and the permissible load for them should be lower. A study of the medical aspects of load carrying produced nothing new. The risk of spine, muscle or joint injury, herniation, cerebral haemorrhage in the arteriosclerotic, and the special risks to adolescents and pregnant women have long been accepted. Laboratory research has already confirmed the importance of temperature and humidity in relation to output of work. The use of the pulse rate as an index of total effort in healthy subjects is widely adopted.

There can be no doubt that mechanical handling of loads is the most desirable objective. In situations where this cannot be provided it is right that limits should be set to the weight to be carried, and vocational training for regular load carriers can make the work much easier. The meeting recommends that the maximum weight for adult males employed in operations requiring lifting and carrying of weights should be 40 kg. for their normal work, but a few members felt this could be set at 50 kg. The weight for women workers should be between 15 and 20 kg. but regular carrying should not be permitted for women. For boys and girls between 16 and 18 the limits are 15-20 kg. and 12-15 kg. respectively. Regular weight carrying should be prohibited for those under 16 years.

These limits may appear low to many experts and even to many workers whose job entails the regular carrying of loads. In the United Kingdom the Factory Act, 1961 provides simply that no person shall be employed to lift, carry or move any load so heavy as to be likely to cause injury to him; under special regulations, *e.g.*, Woollen and Worsted Textiles . . . Regulations, 1926 and Jute . . . Regulations, 1948, exact limits are set for certain categories of workers, the limit for females is 65 lb. (30 kg.) and for girls 50 lb. (23 kg.).

The lower range appears to have been chosen by the meeting in order that the weights can be carried without fatigue by workers in different regions and climates throughout the world and that they can be handled by less favoured workers. By adjusting the number of packages handled during the working period, the total daily load can then be suitably related to working and environmental conditions, the state of nutrition, and the physique of the workers.

T. S. SCOTT

Toxicity and Metabolism of Industrial Solvents. By Ethel Browning. (Pp. 739; 190s.). London, N.Y., Amsterdam: Elsevier. 1965.

It is a pleasure to read and review this book. It is written with great enthusiasm and experience of industrial toxicity and in a pleasingly readable style. The warnings given about many solvents in common use are most salutary.

About 200 solvents are described, and for each there is first a section on the physical properties of the substance, and a piece on its use and occurrence in industry, and methods of production.

Under the heading 'Biochemistry', methods of estimation are briefly described, with references to the detailed methods, and studies of metabolism of the solvent are summarized. The pathogenesis of toxic effects is mentioned where there is work available.

There follows for each solvent a section entitled 'Toxicology', where acute and chronic toxic effects in animals and man are described in terms of symptoms and signs, often some case histories, some pathology, biochemical findings, and treatment.

The book tries to give a summary of the work that has been done on all these subjects, and a large number of references to original articles are given.

The volume of work on some of these solvents is immense. It is impossible for a single author to have the laboratory, industrial, clinical, and epidemiology experience necessary to sort out the trivial from the significant. The inclusion of some trivial work should not be taken as too great a fault when most of the important references are there, but at times the review is by no means balanced.

As a guide to the literature and introduction to the subject, the book is reasonably successful even when dealing with the pathogenesis and biochemistry of toxic effects where the author is clearly not in her own field.

Another criticism, which is perhaps one of the whole subject rather than the author, is that the human toxic effects are, inevitably at times, anecdotal. Single instances of toxic effects are quoted, but how can we tell whether a solvent has caused the illness, without knowing the incidence in the unexposed population and the incidence in, and size of, the exposed population. It is an error in the right direction, for without publication of these single instances there is no stimulus to collect the necessary information for whole populations of exposed persons.

The production of the work is pleasing, though there are a number of minor misprints which should be removed in future editions.

In all, this is a most valuable book and one which should be available to all those who are concerned with the health of men working with solvents. However there is one major and disquieting feature. The price of the book is £9 10s., and this is quite unreasonable for a book of 700 pages with no figures or photographs and with an assured sale. As author and editor of the series, Dr. Browning should be in a position to see that this price, which is prohibitive for the individual worker, is reduced.

A. E. M. MCLEAN

Good Health in the Tropics. By W. H. Jopling. (Pp. 32; 3s. 6d.) Bristol: Wright. 1966.

On the whole this booklet is helpful to the layman going to the tropics and contains much sound advice, but there is one omission—a note on the care of babies and children.

Recent experience would suggest that poliomyelitis immunization is as important for older people as it is for younger. Also, one tablet of Paludrine a day is not considered a large enough suppressive dose in many areas.

J. J. O'DWYER