facing the patient's head. Place your hands flat in the small of her back with thumb over the lowest ribs.

(3) Swing your body forward with your arms straight and allow the weight of your body to fall on the loins and lower part of the back thus pressing the abdomen against the ground, thus driving air out of the chest. This produces exhalation. Count one, two, three.

(4) Now swing your body backwards relaxing pressure without removing your hands. This produces inspiration. Count one, two, three. Continue this backward and forward movement until respiration is restored.

This action must be carried out from 12-15 times a minute. When respiration is restored, turn patient face upwards and promote warmth

and restore circulation by the aid of warm clothing, hot water bottles or sand bags.

Rubbing of the arms and legs in an upward direction is also effective, to promote circulation.

CUTS—BLEEDING

Small cuts when neglected often become troublesome and even dangerous. If the cut and the skin round it are clean, the wound need only to be painted over with tincture of iodine and bandaged over with a clean strip of rag.

If the wound is in any way dirty, wash it with warm water with a little Lysol, Condy's fluid or Boric acid in it. When thoroughly cleansed, paint over with a little tincture of iodine, cover with a bit of cotton-wool, or clean rag and bandage lightly. If there are any bits of glass or any other foreign matter in the wound, they should be carefully removed during the washing.

When a cut is severe and bleeding is profuse, something must be done to stop it. First of all, find out whether the bleeding is arterial, venous or capillary. The blood from a cut artery is of a bright red colour and spurts out jets corresponding to the beat of the heart, while that which issues from a cut vein is darker in colour and flows in a steady stream. In capillary

bleeding, the blood oozes slowly from all parts of the wound. In all cases of cuts, absolute cleanliness is required. Everything that touches a wound must be scrupulously clean, otherwise blood poisoning can set in by germs entering the wound.

Treatment for Arterial Bleeding.—When an artery is cut and the blood spurts out, do not lose your head, but act at once. If there is any clot formed, do not remove it until pressure has been applied. Make the patient sit or lie down and raise the injured part and press hard with the thumb over the point in the wound, from which the blood is seen to be spurting. But if the fingers are dirty and any foreign matter is in the wound, pressing directly on the wound will be dangerous. In that case apply pressure on the artery, at some point between the wound and the heart, the best place for pressure being at the nearest pressure point, that is, where the artery passes over a bone.

This can be located by a sensation of beating and throbbing when the fingers are placed on the right place.

If the wound is not clean, a "ring" pad may be applied round it instead of a hard pad directly on it. Then again if pressure must be applied

directly on the wound and the finger be dirty, pressure can be applied with a perfectly clean rag or piece of white paper.

Sometimes it is necessary to use a tourniquet to keep up continuous pressure. This should only be applied by a skilled person.

Treatment for Venous Bleeding.—When a vein is cut and the blood oozes out in a steady continuous stream, make the patient sit or lie down and elevate the limb. Then, if the fingers are perfectly clean and there is no foreign body, apply digital pressure. Pressure may also be applied by means of a clean pad pressed directly on wound. If bleeding continues apply a tight bandage round the limb about an inch away from the wound, on the side farthest from the wound.

When bleeding has been stopped, bathe the wound in sterile water or with water containing some disinfectant. Then apply a piece of boric lint or cotton-wool and secure with a bandage.

Treatment for Capillary Bleeding.—This bleeding is easily stopped by painting over with tincture of iodine. If the wound is dirty, it may

be washed with either cold or warm water and then painted over with tincture of iodine. A pad of clean lint may be applied on the wound and bandaged—as in the palm.

In cases of bleeding, never give brandy or any other stimulant. It will only start the bleeding afresh.

Internal Bleeding:—For internal bleeding, a doctor must be sent for immediately. Meanwhile place the patient in a recumbent position, loosen all clothing, secure a good supply of fresh air, keep the hands and feet warm, and give ice to suck. For broken blood vessels within the stomach, treat as for above, but do not give anything by way of the mouth.

Nose-bleeding:—Make the patient sit up, with head slightly thrown back, and arms raised above the head, in the open air or before an open window or door. Undo all tight clothing and apply cold to the bridge of the nose and to the nape of the neck to contract the blood vessels of the nose.

Make the patient keep her mouth open to avoid breathing through the nose. Keep the feet warm. Alum or vinegar in water may be sniffed up.

FRACTURES

Fracture is the term given to a broken bone. It may be caused by :—

(1) **Direct Violence** :—When the bone breaks where the force is applied. A blow on the head may fracture the skull.

A Motor car wheel running over the leg may fracture the leg bone.

(2) **Indirect Violence**:—When a bone breaks at some distance away from the place where the force is applied, e. *g.*, a fall on the feet may fracture the neck.

(3) **Muscular Action** :—Sudden contraction of the thigh muscle may fracture the knee-cap.

Varieties of Fractures :—(1) *Simple.*—A fracture is termed " simple " when the bone breaks with no injury to the skin

(2) *Compound*:—A fracture is compound when there is an open wound over fracture.

(3) *Complicated.*—The bone is broken and in addition there is injury done to some important blood vessel or nerve or organ. Great care is needed even in the treatment of simple fractures.

Careless handling may turn a simple fracture into a compound or complicated fracture.

A compound fracture is much more serious than a simple fracture because germs can get into the wound and cause serious trouble.

Green-stick Fracture.—This occurs in little children whose bones are soft. The bones merely bend and crack like a green stick.

General Signs and Symptoms of Fractures.—

Pain.

Swelling.

Inability to move the broken limb. (The whole limb below the fracture may be in an unnatural position).

Discoloration.

Shortening of the limb.

Deformity.

The fracture may be felt.

Crepitus may be present.

General Rules for the Treatment of Fractures—When a fracture has occurred, send for a doctor immediately. No movement whatsoever should be allowed until the limb is

supported in such a way that further injury is impossible. If the fracture is a compound one, the wound should be washed with a disinfectant and covered with a pad of lint, cotton-wool or clean rag. If germs of blood poisoning gain entrance to the wound, the patient may become very ill with high temperature, rapid pulse and other signs of poisoning, and the patient's life will be in danger. After having attended to the wound bring the ends of the bones together and support by means of a bandage.

Splints—for fractures may be improvised from firewood, walking-sticks, broom-handles, umbrellas, cardboard, rulers, door-bars, etc.

These are used (1) to keep the bones in place, so that they may not grow crooked after a fracture; (2) to prevent further injury to the soft parts by careless handling; (3) to prevent a simple fracture becoming compound or complicated; (4) to keep the limb at rest.

Splints must be held in place and the limbs supported by bandages. These may be improvised from ribbons, ties, scarves, belts, thick cord or tape of calico.

Bandages—The regulation bandage for "First Aid" is a triangle cut out of a square of cloth 36 ins or 40 ins. This is known as the "Esmarch Triangular Bandage."

Reef Knots.—All bandages should be tied by reef knots which do not slip, lie flat, thus not making the patient uncomfortable, are neat, and can be easily undone when required.

Broad Fold Bandage.—Place a triangular bandage flat on the table. Bring the apex or point down to the centre of the base, and fold over once again.

Narrow Bandage.—Fold the bandage twice from point to base.

Large Arm Sling.—Spread out a bandage, stand in front of the patient, place the apex under the injured side, one end hanging down and the other over the opposite shoulder. Place the arm across the middle of the bandage and bring the other end of the bandage up over the injured shoulder and tie by means of a reef knot. Then pin the point in front of the elbow.

This sling is used to support the lower arm, in injuries of the lower arm.

Small Arm Sling—Make a broad fold bandage by folding the open bandage twice over from point to base.

Lay one end of the bandage across the sound shoulder, bring it round the back of the neck to the shoulder of the injured side; bend the elbow, placing arm across the chest. Bring up the lower end of the bandage and tie on the shoulder of the injured side.

Bandage for the Hand.—Place a triangular bandage flat upon a table. Place the open hand, palm downwards about three inches away from the base of the bandage. Then bring down the point over the back of the hand. Gather the two ends together, cross them over the back of the hand, and take them round and round the wrist and tie at the back of the wrist.

Elbow Bandage—Lay an open bandage on the table. Fold back about four inches of the base. Then lay the bandage on the elbow with the point half way up the back of the upper arm and the folded edge of the base about three inches below the elbow. Then cross the ends in front of the elbow. Bring them to the back of the limb above the elbow, pass them round and round and tie off behind. Bring the point down over the knot, and fasten with a safety pin.

Knee Bandage.—Fold back about three inches of the base of an open bandage. Lay the bandage on the knee with the point on the front of the thigh about five inches away from the knee. Gather the ends together, carry them backwards and tie about four inches above the knee-cap. Pull the apex until the bandage is taut, fold it down over the knot, and pin down with a safety pin.

Foot Bandage.—Lay an open bandage on the floor, on something clean to prevent bandage getting soiled. Place the foot on the bandage with the heel about four inches from the base, and the point pulled up on the front of the foot (instep).

Gather the ends together, cross over the ankle in front and take them to the back, then forward and tie at the front of the ankle. Pull down the apex to cover knot and pin with a safety pin.

Heel Bandage—Lay an open bandage on the floor on something clean. Place the foot on the bandage with the base towards the toes and point down the heels. Bring the apex up behind

the heels. Gather the ends together cross over the middle of the front of the foot and carry back round the ankle.

Take round the ankle and tie in front.

Ankle Bandage.—Place the centre of a narrow fold bandage against the middle of the sole of the foot, bring the ends upwards, cross them on the front of the foot, carry them round the ankle to the back, cross them behind, bring them forward to the front of the ankle, cross them again round the ankle and tie the ends in front.

Head Bandage.—Lay the base of a bandage across the forehead, the point hanging down behind. Gather the ends together and carry them round the head just above the ears to the back. Cross the ends over the point, bring them forward again and tie them in a knot in front. Pull the apex well down behind until the bandage over the scalp is smooth. Turn up the point and pin to the bandage.

Eye Bandage.—Lay the centre of a narrow fold bandage on the injured eye. Carry the ends around the head, cross, bring back and tie over the eye.

Bandage for Chest—Place an open bandage on the chest over the dressing, with the ends round the waist and the point over one shoulder (say right). Tie the ends together behind in a vertical line from the right shoulder. Pull the point down over the shoulder behind and tie it to the long end.

Sprained Ankle.—This is caused by a sudden twist or wrench of the ankle causing the muscles, tendons and ligaments to tear.

There will be severe pain, swelling, discoloration and loss of power of movement of parts affected.

Treatment.—Tie a bandage tightly over the foot and round the ankle.

Then soak the bandage, with water to relieve pain and to tighten the bandage. Cold has the power of contracting the blood vessels preventing the effusion of blood. Vinegar in water is also effective.

If the sprain is very painful, apply hot fomentations or heat and cold alternately. It is most important to keep the limb at rest, with the foot in a raised position, to prevent blood from rushing to the injured part causing pain and inflammation. Rest the ankle until it is healed.

Dislocation.—The end of the bone is displaced at the joint. This may occur at the shoulder, elbow, thumb, finger or other joint. There will be much pain, swelling, unnatural position of the limb and fixity at the joint.

Treatment.—Send for the doctor.

In dislocation of the shoulder, remove clothing from the upper part of the body, cutting it off if necessary. Support the limb on pillows in a comfortable position. Apply a towel wrung out in cold water, over the injured part.

POISONS

These may be classified according to :—

(1) Those which burn or stain the mouth—Corrosives.

(2) Those which irritate or inflame the digestive tract—Irritants.

(3) Those which act on the nervous system, producing sleep—Narcotics.

(4) Those which produce excitement and convulsions—Deliriants.

Corrosive Poisons.—possess burning properties and therefore, destroy the mucous membrane which lines the alimentary canal. There is vomitting with much pain. Corrosives may be either strong acid or strong alkalis. If you know that the poison is an acid such as carbolic acid,

nitric acid, hydrochloric acid sulphuric acid, salts of lemon or any other acid, give as an antidote, some mild alkali such as powdered chalk in water, plaster from walls in water, milk of magnesia, epsom salts, bicarbonate of soda, liquid ammonia. The alkali will neutralise the action of the acid. Then administer soothing drinks, such as olive oil, milk, or beaten up eggs, to relieve pain. These get between the poison and the walls of the stomach and intestines, preventing the poison coming in contact with the walls.

Some Acid Poisons and Signs and Symptoms of each :—

Sulphuric Acid :—Tongue and lips stain black

Hydrochloric Acid :—Lips and mouth stain white.

Nitric Acid :—Stains yellow.

Salts of Lemon, Oxalic Acid:—Strain white—vomit black.

Carbolic Acid :—Odour of breath like violets.

If the poison is known to be an alkali such as fluid ammonia—which may be mistaken for salvolatile—caustic soda, caustic potash, or washing soda, give as an antidote, viengar in water, limejuice, orange-juice, or any other mild acid Then give raw eggs, milk or olive oil. All alkali poisons burn the tongue, lips and cheeks so as to look like raw beef.

In Corrosive Poisoning, never give an Emetic.

Signs and Symptoms of Corrosive Poisoning :—

(1) Burning pain in mouth, throat and stomach.

(2) Bleached appearance of mouth.

(3) Vomiting.

(4) Bloody mucous brought out.

(5) Swelling ot abdomen.

(6) Collapse.

Irritant Poisons.—These produce inflammation, vomitting and diarrhoea.

Symptoms.—

Burning pain in throat.

Severe pain in stomach some time after poison is taken.

Constriction of mouth, gullet and throat.

Great thirst.

Vomitting, purging and cramp.

Feeling of suffocation.

Collapse.

Examples of Irritants.—

Arsenic—from rat pastes, vermin killers, fly paper and some artificial dyes.

Lead—from paints.

Mercury used as corrosive sublimate.

Phosphorus—from matches.

Treatment:—Give an emetic to induce vomiting. This can be easily prepared by dissolving two tablespoonfuls of salt in enough water to dissolve it; or by mixing one tablespoonful mustard in half a tumbler of warm water. Repeat the emetic every quarter of an hour until patient vomits. When vomiting has occured, give soothing drinks, such as olive oil, beaten up eggs, milk or tea. In phosphorus poisoning do not give any oil.

Narcotics:—produce sleep or insensibility.

Examples:—

Opium and Morphia, Alcohol, Chloral.

Signs and Symptoms:—

Sleepiness.

Feeling of comfort.

Coma.

Insensibility.

Treatment:—Give an emetic and then an antidote. Permanganate of potash or Condy's fluid is a good antidote for opium or morphia poisoning. Make every effort to keep patient from falling asleep. Give strong coffee or tea; keep the patient walking about and flick the skin with a wet towel. If breathing stops, give antificial respiration.

Deliriants.—Belladonna, Strychnine Aconite, Prussic Acid, and Cyanides.

Treatment.—Give an emetic, then strong tea or coffee. If unconcious apply smelling salts to nose and, if necessary, give artificial respiration.

Rules in Cases of Poisoning.—Always send for the doctor at once and when writing to the doctor, state the case as fully as possible to let him know what to bring with him. Never regard any case as hopeless; in every case there is a chance of recovery.

The medicine, food or poison bottle which is suspected as having caused poisoning should be carefully preserved for the doctor's inspection. Never leave the patient alone even after recovery. Symptoms may reappear with circulation of the blood. If the patient threatens to go to sleep, keep him awake.

If the mouth is stained and burnt, do not give an emetic. Keep patient warm.

People often get poisoned through carelessness by taking poisons in mistake for medicines. Poisons should always be kept under lock and key, in labelled bottles, perculiar in shape and size.

Ptomain Poisoning.—is produced by certain bacteria acting on food and forming toxins or

poisons. Foods which are most likely to set up poisoning are proteid foods such as meat, fish, milk, canned or potted foods, ice cream, condensed milk, sausages, etc.

Signs and Symptoms.—Feeling of sickness, severe griping pain in stomach, diarrhoea, purging, vomiting, prostration muscular twitchings coma.

Treatment.—Send for the doctor. Give an emetic. After the vomiting, give castor oil.

Bites—In Ceylon people are often bitten by centipedes, or stung by scorpions. When bitten by some varieties of centipedes the swelling is very great and the pain severe. Before the poison can travel all over the body, apply a crushed onion on the spot or the tender white leaves of a pineapple crushed. This tends to draw out the poison. Then paint the place with red sandalwood and lime-juice. Another method is to paint the skin with tincture of iodine. The bites of animals with sharp teeth, such as dogs, cats and rats are very dangerous and should be treated at once.

Snake Bites—Immediately make the wound larger with a pin or penknife and suck the wound to draw out the blood before it can get into the general circulation. Spit out the blood. Pour

warm water over the wound to induce bleeding. Push a few crystals of permanganate of potash right into the wound. A match stick may be used to do this.

Stings.—When wasps, bees or hornets, sting, they leave the sting behind, causing great pain. It should be extracted by squeezing with the thumb and fore-finger. The area should be bathed over with diluted ammonia or soda-bi-carb or the part may be painted with tincture of iodine dettol, flavine or spirits. If there is any shock, give a stimulant

Dog Bites.—If a finger is bitten, immediately encircle it above the wound with thumb and forefinger and at the same time suck the wound vigorously, spitting out the blood. Tie a string tightly above the wound to prevent the poison getting into the general circulation. Squeeze the finger towards the wound to make it bleed. Pour hot water over the wound to encourage bleeding. Paint the place with tincture of iodine or strong carbolic acid.

The bites of animals with sharp teeth should be treated in this manner.

If the person has been bitten by a rabid dog, she should be taken at once to the Pasteur Institute and treated by inoculation to prevent Hydrophobia.

BURNS AND SCALDS

A burn is caused by dry heat or by corrosive substances, such as strong acids and alkalis. A scald is caused by liquids at high temperature.

A burn may very from slight redness of the skin to complete charring and destruction of the deeper tissues. The danger to life depends rather on the extent of surface area of the burn. Should two-thirds of the body be burned, recovery is uncertain.

Burns and scalds are subject to special dangers. Of these shock and sepsis are the most important.

Shock various with the extent of the surface affected and the area burnt. A burn in the chest or abdomen is more serious than one in the limbs and this is particularly marked in children. A deep burn is not necessarily dangerous to life if it is on the arm or the leg, unless it is very extensive.

In treating a burn, obviously the first thing to do is to extinguish the flames, if the clothes are still burning. To do this, the patient should be placed with the flames uppermost. If the dress is burning in the front, place him on his back and

vice versa. This is to prevent the flames from ascending and if the flames ascend the body will burn more and more.

Other methods of extinguishing a fire are with water or smothering the flames with a blanket, rug or coat. A burning person should not run about in the open air.

Treatment.—consists in applying a clean dressing (lint, linen or gauze) soaked in one of the following solutions :—

(*a*) Bicarbonate of soda. (A dessertspoonful to a pint of water).

(*b*) Strong warm tea.

(*c*) Tannic acid.

(*d*) Picric acid.

Tannic acid is obtained in the form of jelly or in tablets.

Application of oil or any greasy substance is not desirable. If it is desired to remove the clothes, it should be cut off and no adherent pieces should be pulled off.

A dressing to the face should be in the form of a mask with openings for the eyes mouth and nostrils.

In burns of the face, there may be danger of damage to the eyes, mouth or nose which may cause permanent blindness, difficulty of swallowing and breathing.

Shock is one of the most fatal results of burning. It must be very carefully treated.

(1) Patient kept warm by means of blankets and hot water bottles.

(2) Warm drinks.

(3) Perfect quiet and rest.

(4) Fresh air.

Scalds are treated in the same way as burns.

If a burn is caused by corrosive acid such as Sulphuric acid, bathe the part with an alkaline solution such as lime water, washing soda, bicarbonate of soda or ammonia solution If alkaline solution is not available, use plain warm water.

If it is caused by a corrosive alkali, bathe the area with a weak acid, such as vinegar in water, or lime-juice in water. If acid is not available, bathe the area in warm water.

Foreign Body in the Ear:—This may be carefully coaxed out by passing the bent end of a fine hair-pin and drawing it gently forwards. When the offending substance is an insect such as an ant, fill the ear with warm olive oil or "Saruwa-visathya."

SICKROOM MEDICINE CHEST

In every home there should be a medicine chest with things necessary for First Aid and Home Nursing. The medicines should be kept in a chest or cupboard under lock and key and out of reach of small children. The bottles and vessels should be labelled. Poisons must have red labels bearing the name of the contents and the word "poison" clearly marked on them

To ensure greater safety, poisons should be stored in a separate part of the chest.

Some of the common medicines and medicinal oils and their uses are these :—

Camphorated Oil.—To be rubbed on the chest for a chest cold.

Castor Oil.—A purgative.

Clove Oil—For toothache.

Eucalyptus Oil.—To be smelt for a cold.

"**Saruwavisathya**".—or Green Oil.—A few drops applied to the ear for ear ache.

"**Siddartha-thaila.**"—To be applied on the chest for phlegmatic complaints and for catarrh.

Bicarbonate fo Soda—For burns and scalds. Excellent for flatulence. (½ teaspoonful to a pint of water).

Boracic Acid.—This put into boiling water and when cold is used as an eye lotion. For wounds boric ointment is used. Boric lint to be applied hot on wounds.

Boric Ointment:—For sores.

Condy's Crystals.—A few crystals in warm or cold water is used for washing sores and for gargling the throat and mouth. Crystals are applied on wounds caused by snake bite.

Eau-de-Cologne.—To wet the head and forehead in cases of fever and headache. To be rubbed on bumps caused by knocks and falls.

Glycerine.—This with borax is used to clean the tongue.

Tincture of Iodine.—To be applied on wounds and cuts. The best skin disinfectant.

Iodex—For eczema and other skin troubles.

Jeyes' Fluid.—A common disinfectant.

Lysol:—A disinfectant.

Liniment.—For sprains. In bronchitis rubbed on the chest.

Mustard.—For mustard plasters. In cases of convulsions a little mustard added to the warm water bath is effective.

Milton:—A mouth wash and gargle. To clean dirty wounds.

Peroxide of Hydrogen.—Mouth wash. Throat gargle. To cleanse dirty wounds.

Ractified Spirits.—For bed sores. Apply spirits and rub over gently with a fine antiseptic toilet powder. For small cuts

Red Sandalwood.—For bites and stings—with lime-juice is applied on the skin for bites and swellings.

Sal Volatile.—A good stimulant substitue for alcohol. This is taken diluted in water.

Smelling Salts.—To smell in fainting.

Tannic Acid Jelly—For burns and scalds.

Vaseline.—For redness of skin.

Zinc Powder.—For eczema—first apply starch water and on it sprinkle the zinc.

Zinc Ointment.—For eczema.

Essence of Ginger.—Stimulant.

Eno's Fruit Salt.—A pleasant laxative.

Milk of Magnesia.—Laxative for babies.

Gripe Water.—For stomach pain in babies.

Have also plenty of clean rag, cotton-wool, boric lint, roller and triangular bandages, safety pins and scissors, in readiness for use.

A clinical thermometer, ear syringe, enema, bed pan, ice-bag, hot water bottle, throat brush, feeding cup, are all necessary requisites for a sick room.

GENERAL COOKERY

THE VALUE OF FOOD

We all know how absolutely necessary food is. In every home a great deal of time is spent in the preparation of food, and a large proportion of the income goes to purchase it. In order to understand why food is necessary let us think of the old comparison drawn between the steam engine and the human body. A steam engine would only work if it were supplied with fuel, water and air. The burning of the fuel produces heat. The heat boils the water, and the steam drives the engine. No burning will take place without air so that for the burning of the fuel, air is needed.

In many respects the human body is like the steam engine. It needs fuel and air. The fuel is the tissues of the body. This is burnt up by the oxygen in the air thus producing heat and energy.

We know that heat is produced because our bodies are always warm. Moreover, the food we eat is digested, assimilated and taken to all parts of the body to build new tissues and to repair worn out ones.

Therefore the chief use of food are:—(1) To give heat and energy to the body. (2) To repair and build tissue. All foods do not do the same kind of work. Each kind of food has its own special work to do. The flesh-forming foods alone will not keep the body healthy, neither will the heat and energy giving foods alone do so. For good health, meals consisting of all the food classes must be taken, or, in other words, the diet must be a mixed one.

Classes of Food —

(1) Carbohydrates—starches and sugar—give heat and energy and build and repair fatty tissues.

(2) Fats give heat and energy, and build and repair fatty tissues.

(3) Proteins build and repair nitrogenous tissues and give heat and energy.

(4) Mineral Salts—Essential for bone, muscle, blood and other tissues of the body.

VITAMINS

The word "Vitamin" is derived from a Latin word *vita* which means "life"

Vitamins are certain factors found in natural foodstuffs and which are very necessary for normal growth and development. Animals are dependant for their supply of vitamins upon the vegetable kingdom.

Five different vitamins have so far been distinguished and they are named after the first five letters of the alphabet—A, B, C, D and E. Vitamins A, D and E, are soluble in fats and are known as fat soluble vitamins Vitamins B and C, are soluble in water. For some time the existence of these substances rested on animal experiments only, but now Vitamins A, B and D, have been isolated and this has revealed the fact that the amounts required to produce recognizable results are amazingly small.

Vitamin A has recently been isolated. In the pure state it is a yellow oil, so potent that about one five-hundredth of a grain is perhaps the daily requirement of a human being.

The primary source of Vitamin A, is green plants. Animals when fed on green plants store up this vitamin in their fatty tissues, so that animal fats such as milk, butter and cream obtained from animals fed on green food contain this vitamin. However animal fats subjected to great heat lack this vitamin. Examples of this kind are dripping and lard. A group of vegetables known as "Carotenes" which contain a yellow pigment, are good sources of Vitamin A. (Examples: carrot and sweet-pumpkin).

Liver is another good source of Vitamin A. The oils of liver are also rich in this Vitamin. Fish get their Vitamins A and D, from marine algae on which they feed in the water.

Liver, kidney, heart and fish-roe are also sources of this vitamin. Vitamin A, is known as the growth-promoting factor. Its absence from the diet causes lowered vitality and lessens the ability to resist disease and infection.

It prevents and cures a certain diseases of the eyes known as Xeropthalmia, and diseases of the respiratory passages.

It also prevents and cures "Toad-skin"

Sources of Vitamin A.

Yellow vegetable—carrots and sweet-pumpkin (Wattakka.)

Green vegetable—Gotukola, Sarana, Kathurumurunga, Thampala, etc.

Liver and their oils.

Animal fats not subjected to great heat—milk, cream, butter, yolk of egg.

Vitamin B, is now known as "B Complex" as it consists of B_1 and B_2. Vitamin B, is required for the proper maintenance of the nerve tissues. It is found in fresh vegetables, embryo and bran of seeds and cereals, in embryo of egg, yeast and yeast extracts.

Milk, and meat contain small amounts of Vitamin B.

Vitamin B_1 is known as Anti-beri-beri and B_2 as Antipellagra.

Pellagra can be cured by the administration of yeast.

Vitamin B, withstands drying and will survive a temperature of 100° Centigrade for two hours. Higher temperatures destroy it, and for this reason canned foods are deficient in this vitamin.

Vitamin C (Anti-scorbutic) prevents and cures the skin disease called scurvy which used to be common amongst sailors during the time of sailing vessels owing to an insufficient supply of fresh vegetables It is almost unknown now. Infants fed on boiled cow's milk or sterlized milk or on condensed milk suffer from a similar type of disease when not given fruit juices to supply this vitamin.

Symptoms of the disease in babies are bleeding and soreness of the gums and bruising of the muscles.

From the age of two months it is advisable to give babies who are not breast-fed, fruit juice such as orange, grape and tomato.

Vitamin C is found in fresh vegetables and fruit—in germinating seeds and cereals and in raw milk. It is destroyed at a temperature of 100° Centigrade.

Vitamin D (Anti-rachitic) is found in animal fats not subjected to great heat, *e.g.*, milk, cream,

butter, yolk of egg, fish-roe and fish liver oil. (It is not present in vegetable fats). It is essential for the metabolism of calcium and phosphorus and is therefore specially concerned with the development of bone and teeth. Its absence leads to rickets in the child and osteomalacia in the adult. It is the only vitamin that can be produced in the body itself by the action of ultra violet radiation of the sunlight on the ergosterol which when irradiated produces in the body Vitamin D.

Vitamin E (Anti-sterility vitamin) is present in vegetable oils, green leaves and seeds. Rats kept deficient in this vitamin are sterile.

SOME COMMON FOODS AND THEIR VALUES

Milk—is a food which contains all the classes of food arranged in the correct proportion. Hence it is called a model food. The Proteins are found in the form of lact albumin and casein; the carbohydrate in the form of lactose or milk sugar; the fat is found chiefly in the cream. There are several kinds of mineral salts in it, the chief being calcium which helps to form bone. It also contains vitamins A, D and C. Although milk is a perfect food, containing all the classes of food, adults cannot live on milk alone, since there is a large quantity of water present. Adults need more bulky foods.

When milk is boiled and allowed to stand, the cream rises to the top. This cream is mostly made up of coagulated albumin and fat. When the cream is removed the liquid left behind is called skimmed milk and contains casein, lactose, and salts. The casein can be separated from the milk by addition of rennet or a weak acid. When all the curd is taken out of the milk there seems to be nothing left but water. But if we taste this water it will taste sweet, showing that it has sugar in it. The liquid is called whey and the sugar, milk sugar or lactose. When milk is very strongly heated until all water evaporates and the residue blackens and smokes, the ash is left behind. This ash consists of the mineral salts of the milk.

Eggs —contain everything that is necessary for the development of the chicken. But although all the food values are present they are not in the correct proportion. Therefore egg is not a perfect food. The white of the egg is almost all albumin plus water. The albumin is enclosed in thin walls of cellulose. When beaten the cellulose walls are ruptured and the albumin is set free. In its raw state it is very digestible, hence the digestibility of albumin water. When an egg is put into boiling water the albumin is coagulated and rendered less digestible. The yolk consists of fat, albumin, mineral salts, and a trace of saccharine matter. Eggs contain Vitamins A, D, and B.

Cheese.—is a rich nitrogenous food, since it is made from casein. It also contains varying quantities of fat and mineral salts.

Butter.—is almost all fat and is also a good source of Vitamins A and D.

Meat.—This contains protein and variable quantities of fat, salts and vitamins but no carbodydrates. Hence the necessity of eating it with a carbohydrate food.

Fish.—contains protein, fat, mineral salts, but no carbohydrate. It may be divided into (1) White fish, *e.g.*, Seer, Cotton-fish (Pulunno) Carallo, etc. In these the fat is stored in the liver. (2) Red fish, *e.g.*, Blood fish contains a great deal of oil and therefore is too heavy for weak people.

Peas, Beans, and Dhall.—The seeds of pod vegetable are very rich in proteins (legumin) and may be substituted for meat. They contain Vitamin B.

Rice.—is almost all starch with a little mineral salts. In unpolished rice there is a trace of protein and also Vitamin B, in the bran and embryo. Hence the value of country rice.

Green Vegetables.—are valuable on account of the mineral salts and the vitamins they contain. We must never neglect our vegetable diet or we

shall soon become unhealthy. Green vegetables also contain starch.

Ripe Fruit.—is very valuable on account of the vitamins and mineral salts in it. It contains carbohydrates in the form of sugar.

COMMON METHODS OF COOKING IN OUR COUNTRY.

(1) Stewing.
(2) Boiling
(3) Frying.
(4) Steaming.
(5) Baking.
(6) Roasting.

Stewing.—(180° to 190° F.) is cooking in a little liquid in a closed vessel for a long time, over a slow fire. This is the commonest method of cooking in Ceylon, for all our curries are stews. Any article can be stewed and this method of cooking over a slow fire for a long time makes the toughest bits of meat soft and digestible. In stewing, food must not be cooked too fast and the fire must not be too strong. "A stew boiled is a stew spoiled." In this method of cooking there is no waste, for all that is cooked is eaten. Meat and fish must always be cooked over a slow fire.

Boiling—is cooking by means of liquid raised to a temperature of 212° F. liquid being sufficient to cover the article of food:—

(1) When we want to boil a joint of meat and retain in it all its flavour and nourishment, we plunge the joint into boiling water and maintain this heat for five minutes. After this we cook over a slow fire so that the meat merely simmers or cooks at a temperature of 170° F.

(2) If we want to get all the nourishment into the water as in the making of soup, we cut up the meat into small pieces and place in cold water. Then we let this stand for some time until some of the meat juices get into the water. Then we cook the meat over a slow fire, gradually raising the temperature to 170° F. (simmering.) The food is cooked at this temperature for about two or three hours.

(3) If we want the nourishment both in the meat and liquid as in the making of broth, we put the meat into warm water and the water is not allowed to boil at all until the very end. All the time the meat is cooked at a temperature of 170° F. (simmering).

Boiling of Fish.—The water must be just below boiling point. If fish is put into boiling water it will break.

Boiling Vegetable. — Green vegetable *e.g.*, cabbage should be put into boiling water to which salt is added and boiled for about ¾ of an hour until the stalks are tender. The scum which collects on the top must be removed. The cabbage is then drained and a little butter and a pinch of pepper added. A pinch of bicarbonate of soda added to the water helps to preserve the green colour of the vegetables but this destroys a large percentage of the vitamins.

Potatoes and other Tubers—should be put into cold water and boiled.

Root Vegetables.—Carrot, turnip, etc., not tubers, should be put into boiling water with salt in it.

Frying.—Cooking in oil raised to a very high temperature.

Temperature for Frying.—Fish 360° F.- 375° F., Meat 370° F. - 380° F., Fritters and pan cakes 340° F. - 375° F., Small Fish 400° F.

Frying heat is so great that it destroys the food values. Therefore the article of food to be fried should be protected (1) by egging and crumbing. (2) Using of egg and flour. (3) Butter-coating as in fritters.

There are three methods of frying: (1) Dry frying, as in (*a*) frying of bacon where no oil is used. It is fried in its own fat. (*b*) Frying in a little fat as in the frying of pan cakes.

H. M. C.

(2) **Shallow Frying**.—Where sufficient oil or fat is used to cover the bottom of the pan such as in frying of cutlets and fish.

(3) **Deep Frying.**—Fat to cover the food completely. This fat can be used over and over again.

Rules for Frying.—Food must be as dry as possible, otherwise fat will splutter. Protect food against great heat by wrapping it in flour and then by egging and crumbing. Before putting the food in to fry, see that the fat is hot. When done, drain on paper

Steaming—is cooking food in water vapour. This is a good method of cooking, for the food is made very digestible. Many of the foods given to invalids or little children should be steamed, *e g.*, egg puddings, etc.

DIRECTIONS FOR STEAMING PUDDINGS

(1) To steam puddings, grease a pudding mould and put the mixture in.

(2) Cover the top with a greased paper to prevent water getting in.

(3) Boil water in a saucepan or chatty.

(4) Put in the pudding bowl taking care that the water in the chatty comes ¾ parts of the way up the pudding bowl.

(5) Cover the vessel to prevent escape of steam.

(6) As water in the chatty evaporates, add more boiling water.

(7) After about ¾ of an hour take the pudding bowl out of the chatty and turn out on a plate, when cool.

BAKING

Baking—is cooking by means of hot dry air in a closed space either in gas, wood or oil stove, kerosene tin oven, Point Pedro oven or Dutch cooking pot.

Time for cooking varies with different substances. Pastry needs a hot oven. Time for cooking ten to fifteen minutes. Milk puddings are cooked in a moderate oven—time for cooking depends on grain.

Cakes.—Small cakes and sponge cakes are baked in a hot oven. Large rich cakes are baked in a slow oven.

RICE

Take a measure of rice. Pick and throw away the black grains, stones and paddy. Wash the rice several times, put it into a pot and add water. The height, of the water should be two inches from the level of the rice. This is usually measured with the middle finger. From the tip to the second marking of the middle finger roughly measures two inches.

It is also known that water required for boiling is double the quantity of rice, *i.e.*, two cupfuls of rice require four cupfuls of water.

On no account must too much water be added for it will overflow and the valuable mineral salts will be lost. Put the pot of rice over the fire. If the water is inclined to overflow, remove the cover.

When the rice is almost boiled, lower the fire. When well boiled and all trace of water has disappeared, take the pot off the fire. Stir with the handle of a ladle to prevent the rice getting lumpy. (One measure of rice is roughly sufficient for 7 or 8 people.)

EGG RICE

1 measure table rice or Muthu Samba
6 eggs (or less or more)
2 oz red onions finely sliced
20 pepper corns
6 cloves
2 in. piece cinnamon
1 in. rampé
Salt to taste

Method.—Wash and boil the rice with pepper corns, cloves, cinnamon and salt. Beat the whites of eggs to a stiff froth and fold in yolks.

Heat the ghee in a saucepan or chatty and fry the onions and rampé, but do not brown them too much. Stir in the eggs and immediately add the rice after having removed the cinnamon and cloves.

Plain boiled rice may be used in which case the pepper corns, cloves and cinnamons are added to the onions when being fried.

EGG RICE *(Another Method)*

Boil rice, sufficient for two people. Two eggs. Four green chillies, sliced finely. One dessert-spoonful good ghee or butter. Salt.

Method.—Heat the fat in a chatty, add the green chillies and the onions and fry but do not brown them. Beat up eggs and add to the fat and immediately add the rice and stir quickly. Add enough salt and serve while hot.

YELLOW RICE

1 measure Muthu Samba rice
½ teacup ghee, butter or dripping
¼ lb. red onions, sliced
1 large coconut
1 teaspoonful saffron ground
6 cloves
6 cardamons
2 in. rampé
1 in. cinnamon
1 sprig karapincha
10 pepper corns
Salt

Method.—Wash the rice well and allow it to drain. Heat the ghee in a chatty, or saucepan and when very hot, fry the onions, karapincha and rampé.

When brown, add the rice and stir for about two minutes. Then add four cups of the first milk and four cups of the thin milk. Add salt to taste and saffron to colour it. The cloves, cardamons, pepper corns and cinnamon must be tied up in a muslin or voile bag, contents slightly smashed and added in. Stir occasionally until the rice is boiled. Stock may be used instead of coconut milk.

GHEE RICE

1 measure table rice or Muthu Samba
8 cups of meat stock
4 oz. ghee, butter or dripping
4 oz. red onions, sliced
15 pepper corns
3 cardamons
5 cloves.
3 in. piece rampé
¼ in. sera (lemon grass)
2 in. pieces cinnamon
Salt

Method.—Wash the rice well and allow it to drain. Heat the ghee in a chatty or saucepan. When very hot, add the sliced onions and a small piece of sera and rampé.

Fry these. Turn in the rice and stir. Add the stock and the spices tied up in a piece of muslin or voile and boil.

PILAU RICE

1 measure table rice or Muthu Samba

1 fowl

1 teacup ghee, butter or dripping

¼ lb. sultanas

18 almonds, blanched and sliced or Cadjunuts

4 oz. red onions sliced

5 cloves

2 in. cinnamon

8 cardamons

Sprig karapincha

2 in. piece rampé

3 or 4 slices bacon or ham, cut into pieces

4 hard boiled eggs (more or less for garnishing

4 potatoes for chips

Method.—Clean the chicken and cut it up into pieces. Put it into a pan and cover with 10 cupfuls of water, and a little salt, 5 onions

sliced. Boil gently until the chicken is tender. Separate the stock, add half the quantity of ghee into a pot and brown the onions and rampé. Stir in the rice. After two minutes add the stock and the flavouring tied up in a bundle. When boiled take the vessel off the fire and mix in the sultanas slightly fried in a little ghee, or in the fat after the bacon has been fried. Fry the bacon and set it aside. Then fry the almonds. In coconut oil or ghee, fry the potatoes finely sliced. (This should have been sliced, washed and dipped in saffron and salt and dried before being fried.)

Then grill the chicken, add salt, vinegar and pepper into the chicken and fry in the ghee. Serve the rice into a dish and decorate it with the grilled chicken, potato chips and hard boiled eggs and bacon. The eggs may be browned in fat after being boiled.

ANANG OR COCONUT SOUP

Milk of half a coconut (two cups of first and second milk)
2 onions, sliced
2 green chillies, sliced
1 sprig karapincha
1 in, rampe
Juice of half a lime
1 dessertspoonful of maldive fish
1 Pinch of saffron
Salt

Method.—Put the milk into a chatty and add the onions, green chillies, curry leaves, saffron, maldive fish and salt, and cook over the fire stiring all the time to prevent curdling of milk. When the onions and the chillies are boiled take the chatty off the fire. Add the lime-juice, stir the anang for one or two minutes longer. Anang is often given to children with rice and lightly boiled egg. When curries are made without much gravy, this is made to complete the menu.

The anang may be made fairly thick and egg poached in it. Fish may be cooked after being added to the anang preparation.

DHALL CURRY

½ chundu dhall
4 or 5 red onions
1 teaspoonful powdered Maldive fish
2 green chillies
1 sprig karapincha
½ in. cinnamon
1 cup of first milk of coconut
2 cups of second milk of coconut
1 pinch of saffron
Salt to taste
A few drops of lime-juice

If the vegetable is to be tempered I desert-spoonful of coconut oil or ghee or butter, 2 or 3 onions, sliced. Few karapincha leaves, a small piece of rampé, if desired a few grains of mustard.

Method.—Take the dhall into a "nabiliya" and wash several times until all trace of froth disappears.

Strain it into a chatty. Add all the ingredients and the thin milk and cook over the fire stirring it occasionally. When the dhall is boiled pour in the thick milk with salt added to it. Cook for a few minutes longer. A few drops of lime-juice may be added. To temper, transfer the dhall curry into another vessel. And the fat into the chatty and when hot, stir in the sliced onions, karapincha, rampé and mustard seeds. Stir until the onions are a golden brown. Turn in the curry immediately, cover and after about two minutes take down the chatty.

ASH PLANTAIN

2 ash plantains
4 onions, sliced
2 green chillies, sliced
1 sprig of karapincha
A teaspoonful of maldive fish
A pinch of saffron
½ cup thick milk
2 cups of thin milk
Salt

Method.—Pare the plantains and cut them into slices. Rub in a mixture of saffron, salt and scraped coconut to remove the astringency. Wash in cold water. Put all the ingredients into the chatty except the thick milk. Mix well and cook over the fire stirring occasionally. When the vegetables are boiled, add the thick milk and cook for a few minutes longer. After the thick milk is added stir frequently to prevent curdling of milk.

If a dry curry is decided cut the plantains in cubes or strips, fry until a golden brown and allow to drain. Cook in less liquid and add a little roasted and ground corriander and white cummin.

SWEET PUMPKIN OR WATTAKKA CURRY

10 cubes of sweet pumpkin (edge of cube about 1½ inches)
1 cup thin milk
½ cup thick milk
4 onions sliced
2 green chillies
1 sprig karapincha
2 pips garlic
1 slice ginger
1 teaspoonful mustard
10 pepper corns
2 dessertspoonfuls scraped coconut
1 pinch saffron
Salt

Method —Cut the vegetables into cubes and wash. Put into a chatty with the thin milk, chillies, onions, curry leaves, saffron, and salt and boil.

Grind the scraped coconut, mustard, pepper, ginger and garlic together and mix it in the thick milk. Add this to the curry stir and cook for a little while longer. Be careful not to mash the vegetable.

JAK-SEED CURRY

(Kalupol)

25 jak seeds
3 cups thick and thin milk
1 teaspoonful maldive fish
2 green chillies
4 onions
Roasted and ground dry chillies, coriander, cummin.
Saffron and pinch salt.
1 teaspoonful of rice (raw).
1 dessertspoonful scraped coconut.

Method —Wash and boil the jak-seeds until their jackets burst. Mash the seeds slightly, but not too much.

Put it into a chatty with the milk, green chillies onions, saffron salt and roasted and ground dry chillies, corriander and white cummin.

Grind together the roasted scraped coconut and raw rice and add this to the chatty and cook for a little while longer. This curry will be tastier if tempered.

KANKUN LEAF

2 bundles of kankun leaves
2 dessertspoonful of dry chillie powder
4 onions, sliced
4 green chillies, sliced
2 dessertspoonfuls of maldive fish
½ cup thick milk
Salt
1 tablespoonful coconut oil or ghee

Method.—Pick the leaves and tender stalks, wash well and put into a chatty. Add all the dry ingredients and the coconut milk.

When the leaves are well boiled, add the fat and let the leaves cook in it. When done, take the chatty off the fire.

Dry fish, salt fish, prawns, tender cadjunuts can also be cooked in the same way.

MIXED LEAF MALLUN

A handful of Mukunuhenna leaves
A handful of tender Erabedu leaves
A handful Kurungang leaves
2 or 3 large Lettakotchi leaves

½ coconut scraped
A little ground saffron
1 dessertspoonful of maldive fish
5 or 6 onions
4 green chillies broken up into 3 or 4 pieces
Salt

Method.—Wash the leaves well. Wrap the small leaves in the large lettakotchi and shred very fine.

Put the shredded leaves into a chatty with salt water, onions, chillies and scraped coconut, and cook over the fire stirring it well until cooked.

LEAF MALLUN

Leaves such as Mukunuhenna, Kurungang or Angune may be made into a mallun in the following way:—

Wash the leaves well. Gather them together tightly in your hand, cut the bundle in the middle, hold the two halves together, shred very fine. To a breakfast cupful of shredded leaves add 6 onions finely sliced, 4 green chillies also sliced or 4 dry chillies broken up roughly each into 4 or 5 pieces, 2 dessertspoonfuls of scraped coconut, salt water and a pinch of saffron. Put all into a chatty cover and allow to cook. Stir frequently.

Leaves such as cabbage, radish and kankun may be cooked with the scraped coconut ground or pounded together with a little saffron and a few onions, instead of the plain coconut.

Tender jak pollos mallun may have garlic, ginger, saffron and onions pounded with coconut.

Bread fruit mallun will have a little dry chillies, saffron and pepper ground with the coconut.

MEAT CURRY

1 lb. meat
8 dry chillies
1 dessertspoonful coriander (kottamalli)
½ dessertspoonful white cummin (suduru)
1 teaspoonful rice (uncooked)
6 pepper corns
6 onions, sliced
4 green chillies
1 sprig karapincha
1 sprig rampé
½ inch sera
2 pips garlic, minced
2 slices ginger, chopped or shredded
1 small piece cinnamon
1 pinch saffron
1½ cups of thin milk
1 cup thick milk
Salt
1 tablespoonful vinegar or lime

Method – Wash and cut the meat along the grain. Put this into a chatty. Roast the dry chillies, coriander, white cummin, pepper and rice and grind together. Add this to the meat. Add also the saffron, the onions, green chillies, curry leaves, ginger, garlic, salt, cinnamon and add the thin milk. Cook over a slow fire. When very little liquid is left, add the thick milk and cook for a little while longer.

MEAT BADUN

1 lb. meat
1 cup thick milk
1½ cups thin milk
Salt
Pinch saffron
1 dessertspoonful of roasted and ground chillies
1 dessertspoonful roasted and ground coriander and white cummin
6 red onions
1 small piece rampé
1 small piece sera
1 sprig karapinche
2 pips garlic
2 slices ginger
1 piece cinnamon
1 dessertspoonful of ghee or dripping
Vinegar

Method.—Wash the meat and cut it into fairly large pieces. Add the salt and vinegar and mix well. Then add the saffron and other dry ingredients, mix the thin milk. Cook over a slow fire. When meat is well boiled remove the gravy and add the fat and let the meat fry in this. Add the gravy and the thick milk. Put potatoes previously boiled and skinned.

SATHÉ CURRY

1 lb. meat

⅛ bottle oil or ghee

1 dessertspoonful Vinegar

1 dessertspoonful roasted and ground chillies.

1 dessertspoonful roasted and ground coriander and white cummin

1 cup thick milk

1 sprig karapincha

1 piece rampé

1 bit ginger

1 bit sera

Salt

12 pieces of ekel, 4 inches long

Method.—Wash and cut the meat into small pieces, mix in a little salt and saffron and fry for a few seconds. Then pass about 5 bits of

meat through each ekel and fry again Put the meat, the dry ingredients and milk into a chatty, mix and cook over a slow fire.

PATTY CURRY

1 lb. meat
12 billing fruits or a few tomatoes
1 dessertspoonful of coriander and white cummin, ground
1 sprig karapincha
1 piece of rampé
1 piece sera
1 pip garlic, minced
12 red onions
4 green chillies
2 cups thick milk
2 dessertspoonfuls of ghee or coconut milk
Salt

Method —Wash and mince the meat, and put into a chatty. Add the meat, milk, billing, green chillies, half the onions, ground curry stuffs, rampé sera, garlic, ginger, cinnamon, and salt. mix well. Place another chatty on the fire and put in the fat and when hot, add the other half of the onions and a few karapincha leaves and rampé. When these are fried, put in the curry, cover and cook over a slow fire, until the curry is dry. Cut up the boiled potato and egg very fine, add into the curry and serve. This is the filling for patties.

CARAMANATCHY

1 lb. meat
2 oz. red onions
½ coconut
1 dessertspoonful coriander powder
1 teaspoonful white cummin
½ teaspoonful cinnamon powder
½ teaspoonful pepper powder
1 tablespoonful chopped fennel (anduru)
2 slices of ginger
2 pips garlic, chopped
Salt and vinegar to taste
½ rusk
Ghee or butter

Method.—Wash the meat and cut up into fairly thick slices. Prick each piece with a fork. Add all the ingredients except the rusk. Place on the fire with sufficient cold water to allow the beef to boil tender. When dry remove the meat leaving the gravy and let it stand for a little while. Next add the first and second milk and place on fire. Add the powdered rusk. When the meat is well cooked, remove the gravy from the pan and add to the beef in the pan, the dripping or ghee Fry the beef well, turn in the gravy and cook over a slow fire.

MEAT SMORE

2 lb. Piece of meat
1 lb. small potatoes
½ lb. Bombay onions
½ teaspoonful pepper powder
1 dessertspoonful sliced onion
1 piece rampé
1 piece sera
1 sprig karapincha
1 piece cinnamon
1 tablespoonful vinegar
1½ dessertspoonfuls of roasted and ground chillies
1½ dessertspoonfuls of roasted and ground corriander and white cummin
1 Pinch saffron
2 cups of thick milk
3 cups thin milk

Method.—Wash and prick the meat with a fork and put in salt, pepper and vinegar. Put into a pan and add all the onion, ground currystuffs, curry leaves, Bombay onions, cleaned, and the thin milk and boil until meat is cooked. Remove the gravy and add the fat and fry the meat. Pour over the gravy and two cups of thick milk Add potatoes previously boiled and peeled.

MOLOGOTHANNIE

1 lb. beef
10 pepper corns
Small bit cinnamon
1 large Bombay onion
1 ripe tomato
1 bit rampé
1 bit sera
1 sprig curry leaves
A pinch saffron
3 pips garlic
1 bit ginger
1 dessertspoonful ground coriander and white cummin
1 dessertspoonful ground chillies
1 tea cup milk
6 teacups water
8 red onions, sliced
½ dessertspoonful ghee or dripping

Method.—Boil the beef with the pepper, cinnamon, tomato, Bombay onions, rampé, sera, curry leaves, garlic, ginger, and half the quantity of onions and water. When the meat is well boiled put in the milk, curry powder and chillies. Five minutes after this temper in the fat and the other half quantity onions. Strain before serving.

SEER FISH CURRY

1 slice fish (½ lb.)
1 cup of thick milk
1 dessertspoonful ground chillies
A few dill seeds
A pinch of saffron
A few bits of goroka
4 red onions
2 green chillies
Salt

Method.—Wash the fish in goroka and water. Put the fish into a chatty. If the slice is large, cut it into two, mix the milk and all the dry ingredients. Add the fish and cook over a slow fire until the gravy is thick. Occasionally stir, being careful not to break the fish.

CRAB CURRY

5 large crabs
3 cups of thin coconut milk
2 cups of thick coconut milk
2 handfuls of murunga leaves
6 red onions
6 green chillies
2 dessertspoonfuls ground chillies
1 sprig curry leaves
1 dessertspoonful coconut oil or ghee
Juice of 1 lime and salt to taste

Method.—Wash the crabs well and then take the edible parts into a chatty. Add the milk and the ingredients and mix well. Temper this in fat

and cook over a slow fire until the crabs are well boiled. About 4 cups gravy must be left in the curry. If the crabs are very large, the hard shell should be smashed slightly, taking care not to let the juice run out.

SEER HEAD, CURRIED

1 large seer head
A few bits of goroka
3½ dessertspoonfuls of ground chillies
10 pepper corns, ground
4 green chillies, sliced
4 red onions, sliced
1 sprig curry leaves

Method.—Clean and cut the head into large sized pieces. Wash several times in water using about 8 pieces of goroka When the fish is well washed, put it into a clean chatty with the goroka. Add the ingredients and four teacups of water and cook over a fire. When the fish is cooked and about 3 cups of gravy left, take the curry off the fire.

IRISH STEW

4 oz. meat
4 oz. potatoes
2 oz. Bombay onions
Pepper and salt

Method.—Wash the meat and cut into pieces along the grain. Cook meat for 10 minutes with liquid to cover. Then let it simmer for ¾ of an hour. After the first 10 minutes add sliced onions (cut up in rings), pepper and salt. Later add potatoes and let it cook. Add more pepper and salt to taste. Serve hot.

BROWN STEW

4 oz. meat
1 turnip
1 carrot
2 small onions
½ pint water
½ oz. fat
Pepper and salt

Method.—Wash meat, dry and wrap in seasoned flour (flour pepper and salt). Cut up turnip, onions and carrot. Heat fat and fry meat till brown Take this out and fry onions. When brown, add turnip and carrot. When these are brown add meat, then the rest of the flour. Mix well and add water. Stew for five minutes. Add pepper and salt to taste Then let it simmer for one hour till quite soft.

POTATO SAVOURY

1½ lbs. potatoes
3 oz. grated cheese
1 teaspoonful of chopped parsley
½ oz. butter
Salt and pepper

Method.—Boil potatoes and mash them while hot. Add pepper and salt, ¾ of the cheese and parsley and mix well. Put mixture into a pie-dish. Sprinkle over the remaining cheese, and bake till it turns a golden brown. Hot oven required.

MACARONI CHEESE

¼ lb. macaroni
½ pint milk
3 oz. grated cheese
1 oz. butter
½ oz. flour
Salt and pepper

Method—Put water in a saucepan to boil. When it comes to boil, add a teaspoonful of salt. Then add macaroni broken up into short lengths and boil till tender. Melt butter in a saucepan, stir in the flour and add the milk and seasoning. Stir till cooked. Strain the macaroni and put it into the mixture—mix well. Add half the cheese grated, mix and put into a greased pie-dish. Then put a layer of macaroni and a layer of cheese. Bake for 10 minutes in a quick oven, until the top is brown.

TOMATO AND KIDNEY PIE

1 kidney
4 tomatoes
1½ oz. macaroni
1 tablespoonful flour
1 tablespoonful bread crumbs
1 large onion
1 gill stock or water (¼ pint)
1 teaspoonful of fat
Salt and pepper

Method—Boil the kidney in the water till tender, then slice. Brown the onions in the dripping. Add flour and pour in stock or water to form gravy. Season with pepper and salt. Boil macaroni till tender and slice tomatoes. In a greased pie-dish put first a layer of macaroni, then tomato. Add a little salt and pepper and bread crumbs. Continue these layers till all is finished. Place another layer of macaroni on the top, sprinkle over with bread crumbs and bake in a hot oven till brown.

BACON AND LIVER

Wash bacon in hot water to take away the salt. Wash liver carefully. Season flour well and wrap up the slices of liver in it Fry bacon and in that fat fry the liver. If the fat is not sufficient, add a little butter or dripping. When the liver is fried use the remaining fat and flour and water to make a gravy. Then add the bacon and liver into the gravy and cook for a little while. A little vinegar may be added.

FRICASEED BRAIN

1 brain
1½ pints milk
1 oz. flour
1 onion
1 carrot
1 turnip
Pepper and cloves
Cinnamon
Celery
Leek and parsley
1 oz. fat

Method.—Soak the brain in salted water for half an hour. Then blanch in plain water. Blanch onion also. Take off the membrane while the brain is hot. Boil the onion, carrot and turnip in a little water and when done strain the water and use for sauce. Make a sauce with fat seasoned flour, stock and milk. When fairly thick put in the brain cut up into pieces and place on stove to simmer. When done take off the brain place neatly on a dish, pour gravy over it and serve hot.

BEEF-OLIVES

¼ lb. meat (under cut)
2 slices bacon
1 teaspoonful chopped parsley
½ pint water
2 dessertspoonfuls bread crumbs
½ egg and ½ oz. flour
½ oz. fat
Salt and pepper

Method—Chop the bacon fine and mix with salt, pepper, bread crumbs, egg and parsley. If too dry, add a little milk. Cut the meat into thin long slices, spread each out with the knife place a line of stuffing in the piece of each slice, roll it up, and tie with a piece of thread and coat in seasoned flour. Melt the fat in a stew pan and brown the rolls of meat. Add the stock and rest of flour and seasoning. Before serving cut the thread off. Place the beef-olives in a row down the centre of dish and pour the gravy over and round it.

COD A LA PORTUGAIS

½ lb. fish
¼ lb tomatoes
1 lb. onions
1 carrot
¼ spoonful pepper
Bread crumbs
½ egg
1 teaspoonful chillie vinegar
½ oz. fat
½ teaspoonful cornflour
1 sprig of parsley
1 oz. ham or bacon
Salt and pepper

Method.—Wash fish well. Skin it, take off bone and cut into neat slices. Flour, egg and crumb fish. Fry bacon in hot fat, put in cut up onions and carrot and allow to sweat. Skin tomatoes, slice and add to the carrot, etc., with pepper parsley and salt. Simmer for twenty minutes. If tomatoes are not quite juicy add very little water. When vegetables are quite tender take off fire and remove parsley and pass through sieve. Put sauce back on fire, add a little cornflour and boil for a little while, stirring to prevent burning. The sauce must be a flowing one. Pour round fried fish and serve. Before passing the sauce through the sieve, add the chillie vinegar.

KEDGEREE

4 oz. rice
1 oz. butter
1 hard boiled egg
Fish
Salt and pepper to flavour

Method.—Boil the rice, flake the fish, season the rice and fish with pepper and salt. Melt butter in a saucepan and put the rice, fish, half the white of egg chopped. Put the mixture on the stove for about five minutes to heat, stirring it to prevent it burning. Turn it on to a dish and sprinkle the white of egg chopped and yolk sieved, over it. Decorate with parsley leaves. The kedgeree must not be sticky.

MACARONI CUTLETS

1½ oz. macaroni
1½ lb. cheese
1 oz. butter
1 gill milk (¼ pint)
1 egg
½ oz. flour
Bread crumbs and pepper
Salt and little flour

Method.—Break macaroni into small pieces. Put this into boiling water to which a little salt has been added and allow to boil till quite tender. Put fat into another saucepan and melt it. When melted, add flour seasoned with pepper and salt.

Add all the milk at once and stir. When paste is quite thick and leaves the sides of the pan, take it off the fire and add the grated cheese. Then add the boiled macaroni and put on a plate to cool. Cut up. Put on floured board and shape. Egg, crumb and fry.

LENTIL CUTLETS

2 oz. dhall
1 onion
½ gill milk or stock
½ oz. flour
½ oz. fat

Method.—Wash the lentils well. Put enough water into a saucepan and boil until tender. Then strain, but do not throw away the water. If there is any, it may be used as stock. Then pass the dhall through a sieve. Put fat into a saucepan and when melted, add flour, pepper and salt. Then add the stock or milk and stir. When paste is quite stiff add the dhall. Then take it off the fire and leave to cool. Form into shape and wrap in seasoned flour. Egg, crumb and fry.

SEMOLINA CUTLETS

1½ oz. semolina (rulang)
1½ oz. cheese
1 oz. butter
2 gills milk or water

Method.—Boil the milk. Add semolina and stir. Then add butter, pepper and salt. Stir until it boils and forms a stiff paste. Add cheese, spread on a plate to cool. Cut into pieces. Egg, crumb and fry.

MEAT CUTLETS

1 lb. meat
½ lb. potatoes (boiled)
½ lb. red onions
1 egg
20 pepper corns and salt
¼ bottle oil

Method.—Wash the meat and cut into pieces. Then pass the meat, boiled potatoes and onions through the mincing machine. Mix pepper and salt in. Add and mix yolk of egg—form into cutlets. Egg, crumb and fry in oil.

POTATO SOUP

8 oz. potatoes
1 onion
½ pint milk
¼ oz. fat
¾ pint cold water
1 teaspoonful sago
2 cloves
Salt and pepper

Method.—Wash, peel, and slice onion and potatoes. Melt the fat and add to this the sliced potatoes and onion and cover with lid. This is called sweating. Sweat in melted fat for 10 minutes, giving an occasional shake and simmer till

vegetables are tender. Pass through a sieve. Put back into saucepan. Add sago and cook till sago is quite transparent. Add milk and flavouring and heat.

LENTIL (DHALL) SOUP

4 oz. dhall
2 onions
2 turnips
2 carrots
½ oz. fat
½ oz. flour
1 pint water
1 gill milk
Celery and parsley
Pepper and salt

Method.—Wash the dhall well. Melt fat and sweat in melted fat for five minutes. Cut vegetables and add to lentils. Shake the saucepan occasionally. Add water. Flavour with salt and pepper and simmer till vegetables are tender. Pass through sieve. Put back into saucepan. Mix flour in milk and add to lentils. Cook, stirring all the time. If too thick, add hot water. Serve with fried bread.

TOMATO SOUP

8 oz tomatoes
1 onion
1 carrot
1 turnip
Pepper corns and mace
Parsley and cloves
Celery
1 gill boiling water
1 teaspoonful cornflour

Method.—Wash and slice tomatoes. Cut up carrot, turnip, and onion. Sweat in fat for five minutes. Add hot stock or boiling water. Put in flavouring. Bring to the boil and simmer till tender. Pass through sieve. Re-heat and add flour made into a paste with water.

FISH PUDDING

2 slices half-cooked fish (seer)
1 egg
Juice of half a lime
Pepper and salt
1 gill milk (¼ pint)
1 oz. butter
1 oz. bread crumbs
1 oz. flour

Method.—Flake the fish and add pepper and salt. Melt the butter in a saucepan; add the flour and stir in the milk and stir until smooth. This is called a panada. Add the egg beaten up. Then add the fish and bread crumbs and more seasoning if desired.

Turn into a greased pudding bowl and cover with grease-proof paper and steam.

STEAMED FISH AND WHITE SAUCE

Method.—Wash the slice of fish, rub in pepper, salt and lime and then ste am

Pour over white sauce.

WHITE SAUCE

1 oz. butter

1 oz. sieved flour

½ pint of milk

Pepper and Salt

Method.—Melt the butter in a saucepan. Stir in flour and mix until smooth with a wooden spoon Stir over a slow fire for a few minutes to cook the flour, but do not let it brown. Add the milk and stir briskly until a smooth sauce is obtained. Add pepper and salt. Garnish with well washed parsley or very finely sliced lemon.

PRINCIPLES OF CAKE-MAKING

1. Before beginning to make a cake, attend to the oven.
2. To cream butter and sugar together, put the two into a basin and beat them together with the back of a wooden-spoon until they are quite white.
3. If butter is hard, warm the basin but be careful that the butter does not become oily.
4. Before adding the eggs, break each first into a separate vessel to see that it is fresh.
5. Never put wet fruit into a cake. If there is no time to dry it sufficiently, clean with a little flour.
6. Break up sugar removed from candied peel. Never put this into cake because it will tend to make it heavy.
7. Always grease cake-tins before putting in the cake mixture. For a large rich cake it is advisable to line the tin with paper by putting a double band of greased paper round the inside of the tin and two rounds of such paper in the bottom of the tin.
8. If the oven burns at the bottom bake the cake on a tray of sand.

9. When baking a large cake, a thick piece of brown paper tied round the outside of the tin, will prevent the cake getting too dark at the edges.
10. If cake is inclined to burn at the top, a piece of paper should be put over it.
11. Cakes require moderately hot oven at first but the heat must afterwards be reduced in order that the cake may be cooked through without it getting burnt.
12. Do not move a cake about in the oven, and always open and shut the oven door as gently as possible. A sudden jar may cause the cake to sink in the centre.
13. To test if a cake is cooked, a clean ekel should be passed through the centre of the cake. If the cake is done, the ekel will come out clean and dry
14. After having turned out of tin, place cake on a sieve or tilt it against something so that the steam can escape freely from it.

OVEN TEST

If a piece of paper turns black at once the oven is too hot for anything. If it turns a dark golden brown in three minutes it is the right temperature for small cakes, meat and pastry (hot or quick oven). If it turns a golden brown in three minutes it is the right temperature for large cakes, puddings and fish. If it turns a pale golden brown the temperature is right for rich cakes, milk and egg puddings (slow oven).

Cakes.—Small cakes and sponge cakes require a hot oven. Large rich cakes, slow oven.

BUTTER CAKE

1 lb. flour
1 lb. sugar
1 lb. butter
8 eggs
1 teaspoonful baking powder
2 teaspoonfuls essence of vanilla
A bit of candied peel
A pinch of salt

Method.—Cream the butter and sugar together. Add the yolks of egg and beat. Whip the whites of eggs to a stiff froth. Sift the flour, salt and baking powder. Add alternately a little flour, and a little white of egg to the mixture until all is lightly blended together. Paper a tin and put in the mixture. Decorate with strips of candied peel. Bake in a moderate oven.

SPONGE CAKE

3 oz. flour
3 oz. Sugar
2 eggs
¼ teaspoonful baking powder
2 tablespoonfuls hot water
Pinch of salt

Method.—Sieve flour, baking powder and salt. Beat the egg and sugar together for ten minutes. Then add the sieved flour, baking powder and salt and mix lightly and quickly. Put into greased tins and bake in a quick oven.

To test whether done, press lightly on cake, with finger tips.

SWISS ROLL

To make a Swiss roll, use sponge cake mixture. Bake in a flat baking sheet, in a quick oven for ten minutes.

Wring out a tea-cloth in hot boiling water and spread on board. Over this lay a sheet of paper, sprinkled over with sugar. Turn out the cake on to this and quickly spread jam with a spoon or knife. Then roll.

All this must be done very quickly, while both cake and cloth are hot, otherwise the cake will dry and crack.

ROCK CAKE

¼ lb. flour
1 oz. butter
1 oz. sugar
1 egg
1 oz. currants
⅝ oz. candied peel
¼ teaspoonful spice
½ teaspoonful baking powder
1 dessertspoonful milk
Pinch of Salt

Method—Grease a baking sheet. Sift the flour, baking powder and salt together. Put this into a vessel. Add the butter and rub the butter

into the flour with the finger tips till it becomes like coarse bread crumbs. When rubbing the fat into the flour, let them fall from the finger tips through the air. Next add sugar, spice, currants and peel. Beat egg with milk and add to dry mixture. Take two forks and drop the mixture in rough heaps on the tin tray. Bake in hot oven for ten minutes.

LOVE CAKE

½ lb. Semolina (rulang)
Yolks of 10 eggs
Whites of 5 eggs
150 cadjunuts (chopped fine or minced)
¼ lb. butter
1 lb. soft sugar
1 wineglassfull rose water
A little bees honey (optional)
¼ teaspoonful of grated nutmeg
¼ teaspoonful of grated lemon rind
¼ teaspoonful of powdered cinnamon

Method.—Beat the yolks of the eggs and sugar together. Add the cadjunuts, previously soaked in half the rose water. Warm the rulang and mix it with the butter and the spices. Beat well. Beat the white of the eggs into a very stiff froth. Add this and the rest of the rose water into the mixture. Mix again. Line a baking sheet with buttered paper, turn in the mixture and bake in a moderate oven.

SPONGE SANDWICH

The weight of two eggs in flour, butter and sugar, one teaspoonful baking powder. Pinch of salt.

Method.—Beat butter and sugar to a cream. Add eggs, one at a time, and beat well. Sieve the flour, baking powder and salt and add to cream. Bake for about fifteen minutes in a hot oven, cut into two and put hot jam in between and sprinkle sugar over.

CHOCOLATE CAKE

6 oz. flour
6 oz. butter
6 oz. sugar
½ teaspoonful baking powder
1 oz. cocoa powder
A little milk
3 eggs

Method.—Cream the butter and sugar, add the beaten egg gradually and beat again. Then add the ingredients and a little milk. Bake in a moderate oven. When cold cut in two and place between chocolate butter icing. Put together again and ice all over with chocolate icing.

CHOCOLATE BUTTER ICING

Method.—Cream together the butter and sieved icing sugar in the proportion of 2 oz. butter to 3 oz. sugar until smooth and creamy. Add a little water to cocoa and heat over fire and add this to the butter icing and mix well.

GINGER CAKE

½ lb. flour
¼ lb. sugar
¼ lb. preserved ginger
4 eggs
½ teaspoonful bicarbonate of soda
2 tablespoonfuls cold milk
2 teaspoonfuls dry ginger (powder)
¼ lb. butter
2 oz. golden syrup or ginger syrup
Pinch of salt

Method—Cream the butter and the sugar together and mix in the golden syrup. Beat up the eggs. Add this and the flour and salt and mix well. Add the finely powdered ginger and the ginger preserve chopped into tiny pieces (size of sultanas).

Lastly add the bicarbonate of soda dissolved in milk.

Put the mixture into a lined tin and bake in a moderate oven for about 1½ hours.

BREUDHER

1 lb. dough
¼ lb. sultanas
12 yolks of eggs, or
8 yolks of eggs and 6 oz. butter
6 oz. sugar
Rind of lime (chopped)
2 oz. butter

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Method.—Knead the dough to a firm consistency, adding the yolks of eggs, sugar and butter alternately. It is important that the ingredients should be added gradually in order to make the dough firm. Beat and knead the dough, alternately adding the fruit (washed, dried and rolled in flour).

Butter a breudher pan and put in the mixture. Place in the sun for an hour and bake in a hot oven.

CHRISTMAS CAKE

1 lb. rulang
2 lbs. soft sugar
1 lb. butter
25 yolks of eggs
Whites of 12 eggs
1 lb. raisins
1 lb. sultanas
½ lb. currants
½ lb. chow-chow
½ lb. ginger preserve
½ lb. pumpkin preserve
¼ lb. candied peel
200 cadjunuts
½ teaspoonful grated nutmeg
1 oz. bees' honey
½ oz. rose water
¼ oz. vanilla

Method.—Stone and cut up the fruit, candied peel, ginger preserve, etc., and mix with the flour. Cream the butter and sugar well, until very light. Add yolk of an egg at a time alternately with a little rulang, all the time beating up well. Next add raisins and the other dry ingredients, then the whites of eggs stiffly beaten up. Mix well, add the essences and the spices. Put the mixture into a pan lined with paper and bake in a moderate oven.

RULES ON ICING OF CAKES

(1) Remove all scraps of cake from the board before beginning to ice.

(2) Get icing sugar ready, roll and sieve it.

(3) See that cake is quite cold before icing is put on, otherwise the covering of icing when put on a hot cake will not let the steam escape. Moisture will be formed inside which will make the cake stodgy. The heat inside will melt the sugar.

(4) Do not overheat icing sugar, for shine will be lost.

(5) Pour on the icing when warm.

(6) Do not over-decorate cakes. Decorations must be simple but elegant.

(7) If icing is coloured, light shades should be used.

ICING

Icing may be done on cakes to make them look pretty and to make them taste better. Icing sugar is used for this. Put the icing sugar on a board and roll it with a rolling pin or bottle to get rid of lumps. Then sieve it to get it as smooth as possible Any flavouring may be used—cocoa, essence of almond, vanilla, lemon, fruit-juices, such as lime, orange, pineapple Water icing is generally used on small cakes.

To Ice Six Small Cakes.—Crush up and sieve 3 oz. of icing sugar. Put this into a saucepan and add about 2 teaspoonfuls of water and a few drops of essence. Stir with spoon. Then warm the saucepan over the fire but do not heat it too much or else shine will be lost. From time to time stand the saucepan on the palm of the hand. The palm of the hand should be able to bear the heat of the bottom of the saucepan. When icing is thin enough to be poured over cakes, quickly pour the icing over each cake and let it run over the surface by itself. If touched, the icing will not be smooth. A drop of cochineal may be added while heating.

CHOCOLATE FONDANT ICING

4 oz. icing sugar
½ oz. cocoa
¼ gill water

Take ½ oz. of cocoa into a saucepan and add ¼ gill water and boil. Then let it cool slightly. Put in the 4 oz. icing sugar and warm over the fire, but do not heat it too much. The palm of the hand should be able to bear the heat of the bottom of the saucepan. Quickly pour the icing over the cakes. As the liquid in the saucepan gets too dry, warm over the fire.

Butter Icing—is used for sandwich cakes May be flavoured with any flavouring desired. For instance, in icing a chocolate cake, the cake may be cut into two and a layer of butter icing flavoured with cocoa put in between.

Recipe.—Half quantity butter to one of icing sugar and flavouring. Crush and sieve icing sugar. Add butter, and cream together with the back of a spoon. If cocoa is to be added cook the cocoa with a little water and add to the cream. Instead of cocoa other flavourings may be added.

MARZIPAN ICING

½ lb. icing sugar

¼ lb. ground almonds or cadjunuts with almond essence

White of egg

A little rose water

Method—Crush up the icing sugar and sieve it. Put this into a basin and add the finely ground almonds, or cadjunuts and almond essence. Then add enough white of egg to make into a stiff paste. Add the rose water and knead until the flavours are well blended. This may be used as a foundation for royal icing in rich cakes.

PRINCIPLES OF PASTRY MAKING

(1) Use half as much flour, as fat, and salt in proportion of one teaspoonful to a pound of flour.

(2) Sieve the flour (*a*) to aerate it, (*b*) to get rid of lumps, and (*c*) to get rid of creatures.

(3) Have everything as cool as possible. Make the pastry in the coolest part of the day. If possible use a marble slab for rolling on. For rolling use a bottle with water in it (iced water if possible). For rubbing fat into flour use tips of fingers for the sake of coolness. When rolling lift the rolling pin after each stroke to keep the pastry cool.

(4) Aerate the flour (*a*) sieve the flour, (*b*) let the flour fall from the fingers when rubbing in the fat.

(5) Before rolling, flour the board and the rolling pin.

(6) When rolling, do not roll over the edges of the pastry. Do not let the pastry stick to the board.

(7) Roll to the thickness of ½ inch for sweet dishes and ¼ inch for meat dishes.

(8) Bake in a hot oven until light brown.

PATTY PASTRY

1 lb. flour
Coconut milk or water (about two cups)
½ lb. butter
Dripping or lard
4 eggs
¾ bottle oil for frying
Salt

Method.—Sieve the flour and rub the fat into it. Make a well in the centre of the flour. Add the yolks of the egg and a little of the coconut milk and work these into the flour. Add more milk still working it into the flour until a fairly stiff dough is formed. Then knead. To test whether dough is kneaded enough, get a lump of it and cut through with a knife. If the cut surface is smooth it is ready for rolling. Now sprinkle a little flour on a board or marble slab and roll out the pastry as thin as you can possibly make it. Then get a cutter (the lid of a tin, slightly larger than that of a cigarette tin would do) and cut out as many circles as possible. Put a little of the patty curry in the centre, damp the edge of the circle with white of egg, fold one-half over the other and seal the edges. Press down with the prongs of a fork. Prong marks serve as decorations too Put the oil into a pan and when it is very hot add the patties. Fry till brown. Turn over and fry. Method of frying is deep frying. For pastry made of one pound of flour use curry made of one pound of meat.

SHORT CRUST PASTRY

4 oz flour
2 oz. fat
⅛ teaspoonful baking powder
Pinch of salt
Water

Method.—Rub the fat into the flour using the tips of the fingers and let the flour fall from the fingers into the basin so that air may get into it. Pour in water gradually stirring lightly with blade of a knife until a fairly stiff dough is obtained. Flour board and rolling pin or bottle, and roll out the pastry ⅛ inch thick. For baking, a hot oven is needed. This pastry may be used for fruit tarts, meat pies, jam tarts, etc. For jam tarts cut out the pastry into circles. Lay them in greased tins Make a few holes at the bottom of the tarts with a fork. Put a little jam in the centre of each and bake in a hot oven for about twelve minutes.

JAM TURNOVERS

Jam is put into the centre of the circle. The edge is moistened with water and the pastry is folded over as in patties. Bake in a quick oven.

FRUIT TART

Stew fruits with sugar and water and put this into a pie-dish and cover with pastry. Bake in a hot oven to cook the pastry, then let the oven get less hot or put the pie on a higher shelf to get the fruit well cooked. Some people stand the pie on the top of the oven when the crust is done.

CHEESE STRAWS

½ lb. flour
¼ lb. cheese
1 teaspoonful of powdered and sifted dry chillies
1 tablespoonful dripping or ghee
Salt
1 egg
½ bottle coconut oil

Method.—Sieve the flour and salt together. Rub the fat into the flour and mix in the egg, chillie and water into a smooth paste. Roll out the pastry, cut into strips and fry in oil until golden brown.

RASPBERRY BUNS

½ lb. flour.
2 oz. ground rice
3 oz. sugar
2 oz. butter
1 egg
¼ teaspoonful baking powder
2 tablespoonfuls milk
Salt
Jam

Method.—Put dry ingredients into a basin. Lightly rub in butter and beat up egg, add milk and mix. Divide into little cakes and make them round. Into a hole in the top, put a little jam, and gather the edges together. Brush with little egg or milk. Put on greased tin. Bake in a moderate oven for 20 minutes.

GINGER NUTS

¾ lb. flour
1 teaspoonful baking powder
4 oz. golden syrup (4 dessertspoonfuls)
4 oz. scraped jaggery
¾ oz. powdered and sifted ginger
4 oz. butter

Method.—Sieve flour, baking powder and salt. Add ginger. Melt the butter, syrup and jaggery in saucepan until blended. When cool stir into the flour to make a stiff paste. When cold form the paste into balls and bake on greased tin in a hot oven.

PLANTAIN FRITTERS

4 oz. flour
1 gill milk
½ oz. butter
Plantains
Pinch of salt

Method.—Melt the fat, add the milk and bring up to blood heat. Pour to sifted flour and make a batter. Beat well and allow to stand, cut up fruit into lengths and drop sugar on them (a squeeze of lime). Coat in batter and fry in deep fat.

SPONGE PUDDING

½ lb. flour
½ teaspoonful salt
2 oz. suet or butter
4 oz. chopped dates
Plums and figs
1 teaspoonful syrup
1 teacup milk
1 teaspoonful bicarbonate of soda

Method.—Shred the suet very finely, add a little flour, mix the rest of the flour and dates, etc., chopped up. Then the syrup (sugar one tablespoonful) and the milk to form a paste that would drop off the spoon. Add the bicarbonate of soda dissolved in a little milk or water. Steam for about 1½ hours. Half quantities of bread crumbs and flour could be used. When butter is used, rub the fat into flour.

DROPPED SCONES

½ lb. flour
2 oz. sugar
½ teaspoonful bicarbonate of soda
1½ gills sour milk
Salt

Method.—Mix all into a thick batter. Put a little fat into a frying pan, rub it with paper. Drop a spoonful of batter and turn them when air bubbles burst on top.

QUEEN OF PUDDING

1 breakfastcup grated bread crumbs
½ pint milk
1 oz. sugar
1 egg
Rind of lime grated

Method.—Boil milk in a saucepan. Add bread crumbs, sugar and lemon rind. Beat up yolk of egg and add. Put into a greased pie-dish and bake for ten minutes till mixture sets. Spread a layer of jam over it. Put back into an oven till tips of froth are brown.

CANARY PUDDING

Weight of 2 eggs in flour and sugar
3 ozs. butter
Baking powder—½ teaspoonful
A pinch of salt and a little milk
Flavouring

Method.—Cream the butter and sugar together. Beat in the eggs; add flour, salt and baking powder and mix well. Add the milk. Put into a greased pudding bowl and steam for about three hours.

SHORT BREAD

½ lb. butter
½ lb. sugar
1 lb. flour
1 egg

Method.—Cream the butter and the sugar. Then add the beaten egg and lastly the flour. Knead well. Roll out on a floured board and cut into fancy shapes. Prick with a fork before putting them in a oven until a very pale brown and sugar them well.

GINGER BREAD

4 oz. flour
1 teaspoonful ginger (powdered and sifted)
1 oz. fat
½ oz. sugar
3 oz. golden syrup (1½ tablespoonfuls or 3 dessertspoonfuls)
1 egg
¼ oz. candied peel
¼ oz. teaspoonful bicarbonate of soda
¼ gill milk
Pinch of salt

Method.—Grease a cake tin. Melt the fat and add golden syrup and sugar and melt over a fire but do not let it boil. Sift the flour, ginger and salt together. Cut up peel and add to the flour. Dissolve bicarbonate of soda in a little milk. Add this and the egg and syrup to the flour and beat. Pour mixture into a greased tin and bake in a moderate oven for ¾ or 1 hour. When done let it cool on a cake rack or wire sieve.

TODDY BREAD

1 lb. flour
2 teacups toddy
2 teaspoonfuls sugar
1 teaspoonful salt
2 teaspoonfuls butter

Method.—Rub butter into flour which has been sifted with the salt. Add the sugar and mix, leaving just a little flour to dust on board when kneading. And a little toddy at a time and make a stiff dough. Now knead the dough till it is quite soft and elastic. Put into a floured tin and leave in a warm place for about six hours. (Not more than 6 hours.) The vessel should be well protected from the draught; covered up. Bake in a hot oven for about 15 or 20 minutes. All vessels used should be warmed before use.

FRUIT SALAD

Cut up different kinds of fruits and pour over syrup prepared with sugar. Cool with ice.

STEWED FRUIT

If fruit is sweet use ½ lb. sugar to 1 lb. of fruit. If acid 1 lb. sugar to 1 lb. fruit.

Method—Boil sugar and water without stirring to prevent crystals forming. Then add fruit. Allow to come to boil and then gently simmer till fruit is tender. This can be served with custard.

CUSTARD

½ pint milk
2 eggs
2 oz. sugar

Method.—Boil milk, add sugar. Beat up the eggs and when milk is rather cool add it to the milk, stirring all the time. Put this into a saucepan and cook over a slow fire. Stir all the time until the custard thickens. If cooked too quickly or if the fire is too hot, the custard will get lumpy. This custard may be used with any pudding. (One egg may be used instead of two).

VATTALAPPAN

½ bundle kitul jaggery
Thick milk of one coconut
8 eggs
Nutmeg (grated)
Lime rind (grated)

Method.—Beat up the eggs. Scrape the jaggery and dissolve in coconut milk. Add nutmeg and lime rind and steam in a greased bowl.

ICE CREAM

The basis for many ice creams is a custard made of milk, sugar, egg and flavouring.

The cream is often named after the flavouring used, *e.g.*, Vanilla Ice Cream, Kola Ice Cream, Almond Ice Cream, Chocolate Ice Cream, etc.

CUSTARD FOR ICE CREAM, USING COW'S MILK

1 pint milk
2 tablespoonfuls or 4 dessertspoonfuls sugar
2 eggs
Flavouring desired

Method.—Boil the milk. Add sugar and dissolve. Beat up the eggs. Generally add the milk to the beaten eggs, stirring all the time. Then cook the custard over a very slow fire, stirring to prevent coagulation of egg. Just before taking custard off the fire, add flavouring and colouring matter if desired. Then let custard cool before freezing.

ORANGE CRUSH ICE CREAM

1 tin condensed milk
3 bottles Orange Crush
4 heaped dessertspoonfuls sugar

Add milk and sugar to aerated water and stir until dissolved. Then freeze.

Any other kind of aerated water may be used or a mixture of several kinds.

No eggs are used in this recipe.

ICE CREAM USING CONDENSED MILK

1 tin milk
2 tins hot water
2 dessertspoonfuls Sugar.
2 eggs
Flavouring

Dissolve the milk in hot water. Add sugar and stir until it is dissolved. Beat up the eggs and into this gradually add the milk, stirring all the time, otherwise the hot milk will coagulate the egg. Put into a saucepan and cook over slow fire, stirring to prevent curdling of milk.

Just before taking custard down from the fire, add flavouring desired, vanilla, essence of lemon, etc.

Use colouring matter which may be added at the same time as the flavouring.

FREEZING MIXTURE

To 8 lbs. ice use 1 lb. coarse salt.

Before use, always wash the can of the freezer in boiling water.

After use every part of the freezing machine should be thoroughly washed and dried, before storage. Grease the metal parts to prevent rusting.

PRESERVATION OF FOOD

Foods go bad owing to the presence of yeast, mould or other bacteria

Yeast is an extremely low form of plant life, which exists in the air in wild condition. It floats about in the air but once it gets the right kind of food and right temperature it begins to grow with great rapidity.

What the yeast plant needs for growth are :— (1) sugar, (2) temperature of 80° to 90° C. When a warm sugar solution is exposed to the air it gets readily fermented—the yeast acts on the sugar and breaks it up into carbon-dioxide and alcohol. Therefore fermentation of food is due to the growth of yeast plants.

Moulds —There are several varieties of these. They reproduce by means of spores which float about in the air. The mould plant likes dampness, darkness and a moderately high temperature. We often see these plants growing on stale bread, cheese, old shoes, and damp clothing, etc. The origin of the plant—or spores—as we call them, float about in the air. When they drop on certain substances and get the right temperature, dampness and darkness, each spore grows into a new plant. They often grow in foods causing decay and giving the food a peculiar smell and taste. Then there are other harmful bacteria which feed on food causing putrefaction.

The methods that are employed to preserve food are : (1) Exclusion of air (whether by covering it with an impervious coating or by hermetically sealing in tins) (2) Drying (withdrawal of water), (3) Addition of antiseptics (4) Cold storage.

(1) **Exclusion of Air.**—The food is first subjected to great heat to kill all bacteria and their spores. Then it is put into clean bottles which are sterilised and dried and the bottles are then hermetically sealed, having excluded all air. The food may either be pasteurised, sterilised, or canned.

(*a*) Canning is commercial sterilisation where food is heated under pressure. Great care must be taken that all air is withdrawn. (*b*) In order to prevent eggs from going bad soon, they are given a coating of grease to keep off air. Cheese is wrapped in greaseproof paper to prevent mould from attacking and spoiling it.

(2) **Drying.**—The presence of moisture helps foods to go bad readily. Therefore to prevent putrefaction and to preserve food, it is dried.

Some dried foods are desiccated milk (Glaxo, Lactogen, Cow and Gate, Nespray) Maldive fish, dried meat, dried vegetables—lentils, dhall, gram, peas, jak, breadfruit, cadjunut and dessicated coconut.

Another method of preserving food is by *salting and drying.* Salt not only acts as a preservative but extracts moisture from the food, *e g.* dried lime, biling fruit green mango.

(3) **Salting**—prevents food from decaying, *e.g.*, salt fish, salt meat.

Sugar—preserves food and prevents it from going bad. Condensed milk is cow's milk with a large proportion of water removed by means of heat under pressure. All air too is excluded from it. Sugar is also added to the milk.

In jams and preserves, moisture is drawn off and sugar is added to preserve the food, and the mixture is boiled.

In pickles the vinegar and salt act as preservatives. In chutney condiments are added to preserve the ingredients. When condiments are added and water excluded by heating, fish and meat can be kept longer than when cooked in the ordinary way.

(4) **Cold.**—Intense cold prevents putrefaction. Frozen fish, meat, vegetable and fruits can be kept for long periods. At this temperature bacteria do not grow but it must be remembered that freezing does not kill them. As soon as the food is thawed, it must be cooked.

RECIPES FOR PRESERVED FOODS

Mixed Pickle.—

25 red onions
12 green chillies
Green papaw
1 bit of muranga bark
1 bit ginger, minced
2 dessertspoonfuls ground mustard
½ teaspoonful ground chillie
A pinch of saffron
¾ bottle vinegar
Salt

Method—Pour into a chatty half the quantity of vinegar with salt. In this boil the green chillies and remove them into a large dry vessel. Similarly in the same vinegar, boil the onions and

then the sliced papaw. Add all this to the chillies. Now add all the other ingredients and mix well. Wash a large mouthed bottle in boiling water

COLD STORAGE

and dry thoroughly. Put the pickle in when it is cool and cover with an air-tight cover. Fried fish, fried-dry-fish, dry biling, boiled cabbage may be pickled.

TAMARIND CHUTNEY

1½ lbs. tamarind
¼ lb. sultanas
1 lb dates
30 cadjunuts
½ teaspoonful chillie
1 bit cinnamon
2 pips garlic
1 bit ginger
5 cups of Water
1 bottle vinegar
Salt and sugar to taste

Method—Squeeze out the juice of the tamarind in vinegar. Stain and add the ingredients. Boil until proper consistency is obtained. Bottle in clean wide-mouthed bottles and cover with air-tight covers.

MILK ALUWA

1 bottle milk
1½ lbs. sugar
50 cadjunuts
1 teaspoonful of essence of vanilla

Method.—Put the sugar and the milk into a pan. Cook over a very slow fire (if the fire is too hot, the milk aluwa will not be white) stirring all

the time. When half done, add the cadjunuts, previously cleaned and cut fine, also the vanilla. When the mixture gets thick, and almost dry put on a greased dish or board. When nearly cold, cut into any shape you like. This may be prepared without cadjunuts. Cocohut milk can be substituted for cow's milk.

COCONUT MILK TOFFEE

1 coconut
¾ lb. sugar
25 cadjunts
Flavouring

Method.—Add enough water into the scraped coconut to extract two cups of thick milk, add the sugar and stir over the fire. When nearly done, add the cadjunuts, finely chopped. When the mixture leaves the sides of the pan, turn out into a greased plate or board and cut into cubes. Flavouring may be used.

COCONUT PYRAMIDS

3 whites of eggs
1½ oz. flour
8 oz. desiccated coconut
4 oz. sugar

Method.—Mix the dry ingredients together. Then add the stiffly beaten white of egg. Colour half of the mixture pink. Heap it up in pyramids on a greased tin with a fork and bake in a fairly slow oven until set.

COCONUT ROCK

2 coconuts scraped (rather tender coconut)
1½ lbs. sugar
1 tablespoonful of vanilla essence
1 cup thick milk

Method.—Put the sugar and coconut milk into a pan. Boil till quite thick. Add the scraped coconut. A little while before taking down add the essence. When it is almost dry put into a buttered dish and flatten down. When cool cut into diamond shapes (with the essence a little cochineal may be added to colour the sweets). If desired a little butter may be added to make it richer.

NEGOMBO ALUWA

1½ lb. flour
1 bottle good coconut honey
25 cadjunts

Method—Put the honey into a pan and boil till very thick. Now put in one pound rice flour which has been previously roasted, along with the cadjunuts. Stir briskly. When the mixture gets thick and stickly put on a board, with the other half pound flour well sprinkled all over. Flatten down and cut into large diamond shaped bits. Sprinkle flour well over the aluwa.

PUMPKIN PRESERVE

1 lb. pumpkin
¾ lb. sugar
1 teaspoonful essence
½ cup water

Method—Cut the pumpkin into halves longitudinally. Then each half again into six longitudinal parts. Prick each piece with a fork carefully, so that the pieces will not be broken. Now immerse this in boiling water to which a little chunam is added. Do not let the pumpkin remain in water for more than a minute.

Allow it to cool and placing each bit on a clean towel squeeze out as much water as possible. Be careful not to break the bits. Now put into a pan, the sugar and water. When the sugar has treacled put in the pieces of pumpkin (if it is

possible, let the pumpkin remain in treacle for five or six hours). When almost all the water has evaporated, with the help of a ladle and fork, cover each piece with the sugar into a regular shape and lay on a dish to cool and harden. Pumpkin preserve can be kept a long time

PINEAPPLE JAM

1 lb. finely cut pineapple

¾ lb. sugar

Method.—Put the sugar with half cup of water and pineapple into a pan and cook over the fire stirring all the time. When honey-coloured, take the pan off the fire and allow the jam to cool. Wash a wide mouthed bottle in hot water and dry thoroughly. Bottle the jam and keep it air-tight.

Jam may be made with half-ripe mango, guava, biling, lovi and tomato.

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INVALID COOKERY

Food for the sick should be carefully prepared, for the patient's recovery often depends on the quality and quantity of food given. When the patient's appetite is poor it is sometimes necessary to create one. It is best that the nurse herself should prepare the food instead of depending on servants who are often very careless. Every housewife should understand ordinary ailments which those in her household may suffer from, and know how to treat them. If the illness is serious a doctor should be consulted and his orders implicitly obeyed. It is most important that the strength of the patient should be kept up. Therefore nourishment must be given.

In time of illness there is a constant waste of tissue due to the tissues being burnt up. The digestive system becomes weakened, therefore nourishment given must be of an easily digestible kind. Food should be of a liquid nature and should require very little digestion, *e.g.*, beef-tea, albumin water, orange-juice and milk. Sometimes it is advisable to give stimulants in the form of beef-tea, etc. These must be very carefully prepared. A stimulant does not build tissue, but merely helps to whip up the strength of the patient. When the patient is getting better, the food must be of a more solid nature and should contain all the food values-carbohydrates, proteins, fats, mineral salts. Although of a solid nature, this food too must be easy of digestion.

CLASSES OF FOOD

Carbohydrates.—Starches and sugar give heat and energy, build and repair fatty tissues.

Fats—give heat and energy, build and repair fatty tissues.

Proteins—build and repair nitrogenous tissues.

Mineral Salts—essential for the tissues and fluids of the body.

Vitamins—essential for normal growth and development.

SERVING OF FOOD TO INVALIDS

(1) During and after illness the digestive tract is very weak, and great care should be taken in the preparation of the food. Everything should be scrupulously clean, for the weakest germ in the food may do a great deal of harm to the patient.

(2) The food should be of a kind suitable to the invalid. Patients with fever should have food in liquid form

(3) When the patient is convalescing, solid nourishing food should be given. The food, however, should be perfectly digestible. The change from liquid food to solid food should be gradual.

(4) The patient should not be consulted as to what food she would like to have. Let it be a surprise.

(5) The patient should not see the preparation of the food.

(6) The same food should not go twice running.

(7) Food must be palatable and tempting. It should be served daintily and in small quantities. If the food is placed on a tray with a pretty tray cloth, with food served in the daintiest china glass and silver, etc., it would do much to tempt the patient to take the food. A sprig of flowers on the tray will greatly help to cheer the patient. Even rice congee when served daintily will be more readily taken than when it is given in a huge bowl.

(3) The tray with the left over food should be removed as soon as the patient has finished her meal. The food should not be given to anyone—not even to an animal.

SOME FOOD IN LIQUID FORM

(1) Milk, (2) Malted milk, (3) Rice conjee, (4) Barley water, (5) Arrowroot gruel, (6) Orange-ade, (7) Albumin water, (8) Beef-tea or mutton-tea, (9) Tea, coffee or cocoa prepared with milk (10) Sago conjee, (11) Porri conjee, (12) Roasted rice conjee.

FOR CONVALESCENT

(1) Soft rice and white fish curry, (2) Soft rice and broth, (3) Poached egg, (4) Scrambled egg, (5) Omelette-lightly prepared, (6) Egg and milk puddings, (7) Jellies.

RECIPES

Milk—the value of milk, egg, etc., has been discussed in the cookery chapter. Milk is a fluid which absorbs germs very readily. Therefore it must be boiled or sterilised before use. Rinse a saucepan in cold water, put in milk and bring it to the boil.

MALTED MILK

Follow directions given on bottle

RICE CONJEE

Take half a chundu of rice, and remove paddy and black grains. Wash well, put into a chatty add six cupfuls of water and boil. When the rice is well boiled add sufficient salt and boil down to one cupful. Then strain and serve.

BARLEY WATER

Boil four tablespoonfuls of pearl barley in a little water and strain. Put the blanched barley in a jug with some lemon-juice and a little sugar and pour on a pint of boiling water. Strain when cold and then it is ready for use.

ORANGEADE

2 oranges
1 pint boiling water
½ lime
4 dessertspoonful sugar

Method.—Peel oranges, cut them in half. With a spoon scoop out the juice into a bowl. Strain it. Put the orange rind and sugar into a bowl and pour boiling water on it. Strain, add orange-juice and serve.

ALBUMIN WATER

White of egg
1 cupful of water

Method—Put the white of egg into a saucer. Cut up with a knife to break it up thoroughly (but do not beat to a froth). Add half a cupful of water, cover with muslin and let it stand for a few minutes until albumin dissolves in the water. Add the rest of the water. Strain through the muslin and serve. It may be flavoured with a few drops of lime. Add a little sugar if liked.

BEEF-TEA AND MUTTON-TEA

1 pint water
1 lb. of meat free from fat

Method.—Wash the meat and dry it. Then cut it into fine slices along the grain of the meat. With the help of a fork and knife, shred the meat and put it into the cold water. Let the meat and the water stand for a time (from 15 to 20 minutes) to let the meat juice dissolve into the water. Put the meat and water into a vessel and cover with a lid. Place this vessel in an outer vessel of water, and bring the water to the boil and let it boil from 3 to 4 hours. Stir the contents of the inner vessel frequently pressing the meat against the sides of the vessel. At the end of 3 or 4 hours strain the liquid through a fine muslin. This liquid is a stimulant because it contains the stimulating properties from the meat fibres. Add a little salt and pepper, but in intestinal complaints no flavouring should be added.

TEA, COFFEE AND COCOA PREPARED WITH MILK

Tea

2 teaspoonfuls of tea, heaped
½ pint milk

Method.—Rinse tea-pot with boiling water. Put in the tea. Pour over boiling milk. Let it infuse for three minutes and then strain into a cup. Add sugar.

Coffee

2 teaspoonfuls of coffee (level)
½ pint boiling milk
Tiny pinch of salt

Method.—Rinse coffee-pot with boiling water. Add the coffee and salt and pour over boiling milk. Let it stand for six minutes in a very warm place. Strain into a cup and serve. Sugar may be used.

Cocoa

2 teaspoonfuls of cocoa (level)
½ pint boiling milk
A little sugar

Method —Mix cocoa well with a little cold milk. Pour on boiling milk. Add the sugar. Put back into a saucepan and boil for two minutes. (Serve into a cup)

CUSTARD

1 pint milk
4 eggs
4 oz sugar
Flavouring, vanilla essence or nutmeg

Method.—Boil milk, and sugar, beat up the eggs and when milk is slightly cool pour it on to the egg beating all the time. Pour into a greased bowl and steam for about half an hour. This same mixture may be baked.

SAGO SNOW

1 oz. sago (previously soaked in a little water)
½ pint milk
2 eggs
1 oz. castor sugar
Flavouring

Method—Boil the milk, add the sago and stir until clear. Add the sugar, vanilla and the yolks of the eggs. Stir gently. Cook for one moment longer and turn into a glass dish. Beat the whites of the eggs to a stiff froth and add a teaspoonful of sugar Boil about three tablespoonfuls of milk in a saucepan and drop white of egg in lumps into this. Cook for one minute to set the egg. Drain and serve these flakes on top of the sago custard.

EGG JELLY

2 eggs
6 oz. sugar
1 oz. gelatine
2 limes, (juice made up to one pint with cold water).

Method.—Simmer sugar, lemon rind and water. Strain, add gelatine and stir, when dissolved leave to cool. Pour on to beaten egg. Cook gently, stirring all the time. Do not boil. Turn on to wet moulds. Set with ice. When firm, dip for a moment into warm water and turn on to a cold dish.

MLK JELLY

1 pint milk
½ oz. gelatine
1½ lbs. sugar
Lime rind

Method.—Bring milk and lime rind to boil. When it boils pour it on to the gelatine and sugar in basin. Stir from time to time until the mixture attains the consistency of a cream. Set in mould rinsed in cold water. Ice may be used to set jelly. When firm dip into warm water for a moment, then turn out.

VANILLA SOUFFLE

½ oz. butter
½ oz. flour
½ gill milk
2 yolks of eggs
2 whites of eggs
1 dessertspoonful of sugar
Vanilla essence

Method.—Melt the butter. Stir in flour. Add milk and cook until it draws into a ball round the spoon and leave the sides of the pan clean. This is called a panada. Let it cool. Add the sugar and yolks, one at a time, beating well together. Lightly stir in white of egg stiffly whipped. Butter a mould, put mixture in and cover with a buttered paper. Steam for 40 minutes. Turn out and serve with white or jam sauce. This souffle may be put into a buttered pie-dish and baked, but is lighter steamed.

SCRAMBLED EGG

Bread
Butter
Salt and pepper
1 egg
1 teaspoonful milk

Method.—Toast a piece of bread and butter it. Break the egg into a mug. Put a tiny pat of butter into a saucepan and add a little pepper and salt. When butter has melted add milk then the egg. Stir and put on bread.

CHOCOLATE BLANC MANGE

1 pint milk
1 oz. chocolate
2 oz. cornflour
4 oz. sugar
Vanilla

Method.—Boil the milk. Mix the cornflour and chocolate with a little cold milk to make into a smooth paste. Add the milk and sugar to paste, stirring all the time. Cook over fire until it thickens and leaves the sides of the pan when tilted. Pour immediately into a mould which has been rinsed in cold water and place in a vessel of cold water. When cold, turn out into a plate.

LEMON SPONGE

1 lime
1 white of egg
1 gill water (¼ pint)
½ oz. gelatine
1 oz. sugar

Method—Soak gelatine in a little water. Put half the rind of lime into the remaining water and heat to extract the flavour. Add gelatine and sugar and allow the liquid to cool. Beat the white of egg into a stiff froth. Then gradually add mixture into it. Beat this until quite stiff. This generally takes 20-30 minutes. Dip a tin or china mould in cold water. Then fill it. This should stand at least half an hour before use. This can be made with oranges.

POACHED EGGS

Break each egg into a saucer, slip the egg into boiling water, remove to cooler part of range. When white is firm and a film has formed over the yolk, the egg is cooked. Drain and serve on toast.

CREAMY EGG

1 egg
1 teaspoonful butter
4 tablespoonfuls milk
A pinch of salt

Method.—Beat eggs slightly and add the butter, seasoning and milk. Hold over the fire to cook or cook in double saucepan. Stir all the time until done.

OMELETTE

2 eggs
Pinch of salt
Pepper
2 onions and Maldive fish

Method.—Add a pinch of salt into white of egg and beat into a stiff froth. Beat the yolks until light and creamy. Then add to yolk two red onions sliced (cut circularly); Maldive fish, powdered, pepper and salt. Mix whites and yolks lightly. Heat butter in saucepan and swill the butter all over surface of pan. When pan is very hot, turn in mixture and spread evenly. Then reduce heat. When the omelette is set, put it into a hot oven for a few minutes, to dry slightly on top. Fold in two. Instead of Maldive fish and onions, jam, cheese, chopped ham or bacon may be used.

STEAMED PIGEON

1 pigeon
½ pint stock or water
A few onions and celery
1 oz rice
1 teaspoonful chopped parsley
Pepper and salt

Method.—Cut pigeon into neat joints or it can be trussed or stewed whole. Put into a saucepan with stock, vegetable (if allowed) and rice, and simmer gently for two hours until tender. Serve on a hot dish. Garnish with rice and parsley.

BAKED SEMOLINA PUDDING

2 oz. semolina (rulang)
2 oz. sugar
1 pint milk
1 egg
Pinch of salt
Flavouring
Cinnamon or nutmeg

Method.—Grease a pie-dish. Boil milk. Add semolina, sugar and salt stirring all the time. When the mixture thickens take off fire and allow to cool. Beat the egg and add to the mixture. Turn into a pie-dish Dust the surface with grated nutmeg and bake in a moderate oven for about fifteen minutes.

JUNKET

½ pint milk
1 dessertspoonful essence of rennet
Flavouring

Method—Boil milk and cool it to blood heat. Add the rennet and stir and allow to stand until curd is formed.

WHEY

Boil a pint of milk with two teaspoonfuls of lemon juice. Allow the curd, to set and then strain.

KARALLO BROTH

20 Small karallo fish
4 cups of water
10 sliced onions
10 pepper corns
3 pips garlic
2 slices of ginger
10 dill seeds
Salt to taste
Few drops of lime

Method—Clean and wash the fish well. Put these into a chatty and add the dry ingredients in water. Then cook over fire. When the fish is well boiled, mash it well stirring it against the side of the chatty. Add a few drops of lime and pass through strainer.

WHITE FISH CURRY

Given in cookery section. This curry may be cooked in thin coconut milk, in order not to maket it too rich.

PEPPER BROTH

10 pepper corns
1 dessertspoonful coriander
1 dessertspoonful white cummin
Salt
1 dessertspoonful tamarind paste
Curry leaves
8 onions
8 pips garlic and 4 cups of water

Method.—Pound the coriander and white cummin and put into a chatty. Put the other ingredients in too. Add water and salt to taste. Boil down to three cups of pepper broth.

CHILD-WELFARE

INTRODUCTION

A knowledge of child-welfare is of great importance to every girl and woman whether she be nurse sister or mother.

In Ceylon an average of 197 babies die out of every 1,000 babies born and in some parts of Ceylon nearly. 400 babies die out of every 1,000. In England, on the other hand, the infantile mortality is low—79 out of 1,000.

Our high infantile mortality is the result of mistakes made by mothers in regard to their babies through ignorance, rather than through carelessness and poverty.

The chief causes of death are improper feeding which brings marasmus or wasting of tissues, diarrhoea, convulsions, rickets and malaria.

By acquiring a good knowledge of child-welfare it is possible to save the babies from sickness and untimely death, and help them to grow up to be healthy men and women.

MOTHER BEFORE THE BIRTH OF THE BABY

The mother is responsible for the life and development of her child. Therefore even before the birth of the child, she should take good care of herself. Before birth, the baby is alive for nine months, and during this period the mother's health is of utmost importance.

Especially at this time she should observe all the laws of health so that she may have pure blood containing the right nourishment for her growing child.

It is necessary at this time for a mother to live her natural life. She should not cut herself off from the ordinary duties and exercise. Although exercise is good, violent exercise is extremely harmful for the organs of reproduction are highly sensitive and susceptible to injury at this time. Ordinary walking, and going about the house should not be stopped. Falls should be avoided.

Rest too more than at any other time, is necessary to keep a mother healthy. She should sleep at least nine hours in the night, in a well ventilated room. If it is possible, a little rest should be taken during the hottest hours of the day.

She should eat good, wholesome, simple food containing all food values. She should drink plenty of milk, for this is a perfect food. The calcium present in it helps in the formation of bone in the child. Otherwise the baby will suffer from rickets. Fruits and fruit juices, butter, fish, fresh vegetables and eggs, are all nourishing

foods. Plenty of good drinking water too should be taken. Acid foods, unripe fruits and highly seasoned foods like pickles should not be taken for they are not only useless as food, but are most injurious to health.

Clothing should be light and loose, and should be suspended from the shoulders as much as possible. Nothing tight should be worn by a mother at this time. No high heeled shoes should be worn.

She should keep her skin perfectly clean so it is necessary for her to be very regular in her baths. When she cannot bathe, her body should be sponged. Chills should be avoided after a bath.

She should attend to her general health. Constipation should be guarded against. Eno's Fruit Salt or any other mild laxative may be taken to prevent this. If there is any serious trouble a good doctor should be consulted without delay.

PREPARATION OF BABY'S LAYETTE

In Ceylon, there are many mothers who are superstitious enough to believe that it is unlucky to prepare a baby's layette before the baby is born. In such a case a proper layette never gets made, because once the baby comes, the mother has her hands full attending to its needs. Every wise mother will have a complete layette ready before the arrival of the baby.

The garments should be made of good, durable materials chosen to suit the climate. In the low-country, light cotton garments should be used, but, during the rainy weather a warm inner garment made of silk, or a vest of wool and silk should be worn Flannelette and purely woolen garments should not be worn next to the skin, for they irritate the skin and cause prickly heat.

A baby living up-country where it is cold, should wear warmer clothing Silk inner garments and silk and wollen knitted vests, and warm booties, should form part of its clothing.

There should be sufficient clothes for a baby. It will be wise to make about three sets of garments in varying sizes to be used as the baby grows. Here is a rough list of things a mother may have in readiness for her baby:—

12 little shirts of white nainsook.

12 little shirts, slightly bigger.

12 little shirts still bigger.

(Mul. tarantulle or other soft material may be used instead of nainsook).

6 silk shirts made in three sizes to be worn next to the skin in cold or wet weather.

6 frocks in silk or fine cotton.

6 petticoats to be worn under the frocks.

1 warm coat

1 light warm shawl.

4 cotton or silk bonnets to match the frocks.

6 pairs white booties knitted with soft perilusta or wool.

36 napkins 20—20 inches (longcloth or unbleached calico).

6 cotton quilts (double cloth sewn down and patterned diagonally)

12 pillow cases, small size to fit the pillow.

6 bandages made with bands to tie up (to be used until navel cord drops.

6 small towels.

6 large soft towels (may be made of some soft cotton material like mul or nainsook).

6 sheets for the cot.

3 sheets to cover baby when necessary.

2 bedspreads to fit the bed.

1 mosquito net (in a malarial district this is very necessary).

More clothes may be made if means will allow. The garments should be sewn as daintily as possible. The linen should be washed and ironed at home.

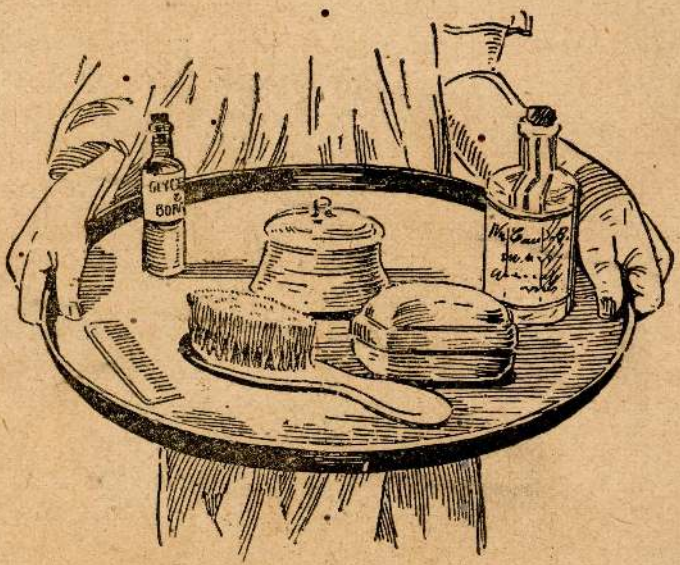
OTHER REQUISITES

Baby's Basket—It is a great convenience to have a basket for holding baby's things This is

BABY'S BASKET

generally made of cane and lined to match the cradle. It should have several pockets in the side to hold small articles which are necessary for baby's use such as safety pins, ribbons, rags, cotton wool, buttons, etc. In a light tray place the powder, soap in a dish, Eau-de-Cologne, glycerine and borax, vaseline, rectified spirits and the tray should be placed in the top shelf of the

basket. Brush and comb for baby too may be put in here A few towels and other articles of linen which are constantly used can be placed in the second shelf A bundle of "Savendara"



BABY'S TOILET TRAY

roots may be put amongst the clothes. The other clothes could be stored in baby's linen cupboard, or in a shelf of an almirah and these with the clothes in the basket, will be used in due rotation.

Bath.—A white enamelled bath or a large enamelled basin may be used to bathe the baby. On no account should this be used for any other purpose. When it is done with, put it away turned upside down.

Soap.—Baby's skin is very delicate and sensitive, and strong soap with much soda in it should not be used. Highly scented and brightly coloured soaps are not good; for strong scent and bright colour are often used to disguise inferiority. In inferior soaps there is a great deal of alkali and this injures the skin. Castile soap is the purest soap, but it has rather an unpleasant smell Pears and Vinolia are made from Castile soap and are scented a little.

Powder.—If powder is used at all, it should be carefully chosen. Fuller's Earth, Johnson's Cuticura and slightly scented Talcum are all good powders.

Sponge.—If a sponge is used it must be kept perfectly clean and kept for baby's use alone. Tie a piece of tape through it, squeeze and dry when finished with, and hang it in an airy place. But it is better not to use a sponge, for it is apt to collect germs in its pores. A piece of Turkish towelling, or a piece of soft flannel, may be used instead.

Cot—A baby should be made to sleep alone in its cot. The cot should have a strong railing all round and be securely fastened. In some Ceylon homes the baby sleeps with the mother or ayah. This is a bad habit and affects the baby's health.

The mattress should be clean with a clean cover encasing it and tied up with tapes on one side. The pillows and the pillow slips, and sheets must be perfectly clean.

It is most imortant to remember that baby's things should not be used by any one else but by the baby. Every article used must be kept clean.

FEEDING THE BABY

Before the birth of a baby, it has had nothing to do with digestion, for it has been nourished by the mother but at birth its digestive system has to develop new functions. The child's alimentary canal has to be gradually and carefully educated, therefore nature has evolved a plan whereby the digestive organs are slowly educated to digest normal food For the first few days there is secreted by the breast a thin watery fluid called colostrum, a most valuable food containing a large percentage of protein of the same nature as that found in blood. This is absorbed into the blood stream without any effort on the part of the digestive organs. During the first eight days this fluid is gradually changed into true milk. Also the chemical composition of this fluid is the some as that of the mother's blood upon which the baby was fed up to the time of its birth. The best food that a baby can have is this first secretion from the breast of its mother and when this cannot be given to a baby there is a great risk run. This is why there is a high infantile mortality among bottle-fed babies under three months.

If however, the mother cannot give her milk to the baby, modified cow's milk should be given. The milk should be of the correct strength and it should be given at the proper time.

THE NORMAL INFANT

A Ceylon baby is usually between 6 and 7½ lbs. in weight at birth, the average being 6½ lbs. An English baby weighs from 7 to 7½ lbs. Normally an infant loses from 4 to 5 ounces during the first 3 or 4 days and should regain its birth weight from 10 to 14 days. After that there should be a gain of ¼ to ½ lb. a week. At the end of six months the birth weight should be doubled and at one year it should be trebled. The usual height is between 19 and 21 inches and the circumference of the head 12 to 14 inches.

These observations are helpful to ascertain whether the baby is healthy. If the baby is found to be below the normal weight or height, special attention should be given to adjust it. Every mother should keep a record of the weight taken fortnightly or weekly.

BATHING THE BABY

Before bathing the baby get everything necessary within reach. Choose a place away from draughts.

First pour the cold water into the bath and then the hot until the temperature of the water is 100° F. The reason for pouring in the cold water first is to prevent any possible accident. If there is no bath thermometer, test the water with the elbow.

As the child grows older, lower the temperature of the water. With normal children of two years of age, cold water must be used for bathing.

Place a low chair or stool in front of the bath. On the right side within easy reach have a tray with glycerine and borax, boric lotion, bits of gauze or cotton wool for cleaning the eyes ears, nose and mouth, wash cloths or sponge and soap. On a bed close by, have the rectified spirits, dusting powder (zinc boric and starch powder) dressings for the navel cord, face powder, brush and comb, clean shirt, napkin and safety pins. Put the baby on the bed and undress it removing the napkin, navel cord bandage and the shirt.

BATHING A BABY

Sit in the low chair in front of the bath of water, with the baby on the lap over a mackintosh and towel. With cotton wool dipped in boric lotion, wipe each eye and always wipe from the inner to the outer corner of the eye.

The routine cleaning of a baby's eyes is not always considered wise after the first two weeks of life unless they are infected. Many doctors will not advise this treatment and the nurse will find it wiser not to clean the eyes unless she has been definitely instructed to do so.

Clean each nostril with a small piece of twisted cotton wool dipped in water. If there are any signs of thrush, clean the mouth with a piece of gauze dipped in glycerine and borax. Wrap the gauze round a finger and clean the mouth inside. If there are no signs of thrush do not clean the mouth as the delicate mucous membrane lining the mouth is easily injured and infection may be caused. Next wash the face with the face cloth but do not use soap. Then wipe it dry with the face towel Moisten the head, and soap all over with the hand. Then wash the soap off pouring the water over with the wash cloth or sponge. As the child grows older, a small vessel may be used for pouring over of water. Next dry the head well with a towel. As the child lies on the lap, soap the whole body with the hand, front and back and well between all the folds of the skin. Next lift the baby gently and carefully into the bath, one hand passing under the baby's shoulders and head and grasping the forearm near the shoulder and the other placed under the buttocks and the fingers encircling the left thigh. Care must be taken to support the head and do not allow the water to get into the ears or on to the face. Lift the baby over to the nurse's lap, wrap it up in the towel and take it to the bed and dry the body thoroughly well taking care to clean between the folds of skin.

Dab the navel cord with a piece of cotton wool dipped in rectified spirits, sprinkle a little dusting powder over it, place a piece of lint or gauze over and apply the bandage. After this dress the baby in the shirt and napkin, turning as little as possible from side to side.

WARMTH AND QUIETNESS

During the early stages of babyhood, it is very important that the child should have warmth and quietness. For nine months the mother has kept

BABY AT PLAY

the baby warm. It has been accustomed to a temperature of 98° 4° F. So until it gets used to new surroundings it must be kept warm. If the baby is exposed during this early stage, heat will be lost and growth will be retarded. Even after that, there should be no undue exposure.

In Ceylon there is a tendency for some mothers to keep a baby warm by making it wear too many clothes, or lie on warm pillows and mattresses all the time. This is unhealthy. Fresh cool air blowing on the baby will do it no harm. When it is asleep, let the doors and windows be wide open to let in fresh air, but avoid draughts which will cause chills Children sometimes contract chills by sitting on cold and damp floors and by wearing insufficient, or no clothes. Chill in the liver may give rise to jaundice. Chilling of that organ produces congestion and temporary stoppage of bile ducts.

Baby should not be disturbed by sudden and loud noises. Great mischief may thus be done to the very delicate and sensitive nervous system of the child, and convulsions and other nervous troubles will follow immediately, or as the child grows older. Therefore a baby should not be excited unduly, or made to talk too early, or to recognise things until it does so, by itself. Little brothers and sisters should be excluded from the room until they learn to be quiet there.

Quietness also applies to baby's frame. A baby should not be carried too much, and, above all, it should not be jogged up and down. This will result in brain trouble and it will also make baby sick. Normal carrying gives baby exercise, and later, it will naturally exercise itself.

SLEEP AND EXERCISE

Sleep.—A new born baby should sleep almost all the time waking only for food. As he grows older, he will be awake longer but it is necessary to get him to sleep during the hottest part of the day for at least two hours. In the night, he should be put to bed not later than 7 p. m. and should sleep as long as he will. Baby should sleep in a cot or bed by itself. He must not get into the habit of sleeping with another. Just before going to bed, he should be washed and dressed in a clean night dress. The room must be well ventilated and windows left open. However, no draught should play into the room. If a child is not taught what fear is it will sleep alone without any fuss. Avoid telling babies about bogie men, ghosts, etc. Instead tell them of kind fairies and angels who watch over children Fear has resulted in making many a baby nervous, and nervous children are apt to go into convulsions with the least illness.

Never carry a child on the shoulder to put it to sleep, neither should it be rocked on the legs.

These are bad and unhealthy habits. Never on any account should a soother be given to a baby to lull it to sleep. Very many Ceylon mothers allow this dangerous habit partly through laziness and mostly through ignorance. The sucking of the soother will gradually push the palate back and the air passage will get smaller, and adenoids will result. Then the child will breathe through the mouth and not through the nostrils. If there is a hole in the soother, as the baby sucks it the air will get into the stomach and the child will suffer from flatulence. The saliva which dries on the outside of the soother will give rise to bad smells.

Disease microbes will be swallowed and this will cause indigestion, colic, diarrhoea and other abdominal troubles. The shape of the mouth will be greatly spoiled. There will be an unnecessary expense in buying soothers and a waste of time, looking for them when the child needs them. These facts tell us that a soother is a source of danger to baby, and it should never be introduced into a home.

Exercise.—Exercise is just as important as sleep to a baby. During the first few weeks baby will take very little exercise but as time goes on he will be exercising himself all the time he is awake.

BABY'S FOOD UP TO NINE MONTHS

By far the best food for a baby is mother's milk. We have already seen that if a new born baby, until it is a week old, is fed on any other milk is open to great risk. Even after that it will be most helpful if the baby can feed on mother's milk.

Although all species of mammals feed their young on milk, no two species have the same kind of milk. All contain the necessary protein, milk, sugar, salts and fats but in different proportions, according to the needs of their young. A puppy has to double its weight in nine days so its mother's milk contains a great deal of protein or tissue-forming material. The reindeer which lives in the very cold lands has a large proportion of fat in its milk to help to preserve warmth in its young.

The constituents of mother's milk are accurately designed for a human baby. Human milk therefore is specially adapted for its young. Further, mother's milk contains a special substance for building up a baby's highly organised brain and nerve tissue; other kinds of milk are deficient in this substance.

A breast-fed baby is practically immune to infantile diseases, e.g., measles, convulsions, etc. Teething troubles are greatly minimized. Then there will also be no danger of contamination of milk. The correct strength and temperature are retained in the milk. It is made fresh each time it is wanted and goes straight into the child's mouth.

A peculiar tie of affection is developed between mother and child where the child is breast-fed.

Since mother's milk is by far the best, the mother should try hard to secure a good supply of her milk for the child. She should have nourishing food containing all food values and vitamins. Milk which is a perfect food, and barley water, may be taken to great advantage. She should also take plenty of water.

Highly flavoured food should be avoided, for it will affect the milk and therefore the baby. On no account should alcohol be taken, for it will upset the nervous system, and the flow of milk will be uneven.

Some mothers, although they are unable to feed the baby altogether, can partially feed him. If this too is impossible a substitute for her milk should be carefully chosen.

COW'S MILK

For a very long time fresh cow's milk was considered the best substitute for mother's milk, for of all milks of mammals, cow's milk is the nearest approach to mother's milk next to asses and goat's

	Mother's Milk	*Cow's Milk*
Protein — Casein	·8	3·25
Protein — Albumin	1·4	·75
Protein (total)	2·2	4
Fat	4	4
Milk Sugar	6·5	4·5
Salts	·3	·7
Water	87	86·8
	100	100

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milk. But cow's milk in an unmodified form cannot take the place of mother's milk, because the food values are not in the same proportion as found in mother's milk. Let us compare the food values of mother's milk and cow's milk: (See page 249)

There is half as much protein in cow's milk than in mother's milk, and if cow's milk must be used it must be diluted with an equal quantity of water to bring the proteins to the same percentage as in mother's milk. But this lowers the percentage

PREPARATION OF MILK FOR BABY

of fat and sugar and so these two have to be added after dilution. The kind of sugar added should be lactose or milk sugar, which can be bought at any chemist's shop. Cane sugar is not as digestible. Fat may be used in the form of cream or cod liver oil. Then again in cow's milk there is more casein and less albumin than in mother's milk, and casein is the less easily digestible protein. Therefore we see that even with modification cow's milk is less digestible than human milk. The character of casein in cow's milk can be chemically altered and softened by the addition of citrate of soda, 1 or 2 grains to each meal of milk.

After 2 or 3 months it need not be added regularly but only during times of stress of teething. All milk on reaching the stomach curdles. Cow's milk gives a hard curd whilst human milk curds are fine and flaky, hence the reason why human milk is easily digested by the baby. If a baby is to be fed on cow's milk, it must be obtained from a reliable place, and must be carefully modified, bringing it to the same standard as human milk. The milk must be clean and fresh and obtained from healthy cows. If possible it is better to have milk of several cows mixed, for then the milk is more likely to have a uniform composition. If a cow happens to have disease

and baby has its milk every day, the chances that it may take the same disease are necessarily greater than if the milk of several cows is mixed.

Milk is a substance which readily takes in germs, so it should be boiled or pasteurised or sterilised to kill all germs. Boiling, however, tends to coagulate the albumin making it less digestible, forces fat globules to the surface and destroys some of the vitamins so stir the milk all the time it is boiled. This process prevents the coagulation of milk and the formation of a scum on the surface. Germs present in the milk are also killed. Remember that milk is a great carrier of disease, so, too much care cannot be taken of it. Scrupulous cleanliness should be insisted upon. The cows, especially the milk ducts, the milker, the vessels used, and the place of milking must be perfectly clean. After the milk is boiled, keep it in a dry place in a clean jug, covered over with a clean net, or muslin jug cover.

FURTHER MODIFICATION OF COW'S MILK

Dried Milk.—This is cow's milk modified scientifically and changed into a fine powder and when needed is prepared with boiling water, according to directions given on the tin. In the process of drying, practically all the microbes found in cow's milk are destroyed and the milk is rendered somewhat more digestible. Some of the

vitamins are destroyed. There are several varieties of dried milk—Lactogen, Cow and Gate, Glaxo, etc.

Condensed Milk.—is also prepared from cow's milk. A great proportion of the water (about ⅔) is lost in its manufacture, because the milk is heated under pressure. The sweetened brands contain a great deal of cane sugar, which cannot be easily digested by a baby, and if prepared from skimmed milk it will contain little or no fat. It lacks in vitamins too. Since vitamins are destroyed in all these foods, it is necessary to give fruit juice to babies fed on these foods. Orange, grape, and tomato juices are all good. In fact babies fed on any milk other than mother's milk should be given fruit juices to prevent scurvy.

FEEDING BOTTLE

The Allenbury's feeder, a boat-shaped bottle, is a good type of feeder because it can be cleaned well. The soft rubber cap gives baby's gum proper exercise, helping in the development of the jaws. The hole in the teat must be neither too large nor too small. It must be such, that when the bottle is inverted the milk will drop out at the rate of one drop a second.

The bottle must be well washed immediately after use, first in cold water and then in hot. It is best to let the water run through from tap after

the removal of the teat. The bottle and teat should be boiled daily. The feeding bottle may be washed with washing soda, and after cleaning

WHERE MILK IS PREPARED FOR BABY

with a brush it should be well washed to remove all traces of the soda.

On a table have an enamel or aluminium basin full of clean water in which is immersed the feeding bottle well cleaned and ready to be used. Two or three teats cleaned and dried, a bottle with citrate of soda tablets, a bottle of lime water, a tray with a clean vessel to prepare the milk, a clean teaspoon, a jug for hot water, a clean muslin to strain the milk (if it is cow's milk) should be placed here. The jug with the milk and lactose sugar may be put in the cupboard till they are needed.

On the wall on a side, the brushes used for cleaning bottles and teats should be hung. Nothing but necessary articles for the feeding of baby should be placed on this table, and it should be

left where nobody will meddle with its contents. It is most important to be regular in feeding both breast-fed and bottle-fed babies. A long rest should be given to the child's stomach during the night, and three hours intervals observed during the day. If this plan is carried out it will be helpful to the child's system. If baby wakes at night and cries, give it a few teaspoonfuls of water.

Age	Number of Meals	Quantity	Time
2 days	7	2 drams	
3 "	7	4 "	
4 "	7	6 "	
5 "	7	8 "	
6 "	7	9 "	
7 "	7	10 "	
8 "	7	11 "	
9 "	7	12 "	
10 "	7	12 "	
11 "	7	13 "	
12 "	7	14 "	
13 "	7	14 "	
2 weeks	7	2 oz. 4 drams	
3 "	7	2 oz. 4 drams	
4 "	7	2 oz. 6 drams	
5 "	7	2 oz. 6 drams	
6 "	6	3 oz 2 drams	
7 "	6	3 oz. 2 drams	
8 "	6	3 oz. 2 drams	
9 "	6	3 oz. 6 drams	
10 "	6	4 oz.	
11 "	6	4 oz. 2 drams	
12 "	6	4 oz. 4 drams	
3 months	6	4 oz. 6 drams	
4 "	6	5 oz.	
5 "	5	6 oz.	
6 "	5	6 oz. 6½ oz	
7 "	5	6½ oz. - 7 oz.	
8 "	5	7 oz. - 8 oz.	
9 "	4	7½ oz. - 8 oz.	

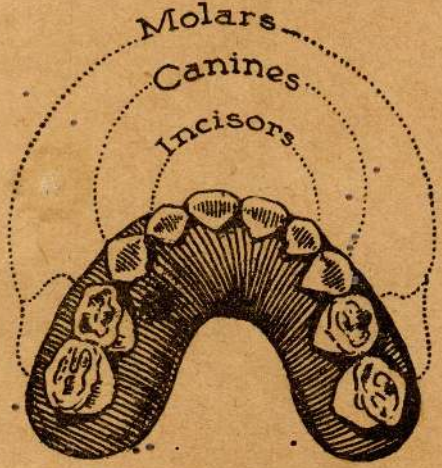
This table may be modified to suit each baby.

The first meal should be given at 6 a.m., and the last feed at 10 p.m. Plenty of good drinking water may be given at intervals.

Do not give the water in the bottle. However hard it may be at first, the wisdom of it will be seen if we keep to regularity.

TEETHING

A baby's first set of teeth has been formed before birth and is more or less influenced by the mother's health, but the date at which the first tooth cuts is variable. Some babies cut their teeth very early but others owing to rickets, or acute illness, or to the lack of calcium will delay dentition. Healthy babies cut their teeth with very little trouble, while others have a very hard time.



A SET OF MILK TEETH

During dentition the child's nervous system is more than usually unstable. Feverishness, from the gums being hot and swollen, cold in the head and chest, loss of appetite, diarrhoea, constipation and even convulsions are common ailments of this critical period and so extra care must be taken of the baby.

The food may be given weaker, and if thirsty, drinks of plain boiled water, or weak barley water or coriander water. Prevent chills by keeping baby warm during dribbling. Tie a bib to absorb the saliva. Keep baby's bowels open, but if the child suffers from diarrhoea, do not allow it to be excessive. Clean the gums with borax and glycerine. Give it something clean and hard to bite, *e.g.*, an ivory ring or a leg bone of a chicken or a rusk which will help to stimulate the blood vessels of the gums. Have infinite patience with the child. Do not be unduly alarmed, but, if there is too much trouble, consult a ductor.

The milk teeth which are twenty in number are cut in groups :—

(1) Two lower central incisors at about seven months, interval of three or six weeks.

(2) Four upper incisors between eight to ten months, intervals of one to three months.

(3) Lower lateral incisors and two upper and two lower front molars between twelve and fourteen months.

(4) The canine or eye teeth between eighteen and twenty months, interval of several months.

The mouth must be kept scrupulously clean and as soon as possible the child must be taught the use of a tooth-brush.

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If the temporary teeth are neglected, then the permanent teeth which are already in the jaw below the milk teeth will also be affected. Neglect of the teeth may also lead to many serious illnesses. It is not sufficiently recognised that decayed teeth swarm with disease microbes, some of which are capable of producing serious results. Bowel disorders, swollen glands in the neck anaemia and general ill-health are sometimes due to decayed teeth.

Baby's Food After Nine Months.—As a rule, until the first teeth appear no other food than milk should be allowed. Teething is the first sign of the development of the digestive system. Babies fed on mother's milk may be weaned at nine months. It is bad both for mother and child if it is still fed on mother's milk. Cow's milk or a dried milk food can take its place until the baby can subsist on solids altogether.

However, the change from milk to solids must be gradual and the digestive system must be carefully educated to it.

During the ninth month an egg may be beaten up and given with the milk.

Cane sugar may be used instead of lactose sugar. A little barley water may be added to the milk. If there is no trouble with the digestive system gradually give solid food.

Lightly boiled egg, fish steamed or boiled, broths, milk puddings soft rice with vegetable and fish curry, bread and butter, biscuits and fresh fruit may form its diet. Till a child is 2½ years old he should have fresh cow's milk or milk from milk powders as part of his diet.

Do not give tea and coffee.

Plenty of water and fruit juices should be given. Keep to regular meal times and give no food between meals.

COMMON AILMENTS OF A CHILD

Bowel Complaints —The mucous lining of the bowels of a baby is very delicate and sensitive and the least thing may upset the bowels. Right from the beginning children should be taught to empty the bowels at regular intervals, and at the same time, every day. This should be made a habit. Very small babies should have two or three motions a day First the stools will be dark in colour and will get lighter, gradually. After the first month there will be only one or two motions a day. Generally, any bowel trouble can be diagnosed by the colour of the stools.

Bright Green Stools —indicate that the food is not properly digested. This may be due to weak bowels, chill, or the presence of disease microbes in the alimentary canal.

Treatment.—Give baby ten to fifteen drops of castor oil with a little sugar. For the next two or three meals give only boiled water or *pori* water. The bowels will move, and the microbes will die, because they have nothing to live on.

Curd in the Stools.—is due to undigested food, especially in bottle-fed babies.

Treatment.—Add more water to the milk and a teaspoonful of lime water.

Very Pale Clay Coloured Stools.—is due to absence of or too little bile salts. This is a sign of jaundice. A further sign will be that the white of the eye is yellowish in colour and the mucous lining of the eye pale. The character of the stools may be due to chill in the liver, and the bile is prevented from going into the duodenum. If continued, jaundice will result and the poison caught up by the liver will get into the blood stream.

Treatment.—Great care must be taken to keep the child warm. Massage gently over the liver with an oiled palm. Olive or medicinal oil may be used. Give a small baby, a dose of milk of Magnesia and a bigger child Rhubarb or Calomel.

Thin Watery Stools.—This is a usual sign of diarrhoea. Breast fed babies seldom suffer from diarrhoea. if they do, it is because the mother has taken either too rich or improper food. In the case of bottle-fed babies, this may be due to dirty bottles, teats, cans, decayed milk or infected milk.

Treatment.—Tiny babies may be given ten to fifteen drops of castor oil. Boiled water should be given for the next two or three meals and then weakened milk. If diarrhoea persists over second day, a doctor should be consulted.

Constipation.—This trouble is found both among breast-fed and bottle-fed babies. This may be due to the fact that the child has not learnt to evacuate its bowels regularly. Constipation sometimes follows an acute attack of diarrhoea. Again, if there is too little or no fat in the food, taken by either or both, the mother and child, this trouble will result.

Treatment.—In the case of breast-fed babies the mother should also take more fat in her diet, fruits, and plenty of water. She should also take exercise.

Bottle-fed babies should be given fruit juices and plenty of water. Failing this method give a teaspoonful of Milk of Magnesia. Another mild laxative is about four teaspoonful of lunuvila

water. (Take a handful of "Lunuvila" leaves and boil it in one cup of water until about half cup of water is left). A very effective and harmless remedy for this trouble given to children whose diet is rice and curry may be tried. Take a handful of tender "Thumba" leaves or tender "Erabadu" leaves or "Kebella" leaves. Wash and cook the leaves into a white vegetable curry with a little gravy. The curry will be tastier if tempered with two or three onions in a spoonful of home-made coconut oil or butter or ghee. This, with rice and curry, has helped to prevent and cure constipation.

If constipation persists for more than three days, syringe with soap and water, or salt and water. Never make it a habit to syringe a child, for it weakens the bowels. Drugs too must not be used for this trouble.

Excessive straining often results in the prolapse of the bowels.

Treatment.—For prolapse of the bowels, do not be unduly alarmed when this happens, but try to push in the part of the bowel which has come out, very carefully. Crush a "Pinna" leaf and place it in the centre of another leaf and wrap to form a pad. Place this against the lowered part of the bowel and this will help to push it in. Wash the leaves well before using them

Another method is to grease the hands well with vaseline and to push the bowels in gently. Good care must be taken to have the hands perfectly clean and germ-proof, before this is done

Worms —There are three kinds of worms which are commonly found in children. They are the round worm, thread warm, and the hookworm. The larvae of the worms are miroscopic creatures which find their way into the body along with dirty water, with raw and carelessly washed vegetables, and through the pores of the skin from dirty soil.

Round Worms.—These greatly resemble the common garden worm but are paler in colour. They vary in length from 3 to 12 ins. and are often found in large numbers. They inhabit the whole length of the intestines. It is not an unusual thing for a child affected by this worm complaint to expel the worms from the mouth, by vomiting.

The usual signs of this trouble are: Loss of appetite, grinding of the teeth when asleep, scratching at the anus and nose, peculiar smelling breath, fever, abdominal pain, and vomiting, and

in some cases, even convulsions. The usual treatment is Santonine, but great care must be taken when this is given. It should be given under a doctor's orders. The powders must be followed by a dose of castor oil.

Thread Worms—are so called because they look like little pieces of white thread. They may be seen with the motion, or hanging round the opening of the bowel. They live in the lower bowel. A salt and water injection into the lower bowel will be an effective treatment. (A teaspoonful of table salt to a pint of water). About three or four ozs. of this should be sufficient at a time. Repeat this treatment night and morning for a few days. At the same time keep the bowels open. If the doctor prescribes Santonine it may be given.

Hookworms.—These worms have suckers and hooks which enable them to attach themselves to the walls of the intestine. There they suck the digested food from the blood vessels of the intestinal walls. As they move from place to place, they leave behind sores. The symptoms only appear when the case is bad. Where the larvae enter the body through the skin, ground itch often occurs. When children walk about bare-footed, on contaminated soil especially on rainy days, they get eczema between the

toes. This is really ground itch. The worm sucks up blood using up the nourishment that should be used up for the building of the child's body. Hence the child suffers from malnutrition. The child gets run down in health, gets tired nervous and anaemic. It has a distended abdomen and thin limbs. This is due to lack of nourishment, weakening effect of sores and the poison given to the body by the worms.

Treatment.—The treatment for hookworm is a strong oil called "Chinapodi." This should be followed by an effective purgative. This treatment should be taken under a doctor's orders. When the medicine is in the stomach no food should be taken.

To prevent worm troubles drink pure water. If we are not sure of the supply, the water should be boiled and filtered. When fruits are eaten they should be washed first. Vegetables and leaves which are eaten raw should be well washed in running water. Salad leaves can be washed in weak Condy's fluid and then in fresh water. Latrines should be kept clean and the floors washed with strong disinfectant. Children should not be allowed to play with dirty soil. They should not get out without shoes or sandals With a little care, worm trouble can be greatly minimized.

H. M. C.

Colic.—When a baby has an attack of colic or stomachache, he is restless and wriggles and kicks with pain. The face gets drawn with pain, and he presses the legs against the abdomen and cries. The stomach is often hard and puffed up. Colic may be due to chills or indigestion, or possibly both. Chills may be due to dawdling over the bath or to exposure of the abdomen owing to careless clothing, or sitting and sleeping on damp or cold floors. Chilling causes too much blood in the intestine so that the blood vessels become congested and the result is pain. In bottle-fed babies colic may be due to the milk chosen not agreeing with the child. Other causes may be overfeeding, irregular feeding, too slow or rapid feeding, constipation, constriction round the abdomen, and even skin irritation.

Treatment.—Apply heat to abdomen and the extremities. Massage the abdomen with a greased palm in a circular direction, across down and round.

Put baby over shoulder, and pat gently over the waist, or put him on the lap with stomach down on lap. If the pain is bad give one or two drops of Sal Volatile in a little water, or dill water, or a tiny pinch of bicarbonate of soda in a little water. Wrap round abdomen a warm flannel, or under careful

supervision apply a hot water bottle to the stomach. If there are signs of indigestion, treat for indigestion after the pain has passed away.

Convulsions.—One of the commonest ailments among Ceylon babies is convulsions. These fits usually come with such suddenness, and result from such trivial causes that mothers often get too excited to do anything for the child, in time to save it. Again some mothers, owing to ignorance, are unable to save their babies. So every mother in Ceylon should know what to do in a case of convulsion, so that when she is faced with a case she can act promptly and with great presence of mind and save the life of the child.

TREATMENT FOR CONVULSIONS

Convulsions is caused by high fever as in cases of malaria, stomach trouble (indigestion, colic

and constipation,) worm troubles, strain of teething, extreme exhaustion (after a severe attack of dysentery,) and brain trouble. In a typical fit of convulsions, there may be first slight twitchings of the face and fingers. Sometimes, the eye-balls roll upwards so as to show the white of the eyes, the face becomes pale and the whole body rigid, the teeth are interlocked, the neck stiffened and the head thrown back.

Treatment.—Put the child immediately into a warm bath, the water being at blood heat (using elbow test) at the same time sponging or bathing the head with cold water. Mustard may be put into the warm water (one dessertspoonful to one gallon of water). After some minutes wrap the child in a sheet or towel and dry and dress him quickly taking care to avoid a chill. Next give the baby an enema. If convulsions is due to stomach disorders give a dose of castor oil after the child has becomes normal.

Now put the child to sleep, keeping him warm. Sleep is necessary because the child is exhausted.

In case of severe and repeated convulsions, which seem to threaten life, a doctor should be called in.

RESPIRATORY TRACT COMPLAINTS

Cold.—Cold begins with sneezing and a watery discharge from the nose and eyes. The child will be out of sorts and will show loss of appetite. If the cold is severe, slight fever, cough and sometimes a sore throat will mark its course. If proper care is taken the cold will pass off in two or three days.

A cold in itself is a mild complaint, but if it is neglected it may lead to bronchitis and other complications.

Treatment.—Keep the child warm and quiet until the cold is better. Induce perspiration. Hot coriander tea may be given. An older child may be given hot ginger tea. Do not allow the child to neglect his meals. Keep the bowels in order. Keep the nose clean and clear of mucus.

Influenza.—is highly infectious. It begins like a severe cold. It also brings on headache, fever, cough, and pain in the limbs, abdomen and back. After the fever drops great weakness is felt.

Treatment.—Treat as for a cold. For the cough rub the chest down with camphorated oil twice a day.

Bronchitis.—By bronchitis is meant an inflammation of the air tubes of the lungs. It is especially common in ill-fed children and those living under insanitary conditions. Then again the average child who is very fat and stodgy is excessively susceptible to bronchitis. Cold and damp are common causes of bronchitis. Sometimes the complaint is developed after such illness, as measles, whooping cough and influenza. Bronchitis often begins in baby with feverish cold which gradually spreads downwards into the bronchial tubes. The temperature is moderately raised to about 102° F. Breathing is quick and short and at the same time laboured. The pulse is quick. The child coughs a great deal to get rid of the phlegm. Infants cannot cough out the phlegm so they swallow it. Sometimes this is vomitted out. A wheezing noise may be heard in the chest specially at night.

In a mild case of bronchitis the large air tubes are affected and the cough is usually louder.

Treatment.—Good nursing is very important. Put the child into bed and keep him warm and quiet. Have plenty of fresh air coming into the room but keep off draughts. If the case is severe put on a paste of antiphlogistine. In milder

cases rub the chest with camphorated oil. Coriander tea may be given. Give plenty of good drinking water. Keep the bowels in order. When the child is convalescing give good nourishing food. Eggs, raw meat juice, cold liver oil may be given to advantage.

A neglected case of bronchitis may lead to pneumonia. Great care must be taken to prevent a ralapse.

Croup —is an ailment which babies develop quite suddenly. The child may seem quite well, but suddenly in the early hours of the morning, it will sit up and gasp for breath. So difficult will be its breathing that it will go blue in the face and perspire profusely. There will be a queer harsh metallic cough and the breathing will be slow and laboured and noisy. After about an hour or so, all these symptoms will disappear and the child will fall asleep exhausted. When it wakes up in the morning it will appear quite well except for a hoarse throat and an occasional cough. This attack will be repeated the next night almost at the same time.

Treatment.—Make the child vomit at once, by giving it a teaspoonful of Ipecacuanha wine. This will ease the chest. Then apply heat to the throat in as many ways as possible to give relief to the spasmodic contraction of the throat

muscles. Apply hot fomentations round the throat, and if necessary give the child a hot bath as hot as he can bear. A bigger child may be made to inhale steam from a bronchitis kettle. When the child is convalescing, good nourishing food and cod liver oil should be given. Croup results from a chill, and comes on in badly-fed children.

SKIN AILMENTS.

A baby's skin is delicate and sensitive and the least irritation will give rise to a rash. The skin is not only affected by outside influence but also by internal irritations as indigestion, dentition and pneumonia.

The skin is an important excretory organ expelling the impurities of the body with the perspiration through the pores. These impurities should be washed off from the surface of the skin. Otherwise they give rise to skin troubles.

Prickly Heat.—In Ceylon almost every baby suffers from prickly heat. This is a rash that comes on in hot climates. They may be seen in illness in which there is much perspiration. They are due to blocked and irritated sweat glands.

Treatment.—The irritation will be lessened by the application of a soothing lotion or dusting powder. Eau-de-Cologne and Fuller's Earth or Talcum powders are effective. In all cases of skin irritations the bowels should be kept in order.

Ringworm—is caused by a fungus—a vegetable parasite. It is very contagious and is spread by the use of brushes, combs, towels, hats, clothing or by direct contact. Ringworm fungus may grow on the scalp or on any part of the skin on the body. It first appears as a round spot. It then spreads at the margin and dies away at the centre so forming a ring. When it attacks the scalp, the hairs in the affected area break off near the surface of the skin. The broken off hairs are very characteristic of the disease.

Treatment.—Something must be done to kill the fungi which cause the disease. Scrub the affected parts with carbolic soap and hot water and apply Iodex or paint over with Tincture of Iodine Gunpowder and lime may be applied on the area. Tobacco juice too destroys the fungus, and X'ray treatment is effectively done in a case of ringworm.

Scabies or Itch.—is caused by the itch mites which burrow into the skin and make furrows at the end of which they lay their eggs. There is great irritation, and scratching sets up an eruption

Treatment.—Soak the affected part in hot water as hot as the child can bear. A little carbolic acid or Dettol may be put into the water. Soak for

about ten minutes so that the skin is thoroughly softened. Next scrub the affected part with a piece of coconut husk and carbolic soap. Apply sulphur ointment and bandage. This must be done twice a day for about five days to destroy the itch mites which hatch from the eggs in the burrows. This disease is highly contagious. The clothing of the child should be boiled and bandages used burnt. The child must be isolated.

Thrush.—is caused by the growth of a fungus. It appears as white patches on the mucous membrane of the mouth and the throat of the child. Hand-fed babies are far more likely to suffer from thrush than breast-fed babies. Sour milk, dirty bottles and teats, all help to give baby thrush.

Babies must have their mouths cleaned daily with glycerine and borax till the trouble disappears completely.

Eczema:—This skin trouble can occur in any part of the body. It usually begins in the folds of the skin, between fingers and toes, folds of the elbow, neck, behind the ears and scalp of the head. There will be patches of red and tender skin on which appear little vesicles full of fluid. After a time the vesicles burst, or are broken by scratching and then scrabs are formed. Sometimes the red surface oozes moisture without any vesicles forming. If the discharge from the sores is

allowed to run over the healthy skin, it will set up irritation and spread the disease. Sometimes the constant scratching with finger nails will result in blood poisoning. Eczema may be caused by careless treatment of the skin which results in irritation, by failing to keep the folds of the groins, buttocks, neck and limbs, clean and dry; by allowing the baby to keep on wet and soiled napkins; by bites of parasites; by intense heat, and by ground itch.

Treatment—Wash infected area with warm Condy's fluid. Dry perfectly well with a clean rag. Smear with rice congee and apply oxide of zinc. It is of no use to apply the powder on top of scabs. Remove these with bread poultice, but care must be taken not to let the poultice get cold. Remove the poultice, soak in oil, and pick scabs. If oils are used the infected area must be well bandaged to exclude air. Eczema is also caused by dyspepsia, diarrhoea and lowered vitality. While treating the infected area great care must be taken to put the child's consititution to right. The diet must be carefully supervised and the nursing mother should avoid alcohol, salted meats, and too rich food. In bottle-fed babies the quality and the quantity of food must be adapted to its digestion.

Again eczema is caused by excess of sugar in the blood. This is often found in older children.

Avoid excess of fats, starch and sugar. In all cases of eczema, the bowels must be regulated.

Very old coconut oil has also proved effective for cure of eczema.

Sores—too result from uncleanliness, lowered vitality, and impoverishment of the blood owing to the wrong kind of food taken.

Treatment.—Wash the sores in warm water and Condy's fluid, remove all pus with a bit of cotton wool. Soak well until the scabs are softened and if possible removed. If the sore is dirty, apply a boric fomentation. (Place a piece of pink lint on an open bit of rag or handkerchief and pour boiling water over it. Now squeeze out the water and place the piece of hot lint over the sore and quickly bandage while it is warm). Change the dressing every three hours. When the wound is clean apply boric ointment. Keep the wound covered to prevent flies from infecting the sores, and to keep off dust. Great care must be taken to keep the sores perfectly clean. If sores are neglected tetanus may set in.

Bruises.—A bruise is bleeding beneath the skin caused by an injury.

Treatment.—Apply cold or heat. Foment with hot ash, cloth or flannel wrung out in hot water, or apply a little vinegar and water, Eau-de-Cologne, ice or balm. If it is a small bruise a little cold water will take it away.

Tetanus —This is a very dangerous disease and often proves fatal. It is much easier to prevent this disease than to cure it. When a wound is open and neglected the tetanus germ gets into the wound from the garden soil. Then again in Ceylon, where people go about barefooted, cuts, needle pricks, wounds caused by barbed wire and rusty nails are common. When these wounds are neglected and when they are not treated at once tetanus sets in.

To prevent tetanus, cleanse the wound if it is dirty, by soaking it in hot water with some disinfectant, such as lysol, in it. Dry the wound and apply tincture of iodine. If the wound is clean apply iodine without washing it. Iodine is the best skin disinfectant. For an old wound, made by a rusty nail, a little asafoetida heated over a fire may be applied hot, and bandaged. If there is fear of tetanus caused by a wound a dose of coriander and "barng getta" (venivalgetta) boiled should be taken. If the case is severe no time should be lost in consulting a doctor. A doctor will give an anti-tetanus injection to act against the toxin generated by the tetanus germ.

RICKETS

Rickets.—One of the commonest diseases among Ceylon babies is rickets. It is a bone disease and results from malnutrition. The cause of rickets is lack of fat soluble D Vitamin in the diet. This vitamin is found in cod liver oil milk, egg, butter, fresh vegetables and fruits.

When calcium salts cannot be assimilated from food, too, rickets results. Sometimes when the expectant mother does not take enough calcium-producing food her baby is inclined to be rickety.

The predisposing causes of rickets are, bad and unhealthy surroundings, lack of fresh air, and uncleanliness.

A child who has this disease is pale, thin, listless and unusually quiet. It perspires profusely especially about the head and neck when asleep. After a time, the bones becomes deformed, arms and legs are distorted, and swellings show at the extremities. The child may develop round shoulders and pigeon chest. The teeth may be affected in some cases, and in others dentition will be greatly delayed. There will be constant indigestion and the child will be quick to contract the ordinary diseases of childhood, but especially bronchitis, whooping cough, diarrhoea and convulsions.

Treatment —Give the child food containing fat soluble D Vitamin ***e. g.***, fruit juices, such as orange juice, grape juice, tomato juice, and cod liver oil, butter, milk, eggs and green vegetables. See that the child has plenty of water. Fresh air is most essential.

A BABY'S NURSE

In Ceylon, babies are usaully looked after by ayahs. Only those who are fitted to take on this great and responsible work should be chosen and not those who come in the way ofering their services for the lowest possible wages.

Preference should be given to elderly nurses and those who had the care of infants previously. If this is impossible, reliable persons should be chosen and trained before they are given the charge of children. It is troublesome both to mother and baby when nurses are changed constantly, so once a good nurse is chosen it is wise to keep her.

A nurse should be perfectly healthy. An unhealthy nurse cannot be expected to do good work. Besides, she may pass on disease to the baby who is so ready to catch them. Tuberculosis is known to be transmitted from nurse to child very readily.

Her teeth must be in good order. The foul breath of a nurse will give rise to ill-health in a child.

The nurse must have a great love for children, and she must choose her work because she loves it. It is only then that she will be ready to do her best for the child without grudging time or trouble.

She should have infinite patience and tact. With tact many a difficult situation can be saved and healthy relationship can be established between nurse and child. On no account should she lose her temper. A good nurse will respect her charge and in return she will be respected.

A nurse must be absolutely trustworthy, otherwise she will be a source of great danger. Often when she is with the baby she neglects it, and takes interest in gossip with her friends round her. When she is deep in conversation forgetful of her charge, harm may come to the child.

Some nurses take children to their friend's cottages without permission from the mother.

This sometimes lead to illness contracted in unhealthy surroundings.

Sometimes the baby has a fall and the nurse hides the fact. Later serious results ensue. So we see how necessary it is for a nurse to be trustworthy.

The nurse must be obedient. If she feels the mother is unreasonable in her demands, it is best to leave her. As long as she is under employment she must be ready to obey the mistress of the house.

A nurse must be truthful. She must never hide things in order to escape blame.

She must be methodical and tidy. She must be an example to the child. Children should be trained to put away toys after use. Time and energy will be greatly saved if the nurse is methodical.

A nurse should be intelligent. She should be able to play well with the child on children's lines. This will not only help to train the children to be intelligent but will also create a strong bond of friendship between nurse, and child. The child will love the nurse, and will do all in its power to please her.

Above all, a nurse must be clean. Her clothes, especially her inner clothes must be clean. Ceylon ayahs are not often particular about this point. Nevertheless, it is emphatically important. Her person must be clean and her language and morals must be clean too. Many a child has learnt bad language from the ayah, and so it is necessary to guard against this.

When the nurse feels she is tired and worn out, it is best to take a little rest with the permission of the housewife. If the housewife is sympathetic towards her helper, she will be amply repaid because the nurse will find it a joy to work for the child.

THE TRAINING OF A CHILD

Every mother and nurse should begin to teach good habits to a baby from its infancy. Some of these early habits will be those which help to keep the child healthy.

We know that an infant should sleep almost all the time, waking only for his food. During night time he should sleep steadily without food. This habit is a good one and if not formed, harm will result to both the digestive and the nervous system. After every meal, the baby should be put into his cot, and be allowed to go to sleep quietly. Never make it a habit to rock the baby to sleep or to watch by his bed while he sleeps.

Regularity of feeding should be strictly adhered to and formed into a habit. No amount of crying should make either the mother or nurse relent and give food, if it is not the right time for him. In the night no milk should be given between 10 p m. and 6 a.m. Indigestion and diarrhoea are often the result of irregular feeding.

A HAPPY BABY IN THE PEN

After every meal it is a good thing to hold baby out to pass urine without letting him wet his napkin. When the habit is developed he will want to be held out to pass urine or to empty his bowels. Every baby should be made to evacuate his bowels at least once a day regularly and always at the same time. If he is not inclined to do so massage over the stomach for about fifteen minutes and let him sit on the chamber for a few minutes until his bowels work. Many a child is constipated because this good habit has not been formed

A baby should be made to breathe correctly through his nose and not through the mouth.

When the air passes through the nose it is warmed and filtered, but mouth breathing takes in germs and often causes adenoids, and tonsilitis. If the baby has a cold, keep his nose clean and when he is older let him use a hankerchief and teach him to keep the nose clean. If the baby has his mouth open during sleep, close it.

Although this seems a small thing it is a habit which can affect a baby's health a great deal.

When the child cries to be carried, and wants some one to be near him leave him alone. If you give in once, every time he wants company, he will cry.

Sometimes a baby takes to sucking his fingers or thumb. This is a very bad habit and should be stopped at once. Not only do germs get into the mouth, but it also predisposes the child to adenoids and we have discussed its evil effects is an earlier chapter.

When the child is older he can get into the habit of performing his own toilet. He can clean his own teeth with tooth paste or powder and brush, wash his face and body and change into clean clothes.

He can also be taught to breathe fresh air and take physical exercise. He should be trained to keep his body healthy, beautiful and clean.

It is important that a child from early days should learn the lesson of obedience. But obedience should be the outcome of love and not of fear. If a child loves his mother, he will not want to displease her, and to obey her will be his delight. Great tact should be used, in giving commands. They should be always reasonable. Positive commands are preferable to negative commands. "Don't open the drawer" will give the child a definite desire to do it; so it is best to divert his attention from it until the child forgets it. If direct disobedience is shown the child should be punished. Punishment should be meted out according to the age and nature of the child. Putting a child in a corner for a few minutes, or keeping back something he likes very much, are effective. Never deprive a child of his necessary food, or frighten him in any way as a punishment. If a child is naughty just for the sake of naughtiness, take no notice of it. Indifference will be enough punishment. If a child has lost control, then too, leave him alone, for it will be harmful to oppose his will just at this moment.

Truthfulness is another valuable quality which should be taught to a child. Yet a line must be drawn between childish imagination and untruthfulness. Imagination is natural and should not be discouraged. But if a child has done wrong, let him confess it to his mother or nurse. It is

unwise to punish a child when he confesses the wrong he has done. Grief and displeasure may be shown at the wrong doing of the child, but do not punish the child if he has confessed of his own accord. Truthfulness can be best trained by example. If a promise is made to a child, keep it. The nurse and mother should at all times speak the truth and thus teach the child to be truthful.

Habits of unselfishness and self-control will help the child later in life. From his very young days, he should learn to share and give graciously and cheerfully. The mother should encourage this generous spirit by her example. Let the child share his toys with others, and entertain others at tea. Give many other chances to think of others first and of himself last. He should learn to bear little pains like a man, without fuss. Giving vent to temper and indulging in crying at the least provocation should be discouraged. In short, a child must be taught to be a sport. A sport is also courteous; there will be no snatching of things and bullying of younger sisters and brothers. Due respect will be given to elders.

The nervous system of a baby should be taken care of. A baby should not be talked to always. He should be quiet in the cot for the greater part of the day. When a child is older he should still be protected from undue excitement. He should

never be exposed to public demonstration of any sort unless he does it of his own accord. It is cruel for a parent to get a child to sing or recite before every visitor who comes to the house.

"Showing off" of this kind is detrimental to the child and his nervous system gets highly strung.

A child should never be frightened. Stories of "billa", ghosts, and devils, should never be related to a child. Fright created in this way affects the nervous system and results in many a child being a victim to convulsions and other diseases.

Train a little child to be useful. Let him do little things to help his "Mummy" and "Daddy." Teach him also to be tidy. After the play hour, he should be deputed to put away its playthings and to tidy up the nursery. This will be a splendid training and will be a help to mother and nurse.

Teach him also not to be wasteful and destructive. Tearing of books, or breaking of toys should not be tolerated.

Servants should not be allowed to wait on the child hand and foot. He must do all he can for himself. Then and only then will he learn to be independent.

Above all teach a child to think and act purely. Teach him to keep his body strong and clean and beautiful. Tell him stories of brave, good, clean heroes and he will have a keen desire to be like them. It is here that the highest ideals of religion should be set before children simply and clearly.

A living religion will help to banish foolish ideas of caste and class. It will teach them to treat those who work for them, especially servants, kindly and courteously. Thus they can be trained to be noble boys and girls who will be worthy sons and daughters of Lanka.

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