Book reviews

Children in Health and Disease (formerly **Paterson's Sick Children**). By F. Brimblecombe and D. Barltrop. (Pp. 880. illustrated + tables. £16.00, hardback.) Ballière Tindall: London. 1978.

Between 1930 and 1971 Paterson's *Sick Children* evolved through 9 editions, but now, 10 years after the death of Dr Donald Paterson, it has appeared under a rather less inspiring but nevertheless more accurate new title. The change is in keeping with the expansion of the paediatrician's role to include active promotion of child health as well as treatment of disease. Consideration is again given to topics such as preventive paediatrics, child care in the developing countries, services and legislation for children, and a new section on the care of children in hospital has been added. A new chapter on the handicapped child replaces one on mental subnormality, and the rest of the text has been thoroughly brought up to date, especially the chapter on infant feeding, which has been completely revised and streamlined to reflect current opinion. The number of specialist contributors has been increased and there are more illustrations, although regrettably no colour plates. As in previous editions, the chapters end with short bibliographies for further reading and the three concise appendices on drug and fluid therapy, normal values in development, and biochemical reference ranges are excellent.

All in all, there is no reason why this new edition should not live up to its editors' expectations and remain the leading single-volume paediatrics manual and textbook. It is fairly expensive, but very good value for money indeed.

N. PALUCH

Human Growth and its Disorders. By W. A. Marshall. (Pp. 179; illustrated + tables. £6.80.) Academic Press: London. 1977.

Auxology is the science paediatricians have moved into after years of perfunctory and none too accurate weighing and measuring of children in outpatient departments in the past. After 14 years of work in the growth disorders clinic at The Hospital for Sick Children, Great

Ormond Street and as a colleague of J. M. Tanner, R. H. Whitehouse, and N. G. Blurton-Jones, W. A. Marshall is in a strong position to present a compact book of wisdom and applied auxology for the present day world of specialists of all kinds who have child patients. A small book on what is an enormous subject is something to be thankful for. No one who reads it need now say 'the complexities of the processes involved in growth are beyond me', even though the author does, as he is entitled, frequently say the complexities here and there are beyond the scope of his text.

The subject is unfolded as follows. First, accuracy in measuring stature, weight, skinfolds etc., and the collection of data (on which our standards have been based): then variations in growth attainment, growth velocity, growth of parts, the dynamics of normal early and late maturation, its social implications for children, and the influence of parental height; in fact all that must be present in the clinician's mind when confronted with a child or adolescent and one set of measurements only. Puberty has a chapter devoted solely to the accurate description of its bodily transformations, each of which has its own rate of maturity and scale of measurement. The author then describes with most interesting data, the rising tides of different hormones from quite early childhood to maturity, each in its own time influencing the skeleton, the breasts, gonads, pubic hair, etc.

Skeletal maturity and bone-age are difficult subjects for paediatricians who want something quick and accurate; but they cannot have accuracy, we are told, without the laborious examination, one by one, of all the short bones of the hand and carpus. After all, the Gruelich and Pyle method requires careful scrutiny of x-rays and a hurried reference to the atlas may give very misleading results, the author says. The TW2 method which examines radius, ulna, carpal bones, and short bones of the hand is described (a pity that Fig. 52 is missing), and examples given of its good prediction of final height, when growth is not pathological. Such predictions are particularly necessary for exceptionally tall girls for whom hormonal treatment to arrest growth

might be considered. The author is sensitive to the sufferings of the over-life-sized child; also the very late maturing children who can be given a height expectation with some confidence, to keep up their morale. The better grasp of 'bone-age' that this section offers, and its use in assessing abnormal stature or the progress of hormone treatment is one of the most valuable things in the book.

The possible role of psychological influences on growth is left in the area of speculation, but 'psycho-social' dwarfism is mentioned several times. The author leans towards a hormonal cause of this (secondary to psychological stress) citing the poor response to growth hormone stimulation tests while the child is living at home, with a normal response soon after removal to a hospital. The nutritional factor (undereating) which some think all that there is behind it, is not discussed. Here is a point where references are lacking and would be welcome, as the condition is by no means rare, not nearly so rare as true hypopituitary dwarfs.

There is one erratum, an important one on page 166, concerning treatment of excessive tallness in boys by injections of testosterone oenanthate. The word 'intravenously' should read 'intramuscularly'. The author has already made known in a letter to the *British Medical Journal* that intravenous injection could be dangerous. However, the various risks of hormone treatment which have to be balanced against the advantages are very clearly stated and would be enough to daunt any one but an expert from undertaking it.

Dr Marshall is to be congratulated for the excellence of this book, its plentiful well-chosen illustrations, its economic bibliographies, and above all the clarity of his writing on these difficult matters.

DERMOT MACCARTHY

Neonatal Respiration. Physiological and Clinical Studies. By L. B. Strang. (Pp. 316. illustrated + tables. £14.50, hardback.) Blackwell: Oxford. 1977.

There is probably no other part of medical practice where an understanding of physiological processes is more relevant to the clinician than that which deals with

respiration before, during, and immediately after birth. For any medical practitioner or physiologist with an interest in fetal and neonatal respiration this monograph should be a delight. It starts with a chapter on the embryology and morphology of the developing lung and this is followed by a consideration of fetal lung liquid production, composition, and distribution, and its contribution to amniotic fluid. Fetal breathing, and the initiation of alveolar aeration after birth, and the production and role of surfactant material are considered in some detail. Changes in the pulmonary circulation, capillary permeability, and lymph flow at birth are well reviewed, but more information about the mechanisms of closure of the ductus arteriosus and the umbilical arteries might have been given. Oxygen and carbon dioxide transport are well explained as is acid-base balance, although the units and explanations given are in terms of mmHg and pH rather than kilopascal and hydrogen ion concentration. This may upset a few readers but I suspect not many. Chapters 9 to 13 deal with the pathophysiology, prevention, and therapy of hyaline membrane disease, neonatal lung oedema and haemorrhage, aspiration syndromes, and apnoeic attacks.

The pleasure of this book is partly due to its scientific content but largely to the lucid presentation of an enthusiastic single author.

FORRESTER COCKBURN

Viral Diseases of the Fetus and Newborn. Volume XVII Major Problems in Clinical Paediatrics. By J. B. Hanshaw and J. H. Dudgeon. (Pp. 356; illustrated + tables. £14.00, hardback.) Holt-Saunders: East-borne. 1978.

The discovery 37 years ago by Sir Norman

Gregg that an inconspicuous illness such as rubella could penetrate the maternal defences and cause extensive damage to the fetus completely changed the existing concept of the safety of the embryo *in utero*. It produced intensive investigation of the relationship of viral infection to congenital damage and a search for other possible viruses of comparable importance was begun. Inevitably a mass of data has accumulated and a formidable task awaited those willing to undertake the extraction of a summary in monograph form. The authors were eminently suited to the task, being well known and highly regarded in the field of paediatric virology. Their collaboration is most timely and will be warmly welcomed and appreciated. Although they say that they have written for the clinician—'to provide the understanding necessary not only for diagnosis and case management but also in order to be able to provide advice to families exposed to infection'—the microbiological and pathological background will make the monograph invaluable reading for many other workers.

Rubella and cytomegalovirus naturally take pride of place and are covered in carefully assessed detail. Herpes simplex virus, enteroviruses, varicella-zoster, pox-viruses, hepatitis, and others are dealt with in proportion to their known relevance, and in order to provide balance there are sections on the development of fetal immune mechanisms and on the pathological changes produced by viral infection of the placenta and cord.

The presentation is good, the established material is given in substance and the unconfirmed aspects are assessed. Where the authors have a personal approach not generally accepted this is stated. There is an excellent bibliography and the volume can be commended to all who have an

interest in the present state of knowledge of virus infection as it affects the embryo, the neonate, and in the implications for the child thereafter.

J. NAGINGTON

Shorter notices

Diagnosis and Primary Care of Accidents and Emergencies in Children. A Manual for the Casualty Officer and the Family Doctor. By C. M. Illingworth. (Pp. 134; illustrated. £4.25, paperback.) Blackwell: Oxford. 1978.

Highly practical manual designed to be carried in the 'whitecoat pocket', and equally strong on the common trivial complaints of childhood (nappy rash, rectal prolapse) as on the serious emergencies, both medical and surgical.

Prenatal Diagnosis of Genetic Disease. By D. C. Siggers. (Pp. 69; illustrated + tables. £3.25, paperback.) Blackwell: Oxford. 1978.

A small and unpretentious manual, setting out clearly the essential facts about which the practising clinician must now be well versed—chromosomal disorders, neural tube defects, inherited and prenatally diagnosed biochemical disorders, x-linked recessive disorders, and amniocentesis with the many difficult decisions engenders.