



HYGIENE FOR NURSES

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SIXTH EDITION

(REPRINT)

EDINBURGH

E. & S. LIVINGSTONE LTD.

16-17 TEVIOT PLACE

1945

First Edition - 1930
Second " - 1933
Third " - 1935
Fourth " - 1937
Fifth " - 1940
Sixth " - 1943
Reprinted - 1945

Made in Great Britain

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PREFACE TO THE SIXTH EDITION

THE main structure and arrangement of the book has been preserved in this edition as experience has shown that it fulfils a definite want. Opportunity has been taken to revise and bring up to date the section dealing with food, as the advances in it, especially that part dealing with vitamins, make progress at a comparatively rapid rate.

Several new diagrams have been introduced to illustrate the text and, it is hoped, help the nurse in her studies.

Our thanks are due to Sister Mathie, Royal Edinburgh Hospital for Sick Children, for helpful criticism, and to the following firms for their courtesy in allowing us to make use of illustrations from their publications:—Messrs. H. K. Lewis & Co., Ltd., for Figures taken from Parkes and Kenwood's *Hygiene and Public Health*; Messrs. Longmans, Green & Co., Ltd., for Figures taken from Notter and Firth's *Hygiene*; Edward Arnold & Co., for Figures taken from Hutchison's *Food and Principles of Dietetics*; and to the Hygienic Referendum. We are also indebted to the Crittall Manufacturing Co., Ltd., for figure 14 and the General Electric Company, Ltd., for figure 17.

THE AUTHORS.

1943.

PREFACE TO THE FIRST EDITION

THE underlying idea in the writing of this volume is to provide nurses with a handbook which will supply a summary of the requisite knowledge of Hygiene. It has been modelled on the syllabus issued by the General Nursing Council. Our experience is that nurses frequently present themselves for examination in Hygiene with ill-balanced knowledge of the subject. It appears to us that too much stress has hitherto been laid on the communal aspect of Hygiene, namely, sewage systems, water-supplies, etc.

In an endeavour to rectify this, we have curtailed the description of these subjects, and have rather concentrated on what we call the personal aspect, as distinguished from the communal. We have emphasised the hygiene of the newly-born child, and have given the underlying principles of dietetics. In following these lines, we think we are carrying out what appears to be the modern idea in the teaching of Hygiene to the nurse.

THE AUTHORS.

January 1930.

INTRODUCTION

THE nurse, throughout her hospital career, is chiefly concerned with assisting the sick to recover health and, consequently, is apt to fail in appreciating that the modern point of view of Medicine is to *prevent* disease. It is important, therefore, that she should learn, early in her course of training, of this side of the matter. Hygiene seeks to teach this. It is "the science of Health and its maintenance."

But, as the nurse handles the individual, Personal Hygiene is most essential for her. She should, however, remember that her work goes beyond the individual. For instance, when she nurses a case of infectious disease she must take precautions to prevent the disease spreading to herself and to others: she aids, in fact, in keeping the community healthy. In other words, she takes part in Communal Hygiene.

Similarly, when she sees to the adequate ventilation or lighting of a ward she is acting for the good of more than one patient. Thus, at many points in her work she aids the community as a whole.

A further lesson that Hygiene seeks to teach is the great importance of detecting the earliest signs of disease, when the condition can be rectified without prolonged and sometimes permanent suffering and incapacity. The nurse should, therefore, learn to recognise the slight indications of such departure from "the normal state of body and mind" which are ill-health.

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CHAPTER I

PERSONAL HYGIENE

THE health of any community depends on the health of the individuals composing that community. The health of the individual again depends on the observance of the laws of health. As the work of the nurse is devoted in great part to the individual it is of importance that she should possess a knowledge of them. The study of these laws together with any other factors which may influence health constitute the Study of Hygiene.

In order that an individual should begin life without hindrance to the attainment of a full measure of health it is desirable that stock from which he or she comes should be healthy. The expectant mother is probably the most important individual of the family group, but other members also play a part.

In the study of Hygiene, therefore, some consideration should be given to that important and far-reaching subject known as Eugenics, that is, in other words, to the subject of being well born.

It is recognised that certain diseases as well as a tendency to contract others are passed on from one generation to another. In the process of time, however, these diseases will slowly breed out and ultimately the individual will come back to normality.

If we take, for example, such a disease as hæmophilia, there is a marked tendency for it to be passed on by parent to child. Families with such an inheritance are

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known as Bleeders, and the children of such parents are a source of untold anxiety to their parents, as a slight trivial wound may cause a dangerous or even fatal hæmorrhage. Certain nervous disorders also tend to be inherited.

Another example of the transmission of defect may be found in the case of the mental defective. All mental defectives are not necessarily the offspring of mentally defective parents. It is reckoned that about 50 per cent. of mental deficiency is due to inheritance. There is the well-known instance of the notorious American family where from one female mental defective no fewer than 222 of her descendants were mental defectives or showed marked criminal tendencies. Other disabilities of a lesser character tend to be passed from parent to child such as abnormalities of fingers, defective vision, cleft palate, etc.

A few deductions may be drawn from these facts, namely, the importance of a healthy stock and the extreme undesirability of members of unhealthy stock producing children.

A consideration of the elementary facts of heredity would appear to make it desirable that those about to marry should know something of the health of their proposed partners and the stock from which these partners come. While the ancestors have an influence on the life of the individual, the health of the parents is of more immediate importance. It is undesirable that any child should be born while either of the parents suffer from any venereal disease or any exhausting illnesses such as tuberculosis, chronic renal disease, etc.

Healthy children may, of course, be born of parents

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not in a good state of health, but for the sake of the child healthy parenthood is most desirable.

HYGIENE OF THE PREGNANT WOMAN

Before summarising briefly the more important points in the hygiene of the pregnant woman, it is necessary to draw attention to the fact that in pregnancy both tissue and energy metabolism * are maintained at a higher level than normal. This increased metabolism is due to two facts: first, the mother is providing building materials and warmth for the growing child; second, the child's body is increasing and using the materials provided. As a consequence, the expectant mother must obtain extra materials in her diet: she has additional by-products of metabolism to get rid of by lungs, skin, bowel, and kidneys, and she requires more than the normal supply of oxygen for "burning-up" the tissue and diet materials.

Particular points to be attended to are:—

(1) *Exercise* out of doors should be obtained daily for two or three hours, care being taken to avoid excessive tiredness. This exercise keeps the muscles in good "tone," prevents fat deposit and stimulates the circulation.

(2) *Fresh air* should be had in abundance day and night; the bedroom windows should be kept open as widely as possible in all weathers. Since tissue and energy metabolism are greater and oxidation is increased, a supply of oxygen greater than in ordinary times is needed.

* For explanation of these terms see p. 74.

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(3) *Rest* is essential to allow the tissues of the mother to be renewed and those of the child to grow. Two hours' afternoon rest, lying down in a quiet room, should be aimed at. In the later months more hours are required. Unfortunately, for many women this is a counsel of perfection.

(4) *Sleep* should be for at least eight hours. The bedroom should be quiet and well-ventilated. The bed-clothes should be warm but light.

(5) *Bowel action* should be free. Constipation is one of the troubles of pregnancy, resulting in the retention of the increased poisonous by-products of metabolism. Abundance of fluids, fruits, vegetables, marmalade, and brown bread, together with exercise, are useful, but are unlikely to entirely exclude the need for aperients.

(6) *The kidneys* should act freely. They should be well flushed by non-irritating fluids to eliminate substances which might irritate them and set up that dread condition, albumen in the urine.

(7) *The skin* must be carefully attended to. A tepid morning bath is indicated, and most authorities permit hot baths each night at bedtime. Where no bath is available a daily soap-and-water sponge-down might be managed. It is to be remembered that the more efficiently the skin, lungs, and bowels act, the less is the strain thrown upon the kidneys. *Sea-bathing* is permissible during the first three or four months, provided that chills are avoided.

(8) *Clothing* will vary with season and climate. It must be adequate to maintain warmth, but must be sufficiently loose to permit free air circulation, and to avoid constriction in any part. All garments should be

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suspended from the shoulders. Corsets, if habitually worn, should be retained during the early months, provided they support, but do not compress abdomen or breasts. Made of soft material, the corset should have elastic side-insertions and be front-lacing, so that the patient may lace it from below upwards whilst lying on her back. Toward the end of pregnancy an abdominal binder is preferable.

(9) *Diet* is of vital importance. If the pregnant woman does not obtain in her food all the building materials necessary, she must supply them by draining her own body. The importance of the lime-containing and vitamin foods is emphasised in their appropriate sections. It is sufficient to say that milk, butter, eggs, vegetables of all sorts, fruits, whole-meal bread and cereals are required. Meat and meat juices, because of their extractives, should be limited to once a day, and should probably be entirely avoided in the last month. Fluid should amount to at least two quarts daily; water is the best. It may be taken alone, or as lemon or barley-water; sipping an occasional glass of hot water is excellent. Tea and coffee should be limited in amount and weak in quality.

It is necessary to emphasise that upsets of digestion are to be avoided. Foibles of diet, which often occur at this time, should not be lightly ignored; the possibility of there being evidence of an over-strained body crying out for some particular principle, mineral or vitamin, should be carefully considered.

(10) *The breasts* should receive careful attention. After all, breast-feeding is the natural and best source of nutrition for the child, and cannot be given unless

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the breasts are healthy. The nipples should be kept scrupulously clean by daily washing with soap and water to remove the dried secretion which forms on them. If they are flat or indrawn, they should be made more prominent by being drawn out, with finger and thumb, for a short while daily. The baby cannot obtain adequate nourishment unless the nipples are prominent and easily grasped.

Lastly, should any abnormality occur, or doubt on any point arise, the medical man, who should be engaged early, must be consulted. Serious complications often give slight signs at first, and many may be avoided by attention to some small, overlooked hygienic detail.

*Antenatal care** is of the highest importance in lowering the maternal mortality rate. This can be secured by two methods: (1) through her own family doctor; or (2) by attendance at an antenatal clinic.

As the mother is the more important in the life of the child, the nurse should be able to supervise and guide the expectant mother, as far as may be necessary, in a hygienic mode of life so that she and her offspring may arrive at full time in good health.

The nurse should remember that pregnancy is a normal physiological process and not a diseased condition. Consequently the expectant mother should live a normal life as far as is compatible with her condition.

Far too much has been heard of maternal morbidity and too little of pregnancy as a natural process.

* For further information see *Advice to the Expectant Mother*.—F. J. Browne, Sixth Edition, 6d. net (E. & S. Livingstone Ltd.).

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HYGIENE OF BABYHOOD

As soon as a child is born the hygiene of that child as a personal unit should begin. It ought to be wrapped in some warm material and placed where no cold draughts come, until the mother has been attended to. A not uncommon occurrence is that the child is wrapped in an old apron, which merely acts as a covering, but does not conserve body warmth, and is placed in any corner, too often exposed to draughts, so that by the time the mother has been attended to, the baby is blue with cold. Such exposure should be avoided by all means as a slight attack of bronchitis at this early date may damage the lungs and sow the seeds of future trouble. A little care at this stage will prevent many troubles later. After the mother has been attended to the baby is washed. It should be noted that the skin of the newly-born is very delicate and, consequently, the child should be handled very gently. Prior to washing, the skin may be anointed with olive oil, which helps to remove the sebaceous matter adhering to it. The bath-water should be at 100° F. It is rather an exceptional thing, however, in everyday life for a thermometer to be used, but a comparatively safe guide is the skin of the nurse's elbow. If the water is comfortable to this part it may be taken that it is all right for the child. The eyes should be washed first, and any discharge and matter on the eyelids carefully removed, a separate piece of cotton-wool being used for each eye. A superfatted soap should be utilised, and a soaped hand is preferable to any rough washing

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cloth. Only a few minutes should be spent at the washing. There is no necessity whatever to scrub the skin. Care should be taken that the nostrils are cleaned thoroughly and careful search must be made for such abnormalities as hernia and cleft-palate.

After washing, the child should be placed on warm towels on the nurse's knee and dried gently and rapidly. Rubbing of the skin is to be deprecated ; it is better that the moisture should be chiefly mopped off and any rubbing should be of a very gentle character.

Dressing.—The child should now be laid on the stomach and a vest applied to the back, a knitted or crepe belt (worn until the cord separates), a diaper of Harrington towelling and a nightdress. Then, keeping the clothes in position, turn the child round so that it lies with its back on the nurse's knees. The cord should then be attended to. This should be dusted with some antiseptic powder. It is a common practice to have a piece of dressing about four inches square with a hole in the centre. This dressing is now applied to the cord, which is passed through a hole in the dressing, and the superfluous part of the dressing folded over so that the cord is completely enclosed. Before fastening the diaper, which should be pinned to the belt, it is a common practice to apply to the buttocks zinc and castor oil ointment. In order to minimise labour, and to save washing, put a piece of lint over the diaper and as this is soiled it can be burned. During the night, pads of gamgee tissue may be used, but in poorer homes this is a very exceptional practice. The petticoat is then fastened round and the part projecting beyond the baby's feet is folded up

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loosely and pinned on to the dress, so conserving the warmth of the limbs. Finally a woollen frock and soft shawl are put on. As there is no special need to feed a newly-born baby for a few hours, it should be put into a warm cradle in a warm corner of the room. It should be carefully seen that the face is sufficiently exposed to permit of sufficiency of fresh air. During the first week the baby should be sponged at least once a day, care being taken that the cord, until it separates, is kept as dry and as aseptic as possible. To this end baby is not immersed in the bath until separation has occurred and the sore healed. After it separates, about the end of ten days, the baby should be fully bathed daily, the water still about 100° F. The reason for this temperature is, of course, that the child has hitherto been kept at a temperature of at least 98° or 99°, and it does not seem physiological to begin to bath it in much cooler water in its early days. After a month or six weeks it is a good plan to gradually lower the temperature of the morning bath. If this is done gradually, it may be ultimately reduced to the temperature of ordinary cold water. This hardens the skin and makes the child more resistant to colds, and acts as a general tonic. No attempt, however, should be made to persist in cold water if the child becomes at all blue, because this means that the child is not reacting as it ought to the coldness. If the child can tolerate this it certainly shows a glow of health which is not easily acquired otherwise. After the bath it is a good plan to place the baby on a rug in front of the fire, away from draughts, and allow it to kick for a few minutes while it is still undressed.