REVIEWS.

HIGH BLOOD PRESSURE.

By I. HARRIS, M.D. in collaboration with C. N. ALDRED, M.D., J. T. IRELAND, B.Sc. (Hons.), G. V. JAMES, M.Sc., A. I. C. LEVERHULME and MAURICE STERN, Research Fellows (From the Liverpool Heart Hospital). With 22 illustrations. Oxford University Press. 1937. Price 10/6.

This record of a combined piece of clinical and laboratory research by Dr. I. Harris and his co-workers in Liverpool is of interest in that it constitutes an example and a pattern of the Neo-Hippocratic mode of approach to one of the special problems of general medicine.

For centuries medicine has been rigidly bound in water-tight compartments, for, dominated by the sway of pathology, clinicians have felt that they had done all that was requisite when they had attached to a particular grouping of symptoms the name of some disease. Such limited procedure, however, has failed to promote any real appreciation of those basic factors which must be known before advance can be made in prevention or control. Especially is this true of the complex and difficult problem of hyperpiesia, to which no ætiological key has yet been discovered. As Dr. Harris rightly observes: "To deal adequately with disease it is necessary to disentangle an abnormal function and trace its origin through a whole maze of changes to the chemical and physical reactions which are the causal factors of the altered function."

This book stimulates because of the belief therein expressed that such key cannot be found in the misleading and often contradictory publications of isolated workers, but only becomes possible by skilled teamwork organized and co-ordinated on well-planned lines.

The main contention of the authors is that hyperpiesia, in the majority of instances, is directly related to and varies with the amount of protein intake. The clinical picture of this type of case is well-recognized; an over-fed, under-exercised individual inclined to worry, of robust and florid appearance with tendency to adiposis. The authors state that such persons retain protein, but not in the fully catabolized

form of urea and non-protein nitrogen, and that under high protein feeding the latter is stored in the blood-cells and presumably also in the tissue-cells as protein, the suggestion being that this type of protein retention may be an ætiological factor in high arterial pressure. Undisputed facts are that in all types of fully established hypertony the kidney is damaged and its function for nitrogen elimination impaired. The conclusion is that in such cases the protein intake should be limited to the requirements for replenishing tissue-wastage, assessed individually and not by so much protein per kilo. body weight. From the viewpoint of therapy this suggestion is of value.

Dr. Harris believes that hyperpiesia is fundamentally brought about by disturbance of the osmotic pressure of the blood which, for life to go on, must be maintained within very narrow limits at a constant level, the chief factor in regulation being renal excretion. He points out that in hyperpiesia, while the systemic vessels are contracted, those of the kidney are dilated, an arrangement which facilitates effective renal excretion, and that the symptomatology of uræmia, as well as the other symptoms of hypertony, are identical, as they appear whenever constancy of osmotic pressure is threatened.

Considerably more evidence over much larger numbers of cases than are detailed in the tables included is necessary in respect of the interesting speculation as to the prime importance of disturbance of osmotic pressure, as well as the alleged frequency of incidence of rise of serum protein and the presence of hydræmia in advanced cases of hyperpiesia, before these points can be regarded as established. There is now, however, far more general agreement as to rise of arterial pressure being dependent in the majority of cases—although there are apparently undoubted exceptions—upon excess protein intake, the total quantity over a term of years and not the kind of protein being all-important.

Many other biological factors are dealt with in the book to which readers are referred. Let us hope that it may encourage further large-scale advances in research on a subject the ætiology of which is still doubtful.