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**Book review**

# Pediatric Exercise Science and Medicine

**Editors:** Neil Armstrong & William van Mechelen

**Bibliographic Data:** ISBN-10: 0199232482, ISBN-13: 978-0199232482; Oxford University Press, Oxford, England; 2008, £49.95, 650 pages, paperback

**Subjects**: exercise physiology and pediatric performance, children in sports and exercise medicine; exercise related injuries in children

**DESCRIPTION:** The book describes and discusses exercising children's physical capacity in health and disease in meticulous detail. It emphasizes evidence-based advances in relevant knowledge, and is widely cross-referenced to encourage access to complementary material. A summary to identify the key issues is also presented at the end of each chapter.

**PURPOSE:** To update the first edition of the book by including the latest data from leading researchers in the field. As the second edition of pediatric exercise science and medicine book, it aims to improve the recognition of this paediatric sub-specialty area, as an important component of sport and exercise medicine at large.

**FEATURES:** The book starts with assessment in pediatric exercise science, which is discussed in 13 sections as follows: 1- Ethics in paediatric research: principles and processes; 2- Interpreting exercise performance data in relation to body size; 3- Anthropometry, physique, body composition and maturity; 4- Muscle strength; 5- Maximal intensity exercise; 6- Pulmonary function; 7- Cardiovascular function; 8- Aerobic fitness; 9- Field tests of fitness; 10- Physical activity; 11- Effort perception. In part II developmental aspects of pediatric exercise science are presented between sections 12 and 23: 12- Growth and maturation; 13- Developmental biodynamics: the development of coordination; 14- Motor development; 15- Muscle strength; 16- Exercise metabolism; 17- Maximal intensity exercise; 18- Pulmonary function; 19- Cardiovascular function; 20- Aerobic fitness; 21- Locomotor economy; 22- Oxygen uptake kinetics; 23- Temperature regulation. Physical activity, fitness and health issues are discussed in part III in 7 sections (from 24 to 30): 24- Physical activity, physical fitness, and health: current concepts; 25- Physical activity, physical fitness, and cardiovascular health; 26- Gene-physical activity interactions and their role in determining cardiovascular and metabolic health; 27- Physical activity, physical fitness, and bone health; 28- Physical activity, physical fitness, and social, psychological and emotional health; 29- Sport, physical activity, and other health behaviours; 30- Systematic promotion of physical activity . Then, in part IV chronic health conditions and physical activity matters followed from section 31 to 36: 31- Exercise testing in congenital heart disease; 32- Exercise, physical activity, and asthma; 33- Exercise, physical activity, and cystic fibrosis; 34- Exercise, physical activity, and eating and weight disorders; 35- Exercise capacity and training in cerebral palsy and other neuromuscular diseases; 36- Exercise, sport, and diabetes mellitus. Finally, in the last part the elite young athlete is examined in detail between sections 37 and 48: 37- The elite young athlete; 38- Hormonal responses and adaptations; 39- Aerobic training; 40- Maximal intensity exercise and strength training; 41- Young athletes with a physical or mental disability; 42- Current concepts on the aetiology and prevention of sports injuries; 43- Aetiology and prevention of injuries in physical education classes; 44- Aetiology and prevention of injuries in youth competitive contact sports; 45- Aetiology and prevention of injuries in youth competitive non-contact sports; 46- Upper extremity and trunk injuries; 47- Lower-limb injuries in sporting children; 48- Injuries to the head and cervical spine.

**AUDIENCE:** Paediatricians, medical practitioners, physical educators, sport scientists, exercise physiologists and graduate students will find this book a must when dealing with exercising children.

**ASSESMENT:** The editors and the contributors are recognized authorities in their fields, who have adapted experimental methods and new non-invasive techniques to use with children and to understand the challenging characteristics of exercising child. This textbook, therefore, will serve as a first-rate reference source for researcher and field workers to support and challenge them in developmental pediatric exercise science and medicine.

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