

TEXTBOOK  
OF  
MEDICAL  
TREATMENT

EDITED BY  
DUNLOP  
DAVIDSON  
& ALSTED

FIFTH  
EDITION

# TEXTBOOK OF MEDICAL TREATMENT

By Various Authors

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## PREFACE TO NINTH EDITION

It is gratifying that the demand for this book continues to be such that a new edition is still required every two or three years. Despite the fact that the last edition was published in 1961, the advance in therapeutics has been so rapid that every section has had to be extensively revised. Several of them have been completely rewritten by new authors, namely, Antibiotics and Chemotherapy by Dr. J. McC. Murdoch; Common Diseases of the Skin by Dr. A. Lyell; Some Common Disorders of Infancy and Early Childhood by Professor J. H. Hutchison; Industrial Diseases by Dr. A. T. Doig (in collaboration with the former author, Professor T. Ferguson); Nutritional Disorders by Sir Stanley Davidson; and Renal Diseases by Dr. J. S. Robson. Dr. F. J. Wright is now solely responsible for Tropical Diseases with the aid of Dr. A. R. Mills, who writes the pages devoted to Insecticides and Repellents; and Professor R. H. Girdwood collaborates with Professor H. W. Fullerton in Disorders of the Blood in place of Sir Stanley Davidson.

Ten of the thirty authors, who as young men contributed to the first edition a quarter of a century ago, are still numbered among the thirty-two who take part in this ninth edition. In spite of the incorporation of much new material, appropriate deletions of what has become out of date have resulted in this edition being a few pages shorter than the previous one.

We are indebted to Mrs. M. Wilson of E. & S. Livingstone for much help, to Miss J. Hutt for assisting in proof reading and for the compilation of the index, and to Dr. D. Seaton for drawing up the glossary showing the proprietary equivalents of the officially named drugs mentioned in the text.

DERRICK DUNLOP.  
STANLEY DAVIDSON.  
STANLEY ALSTEAD.

1964

## PREFACE TO FIRST EDITION

THIS book has been written for students and practitioners in the hope that it may fill the therapeutic gap left by the majority of textbooks on general medicine in which, owing to exigencies of space, the section devoted to treatment is often inadequate. In addition, the information given is not infrequently couched in such indefinite terms as to be of little value in helping the practitioner to determine whether a particular line of treatment is worthy of trial and, if so, how it can be put into practice. The following statements, for instance, are frequently made: "vaccines may be of value," "arsenic may be tried," "a well-balanced diet should be given," "the general health should receive attention." Further, it is not uncommon for many drugs and measures recommended by our forefathers to continue to be included in such works year after year in spite of the fact that some of them have been shown to be useless and others are known to be less efficacious than modern substitutes.

An attempt has therefore been made by the authors of this book to be extremely explicit in regard to the treatment recommended, in the hope that the directions given will suffice to enable a doctor without much previous experience to carry out the measures which have been described. As far as possible the indications, contraindications and dangers of each recommended method or drug are fully discussed.

Further, an attempt has been made to indicate why and when certain drugs and methods formerly widely used should no longer be employed for the particular purpose under discussion. From this it follows that the number of drugs advised are considerably fewer than in some books of therapeutics, but this we believe to be wise, for undue reliance on the "bottle of medicine" has tended in the past to obscure and diminish the importance of certain general measures of paramount importance which may be included under the heading "General Management of the Patient," i.e., diet, rest, exercise, nursing, etc., which in the past have received too little attention in medical teaching and textbooks. In addition, the general problem of handling patients and relations under the various circumstances which continually confront the young doctor is dealt with. This entails a consideration of what information should or should not be given to the relatives and patient in certain circumstances, and general advice on where and when to send patients to sanatoria, spas or for a change of air and climate. Lastly, the good management of a case frequently requires a knowledge of common-sense psychological principles which are so important in the art of medicine.

It is well recognized that in some diseases where no specific therapy exists a variety of methods of treatment may be advocated by different authorities. In others, even though the general principles of treatment are unanimously approved, yet the details of their practical application may vary widely in different hands. For example, it would be generally admitted that a case of severe diabetes requires insulin, but opinion differs upon the type of insulin to be used, the details of its administration, and upon the quantity of carbohydrate to be allowed in the diet. No attempt has been made in this book to give a comprehensive

description of all the possible methods of treatment which have been recognized to be of value. To do so would greatly increase the size of the book and would, in addition, defeat the object aimed at, namely, to present to the student and general practitioner the subject of medical therapeutics in a simple and rational form. Accordingly the authors have selected for description those methods which from their personal experience they have found to be most useful. When the procedures are of such a specialized nature as to be outside the scope of the general practitioner, only a brief outline is given.

The work is not a small handbook of treatment, nor yet a vast encyclopædia, since there are already a number of such books. Neither is it a textbook of pharmacology, since a large portion of the book deals not with drugs but with the "Management of the Case" in the widest sense of the term. It is not concerned with surgery, but includes sections on the treatment of venereal diseases, tropical medicine, some diseases peculiar to infants, common diseases of the skin, industrial diseases and the neuroses. There is, in addition, a section which describes in detail the technique of certain essential medical procedures—such as lumbar puncture, venesection, paracentesis, blood transfusion, oxygen therapy, etc.

It is a pleasure to acknowledge the help received from Mr T. H. Graham and Miss Margaret P. Russell, M.A.—Librarian and Assistant Librarian in the Royal College of Physicians, Edinburgh—for their help in proof-reading and in the compilation of the index ; to various editors and publishers who have given us permission to use certain plates and diagrams appearing in their journals, and in particular to Messrs Lippincott, of Philadelphia, the publishers of "Body Mechanics", and to Messrs Oliver & Boyd, publishers of the *Edinburgh Medical Journal* ; and, lastly, to Mr McDonald Walker, of Messrs E. & S. Livingstone, who on all occasions has assisted us in every possible way.

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# INFECTIOUS DISEASES

## INTRODUCTION

**W**HEN DISEASE is the result of invasion of the human tissues by bacteria and other micro-organisms, the condition is called an infection. Those infections which are transmitted naturally from one person to another are broadly classed "infectious diseases". For various reasons, including administrative expediency, a number of these diseases are regarded as the responsibility of special hospitals—the infectious diseases hospitals. Although the classification is arbitrary rather than strictly scientific, it accounts for the selection of diseases included in this chapter. It also explains why venereal diseases, tuberculosis, parasitic infections and tropical diseases are dealt with elsewhere in this book.

The more we know about the natural history of infections, the more rational is our treatment likely to be; and we shall be more skilful in protecting our patients against the hazards of complications. Stated briefly, the effects of bacterial invasion are determined principally by the virulence of the micro-organism and the efficiency of the defence mechanism of the host. There is a very wide range of possibilities: infection may occur without perceptible illness; and at the other end of the scale the infection may overwhelm the body defences and cause death in a few hours.

An acute infection may thus be regarded as a struggle between a susceptible host and a pathogenic organism. To achieve success, whether in prevention or treatment, it is necessary to realize that measures which enhance the recuperative capacity of the host are no less important than those which diminish the attacking power of the micro-organism. The febrile period is so short—following effective chemotherapy—that the value of general nursing management is easily overlooked; but there is no doubt of its importance in severe infection with constitutional upset.

At the outset, it is worth while to draw attention to an important contrast between bacterial and viral diseases. In almost all bacterial infections the organism remains mainly extracellular and can thus be reached with comparative ease by substances which are present in the blood stream. Although it is reasonable to assume that there is a temporary stage of viræmia in many of the virus diseases, the causative organism is capable of growth only inside the body cell so that it rapidly becomes inaccessible to the usual methods of treatment. Such localization of the virus in body cells has often occurred by the time the infection becomes manifest, and up to the present no practicable method has been devised of modifying the effect after the cell has been invaded. The specific treatment of nearly all virus diseases therefore still remains beyond our reach. Cellular damage by a virus may be followed by secondary bacterial infection. This complication may call for the use of specific therapy; and such treatment is often used preventively—in anticipation of bacterial invasion.

## GENERAL MANAGEMENT OF THE FEBRILE STATE

Although pyrexia, arising from interference with the function of the heat regulating centre, is usually a cardinal sign of an infection, in some cases, and

those the most toxic, the temperature may not rise above normal. Wasting, due to increased catabolism; dry hot skin, acceleration of the pulse and respiration; coated tongue, anorexia, vomiting and constipation or diarrhoea; headache, restlessness, insomnia and delirium; quantitative and qualitative changes in the urine; all these manifestations are a result of the reactions of the tissues of the host to the effects of the pathogen or its products.

In the general management of the febrile patient the essential needs are (a) rest; (b) efficient nursing; (c) a suitable diet with adequate intake of water; and (d) relief of symptoms.

**Rest.**—Confinement to bed is essential as long as the temperature remains elevated, and should be continued for a varying, but not prolonged, period in convalescence. Strict bed rest should never be regarded as an end in itself. When there is no obvious contraindication, walking should be encouraged early. The young patient is better to be up and properly dressed than to be continually in and out of bed without adequate clothing. In the elderly the real risks of a long period in bed far outweigh the potential risks of allowing the patient a fair degree of freedom.

A single bed and firm mattress are preferable for nursing purposes. Careful bed-making contributes greatly to the patient's comfort. A length of plastic across the bed covered by a taut drawsheet will prevent extensive soiling and save linen. The bed should be made twice daily—oftener if the patient is perspiring profusely. An adequate supply of pillows will make for comfort. Bedclothes should be light and not tucked in tightly: a cage at the foot is often desirable. Quietness in the sickroom and its environment is essential; traffic in and out should be cut down to a minimum.

Ideally the sickroom should be bright and adequately ventilated and heated. Proximity to a bathroom, which should if possible be reserved for the patient's use, is advantageous. The temperature should be kept around 13° C. (55° F.) except in the case of infants or the aged, when it may be raised to between 15° to 18° C. (60° and 65° F.). Even when the room temperature is low the patient can be kept warm by hot-water bottles—and this is particularly appreciated by the elderly.

**Nursing.**—Practically all of the common infectious diseases, provided the illness is not unusually severe or complicated, are best treated at home. The mother will as a rule prove the best nurse. With modern therapy the period of heavy infectivity is comparatively short, so that the risk of spread of infection is slight. The mother should be given instructions in simple home nursing and, in particular, emphasis should be placed on the following points.

An overall should be worn when attending to the patient and should be hung conveniently near the door. A bowl of chloroxylenol (Dettol), or even plain water, with soap and towels, should also be adjacent to the door and the mother should be instructed to use this frequently for hand-washing. The practitioner should be careful to practise what he teaches. A simple temperature chart should be constructed; the thermometer should be placed in the groin or the axilla and left in position for two minutes. All treatment ordered should be entered on the chart and precise instructions given regarding administration.

The patient's skin should be kept clean by sponging with soap and warm water daily, especial care being paid to areas liable to soiling. These should be freely dusted with talcum powder. The body should be washed and dried limb by limb. The windows, of course, must be kept closed during the bathing



process. The refreshing and soothing effect of a "blanket bath" of this nature is of inestimable value in any febrile condition. The seriously ill patient must have his position changed every two or three hours; areas subject to pressure should be massaged with spirit and dried with talcum powder twice daily.

*Food* should be given at the usual meal times, but the individual patient's likes and dislikes must be noted. Any remaining scraps of food should be removed from the sickroom and burnt. Cold water, plain or with various flavourings, must be given freely. In young children the *mouth* should be gently cleansed after each meal by inserting the index finger enveloped in cotton-wool soaked in warm water or warm solution of bicarbonate of soda containing 2 g. (30 gr.) to 600 ml. (1 pint). In older children the teeth should be brushed and the mouth rinsed with warm water or mild antiseptic solution. The lips may be smeared with petroleum jelly.

*Nasal discharge* must be promptly removed preferably on paper handkerchiefs, and the nostrils gently cleaned with a cotton-wool swab soaked in warm saline or bicarbonate solution. Older children should be encouraged to clear the nose by gentle blowing. Petroleum jelly applied to the nostrils and upper lips prevents crusting and excoriation.

The *eyes* may require regular cleansing, and saline swabbing is usually best. The very toxic or comatose patient often lies for long periods with the eyelids partially separated so that the cornea dries, and may become ulcerated. This can be prevented by instilling a drop of castor oil into the conjunctival sac.

All *excreta* should be removed from the sickroom and consigned to the closet as quickly as possible. Care must be taken to avoid contamination of water-closet seats. Specimens required for the physician's inspection should be placed in covered fly-proof receptacles. Bed-linen, towels, etc., which may have been soiled with excreta should be left soaking in weak lysol solution overnight before being thoroughly washed with soap and water. Swabs used for wiping away discharges from the mouth, nose, ears, eyes and other organs must be burnt.

Flies must be excluded from the sickroom and, in summer, spraying with dicophane (DDT) or some similar material is an important measure.

**Diet.**—The characteristic change in the metabolism of the fevered person is the greatly increased destruction of the nitrogen-containing tissues of the body. Instead of endeavouring to make good this loss by an increased nitrogen intake, it is a better policy to supply an abundance of "protein spacers" in the form of carbohydrates. Fevered patients strongly dislike fatty foods. On theoretical grounds a high caloric intake is indicated, but in practice, owing to loss of appetite and actual distaste for food, this is impossible to attain during the height of the fever.

When the febrile period does not exceed four or five days (and, it may be noted, this is now usual with specific therapy), the diet should be restricted to fluids and "feeding up" is to be deprecated. One and a half to three pints of milk daily usually form the basis of the diet. Not more than 150 to 180 ml. (5 to 6 fl. oz.) should be given at a feed. Glucose is a most valuable and easily assimilated food, which should be given freely in the form of sweetened lemon or orange juice drinks. From 150 to 300 g. (5 to 10 oz.) of glucose can readily be administered in the 24 hours. Jellies, clear soups, eggs and custards are useful additions to the diet, and varying flavouring agents can add spice to an