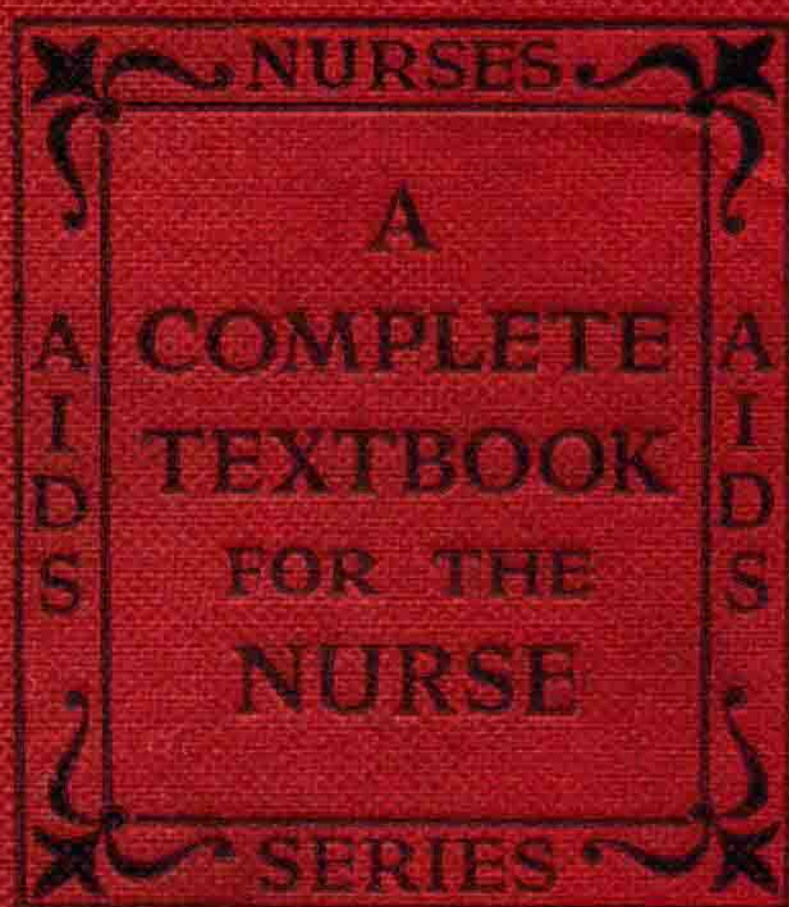


AIDS TO
TROPICAL NURSING



SECOND EDITION

BAILLIÈRE, TINDALL & COX

AIDS TO TROPICAL NURSING

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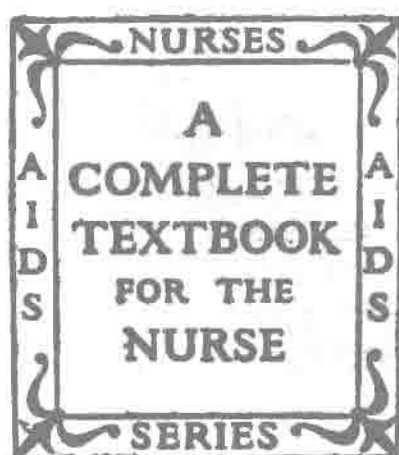
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CONTENTS

CHAPTER	PAGE
I. KEEPING FIT IN THE TROPICS Personal Hygiene. Food and Drink	I
II. CARE OF CHILDREN IN THE TROPICS Pregnancy. Infant Feeding. Weaning. Teething. Protective Inoculations. Diar- rhœa and Vomiting	10
III. CLIMATIC DISORDERS Glare. Heat Exhaustion. Heat Stroke. Sunstroke. Prickly Heat. Tropical Neuras- thenia	24
IV. DIETETIC ERRORS AND DISORDERS Undernutrition. Hunger Swelling. Vitamin- Deficiency Diseases, Rickets. Osteo-malacia. Beri-beri. Pellagra. Scurvy	35
V. INFECTIONS DUE TO CONTAMINATED FOOD AND WATER Cholera. Giardiasis and Shigellosis. The Dysenteries. Typhoid Fever. Undulant Fever	49
VI. PARASITIC INFESTATIONS DUE TO CONTAMINATED FOOD AND WATER Intestinal Worms. Guinea-worms. Schisto- somesiasis (<i>Bilharzia</i>)	86
VII. MOSQUITO-BORNE INFECTIONS Malaria. Dengue. Filariasis. Elephantiasis. Yellow Fever	101
VIII. INSECT-BORNE INFECTIONS Kala-azar. Plague. Relapsing Fever. Sandfly Fever. Sleeping Sickness. Typhus Fever	138
IX. INJURIOUS BITES Snake Bite: Scorpion and Spider Bites. Rabies and Hydrophobia. Rat-bite Fever	163

CHAPTER	PAGE
X. DISEASES AFFECTING THE SKIN	175
Dhobie Itch. Leprosy. Yaws. Madura Foot. Sandfleas	
XI. OTHER DISEASES COMMON IN THE TROPICS	183
Sprue Bacillus Coli Infection. Smallpox. Leptospirosis, Weil's Disease and Seven- Day Fever of Japan	
SUMMARY OF COMMUNICABLE DISEASES	201
GLOSSARY	206
INDEX	211

AIDS TO TROPICAL NURSING

CHAPTER I

KEEPING FIT IN THE TROPICS

There exists a common fallacy among people not used to hot countries that to settle down in the tropics necessarily involves sacrifice of health and physical well-being. Certainly there are many more diseases to be guarded against than in temperate climates and the effects of living in a continuously high atmospheric temperature, especially if it is also humid, may be very enervating. However, even under such adverse conditions, providing certain extra hygienic precautions are taken and moderation in all activities is observed, the constitutional stamina need not become unduly undermined. The person who takes thought to preserve a good state of bodily resistance will be well repaid by a comparatively rapid recovery from most of the commoner tropical infections, should he fall victim to any one of them.

The most usual causes of deterioration of health in the tropics are avoidable, being those of self-indulgence in eating and drinking, and excessive social activities that encroach on the time needed for rest. Another frequent cause of serious ill-health is the neglect of minor symptoms of disorders, such as those of progressive anæmia or intestinal disturbances, which should be investigated as soon as they become apparent.

Protective Inoculations.—All people resident in tropical countries owe it to both themselves and the community in which they live to undergo various inoculations to safeguard their own health and to prevent diseases

becoming epidemic. Everyone should make a point of being vaccinated against smallpox, as serious outbreaks in the cities are frequent. Typhoid fever is endemic in most villages and towns, so protective T.A.B. inoculations are necessary. Other inoculations are necessary from time to time, when the Public Health Authorities find that certain diseases, as for instance typhus fever, are on the increase. Further information on protective inoculations will be found in the next chapter, which deals with the care of children in the tropics.

Mental Outlook.—One of our most important needs is to have some understanding of one's own personal "psyche" or mental make-up, so that deviations from the normal can be noted and mental health maintained. It too often happens that, in an environment foreign to one's upbringing, specially when climatic conditions are difficult, mental stability is lost, and this results in nervous irritability, unreasonableness, and impairment of judgement. Such mental ill-health must be consciously admitted and accounted for by a process of deliberate clear thinking. Only thus can the reason for its occurrence be understood and the cause if possible be removed, or at least guard kept to prevent irrational behaviour. Instinctive impulses need to be guided by reason, and moral behaviour, which tends to have a standard of its own in warm climates, needs special guarding, if the principles instilled by a decent upbringing are not to be jeopardised.

Nurses come in contact with a great many people, so for them, tolerance towards the race and religion of others is particularly essential. The inability of many to live and let live is the cause of much bitterness of feeling, while the assumption of superiority of one community over another becomes the root of deep antagonism.

Racial customs often have a religious origin and so are very precious to those who observe them, and it is unwise and thoughtless to show prejudice, ridicule, or condemnation towards such observances. Some religious rites were originally instigated with a view to the protection of the health of the race, but in some instances this object has been lost sight of, and the practices have become corrupt and harmful and need to be eradicated.

Interference even in these instances is, however, best left to those who make social uplift their lifework and who understand the language, needs, and customs, of the backward communities among whom they work.

Personal Hygiene

Baths.—It is a good plan to have a quick tepid or cold sponge down or shower on rising, as this stimulates the circulation of blood and so aids in flushing all the excretory organs of the body. Lengthy cold baths are not a wise practice on first coming to the tropics or when feeling run down, as they may be instrumental in precipitating an attack of malaria if the parasites are latent in the blood. When the day's work is finished a warm bath at a temperature of 100° F. is needed to remove sweat and dirt, and a brisk rub down to follow removes the worn-out epithelial cells of the skin that otherwise tend to accumulate and clog the sweat ducts, thus impeding the evaporation of perspiration. It is particularly important in very hot weather to keep the skin functioning freely, as evaporation of perspiration is the chief means of regulation of body temperature, and failure in this respect may give rise to prickly heat locally, and the general dangers arising from heat stagnation. To lie soaking in a hot bath for a long time is devitalising and should be avoided. The warm bath should be followed by a few minutes of complete muscle and mental relaxation on the bed, followed by a change into clean undergarments free of stale perspiration.

When bathing in unfiltered water care should be taken not to let it splash in the mouth. If the source of supply is doubtful, a few crystals of potassium permanganate (*Condy's fluid*), enough to make the water pink, provides a certain amount of disinfection. Water used for mouthwashes and dental hygiene should always be boiled before use.

Hands and Nails.—Care should be taken to wash the hands thoroughly before meals or handling food, as all furniture and articles in daily use are likely fomites, harbouring organisms, particularly those of bowel infections. These should be considered as potential

sources of danger. Such infection is especially likely to be harboured in finger nails, and it is essential that the nails be kept short and clean. The nurse with a tendency to nail-biting should curb this habit otherwise she may infect herself following attendance on patients with any of the infective intestinal diseases, such as *cholera*, *typhoid fever* and *dysentery*.

Care of the Feet.—It is best to wear shoes with a moderate heel, as they are less tiring to the feet than flat shoes for those not accustomed to going bare-foot. The fashion of using block shoes is not very wise, as the arch-supporting muscles get lazy. For the nurse on hospital duty two pairs of shoes should be kept in alternate use. Tired aching feet due to prolonged standing can be strengthened by daily tip-toe exercises, followed by bathing the feet in alternate hot and cold water, and finishing by rubbing briskly with methylated spirits. Feet perspire a good deal in hot weather, so stockings should not be worn twice without first rinsing through with soapy water, otherwise stale odour gives offence and also the stockings become harsh and cause sore feet.

The Eyes.—Protection from glare is necessary to those who are easily affected by strong sunshine (*see Glare*). Frequent headaches should be regarded as an indication for the need of an investigation by an eye specialist. It is a poor policy to sacrifice eyes which would be saved strain by the use of glasses, for the sake of personal appearance.

The Bowels.—The effects of chronic constipation are more readily apparent in trying climates, and usually take the form of lassitude, irritability and headaches. Constipation can be corrected by an adequate intake of fluids between meals, and by increasing the amount of roughage necessary to stimulate the alimentary tract, in the form of fruit and vegetables. A frequent cause of constipation is lack of sufficient exercise, the usual sufferer in this respect being the sedentary worker who does not have to walk to his work. Other symptoms of intestinal disorders such as distension, flatulence, and diarrhoea must be taken seriously and promptly investi-

gated. Sometimes these symptoms are caused not directly by infection, but by a chill arising from lying exposed when an electric fan is in action. A cool current of air directed on to the abdomen may cause an intestinal catarrhal condition that will predispose to any one of the infective diseases that may be latent in the bowel.

Clothing.—A daily change of undergarments is desirable, especially if prickly heat is to be avoided. The most practical material for underwear is white absorbent cellular weave, as ordinary cotton soon becomes saturated and uncomfortable. Restricting garters and waistbands should be avoided, and foundation garments should be light, porous and easily washable, two being kept for alternate use. Chilling after exercise and at sundown must be guarded against, so a light sports coat should be handy for such occasions, and a rub down and change of clothing made as soon as possible. A brimmed hat is essential to those not accustomed to strong sunshine who are obliged to be outdoors during the heat of the day. The solar topee made of pith, though it looks clumsy, has the advantage of light weight and is usually well ventilated, but it is gradually being ousted by the equally serviceable and more fashionable "terai," as supplied to the armies in the tropics.

Exercise and Relaxation.—In order to avoid physical and mental fatigue a complete change of thought and occupation is necessary after the day's work. Everyone is the better for a hobby, and leisure hours are of greatest benefit if pleasantly utilised by taking such recreation for example as that offered by a constructive interest in the garden, rather than by lounging aimlessly. Outdoor sports and swimming are the usual forms of exercise in the tropics, but care should be taken not to push such activities to the point of fatigue, especially when it is very hot.

Sunshine has a beneficial action on the skin, but for those not accustomed to an outdoor life a sudden excess of sunbathing in order to acquire a tan is most undesirable and harmful. In the tropics the body obtains all the health-giving ultra-violet rays necessary by the normal day's activities. The slanting rays of the early

morning and evening sun contain the maximum of health-giving rays, and the infra-red heat-giving rays predominate towards mid-day and in the afternoon, and so should be avoided if possible.

Sleep is not easily come by during the hot sultry nights, but can be encouraged by deliberate preparation, an effort being made to banish cares and anxieties from conscious thought, thus securing a peaceful frame of mind. A period of rest during the day in a darkened room is beneficial in conserving strength and energy during the hot monsoon months of the year.

An effort should be made to take an occasional holiday and a change of air, with the bracing effects of a cooler atmosphere, by the sea if possible, or in the hills. The apparent anæmia of the "tropical complexion" is often due (especially in children) to a slight protective thickening of the facial epidermis, together with a contraction of the superficial blood capillaries, and does not necessarily indicate a poor condition of the blood. A condition of true anæmia is suggested by paleness of the conjunctival sacs of the eyes, and also by lack of a healthy pink colour in the finger nails. The causes of anæmia are manifold, but in the tropics the condition is frequently traced to malaria, kala-azar, or to one or other of the intestinal infections, especially hook-worms.

The Diet

Food.—The various items comprising the daily meals should be considered from time to time to make sure that sufficient of each type of food factor necessary to the well-being of the body is being obtained. It is of significance to realise that in tropical countries the nutritional values of foodstuffs are often below accepted standards. Examples of this is seen by the small size of eggs and the poor quality of meat, these defects usually being due to lack of scientific breeding and farming.

During the hot season inclination warns one against eating too much of the heat-yielding proteins and fats, and the appetite is chiefly inclined to a diet containing cool fresh salads, fruits, and light savoury protein dishes.

The value of fresh fruit and salad lies mainly in their valuable mineral salt and vitamin content, and these are even more important to the tropical dweller than to those who live in cooler countries and so derive these accessory food factors chiefly from animal proteins. Some people deliberately avoid eating these protective foods on the grounds that they are a likely source of contamination; but this risk can and should be overcome. It is worth while to give personal time and supervision in the kitchen, and see that salads are thoroughly washed in running water, carefully inspected, and then put to soak for a little while in a weak solution of Condyl's fluid. Cleanliness in the kitchen should be strictly enforced, and the servants taught the necessity for washing their hands before handling food.

Fresh fruit salads are very attractive, but can be a source of danger unless carefully prepared just before required, and they should never be left exposed to dust and flies. If these precautions are not possible the dish is best avoided, and therefore should not be taken in doubtful restaurants, particularly if their freshness has been enhanced with crystals of ice. It will be observed that minute fruit flies gather quickly wherever there is over-ripe or peeled fruit left about, and these flies act as carriers, capable of conveying such diseases as infective enteritis, typhoid fever, cholera and dysentery. The safest way to take fruit is to clean it in Condyl's fluid and then peel it as required.

Ice-cream should only be eaten if obtained from a reputable firm or made under personal supervision at home. Street and market vendors of ice-cream are often the disseminators of such infections as cholera and other acute intestinal diseases. As exposure to high temperature and humidity causes food to decompose comparatively quickly, twice-cooked meat dishes should not be served unless the meat has been stored in a reliable refrigerator. Shell-fish are best treated with suspicion and avoided; they are frequently served in the numerous "foreign" restaurants, and are often the cause of an acute attack of diarrhoea. When going on train journeys it is advisable to provide one's own tinned food as far as possible, and to drink only reliable aerated

waters made by a well-known firm, and boiled drinks such as tea and coffee.

As happens all the world over, some people in hot countries habitually over-eat, and so obese ungainly figures are a common sight. Self-indulgent people are liable to suffer from dyspepsia and allied disturbances, and so have less prospect of completing their allotted span of three score years and ten. It is safer and decidedly more comfortable to be slightly on the lean side in the tropics. When the appetite flags in the hot weather an effort should be made to eat, as insufficient food gives rise to lassitude and lack of mental concentration, and subsequent debility results in a lowered resistance to infection. A steady weight is the best indication of adequate nourishment. Most people know approximately how much they should weigh in relation to their height, and although it is unwise to make a fetish of weighing oneself, any obvious and continued increase or decrease from the average calls for investigation.

The merits and defects of some of the common Indian diets are dealt with in the later chapter headed "Dietetic Errors and Disorders."

Drinks.—Plenty of fluids are needed by the body to help regulate the body temperature, and extra fluids should be taken between meals. Cold drinks of lime and orange juice are only to be trusted if carefully prepared, and a good rule is to avoid them in restaurants and clubs, and choose aerated waters instead. Commercial ice should never be added to drinks as it is usually contaminated, if not at source, then in transport and handling by coolies. Such ice is only safe to use for packing round the outside of food containers. Only ice made of boiled water in the home refrigerator can really be considered safe.

All drinking water should be filtered first and then boiled. Unboiled water may transmit any of the numerous intestinal infections, while unfiltered water obtained from impure sources usually contain suspended particles of grit that set up an irritation of the bowels. The common complaint known as "Hill Diarrhœa" is discussed in detail at the end of Chapter V, under the sub-heading "Diarrhœa".

The drinking of alcohol as a regular habit is not a good one in the tropics, as any subsequent tendency to a cirrlosed liver impairs its function of excretion of toxins and other poisonous substances from the blood. It is usually the person with an alcoholic record who is the victim, for example, of heat stroke, complications following malaria, or liver abscess after amoebic dysentery.

CHAPTER II

CARE OF CHILDREN IN THE TROPICS

The mother bringing up her family in the tropics should realise that to a far larger extent than in Western countries the health of the family depends on her own keen supervision of domestic hygiene. In Europe, public health services, such as filtered water and reliable sanitation are taken for granted, but in the tropics the mother lacking interest in such matters would be at the mercy of servants who have not the most rudimentary ideas of cleanliness. Clothing should be washed under supervision on the premises and not be taken away to be pounded in some dirty backstream, as often happens. Drinking water must be boiled, and the kitchen inspected for cleanliness and the servants instructed concerning the need for clean hands. Flies in any vicinity indicate the presence of dirt and refuse, and are an active means of transmitting disease from sewage to food, particularly the excretal-borne infections of enteric, cholera and dysentery. Mosquitoes which transmit malaria, filaria, and dengue, should not be tolerated, and if the house itself is not mosquito proofed at doors and windows, then bednets should be used.

The mother who has the interests of her children at heart must be prepared to devote the greater part of each day to their welfare and give them priority over social engagements. The nursery routine should have her personal supervision, and she should prepare the feeds herself. Ayahs however carefully instructed, cannot be expected to grasp the factors concerned in the transmission of germs, and without such understanding, however willing to do her best, she will be the means of passing on disease. Little unhygienic habits are hard for the Ayah to break. She likes to taste the baby's food with her teaspoon, hands him the crust dropped on the floor, and handles the drinking edge of his mug. The Indian Ayah should not be retained for

too many years. She is apt to anticipate her charge's needs too readily, so that he has no opportunity of learning self-reliance and independence of thought and action. She is there to supply his needs, and for this reason Indian-bred children are often bad mannered, develop an imperious disposition, and are ill-humoured when thwarted. Kissing on the mouth is a ready means of spreading infection and should be strictly forbidden.

The psychological aspect of the child's development should not be overlooked. Children need a strict routine in a peaceful environment, safeguarded from too many demands on their emotions, and from distractions in the form of frequent visitors. Adults find it difficult enough to maintain an equable temper during the trying months of the year, and even more so, lack of tranquillity in the child's life results in a nervous irritability that reflects particularly on the orderly conduct of meal times and rest hours.

Until the age of seven years the child's outlook is concerned only with himself. He creates his own interests, and is happiest when left alone to make his own discoveries. Adult attempts to guide his play, and coaxing to make him share his toys with others is generally resented. It is best to let him acquire new ideas at his own pace, otherwise an overburdened mind may result in mental instability. After the age of seven years the social instinct commences to develop, and the child begins to think about himself in relation to others. This is the time to encourage him to join in the play of other children, to learn to share his interests, and to find his place in the ordered scheme of society as presented by the schoolroom. Thus he gradually adjusts himself to the advantages of discipline, and learns to subordinate his inclinations to co-operate with others.

Parents are often unduly fearful of bringing up their children in the tropics, but given common-sense supervision, and with personal attention to dietetic requirements and domestic hygiene, children on the whole do very well for their first years. After the age of five, European children that have not had the advantage of living in the hills during the hot months of the year,

usually become listless and anæmic, and show a general lack of stamina. These signs of debility can usually be ascribed to the enervating effects of the climate, in conjunction with an inadequate amount of vitamins and mineral salts, for generally speaking food supplies in hot countries have a poorer nutritional value than those of Europe. Most difficulties encountered are associated with bilious attacks and stomach upsets, bouts of diarrhœa that have to be dealt with promptly and then accounted for, and skin eruptions due to the heat or contact with dirty articles.

As with children all the world over, various childhood airborne infections become epidemic from time to time, and the three outstanding ones against which the child should be protected are diphtheria and whooping-cough by inoculation, and smallpox by vaccination. Measles, mumps and infantile paralysis tend to increase in the cooler months of the year when the dry atmosphere favours the spread of germs.

Protective Inoculations

1. Vaccination against smallpox is absolutely essential and should not be postponed beyond the second week of age in the case of the average normal infant. The fact that it is the hot season should not be accepted as sufficient excuse for delaying this protective measure.

2. Diphtheria is a grave danger during childhood. During the first few months the majority of infants, particularly if breast fed, have a natural immunity to this infection, and about 60 per cent. of children retain it and show a negative reaction to the Schick test up to the eighth month. After this period the immunity weakens and so, between the ninth to the twelfth month the artificial protection should be given. This consists of two injections of diphtheria toxoid, the second being given three weeks after the first. The A.P.T. (Alum Precipitated Toxoid) is the kind usually used, and it confers a lasting immunity in the majority of cases. Whenever a child has a sore throat, especially if there are cases of diphtheria about, a throat swab should be taken. It is possible for one immunized to harbour the organisms