

Reviews.

DIETETICS.

THE excellent work on *Diet in Health and Disease*,¹ by Drs. FRIEDENWALD and RUHRÄH, has now reached a third edition, and has been revised in order, as the authors say, to make it more valuable to the practising profession. The articles on milk and alcohol have been rewritten, and additions have been made to those on tuberculosis, salt-free diet, rectal feeding, the caloric needs of infants and others, while several useful tables showing the caloric value of foods have been added, as well as one showing the composition of diabetic foods, and a short account of the simpler methods for detecting food adulterations and preservatives. These additions have been made without any appreciable increase in the size of the book, and will doubtless be appreciated by its readers. The chief value of this work lies in its tabulated information. There are, for example, a number of dietaries of public institutions, prisons, lunatic asylums and hospitals, and the dietaries of the army and navy, besides special diets for various diseases which are all given in great detail. Here can be found accounts of all the various test meals used in stomach diagnosis, with full directions for their administration. On the other hand, there is very little in the way of general discussion of principles. Chittenden's experiments, for example, receive quite inadequate discussion in their bearing upon the general question of diet, and are not even alluded to under the subject of the training of athletes. The references and descriptions of diets are almost exclusively drawn from German authorities; and as the food eaten in Germany is so different from that used in this country, they are not as convenient as they might be to the British practitioner. It is somewhat remarkable to find Haig's diet not even mentioned, although in certain diseases it is undoubtedly useful. Milk soured by the growth of the lactic acid bacillus is mentioned, but there is no reference to its dietetic value in the treatment of chronic constipation. The very interesting subject of idiosyncrasies in diet is dealt with in quite too brief a manner. It may be worth noting that the authors say that sea-water fish should be eliminated from salt free diet, as such fish contain a large amount of sodium chloride. The authors possess the apt American way of putting things. For example, in their article on milk, they say: "It costs less to buy a baby good milk for a year than to bury it."

The little book on *The Dietetic Treatment of Diabetes*, by Major B. D. BASU,² a retired officer of the Indian Medical Service, is stated in the preface to have been written "as much for the general public as for the ordinary medical practitioner." It is mainly composed of judiciously selected extracts from the writings of authorities on the subject, but to some extent it reflects the author's personal experience among the natives of India, where diabetes is common, and where, also, owing to the climate and local habits, it probably runs a somewhat different course to that generally met with in Europe. We gather from the author that diabetes in India, as a rule, is a mild disease which lasts many years. This he attributes to the vegetarian diet of the people and their abstinence from alcohol. How far the former statement may be true we are not in a position to say, but the disease in Europe in elderly people usually runs a prolonged course, although our patients eat a certain amount of meat and take a little alcohol, and without further evidence we are not prepared to admit that "diabetic patients who are vegetarians live longer than those who are meat eaters." We gather that the author is in favour of treating diabetes in natives of India by a strictly vegetarian diet; he certainly condemns the practice of European doctors who in treating such cases prescribe meat; but it would have been interesting if he had given us diet tables showing the kind of food upon which he has been able to manage moderately severe cases of diabetes successfully without the use of animal food or milk. He objects to milk "at all periods of the disease,"

as in his experience it has always increased the glyco-uria; but, if this observation is founded upon a sufficient basis, it does not agree with European results when milk is given in small quantities. He speaks of bread made from "fish roe dried and ground," but tells us nothing about its palatability or the kind of fish from which the roe for this purpose is obtained. It is misleading to speak of saccharine as a "poison," for in small quantities in which it is used as a sweetening agent it appears to be harmless. The author's opinion upon the use of alcohol is apparently adverse, but the extracts given are in its favour. He quotes a far from convincing article by Dr. Ridwill, of Melbourne, on the use of rye bread in diabetes, which was followed by the "happiest results"; it is said to be satisfying, but not to cause any increase of sugar; this is explained by the starch not being digestible, but the digestion experiments upon which the explanation is based were made not with saliva, as one would expect, but with pepsin, hydrochloric acid, and pancreatic extract! The book is disfigured by numerous misprints which occur on almost every page, while the style is marked by that capricious use of the article which is so characteristic of English as written by natives of India.

GENERALITIES.

IN a pamphlet on the essential nature of disease³ Professor RIBBERT discusses in philosophical fashion the underlying principles of cellular pathology, the significance of the pathological tissue changes associated with the origin of disease, and the pathological aspects of heredity. He defines disease as "the sum of the lowered vital processes which are dependent on changes in the structure of the body due to an absence of accommodation." Virchow's three-fold division of cell stimuli into the functional, the nutritive, and the formative is discussed at great length; it cannot be regarded, in Professor Ribbert's opinion, as a sound basis for the explanation of morbid processes. "Physiological stimuli, as such, obviously have no pathogenic significance. But if they become too intense they damage the organs concerned. So it is with pathogenic stimuli. Whilst in lower degrees of intensity they only give rise to functional activity, when they are stronger they produce damage. But when operative with these injurious degrees of intensity they can never exercise either a nutritive or a formative influence. There is no such thing as a nutritive or formative stimulus produced by pathogenic influences." The author's theories about cell stimuli must be taken in conjunction with his doctrine of tissue growth and tumour formation. He regards all growth as an exercise of a "capacity for growth" which is always immanent within the cell, and is brought into activity by a release of the normal "tissue tension." This change may be due to a variety of causes, such as the formation of gaps in a tissue (in regeneration and in compensatory hypertrophy), hyperaemia (in inflammation), other mechanical causes, the escape of cells from their normal situation in a tissue owing to chemiotactic influences, and the displacement of cells from the normal restraints of their environment which occurs in tumour formation. By an elaboration of these considerations the author arrives at his well-known and oft-reiterated views as to the origin of cancer. In the concluding chapter of the book he protests against the improper use of teleological conceptions. For example, the progressive changes which lead to healing must not be regarded as "purposive." They are not produced by an agent acting with a view to an end, but arise as the necessary consequence of the innate properties of the tissue. The changes commonly regarded as purposive would more properly be described as the manifestations of a capacity for accommodation to the conditions of life. As the author admits, some of his theories are still the subject of controversy, and we doubt whether all objections to them have been removed in the present volume, which contains the latest exposition of his favourite doctrines. We refer in particular to his attempted explanation of the origin of cancer by a theory of disturbed "tissue-tension." Whilst everybody admits that in cancer formation there must, *ipso facto*, be a disturbance of normal intercellular relationships, many pathologists

¹ *Diet in Health and Disease*. By Julius Friedenwald, M.D., and John Ruhräh, M.D. Third Edition. Philadelphia and London: W. B. Saunders Company. (1909.)

² *The Dietetic Treatment of Diabetes*. By B. D. Basu. Allahabad: The Panini Office. 1909. (Cr. 8vo, pp. 40. Rs. 1.8.)

³ *Das Wesen der Krankheit*. Von Dr. Hugo Ribbert. Bonn: Friedrich Cohen. 1909. (Roy. 8vo, pp. 175. M. 4.)

fail to regard the conception of disturbed "tissue-tension" as anything more than a restatement of obvious fact in the language of fanciful metaphor; they consider that the use of the word "tension" should be restricted to the precise meaning which it bears in the science of physics. As a teacher of morbid histology and anatomy, Professor Ribbert's gifts of accurate observation and lucid exposition have secured for him an undisputed position in the very first rank, but as an authority on the more speculative and theoretical aspects of pathology, his claims to pre-eminence are less well established.

Dr. RICHMOND'S aim in writing his *Essay upon Disease, its Cause and Prevention*,⁴ has been "to point out the very large number of diseases which are either spread by food or directly due to impurities found in articles of diet or articles in common use." The essay has, admittedly, been written hurriedly—to which, indeed, it bears inherent witness. After a somewhat elementary exposition of the author's views of "Life, Health, and Disease,"—in the course of which he deduces, first, the "law of constancy of function," according to which cells which have identical functions must have identical chemical composition; and, secondly, the "law of permanency of function," by which every cell in the organism will continue to perform its function normally, unless some influence or poison is brought to bear on it, which interferes with the usual decomposition of its cell substance—he passes to the influence of diet and environment on disease. This part consists mainly of simple and often questionable statements, unsupported by evidence or authority. We give one or two of these precisely as they are printed, in all their amazing baldness and absence of contextual reference.

Conjunctivitis, suffusion of eyeballs, tinea tarsi, caused by diet, and in all probability errors of refraction, and increase of ocular tension and buphthalmos.

Ringing in the ears, deafness, catarrh of middle ear, and pain in the ears, deficiency of wax, excess of wax, can all be caused by such articles of diet as cheese and bread, etc.

Similarly, neuralgia is caused by milk; hysteria in women by toxins in tea, butter, etc.; asthma is "probably due to substance in some article of food or drink"; and, alas! toothache to tobacco. Out of evil, however, good may come, for the author states that it is possible to control the colour of the hair by diet, this being shown "by the Bible stating that Jacob was able to make the sheep bring forth lambs with spots or without, by giving them certain kinds of food to eat." This is the sole authority quoted by the author in this book, and unfortunately, we fear, incorrectly, for we have never heard it suggested that the goats and sheep ate the rods of green poplar and hazel and chesnut tree artfully set before the flocks by Jacob to produce what is known nowadays as a maternal impression.

SELF-EDUCATION.

"MAN is the only animal who does not know how to live." This is the opening sentence of Dr. PAUL DUBOIS'S introduction to his book, a translation of which by Mr. H. H. BOYD has recently been issued under the title, *Self-Control and How to Secure it*.⁵ The title may be regarded as the text of a comprehensive treatise on the means by which it is possible to mitigate functional faults of inheritance, to correct those which we all acquire, and to educate ourselves generally on such lines as will make it possible for us to make the best of our opportunities and get the most out of our lives. The desire for happiness is, so says the author, the guiding motive of human life. He admits that real and lasting happiness is not to be found in the realization of desires, however legitimate they may be, and, though he evades any definition of what true happiness is, he contends that those come nearest to its attainment who observe best the virtues which, according to the doctrines of religion, assure for us felicity in a future life. These virtues are only to be acquired by the education of

self and by the development of conscience, which is defined as "a collection of moral conceptions which, at a given moment, exist in the understanding of man and serve him as a guide for the conduct of his life."

In elucidation of his argument the author considers such abstract subjects as meditation, tolerance, humility, patience, courage, sincerity, and kindness—to name a few only—and under each heading we find an interesting and philosophical dissertation which arrests attention, although the argument may not always be so convincing as to command the unqualified assent of the reader. Dr. Dubois strongly urges the need for self-examination as an essential factor in the educative process, and rightly contends that no discouragement need ensue from the discovery of faults and failings if we but use past experience to improve the future, and accustom ourselves to live in an atmosphere charged with a moral perfection which constantly stimulates our endeavours to betterment. Meditation is a habit essential to ethical development, and action is the psychological expression of feelings which, in the case of the commoner virtues, become automatic. To the majority of people who have acquired an average moral control, vulgar crimes like theft, forgery, or murder are inconceivable; the firmly-established conviction that such things are wrong makes their commission impossible. By a wider and more careful cultivation of the moral sense the author argues that the practice of such other virtues as tolerance, patience, chastity, and kindness will ultimately create a similar psychological automatism, and make their daily practice a mere matter of course. The following passage brings home forcibly one aspect of defective self-education with which most men are familiar:

We lack indulgence and patience towards our fellow-beings when, without being really ill, they exhibit those variations of humour to which we are more or less subject. Under the influence of fatigue that apparently is not justified by the work done, when in states of organic disturbance caused by certain physiological and psychological phenomena peculiar to our being, we feel influenced in our mental life; we become sullen and discouraged, without serious reasons; we appear rebellious, wicked, and we are sorry, but our nerves govern us, and we are unable to expel the enemy that is within us. We should more easily escape if those who surround us had determinist indulgence in their hearts; if they could recognize our weaknesses as their own. They forget that they are not always what they would like to be, and they nag us harshly. Impressionable people often suffer real martyrdom in their families. Subject to constant variations in their state of mind they are misunderstood, and the reproaches they receive take away their last vestige of self-control. Doubtless a word may do them good, on occasions even a reproach, provided it be friendly. The person who is impatient and fretful suffers; he does not feel well without being able to say what is the matter. We should regard him as a patient who needs repose or encouragement, and not as a culprit who is willingly sullen.

This is a graphic and very human picture, and its widespread application indicates the need for the cultivation of sympathy, which, after all, is the practical expression of personal experience, and of a philosophic adaptation of self to the circumstances and exigencies of life. Dr. Dubois's book is full of thoughtful and suggestive references, and its perusal cannot fail to promote in the reader a true desire to improve the ego, which it is his business to control and his duty to educate. Mr. Hutcheson Boyd is to be congratulated upon the fluency of his translation; but the printers have put the pages so carelessly together that, in the middle of the volume, one or two of the chapters have become mixed up in hopeless confusion.

MYXOEDEMA AND CRETINISM.

FOURTEEN years have elapsed since the appearance of the first edition of Professor EWALD'S book on diseases of the thyroid, myxoedema, and cretinism in the Nothnagel series of handbooks. The second edition, which has been brought up to date and almost entirely rewritten,⁶ will confirm the favourable opinion expressed in our review of the first edition (1896, vol. ii, p. 655). In the sections on anatomy and physiology the chief alterations are due to the recognition of the importance of the parathyroids. Their anatomy is carefully described, the vitiation of the conclusions formerly drawn from experiments in which

⁴ *An Essay upon Disease, its Cause and Prevention*. By G. E. Richmond, M.D., B.Sc., B.A.Lond., D.P.H.Camb. London: H. K. Lewis. (Cr. 8vo, pp. 96, 2s.)

⁵ *Self-control and How to Secure it*. [L'Education de Soi-Même.] By Dr. Paul Dubois, Professor of Neuro-Pathology in the University of Berne. Authorized translation by Harry Hutcheson Boyd. New York and London: Funk and Wagnall's Company. 1909. (Demy 8vo, pp. 337. Price 6s.)

⁶ *Die Erkrankungen der Schilddrüse, Myxoedem und Kretinismus*. By Dr. C. A. Ewald. Second edition. Vienna and Leipzig: Alfred Hölder. 1909. (Sup. roy. 8vo, pp. 297; 26 illustrations and map. M. 8.80.)

they were ignored is continually kept in mind, and mention is made of the recent work tending to prove that their removal is responsible for the onset of tetany and other post-operative catastrophes. There is also some timely criticism of the various hypotheses advanced in regard to the inter-relationship of the thyroid and the pituitary. In dealing with cretinism the varieties (sporadic and endemic cretinism) are distinguished from juvenile myxoedema and from Mongolism and achondroplasia—conditions often confused in Germany. Careful and complete descriptions of the clinical and anatomical appearances in cretinism and myxoedema are given, and compensate for the very poor illustrations. In place of a long review of the numerous theories to account for the endemic occurrence of goitre and cretinism there is a most interesting exposition of the "drinking water" theory, illustrated by many striking examples of epidemics and of the disappearance of these diseases from an endemic area when a proper water supply has been obtained. The importance of the subject is shown by statistics, perhaps the most striking fact being the statement that the Swiss army loses about one-sixth of its numbers from cretinism alone. In regard to the treatment of goitre the author still pins his faith to iodine in its various forms. He is very sceptical about the alleged dangers of iodide in goitre, but is too enthusiastic about the virtues of iodine and too pessimistic about the dangers of surgery. There is an excellent chapter which sums up our knowledge of thyroid feeding, not only in goitre, cretinism, and myxoedema, but also in other conditions in which it has been recommended, such as psoriasis, obesity, and acromegaly. The phenomena and causation of thyroidism are discussed at length, a long list being given of all the ill effects which have been ascribed to thyroid feeding. Here, as throughout the book, a statement of the evidence is accompanied by carefully weighed criticism which, coming from such an eminent authority as Professor Ewald, is well worth serious consideration. The bibliography contains over 1,400 references, but they are not well selected. Many of them are English, but appear to have been culled from the index columns of periodicals, and refer in many cases to single patients shown at societies, whilst on the other hand such a valuable monograph as that of Berry is not mentioned. As a work of reference the book is ruined by two faults: there is no index and the reference to an author in the text gives only his name, although in the bibliography we may find half a dozen references under it.

ACCIDENTS TO WORKMEN.

THE volume on *Accidental Injuries to Workmen with reference to the Workmen's Compensation Act, 1906*, by H. NORMAN BARNETT, F.R.C.S.,¹ is intended to supply some of the needs of those who are called upon to deal with such matters, both from a medical and a legal point of view. The author was assisted in his work by Dr. Cecil Shaw of Belfast, who devotes some twenty-seven pages to injuries to the organs of special sense, and by Mr. Thomas J. Campbell, M.A., LL.B., B.L., who deals in an interesting manner with the law in relation to accidents and industrial diseases. The appendices contain the text of the Workmen's Compensation Act, 1906, a list of industrial diseases, and the report of the Departmental Committee. The book contains 384 pages, and of these 196 are devoted to injuries and diseases. The chapter giving directions for making a report on an injured workman will be of value to those who have little experience of this kind of work, and the form of certificate in use by a certain assurance corporation is filled in for the guidance of the tiro. Dr. Barnett has collected most of the facts as to etiology and diagnosis which we find in the ordinary textbooks on medicine and surgery, and presents them in an accessible and readable form. The modifying effect of pre-existing disease is considered at some length, and the importance of a medical report as to the physical condition of candidates for employment is noted. In this connexion we believe that in some districts workmen have resisted such an examination, and neither insurance companies nor employers have insisted, nor does the Act itself require it, so it is probable that the test of good

¹ *Accidental Injuries to Workmen*. By H. Norman Barnett, F.R.C.S. London: Rebban, Limited. 1909. (Demy 8vo, pp. 384. 7s. 6d.)

health, which is often applied to a claimant, namely, capacity to earn average wages previous to the alleged accident, will hold good in individual cases, unless there is strong evidence proving the existence of disease antecedent to the injury. The information presented in the various sections will be of service, at any rate in the less contentious cases, and the medical man who is occasionally required to examine and report with a view to giving evidence in Court, will find the book helpful. Some of the sections are rather too brief, and might be made more comprehensive in another edition. Questions of diagnosis are dealt with shortly, but quite clearly, and the points are set out in a manner which will serve to refresh the memory of the medical examiner. Under the heading traumatic neuroses, the author warns the medical examiner against falling into the error of regarding the injured workman as an impostor or a pure neurotic, while at the same time due regard is to be given to the possibility of malingering. The work is in clear type, easily read, and will no doubt serve a useful purpose.

THE SIGNS OF DEATH.

DR. ICARD has done useful work in calling the attention of the profession and the public, in his monograph upon the signs of death,² to the various methods by which the fact of death can be proved. He discusses with some fullness the various signs of death, dealing with especial care with the "fluorescine test." He points out, however, that all the signs used up to the present require skilled help for their demonstration or reading, and that it is exactly in those cases in which it is impossible to obtain the assistance of a doctor that there is a need for some test which will be both simple and easy of application and at the same time infallible. This, he considers, he has found in the reaction which he names the "*réaction sulfhydrique*." According to Dr. Icard, any signs of putrefaction which may occur in the last stages of life are due to the action of aerobic bacteria, the action of the anaerobic bacteria never becoming evident until life is extinct. One of the first manifestations of the activity of these anaerobes is, he states, the evolution of sulphuretted hydrogen gas; and as the bronchial mucous membrane is one of the first parts of the body to show putrefactive changes, and, further, as in temperate or hot climates putrefaction of the bronchial mucous membrane commences within a very few hours of death, he considers that the demonstration of the presence of sulphuretted hydrogen in the gases coming off from the nostrils or mouth is proof positive of death having already occurred. The author tests for sulphuretted hydrogen by placing either a silver coin or a piece of paper moistened with neutral acetate of lead over the nostrils of the body. If life is still present, no sulphuretted hydrogen will come off and no change will take place in the coin or paper; but if life is extinct, then, in the course of a few hours, the coin or paper will become blackened. This test, he avers, never fails, and it is evident that it is not only simple in its method of application but definite in its results, and can be used and understood by the most ignorant. The author enters fully into the possible fallacies and objections to the test, and certainly shows that errors are at least not likely to occur with it, except in cases in which the surrounding temperature is very low. He contends that the possibility of premature burial is a real and not an imaginary danger, especially in those cases in which the supposed corpse has not been seen by a medical man. Such accidents are, he admits, rare, but he states that it must be allowed that they have occurred in the past, and that, as they may take place in the future, he thinks it of the greatest value to have some test which will serve to render so lamentable a catastrophe more infrequent still.

² *Le signe de la mort réelle en l'absence du médecin*. Par le Docteur Icard. Paris: A. Maloine. 1907. (Cr. 8vo, pp. 292, avec figures. Fr. 4.)

A SYSTEMATIC attempt to exterminate rats is to be made in all parts of the United States under the official sanction of the Department of Agriculture.

THE late Dr. Thomas Crawford Hayes, Emeritus Professor of Medicine at King's College, Consulting Physician to King's College Hospital, left estate of the gross value of £50,739 8s. 5d., of which the net personalty has been sworn at £48,765 7s. 3d. He left £100 to the King's College Hospital building-fund.