Reviews

RESPONSE TO INJURY

The Metabolic Response to Surgery. By Francis D. Moore, M.D., and Margaret R. Ball, A.B. Metabolic Diagrams by Mildred B. Codding, A.B., M.A. (Pp. 156; illustrated. £2 15s.) Springfield, Illinois: Charles C. Thomas. Oxford: Blackwell Scientific Publications. 1952.

The professor of surgery at Harvard and his colleague have produced a unique and original book; it may well herald a change in the approach to the patient after operation. The complex graph on the dust-cover, showing in tabular form a patient's metabolic behaviour after operation, clearly reflects the modernity and the novelty of the content in its superimposed graphs, whose hatched-in and shaded masses above and below each baseline suggest a cubist representation of giant skyscrapers on a waterfront, reflected in the water below them. This type of graph is indeed symbolic of the authors' approach to the problem—graphs of the temperature and pulse rate, nitrogen, potassium, sodium, and calcium balance, eosinophil count, and therapy being indicated in parallel blocks. The complaint is sometimes made that such tables are too complex and difficult to follow, but it must be admitted that the metabolic behaviour of a patient after operation is no less complex and difficult to follow. Dr. Moore's essay analyses and integrates these changes.

The average clinician may be confused no less by the complexity of the diagrams than by the expression of electrolyte concentrations in milli-equivalents, but there is nothing more certain than that the milli-equivalent will in this sphere replace the milligramme soon, and no conception of the balance of a patient's electrolytes can be obtained unless the milli-equivalent is used.

Dr. Moore's thesis, which he goes far towards proving, is that during the first few days after operation or injury the metabolism undergoes a natural biochemical reaction which is normally beneficial and which probably should not be subjected to interference provided it proceeds normally. This normal metabolic response is characterized, according to Dr. Moore, by a transient slight rise of temperature and pulse rate, a transient decrease in urinary excretion, a loss of nitrogen from the body for three to seven days followed by a positive nitrogen balance, a loss of potassium for two to five days followed by potassium retention, a decreased urinary excretion of sodium for two to five days followed later by sodium diuresis, a loss of weight greater than can be accounted for by these balance changes and due to oxidation of fat, a variable drop in circulating eosinophils and an increased excretion of steroid hormone products under endocrine influence, and a period of starvation and relative caloric deficiency.

If these changes are a beneficial reaction, we must accept Dr. Moore's advice not to treat the fever with antibiotics, not to swamp the patient with water during the early post-traumatic phase to make up urine volume to an arbitrary level, not to try to cover up short-term nitrogen loss by unsuitable protein material, not to be anxious about potassium for three days after operation, not to make the patient oedematous by the administration of sodium during the phase of sodium retention, not to be concerned with caloric deficiency for the first three days, not to prolong the starvation phase beyond three to five days, and not to convert a normal convalescence into a "failed" convalescence by meddlesome early interference.

Dr. Moore does, however, recognize four abnormal types of response of which particular account must be taken: (1) the excessive response to excessive trauma; (2) the depletion response of a patient depleted before operation; (3) the hypo-adrenal response (which is less clearly proved than the others); and (4) the extrarenal loss response in a patient who, in the early post-operative phases, loses water, electrolytes, and protein by abnormal routes.

The book is a brilliant analysis of an immense quantity of data. British clinicians working in the same field will have the greatest possible admiration for it, tempered a little by their appreciation of Dr. Moore's enthusiasm for the almighty adrenal cortex. It is a book which anatomizes clearly and in detail the methods by which the problem of the post-operative patient can most profitably be attacked, and there is no question that its study will help surgeons to a greater understanding of the physiology of the whole patient and to greater surgical success.

Ian Aird.

TEXTBOOK OF PHARMACOLOGY

A Textbook of Pharmacology: Principles and Application of Pharmacology to the Practice of Medicine. By William T. Salter, M.D. (Pp. 1,240; 284 figures. £3 15s.) London: W. B. Saunders Company. 1952.

The author of this book is one who, to quote his own words, "has spent many hours at the bedside of clinical patients as well as long nights in the laboratory." His presentation of pharmacology should therefore appeal to those whose approach to the subject is clinical. The book is divided into four parts: the first is on general principles, the second on the action of drugs on physiological mechanisms, the third on the application of drugs in clinical medicine, and the fourth on toxicology.

The discussion of the principles follows a conventional pattern and is limited to history, pharmacy, and the administration and action of drugs. Although the author acknowledges the importance of the kind of pharmacology that lies nearer to the exact sciences than to therapeutics, he passes lightly over fundamental notions. In a book of this size he might well have devoted more space to the principles of biological assay, the combined actions of drugs, methods of studying the fate of drugs in the body, and the design of clinical trials. But in the second and third parts the author's gift of exposition is fully displayed. To the description of the actions and uses of drugs he brings a formidable array of data drawn from many sources, as the extensive bibliography at the end of each chapter testifies. The discussion of each type of drug follows an orderly and comprehensive arrangement under the headings of history, source, chemistry, actions and fate, clinical application, preparations and doses, standardization, unsolved problems, and synopsis. In Part 3 the author places more emphasis on therapeutics and discusses chemotherapy, actions of drugs in various diseases, gases and vapours, metabolic pigments, and poisons.

The text is in double columns and the print clear; the illustrations, graphs, and tables are excellent. The style is pleasantly discursive. This book is useful because it looks both ways; not only does it help to explain pharmacology to the clinician, but it conveys to the laboratory worker a clear picture of how drugs may be used for their effects on man.

Henry Adam.

ART OF MARRIAGE

The Art of Marriage. By Mary Macaulay, M.B., Ch.B. (Pp. 97. 7s. 6d.) London: Delisle. 1952.

Popular books on sex require to be written with the greatest discretion if they are not to err either on the side of sentimentality (usually combined with inaccuracy) or on that of potential pornography. Dr. Mary Macaulay has managed to steer clear of both extremes and has produced a book which is human, scientifically accurate, and fully in conformity with current sexual ethics. It should bring enlightenment and comfort to innumerable married couples or those intending to marry.

The standard of marriage envisaged is that of Christian marriage as understood by most Churches other than the