As a nation, we perform social introductions in a slovenly way. On paper, however, the Anglo-saxon mind has a peculiar dexterity in making a pleasant introduction to new subjects. One has only to recall Sir James Jeans, introducing the celestial bodies to the ordinary man and having us all on easy terms without a difficult moment. The volume under review succeeds remarkably well in keeping the reader at ease during the succession of new acquaintances. In true astronomical style the celebrities are occasionally spiced by eccentrics or oddities; such a one is met on page 91, "1 gram of certain lactose fermenting bacteria can hydrolyse 180 to 15,000 grams of lactose per hour. If man were capable of metabolism on the same scale he would consume several thousand tons of food per hour."

Occasional difficulties in explanation show themselves by a failure of lucidity and thus of style and attractiveness, but in general the development moves smoothly, like Montaigne's story "how a country woman having enured herselfe to cherish and beare a young calfe in her armes, which continuing, shee got such a custome, that when he grew to be a great oxe, shee carried him still in her armes."

It is questionable if, after reading this book, one holds anything as solid as a "great oxe;" on the other hand, for anyone interested in bacteria it provides a pleasant introduction to the subject of their chemical behaviour. Briefly, the book starts with some deftly sugared revision of such things as pH, colloids and enzymes, it then introduces the chemical structure of bacteria and their metabolism, and closes with a section on the immunological reaction. A group of recent general references is given at the end of each chapter.

Doubtless, because the work is not confined to the pathogenic bacteria, information tends to be rather brief on some of the serological reactions well known to medicals. It would seem to the reviewer that even in an academic approach, the Wassermann reaction, the tuberculin reaction, and the hyperergic and histological reactions to such products as the fatty acids of the tubercle bacillus are worthy of considerable notice, despite the many interesting and money-making activities of
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bacteria, fungi and yeasts. In view, however, of Dr. Anderson's present situation in the Bacteriology Department at Edinburgh University, we can look to future elucidation of chemical problems in medical bacteriology.

The volume is a typical Livingstone production, of comfortable size and the characteristically clear, though if anything rather dull, typography. The index is good.

Infantile Paralysis and Cerebral Diplegia: Methods used for the Restoration of Function. By Elizabeth Kenny. Sydney: Angus & Robertson. 1937. (21s. net.)

This very interesting and stimulating book contains so much that arouses the informed reader's admiration and enthusiasm, and yet so much that is radically unorthodox, that more than a partial acceptance of its principles is beyond the most open-minded orthopedic surgeon, who has not actually seen its results for himself.

The book contains a theoretical Foreword by Professor H. J. Wilkinson, of the Chair of Anatomy at Melbourne, a historical preface by the author, dealing with the origin of her method, and practical Introductory Notes by Mr. J. V. Guinane, F.R.C.S., the whole-time investigator appointed by the Government of Queensland, as well as seven chapters dealing with treatment of Infantile Paralysis, and four dealing with that of Cerebral Diplegia.

Professor Wilkinson, who is obviously very favourably impressed by Sister Kenny's methods and results, brings considerable neurological evidence and theorizing to bear on the problem of explaining the rationale of her methods. His main point appears to be that poliomyelitis produces a somewhat diffuse lesion, and is thus likely to involve some of the neurons of a group of muscles rather than all of those supplying an individual muscle, and that associative tract dendrons are often much more extensively affected than motor cells: hence if physical and mental association with the paralysed parts can be maintained, surviving neurons and dendrons will develop new connexions with the most severely affected muscles relatively freely and quickly. In support of this view he claims, mainly from personal research, that discrete nerve-cell-muscle units do not exist, but that in the periphery of each muscle there is a motor plexus (or several such plexuses) connected with the anterior horn cells, and capable of distributing impulses arising from the surviving cells to the whole muscle.
Sister Kenny describes how she started the Townsville Clinic some sixteen years ago, with seventeen cases of infantile paralysis of eight to thirteen years duration, and cerebral diplegia patients up to fourteen years of age, under the honorary supervision of four doctors. Presumably from want of space, she does not describe how she came to evolve her methods. Results were such that the Government of Queensland took over the Clinic after holding a Royal Commission on its work, and appointed a full-time Official Medical Investigator in the person of Mr. J. V. Guinane, F.R.C.S., whose report after two years was so favourable that the Queensland Government decided to establish similar clinics at all its main hospitals. Similar clinics have since been set up in Sydney and other parts of the Commonwealth, and eight additional clinics are in course of erection. A certificate of efficiency in the author's methods is now granted by the Queensland Department of Health to trained nurses who have adequately learned to apply these methods. Sister Kenny does not claim to restore dead cells, but with the aid of hydrotherapy and assisted exercises she claims to be able to restore and strengthen the motor impulse when it was apparently cut off permanently in spite of (if not because of) proper standard treatment.

Mr. Guinane's notes confirm the good results claimed, and deny a single bad result since the work came under his observation two years ago.

Sister Kenny's five basic principles are shortly stated as follows:—

(1) Maintenance of bright mental outlook; (2) Maintenance of "impulse;" (3) Hydrotherapy and remedial exercises; (4) Maintenance of circulation; (5) Avoidance of generally accepted methods of immobilization.

Maintenance of impulse is obtained by simple concentration of the paralysed part by the patient, associated with a firm but light grasp of the appropriate part by the attendant. The attendant may actually initiate movement in the early stages, but only when at least a faint flicker of muscular contraction results at the moment of the patient's completest concentration.

"Avoidance of the generally accepted methods of immobilisation" is the barrier beyond which it is virtually impossible to accompany Sister Kenny wholeheartedly. She maintains that limbs should be allowed to occupy the normal position "when a standing pose is maintained with the feet slightly apart and the hands by the side." It is difficult to see how this principle can be other than disastrous when applied where there is paralysis of the deltoid muscle. It is even more difficult to see how the position advocated is to be maintained where the abductors of the thigh are paralysed, while the
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	naturally stronger abductors tend to overact, without the use of an abduction frame or plaster cast. Sister Kenny attacks all forms of immobilization ruthlessly, but most of the bad results which she cites are obviously due to ill-conceived immobilization inadequately or improperly applied. It is to prevent accommodative shortening of the unaffected muscles, and the onset of permanent deformity due to their overaction, that the orthodox orthopedic surgeon applies immobilization in as normal a position of the affected limb as will prevent overstretching of the paralysed muscles.

The book should serve a very useful purpose in making every open-minded surgeon dealing with poliomyelitis cases consider not only whether assisted active movements and hydrotherapy should not be started much earlier than is usual, but whether immobilization is always necessary in the less massive paralysis.

The apparatus used in Sister Kenny's Clinics is described in detail. The remainder of that part of the book dealing with the treatment of infantile paralysis is concerned with the technique of treatment and detailed remedial exercises, which are generally sound and practical, if obvious to any trained masseur or surgeon.

The smaller section of the book deals with the treatment of cerebral diplegia and allied spastic conditions in a very practical and enlightened manner. Ample allowance is made for the differences between these conditions and those caused by poliomyelitis, yet the same correction equipments are used, and there is the same insistence on active assisted or supervised movements, but now co-ordination of movement and relaxation is the aim. Two useful adjuncts used are exercise steps and a sand trough, but it is surprising that no use is made of steady rhythmic music, as is done in some of the most advanced clinics in this country. Treatment of salivation by sips of sweetened fruit drinks and special exercises for the tongue muscles is a good and slightly novel feature.

This section of the book is a description of an up-to-date line of treatment, with some novel features, but it does not infringe the tenets of orthodoxy to an appreciable extent.

The book is well printed and illustrated by photographs, in most of which the author is supervising or giving the treatment.

This arresting and stimulating book should be studied by all surgeons who treat cerebral diplegia and the results of infantile paralysis.
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*Short Manual of Regional Anatomy.* By J. A. Keen, M.B. Lond., F.R.C.S. London: Longmans, Green & Co. 1937. (5s. net.)

A considerable amount of originality has been shown in the preparation of this Manual but we doubt very much whether it will be widely acceptable. It is “written for the medical student as an aid to a rapid revision of the whole subject.” In spite of a list of contents and an index we have found some difficulty in locating several subjects. The index, it may be added, consists of the following headings—Arteries, Joints, Ligaments, Lymph Glands, Muscles, Nerves, and Veins. Where are the Viscera?

The English Terminology (1933) is used but a glossary of Old Terminology is included at the end of each chapter. We agree that the lists of derivations are not only interesting but useful.

The book is inexpensive, well printed, and clearly illustrated.

*Biological Standardization.* By J. H. Burn, M.D. London: Humphrey Milford (Oxford University Press). 1937. (21s. net.)

Reference is often made to the Science and Art of Medicine, but it is probably true to say that in the past two decades the tendency has been for science to outstrip art in the development of medical knowledge. When it is realized that art is often a synonym for empiricism and a refuge for those who are destitute of intellectual virility the impending dissociation may be regarded with complacency. In no branch of medicine is the revolution more apparent than in pharmacology and nowhere is it more welcome. Practitioners in all branches of the profession are dependent in no small measure upon the researches of the pharmacologist for the tools in daily use for the healing of the sick. A generation of workers which has presented us with such potent remedies as vitamins, hormones and the hematopoietic substances has placed us under a debt of obligation for all time. We who practise medicine, however, tend to lose sight of one aspect of the pharmacologist’s function in the scheme of things; not only is he concerned with the discovery of new remedies but also with the perfecting of the old. In particular, it is of the utmost importance that drugs should be accurately standardized. This department of knowledge has become a science in itself and has ramifications into the realms of physics and bio-physics, physical chemistry and, not at least, statistical mathematics. Professor J. H. Burn has brought together in a volume of some 250 pages the established principles of this science and their application to the problems of assessing the potency of important therapeutic agents.
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It may be said without reservation that this publication establishes the author in the front rank of workers who enjoy an international reputation.

*Drug Atlas for Students of Pharmacy and Medicine.* By W. Scarnell Lean, B. Pharm., Ph.C. London: Longmans, Green & Co. Limited. 1937. (2s. 6d. net.)

As the title indicates, this booklet is composed mainly of maps of various parts of the world on which are marked the habitat of the most important drugs. The diagrams are clear and facilitate rapid assimilation of a subject upon which medical men in the main must confess themselves deplorably ignorant.

*The Medico-Legal Post-Mortem in India.* By D. P. Lambert, M.D., Ch.B., D.T.M.&H. London: J. & A. Churchill, Limited. 1937. (5s. net.)

This is an extremely concise and readable handbook and although we are not able, unfortunately, to judge how valuable it may be in India, the impression is made by the manner in which it has been written that it should be extremely useful to those called upon to do medico-legal autopsies in that country. It is to be hoped that the title will not mislead prospective purchasers in this country for it can be strongly recommended to all resident medical officers in hospitals and others who may in the course of their duties have to undertake occasional medico-legal work, providing, as it does, complete summaries of the appearances found in the more important and usual forms of criminal, suicidal and accidental death and of the method of approach in such cases. A helpful feature also is the emphasis placed on those morbid processes which are liable to complicate medico-legal findings. Only one small point of disagreement may be mentioned. The reliance which the author places in the time of ossification of the patella can no longer be maintained for, from recent work, its ossification is apparently just as variable as that of many of the other bones.

*Infants in Health and Sickness.* By Robert Elsworth Steen, M.D., F.R.C.P.I. London: Humphrey Milford (Oxford University Press). 1937. (5s. net.)

This small book, with a few additions, is identical with the Infant Section in Tweedy’s *Practical Obstetrics.* It is, therefore, not
surprising that such subjects as breast-feeding and its difficulties, artificial feeding, disturbances of the digestive system and diseases of the neo-natal period should receive more consideration than other conditions arising in infancy; in fact, the other diseases are dealt with in ten pages. A special chapter might have been devoted to prematurity in such a book, because of its frequency and importance at the age period under consideration. The chapters on breast-feeding are good, and artificial feeding is dealt with in a simple straightforward way which should prove of value to the practitioner who wants a system to follow. Actual diets for various ages up to five years are given in an appendix along with valuable information about weaning, thickened feeds and so forth. The book can be recommended as representing excellent value.

The Dissection and Study of the Sheep's Brain as an introduction to the study of the Human Brain. By James Wilkie, B.Sc., Department of Biology, Guy's Hospital Medical School. With a Foreword by Professor T. B. Johnston. London; Oxford University Press (Oxford Medical Publications). 1937. (6s. net.)

This book has been written with the object of enabling the student of comparative anatomy to use the text-books of human anatomy, and also to help the medical student, who should find the human brain more easy to understand after the careful study of a brain which can be so easily obtained as that of a sheep. The result is a conveniently sized laboratory guide illustrated by more than 50 original drawings in which the author has admirably fulfilled these objects. The book is such that one can conveniently use it in the dissection of any mammalian brain.

Whilst the presentation and arrangement leave little to be desired, there are certain points which might be clarified in future editions. Thus, on p. 12, there seems to be some confusion about the formation of the connexions between the hemispheres and the brain stem, and it is not made clear that the "line of fusion" between the medial wall and thalamus is caused by the development of the fibres of the internal capsule, resulting in a thickening of the posterior wall of the foramen of Monro. Also in dealing with the medullary velum (p. 32), the author seems to have confused velum and epithelial roof.

Considering that the book is intended for students who are not yet familiar with complicated brain terminology, it would be an advantage to have a separate glossary of the many terms used. As it is, the explanations of words like rhinencephalon, neopallium, &c., are buried
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in the text, and there seem to be no precise definitions of sulcus, gyrus, fissure, commisure, tract, &c., all of which describe features shown in the diagrams.

These, however, are only minor points, and the book can be confidently recommended as an excellent introduction to a study of the anatomy of the mammalian brain.

Chronic Streptococcal Infection as a Disease. By J. D. Hindley-Smith, M.A.Camb., M.R.C.S., L.R.C.P. London: H. K. Lewis & Co., Limited. 1937. (3s. 6d. net.)

The author believes that much ill-health—enlarged tonsils, liability to colds, irregular dentition, bilious attacks, being "livery." irritability, growing pains, flat-feet, impetigo, chilblains, sluggish circulation, chronic appendicitis, cholecystitis, neuralgia, and so-called chronic rheumatism—is due to chronic streptococcal infection. The diagnosis is proved by examination of a throat swab whereby the "streptococcal index" is determined. In normal people 15 to 20 per cent of the organisms on the pharynx are streptococci, in cases of "Chronic Streptococcal Toxaemia" the figure may rise to 60 or even 90 per cent. The minimum treatment is three courses of twelve injections of an autogenous vaccine at intervals of one to two years, reinforced by vaccines applied locally to the affected area whether skin, mouth or colon.

An unfortunate weakness of this work is that the author gives no details from the records upon which such important conclusions must be based. He appears to admit this in saying, "I do not hope or suggest that these statements should be accepted without question .... It is, however, my earnest hope that what I have said may be taken sufficiently seriously as to promote an endeavour to prove that I am wrong."

This transfers the burden to other shoulders, but to support statements of such far reaching significance as are contained in this book, the onus of proof should rest upon the author rather than the reader.

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_The Diet Book._ By Marguerite Regua Rea. Third Edition. London: Humphrey Milford (Oxford University Press). 1937. (6s. net.)

This excellent little volume is well conceived and provides the busy practitioner and nurse alike with a comprehensive survey of a rather difficult and confusing subject.

The specimen dietaries for the different diseases are set forth in lucid style, and the one-week menus are particularly helpful. It is so easy to lay down the law about this and that kind of food, but a vastly more difficult proposition to descend to details and provide the patient with an attractive and appetising meal three times per day. By talking generalities to the patient he is often left unmoved. The splendid detail of the book and the helpful advice on preparing the many dishes in an attractive way, extend the scope of the volume to include the thoughtful housewife as well.

A little more attention to the types of food we eat in health as well as disease will, one hopes, save us from "digging our graves with our teeth."

_Trial of Buck Ruxton._ Edited by R. H. Blundell, Barrister-at-Law, and G. Haswell Wilson, M.D., "Notable British Trials," Vol. 66. London, Edinburgh and Glasgow: William Hodge & Co. 1937. (10s. 6d. net.)

The case of Dr. Buck Ruxton, executed at Manchester on 12th May, 1936, is doubtless still fresh in the memories of our readers.

Ruxton was a native of Bombay, and had served in the Indian Medical Service at Basra and Baghdad. He was a graduate in medicine of both "Bombay and London," and after a period in London he in 1930 settled in practice in Lancaster. He was accompanied by Mrs. Ruxton and one child. His domestic life there was far from happy and he was subject to violent outbursts of jealousy. These culminated on the night of 14-15th September, 1935, in the murder of his wife and their maid-servant.

About a fortnight after their disappearance some holiday visitors to Moffat observed some human remains in the depths of Gardenholme Linn, about two miles from Moffat. Investigation showed that the remains were the cut-up bodies of two women, and the appearances
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suggested that the dismembering must have been done by someone possessed of technical skill and possibly with an anatomical or surgical training. Some of the wrappings were of newspaper and these pointed to Lancaster as the place of origin of the remains. Ultimately, Ruxton was arrested in Lancaster, on 13th October, a fortnight after the discovery of the remains in the ravine near Moffat. Investigations were pursued with untiring industry and skill and resulted in Ruxton being brought to trial on 2nd March, 1936, at the Manchester Assizes, found guilty, and executed there on 12th May. The case is one specially interesting to medical readers who, naturally, can appreciate the extraordinary care with which Professors Glaister, Sydney Smith and Brash literally "pieced together" the medical evidence and reconstructed the horrible crime. The work of the police also was of a high order, and the steps which led to the identification of the various articles in which the remains had been wrapped are a matter on which the police officers concerned are to be congratulated.

The volume opens with an introduction by the editors, in which the main facts are set forth in narrative form. The evidence of the witnesses at the trial forms the bulk of the main body of the book, and there are appendices containing the medical reports of the experts concerned.

The medical evidence in this case was of a striking character. It included a new and remarkable method where, by superimposing on negative prints of the skull (No. 2) photographs of Mrs. Ruxton during life, a close correspondence between photograph and print of the skull was proved to exist. This part of the examination was carried out by Professor Brash, and his reports form two of the appendices above mentioned. Examinations were also made by Professors Glaister and Sydney Smith, and their reports along with those of Professor Brash were highly praised by the Judge, who stated that he found it difficult to imagine greater care and greater skill being used than was used by them.

The prisoner’s counsel (Mr. Norman Birkett, K.C.) remarked in his speech for the defence “... this case will no doubt be long remembered for many of its unusual striking and dramatic features,” and no one who reads the well-written and intensely interesting introduction to this volume but will agree with him. The contents of the volume are truly of a thrilling nature, and in some respects outdo the most ingenious conceptions of the writers of detective tales.

The text is supplemented by numerous plates of which we may describe those between pp. 184 and 185 as grim and haunting. The publishers are to be congratulated on having produced a volume which in interest and in general get-up leaves nothing to be desired.
The fact that this admirable handbook on sanitary science has run to three editions since it first appeared in 1933 is sufficient testimony to its popularity and worth.

The present edition synchronises with the coming into operation of the Public Health Act, 1936, and the Housing Act, 1936. The inclusion of all the legislative measures of 1937 relating to public health brings the book quite up-to-date.

The steady growth of Public Health administration and practice has imposed upon the sanitary inspector the duty of keeping in line with the advancements made in the various branches of his calling. The catalogue of duties performed by the sanitary inspector is now a most imposing one, and as an inevitable consequence the standard of examinations set for his qualifying certificates is very high. In fact, the sanitary inspector must, before and after examination, be prepared to devote much time to study, otherwise he will fall behind very quickly in these progressive times.

The Sanitary Inspector's Handbook by Mr. Clay is a real asset to the sanitary inspector and supplies the information which will keep the student abreast of the times. Every branch of the work is set forth in well-balanced chapters, and candidates for the examination of the Royal Sanitary Association and Sanitary Inspectors' Examination Joint Board will find in this book all the information they require. The illustrations are numerous and excellent.

Mr. Clay may have written primarily for the English student, but the Scottish student will also find the handbook invaluable in his studies for the Sanitary Inspector's Examination.

This new edition is an excellent book in every way and a valuable contribution to the science of Public Health. It is confidently recommended to students and teachers alike.