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**BOOK REVIEW**

*Title:* EXERCISE PHYSIOLOGY: PHYSIOLOGIC BASES OF WORK AND SPORT  
*Author:* Jurgen Stegemann, translated and edited by James S. Skinner  
*Price:* £9.75  
*Pages:* 345 pages  
*Figures:* 197 figs.  
*Cover:* Soft cover

This is the first textbook on exercise physiology to appear in the popular Year Book series published in the ‘Pocket Book’ format. This translation of Professor Stegemann’s book communicates the essential physiology, underlying the study of exercise, in a crisp and clear manner without unessential repetition. However because it is a translation of the 1976 German second edition of the 1971 publication then the exercise physiology is as expected, a bit dated. The contents of this book cover the range of topics expected in a book on exercise physiology and they include the essential physiology of muscle cell function through to altitude and diving physiology. There is a chapter on what is called “biologic cybernetics” which is simply control theory used to explain selected physiological principles of regulation. In another section there is a description of an on-line system for the determination of oxygen uptake which has been called “computer controlled spiroergometry”. This information would have been welcomed in the middle 1970’s but these systems have been available commercially for some time and occupy pride of place in many exercise physiology laboratories.

Dr. Skinner has been loyal in his translation of the German text as is reflected in his use of terminology which he does not use in his own writing. For example Professor Stegemann refers to muscle as being made up of red and white fibres and that with endurance training white fibres are converted into red fibres. The distinction between red slow twitch fibres and red fast twitch fibres has not been made. The nomenclature describing both populations of fibre types and the limited conditions under which this conversion takes place are well known to exercise physiologists in general and Dr. Skinner in particular.

Professor Stegemann does use much of his own work and that of his colleagues to describe and illustrate the physiological changes which occur during exercise and so this does present the reader with the opportunity to see research results which have previously only appeared in German language journals. Although there is no bibliography section in the book, each illustration containing published research work is adequately referenced. The sections in the book which may attract those of us interested in the mechanisms underlying improvements in performance, are most disappointing because they offer attractive headings to various sections, which in reality have nothing new to say. Therefore in one sense this translation of what has effectively been the course textbook for the students at the Cologne Sports School, is reassuring in that it confirms that the principles and concepts in human exercise physiology are indeed international. This translation has not unlocked a wealth of “unique information on work physiology and sport physiology” as the publishers claim but simply reminded us of what we were teaching a decade ago. Even at this modest price of £9.75, Åstrand and Rodahl can rest easily; there is no contest!

_Clyde Williams_