



## METADATA

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### Abstract

Physical exercise plays a key role in human health and fitness. An essential part of physical exercise is resistance training, which improves overall health, muscle strength, body metabolism, as well as the cardiovascular system. Scientific methods towards designing resistance training programs have evolved rapidly in the last years. As a result, designing of strength training programs has become an integral part of an Undergraduate Program of Kinesiology/Physical Education and Sports. This book contains comprehensive theoretical and practical information for the design of more effective and safer resistance training programs. It gathers basic knowledge of anatomy, physiology, biochemistry, biomechanics, endocrinology, nutrition

and training needed by the health professionals to design effective and safe strength training programs avoiding injuries for athletes, sick people and people who adopt a sedentary life. The book also contains examples of resistance training programs, a detailed description and figures of strength training exercises, practical questions and problems as well as specific learning objectives in the beginning of each chapter. Moreover, emphasis is given in muscular strengthening throughout childhood for the elderly and for people of both genders. Each chapter cites references to important scientific literature that has substantially changed sports science, as an incentive for young scientists to engage in scientific research.