and production managers to ensure that mechanization reduces and does not increase the rheumatic hazards is stressed, though it is admitted that much more research into the influence of occupation is required if effective steps are to be taken. Unfortunately, intervertebral disc degeneration, which forms such an important part of the rheumatic hazard, particularly in heavy industry, is not very fully discussed in any part of the book. Its importance has, however, been recognized only comparatively recently and it will, no doubt, receive greater prominence in future editions.

As inevitably happens in a book by many contributors of varying disciplines, there is not only much repetition but also some disagreement, particularly on the treatment which may be pursued. This, however, is not altogether a disadvantage in the present state of our knowledge.

The chapter on the prevalence of the rheumatic diseases is valuable but tends rather to neglect recent work.

As in the first edition the illustrations and radiographs are beyond reproach, and this book can be confidently recommended to the industrial medical officer who requires an authoritative guide to present-day knowledge of the rheumatic diseases.

J. S. LAWRENCE

Vitamins in Theory and Practice, 4th ed. By L. J. Harris. (Pp. xxii + 366; 103 figures, 107 tables. 35s.) London: Cambridge University Press. 1955.

The first edition of Dr. Leslie Harris's book appeared in 1935 and contained a survey of the progress made in the study of vitamins to that date. It rapidly became

accepted as a standard book on the subject, reaching the third edition before the second world war.

The period during and since the war saw great advances in this subject, many further substances and groups of substances being added to the list of vitamins, while knowledge of the accepted vitamins was greatly extended. The fourth edition has, in consequence, been enlarged and extensively rewritten to accommodate recent advances. Perhaps the most startling change is the rise (from six to 20) in the number of vitamins discussed.

Dr. Harris has three separate but closely intertwined stories to relate: first, the initial experimental work involved in the recognition of certain diseases as being due to a dietary deficiency and of the discovery of the foods necessary to restore health; secondly, the large scale introduction of these foods or of vitamin-rich extracts to effect the eradication of the diseases in the areas affected; finally, the isolation, identification, and synthesis of each vitamin by the organic chemist, allowing some insight to be obtained into the mode of action of the vitamin in the body.

The author has treated this complex subject in a masterly fashion, including an immense amount of factual material in a lively narrative. *Vitamins in Theory and Practice* is eminently suitable for the non-specialist without being superficial. The industrial medical officer dealing with dietary problems in industry and with the special treatment of patients subjected to particular hazards, *e.g.*, chlorinated hydrocarbons, T.N.T., etc., should find it particularly useful.

J. C. SMITH