Hills Decompression Sickness

VOL.1

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Decompression Sickness volume 1 The Biophysical Basis of Prevention and Treatment

Brian A.Hills



Brian Hills begins his book by presenting the features of decompression sickness, paying particular attention to the many factors which determine its incidence and severity. The information is then used as the basis for a critical review of the mechanisms which have been offered to explain this disease. This section also contains a review of the models and calculation methods employed to prescribe preventive methods, that is, to formulate decompression tables. From the discussion several issues emerge which are vital to the formulation of preventive decompression, and analysis of these problems brings to light fundamental research as yet mostly buried in military reports or in journals unfamiliar to many involved in the practical aspects of diving, aviation and tunnel construction. The book presents much of this fundamental work in a form readily accessible to the designer of decompression tables and to the medical officer involved in treatment procedures. However, the major purpose of the book is to explain the prevention and treatment of decompression sickness on a physiological and physical basis rather than in terms of empirical procedures.

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Brian Hills graduated in natural sciences from Cambridge University and followed his B.A. with a Diploma in chemical engineering at the University of London. From 1963 to 1968 he was Senior Lecturer in chemical engineering at Adelaide University where he gained his Ph.D. in 1966. He has held appointments at Brown University, Rhode Island, Duke University and the University of London and is now Professor of physiology and biophysics and Chief of the Hyperbaric Physiology Section of the Marine Biomedical Institute at Galveston