

RECENT PUBLICATIONS

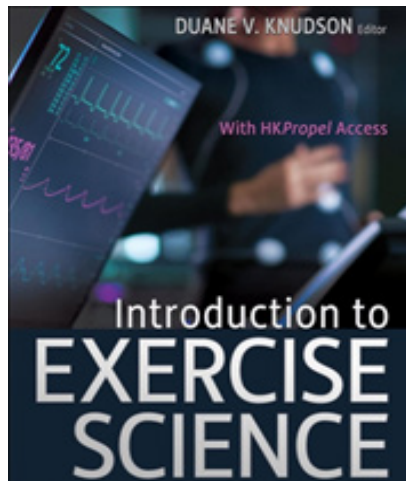
Book reviews

Introduction to Exercise Science. First Edition

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Human life and health are not possible without movement, and this is now a fundamental truth already accepted by most of the people around the world. This explains why more and more individuals are seeking expertise, and benefiting from it, from a variety of exercise science professionals, either to improve their movement performance or for regain lost physical activity ability, after injury or disease.

The natural consequence of this trend was a record interest in the study of physical activity and exercise science, so that the number of undergraduate students majoring in the respective disciplines has increased dramatically in the USA, from the early 2000s to 2016. This sudden growth being of course accompanied and stimulated by an unprecedented expansion of the career opportunities, for the professionals possessing the necessary actual scientific and humanistic knowledge of the bases of exercise science.

In this context the appearance of a book like *Introduction to Exercise Science* can only be extremely welcome. And this is because it complements and continues another fundamental work in the field; we refer to *Introduction to Kinesiology*, edited by D.V. KNUDSON and T. BRUSSEAU, with its first edition in 2000 and already the 6th in 2022.

The book which we present now is organized into three parts and a total of 11 chapters. Of these chapters the first two are authored by D.V. KNUDSON himself, while the

other nine were written by the 15 collaborators, all of them renowned specialists in exercise science and kinesiology.

Part one – *Foundational Knowledge* – is composed of three extremely important chapters for those who study exercise science and physical activity. It first introduces the readers into these disciplines (Chapter 1), and then summarizes the human musculoskeletal anatomy (Chapter 2); namely that part of the anatomy which represents one of the most important prerequisite areas for studying exercise science, as well as for working as a professional in the field. Another foundational area of exercise science knowledge – measurement and statistics - is presented within the third chapter; a chapter which also addresses to the evidence-based application of some specific clients and special populations, be they athletes, construction workers, children or old people.

With its five chapters, Part II – *Major Subdisciplines of Exercise Science* – is not only the most consistent, but also the most important sequence of the book. Its very rich content addresses the students who after acquiring the knowledge of the first three chapters, are already prepared to begin the study of the five major subdisciplines of the discipline of exercise science: biomechanics (Chapter 4), exercise physiology (5), motor behavior (6), sport and exercise psychology (7), and physical activity epidemiology (8).

What the first four subdisciplines deal with is not difficult to understand, and why they must be given all the attention within a book like this is relatively easy to guess. Unfortunately not as easy is to guess the object and the content of the fifth subdiscipline, but all will be clear if we will read with all attention the last definition of the physical activity epidemiology. A definition offered just in 2023 by the D-C. LEE (the chapter's author in person) and A.G. BRELLENTHIN, which stipulates that physical activity epidemiology is “*the study of the distribution and determinants of physical activity, its associations with health-related outcomes, and the application of this study to disease prevention and health promotion*”. As concerns the chapter structure, similarly to previous ones within the second part it approaches the four essential aspects of physical activity epidemiology; i.e. its benefits, its content, its history and its research methods. The chapter ends with an overview of the knowledge in this field.

Part III is entitled *Related Professional Subdisciplines*, and teaches the students in what way the knowledge related to the five major subdisciplines can be applied and integrated with clinical science, in professional practice. In other words this part is dedicated to prepare the readers for a successful professional application of the respective

knowledge, in various allied-health-related (as physical and occupational therapy or others) and sport performance careers, as is the case with strength and conditioning, nutrition a.s.o.

This last part starts with the Chapter nine - *Research and Evidence-Based Practice*; a chapter which has a more theoretical content, as apart of the benefits of research the authors present some of the most frequent research designs used in exercise science, explaining also how they can be used to support evidence-based practice. It follows a chapter – *Sport Performance: Strength and Conditioning, Nutrition, and Sport Science* – authored by no less than four scientists: a sequence dedicated to the sport performance, within which before offering an overview of the knowledge, the authors present the history and the research methods of the respective field.

If the previous chapter addressed to the different aspects related to sport performance, the last one introduces research in the other targeted professional practice area: *Medicine and Allied Health*. In this endeavor among other

useful information the two authors present to the students not only several elements of the diagnostics in the field, but also essentials on the types of interventional exercise that they will have to use in practice.

In the end of this short presentation we should emphasize that this book is a special one not only for its exhaustive content and the knowledge mode of presentation, but also because it has many features to help the readers understand and memorize the essential and strictly useful information about exercise science. Moreover, if we take into consideration that a code for accessing the respective HKPropel is included with all new print books, we can say that there are all reasons to consider this work an extremely useful, even indispensable tool, for the actual and future under- and post-graduate students within exercise science or sport and/or physical activity university programs.

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