

ally, where more complete addresses are included, there are a number of visible errors that question the validity of other reference and resource material.

It is unfortunate that the book appears to fall into the age old trap of attempting to be all things to all people, and declines to clearly define its constraints. It seeks to provide a comprehensive history, a commentary on future issues, a coaching guide, an allusion to a world view and the implications of culture, and a reference point for additional information. Broad generalizations are fashioned that must be recognized as providing only a catalyst to further reading and research.

As the present trend within the sports movement focuses much more on sports specific participation rather than the disability of the athletes, it is rued, for example, that several fundamental questions have been ignored. It is unsatisfactory that a number of significant Paralympic sports are given not even a cursory mention, and that the history of their development is neither traced nor highlighted. It is discouraging that the authors appear to have responded to the demand of the "media image" and failed to acknowledge the participation of athletes with a severe disability, and the major controversies in these athletes' continued involvement in the elite sports competition program. It is also unexpected that winter sports, and especially the Winter Paralympic Games, do not receive due recognition considering the very significant role these programs have played in establishing more integrated training and competitive programs.

In drawing conclusions, this text does achieve a number of major objectives. It brings together a considerable amount of information and constructs it into an interesting and informative text that is enjoyable to read. It issues a challenge to others to invest time in collating their retrospective views, both factual and interpretational, and ensure that the history, and the lessons of the movement, are not lost to posterity. It allows for the clear identification of issues that need further research and penmanship, and provides a framework that will facilitate an identification of the perceived gaps in its own content. More pertinently, however, it presents a catalyst—an opportunity for those with little or no knowledge of working with athletes with a disability to gain information that enables them to strengthen their own programs through increased knowledge and awareness.

Reviewed by: Howard Bailey, Atlanta, Georgia.

Fitness Programming and Physical Disability. Edited by Patricia D. Miller. Champaign, IL: Human Kinetics, 1995.

With a boost from the American's with Disabilities Act and an increasing fitness awareness as exemplified by the *Healthy People 2000* proposals, fitness concerns of people with disabilities are being appreciated and addressed. There are several publications which cover these concerns. This book, which serves as the textbook for the Adaptive Fitness Instructor Certification Workshops of Disabled Sports, USA, fills the niche of being an introductory workbook in this area. Therein lie its strengths and its weaknesses.

In reading through this book one can picture it being used as the textbook for a workshop. The book's organization leads the reader through four distinct parts. Part I is an introduction to disability. There is an excellent section on preferred language, e.g., "a person who uses a wheelchair," rather than "wheelchair bound" and behaviors, e.g., ask before giving assistance. This part also provides an overview for the rest of the book.

Part II reviews the theoretical basis of exercise science. For those who are well versed in exercise science, this is a review. For those without training in this area, Part II may be somewhat technical. For example, describing the function of the muscle spindle and its

strength reflex, or the Golgi tendon organ and its inverse stretch reflex, may be confusing to the uninitiated. Most of this is standard exercise physiology with some consideration of adaptations suggested by physical disabilities.

Part III provides practical applications of the exercise science theory presented in Part II. This section is the true “meat and potatoes” of the book. It is arranged with an initial overview of the exercise prescription, and then progresses to resistance training, types of resistance training, flexibility training, types of stretching, and specific exercises. This section ends with aerobic dance. This arrangement, while it gives a good overview of the field, makes it difficult for someone interested in designing a particular program, i.e., a program for a person with a spinal injury or cerebral palsy; that would require skipping from chapter to chapter.

Part IV contains helpful administrative guidelines, a review of medical conditions that may be associated with physical disabilities (e.g., seizures, autonomic dysreflexia), transfer techniques, and helpful appendices on pharmacological agents, registration forms and resources, and a glossary.

As with any edited, multi-authored book, there are inherent limitations. Additionally, the authors have the formidable task of trying to develop a general textbook with meaningful yet simplified information so as to be useful to a wide audience. There is also the difficult task of determining where information should be placed so that it is not overlooked or repeated. Several problems in this regard are noticeable. For example, in the initial discussion of autonomic hyperreflexia in the disability section, there is no mention of the primary concern of this disorder, i.e., that the main problem is an elevation of blood pressure. There is also failure to mention that some athletes with high spinal injuries are intentionally inducing autonomic hyperreflexia, i.e., “boosting,” as a performance enhancer. Similarly, there is a good discussion of overheating problems in those with temperature regulation disorders from spinal cord injury, but a failure to mention hypothermic problems that can occur in the typically cool fitness facility swimming pool. It would also be helpful to those new to the field to realize that seizures, which indeed can occur with cerebral palsy and other conditions, are very rare in the exercise setting. Finally, for some inexplicable reason, there is an admonition never to apply resistance to the prosthesis of an amputee. If this were the case, how could a lower extremity amputee ever power down the runway for a long jump, or an upper extremity amputee carry out the garbage?

Overall, *Fitness Programming and Physical Disability* is certainly a useful contribution to the field. In particular, the book would be helpful when developing a training program for exercise instructors who are being initiated into the field of exercise for people with physical disabilities. A final problem with this book, however, is a problem with the field itself. What is the best way for a person with a physical disability to exercise? We still have much to learn about the best way to deal with spasticity, loss of major muscle mass, and other characteristics that may be present in people with disabilities. Much research and field work still needs to be done. However, the virtues of this book certainly outweigh its defects. In particular it gives one who is new to the field a good starting point and would be a helpful addition to the library of anyone interested in exercise and fitness for individuals with physical disabilities.

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