up-dated versions. This book is an indispensable working guide to medical genetics as practised in the clinic rather than the lecture theatre.

RODNEY HARRIS

A Handbook of Clinical Genetics

By J S Fitzsimmons with the assistance of
E M Fitzsimmons. (Pp vii + 159; figures + tables.
£5.15.) London: Heinemann. 1980.

It is stated in the preface to this book that it was originally planned for nurses. It more than fulfils the need of nurses, both in training and when working in paediatric or obstetric departments, to understand the principles of elementary genetics and particularly their application in the genetic counselling clinic, although some mention of the genetics of blood groups would have been useful.

Good communication is one of the essentials of genetic counselling; the standard of communication in the script and also in the illustrations, both serious and amusing, is uniformly high throughout the book, whether the author is dealing with the genetic code, inheritance patterns, prenatal diagnosis of genetic disease, or ethical issues, to mention but a few of the topics covered. Perhaps it is because so many aspects of the subject are discussed that what is covered in breadth is lacking in depth, but this seems inevitable in a book of this size.

Even so, many doctors, as the author again suggests in his preface, who have not received or have forgotten any basic training in biological genetics will find it a useful and readable handbook. Furthermore, the medical students of today, who should be aware of genetics at a more advanced level than the authors would claim to describe, will doubtless benefit from this introduction to the practical application of their knowledge to the problems they will meet in practice.

MARY VOWLES

Genetic Metabolic Diseases. Early Diagnosis and Prenatal Analysis

By Hans Galjaard. (Pp xx + 870; figures + tables.
US \$121.25, Dfl 285.) Amsterdam: Elsevier-North
Holland. 1980.

Our understanding of genetic metabolic diseases has advanced rapidly during the past 20 years, particularly with regard to the molecular basis of their pathological manifestations. A major practical benefit is that biochemical methods are now available for the accurate diagnosis of a large number of inherited disorders. Professor Galjaard's book deals

authoritatively and comprehensively with this information as it relates to the 60 conditions for which prenatal diagnosis is currently possible.

The first chapter provides information on the incidences and recurrence risks of monogenic defects, chromosomal anomalies, and congenital malformations, and ends with an introduction to the biochemical aspects of early diagnosis and prenatal detection. The second chapter, taking up half of the book, begins with a description of the early clinical and developmental abnormalities associated with metabolic disease. It then continues with individual sections dealing with specific disorders in the metabolism of carbohydrates, mucopolysaccharides, mucolipids, lipids, amino-acids, nucleic acids, and other metabolites. The sections are exhaustively referenced with key information on differential diagnosis, clinical features, pathology, and specific biochemistry, including molecular diagnosis. These are scholarly, critical accounts and probably the best to be found by anybody wanting a short yet comprehensive reference to a particular disease. There is some inevitable repetition between sub-sections and, perhaps understandably in a work of this kind, a sprinkling of obvious textural errors.

Chapter 3 describes the methodology of prenatal diagnosis, including amniocentesis, AFP measurement, cell culture, and chromosome analysis. It ends with a good account of the microbiobiochemical techniques pioneered in the author's laboratory. There are some particularly good photographic illustrations. Chapter 4 describes current practical experience of prenatal diagnosis, each disorder being treated individually in metabolic sub-sections, as for chapter 2. Again, this has led to some repetition. Also, the experimental detail given for individual cases might be felt to be excessive sometimes. Nevertheless, it is a critical assessment which stresses the problems as well as enumerating the successes.

The next chapter discusses carrier detection and prenatal diagnosis of X linked disorders, and the final chapter deals with future prospects including enzyme replacement therapy, fetoscopic sampling, and DNA analysis by recombinant DNA techniques. There is a valuable practical appendix giving source references and essential details for 75 biochemical and related techniques.

This is an excellent book, packed with all the information of a standard reference work, while still retaining the interest to make it enjoyable reading. The book can be highly commended to all who are concerned with the genetic aspects of metabolic disorders.

A D PATRICK