VITAMIN SOURCES IN ARCTIC REGIONS. By Kare Rodahl. Skrifter No. 91. 10\(\frac{1}{2}\) x 7 in. Pp. 64, with 15 figures and 36 tables. 1949. Oslo: Norsk Polarinstittut. Price N. kr. 6.00.


HYPERVITAMINOSIS A. By Kare Rodahl. Skrifter No. 95. 10\(\frac{1}{2}\) x 7 in. Pp. 206, with 55 figures, 78 tables and 27 graphs. 1950. Oslo: Norsk Polarinstittut. Price N. kr. 22.50.

The first two Skrifter (Nos. 91 and 92) deal with the historically interesting facts that led to the main investigation. These were: that the liver of seals contained much vitamin A; that the livers of polar bears, largely dependent on seals for their diet, produced severe sickness in man; and finally that this toxicity of polar bear liver was due to its vitamin A content. The third Skrifter (No. 95) then deals with the signs of hyperactivity A mimicked scurvy while the bone changes, as revealed by radiographs, could resemble those in hyperparathyroidism. A great part of this book deals with details of limited interest, such as, for instance, the evidence that polar bear liver is toxic only on account of its vitamin A content and not because of associated compounds. It does not deal adequately with the growing literature on hyperactivity A in man. However, as a work of reference it is a valuable contribution to knowledge, especially in these days of widespread vitamin administration.—C. E. Dent.


In this volume the author has attempted to explain and analyse the common sensations experienced by amputees, whether in the stump or in the phantom limb. Only 122 patients were examined, and the conclusions reached, although adding a little to our knowledge of this highly complex subject, do not point a way to any more certain method of treatment of pain in stump or phantom limb.

It is interesting that only twenty-seven of the patients exhibited painful neuromas, but in many cases there was evidence not only of somato-motor hyperactivity in the stump but also of vegetative hyperactivity in the stump and adjacent parts of the trunk. There seems little doubt that painful sensations in the stump or phantom limb are commoner after high amputations, whether of the arm or leg, and are commoner in those losing the limb late in life when adaptation is more difficult. The investigation also proved that pain in the phantom limb is commoner immediately after amputation, and usually tends gradually to subside. Patients who have lost a limb that has been painful for some time before amputation are also more liable to a painful phantom.

The loss of a limb causes a state of hyperexcitability of the central nervous system, not only at spinal level but also at central level, and some of the phantom sensations can be due only to this excitability. The tendency of a phantom sensation to disappear or diminish proves that there is an attempted central adaptation. This is easier and more complete in young patients—the very young may experience no phantom. It is thought that there is a central "shift" in functional organisation, which conditions the integration and interpretation of the afferent or centripetal impulses from the cut nerves. The sensation of pain appears to be determined chiefly by the intensity of the centripetal volley of impulses, especially from the stump, and by the state of central hyperexcitability; but the localisation of the pain to phantom or stump is determined by the central state of functional organisation, in which the make-up of the patient would seem to be important.

A basic phantom sensation is not present in every case, but some patients can summon a phantom by concentrating on it, by trying to perform movements with it or by contracting the stump muscles or the muscles of the opposite limb. A referred sensation assigned to the phantom can also be caused, and sometimes altered, by various types of stimuli applied to the stump or to "trigger areas" of the stump or adjacent parts of the trunk. Stimulation may inhibit the phantom or may intensify the sensations assigned to it. Sensations in the phantom leg are usually referred to the foot or distal part, those in the phantom arm to the hand or wrist; but in arm cases it is commoner for the phantom to be foreshortened to within the area of the perception of the stump.

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The leg phantom usually conforms to the posture of a natural limb, but the arm phantom is more often away from the "natural" position. This is probably because the arm has a more highly specialised function than the leg, and may explain also why the phantom is more often identified with the artificial leg than with the artificial arm. Identification of the phantom with the artificial leg is used in walking—or the phantom may disappear when the limb is worn. The artificial arm, however good and well controlled, cannot approach in function the highly specialised and sensitive natural hand and fingers, so that the "phantom" does not help the use of the artificial arm in the same way.

The sensations after the loss of a limb bear many resemblances to those in peripheral nerve injuries: for instance pain is more common in high amputations, where division is nearer the parent neuron and more fibres are divided. Some of the referred sensations aroused by pressure on the neurora, or by other stimuli applied to the stump, resemble sensations referred to a painful area after nerve injury. In amputees there are many complex and seemingly contradictory findings not entirely explained by the hyperexcitability of the central nervous system and the retention of a topical distribution of the sensations, nor by the attempt at adaptation by a central shift in functional organisation. Whatever the true explanation of the varied and often unpleasant experiences of some amputees, there seems little doubt that the psychological make-up of the patient affects their interpretation and accounts for the failure of many recognised methods of treatment to achieve lasting improvement in some individuals.

The author is to be congratulated on his painstaking investigation of only a comparatively small number of cases. The translation has made the earlier parts of the book a little difficult to read; but the discussion of the findings, the summary and the conclusions are logically set out and easily understood.—T. Ritchie.


This monograph reads like a Swiss Guide Book. The illustrations are not quite up to the standard of the holiday brochures but its layout is pleasing and sections are easily found. It contains little that is new. It deals largely with observations about injury and the technique of repair. This monograph is probably unique in that in a reasonable compass it states the essentials that are basic to the repair of injured tendons of the hand. It summarises the numerous papers that have appeared recently on this subject and abstracts information from the classical text-book. It is well worth study and is likely to be of use to the surgeon who may be called upon to deal with casual hand injury.—Ronald Furlong.


The entire " Henke-Lubarsch " "Handbook of Special Pathological Anatomy and Histology " (now edited by Robert Rosse of Berlin) makes a formidable row of volumes. Both in its content and in its presentation it sets the highest standards of descriptive pathological anatomy, and it has been for many years an authoritative work of reference. The present volume, by Professor Werthemann of the University Institute of Pathology at Basle, dealing with "Malformations of the Extremities," is the most recent addition to the series of volumes dealing with the locomotor system.

The types of malformation discussed are nearly all congenital, and the book does not include accounts of any generalised skeletal diseases which may involve the limbs, even when, as in the case of some chondrodystrophies and of osteogenesis imperfecta, these are thought to be related to "developmental" processes. The remaining field of malformations, however, is thoroughly and systematically covered. In contrast with other volumes of the series there is little actual pathological material illustrated, the ease of radiological study and the infrequent opportunities for the collection