

## RECENT PUBLICATIONS

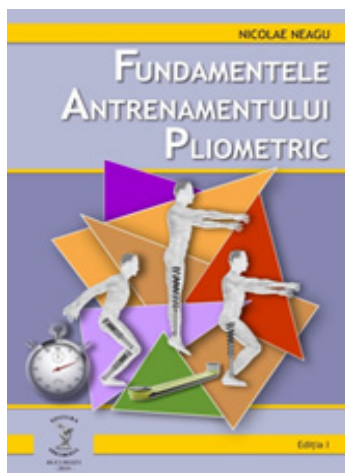
### Book reviews

#### Fundamentals of plyometric training

Author: Nicolae Neagu

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University format (18/25 cm), 423 pages



The book elaborated by the distinguished Prof. Dr. Neagu Nicolae Emilian falls, through the content of the issues addressed, in the field of the training methodology for athletes, and approaches *plyometric training* in an inter- and transdisciplinary manner, where theory does not appear as a goal per se, but helps in understanding the complex mechanisms of plyometrics as a method with optimizing and potentiating influences on individual sports performance.

Published by the Discobolul Publishing House @ Copyright 2018, the volume *Fundamentals of plyometric training* comprises a total number of 423 pages and 4 extensive chapters structured in 60 subchapters, 147 figures, 22 tables and a generous lexicon in which the reader is offered explanations of the terms used.

*Chapter I* highlights the concept of *plyometric training*, its evolution and defining notes; individual physical and mental engagement, the relationship of plyometrics with strength and speed training, the work regimens and the forces involved, the goals pursued through this type of training, the synergistic muscle relationships in plyometric training.

*Chapter II* presents the human body as a topological system, the relationships of the human body and Newton's mechanical principles; human locomotion, body symmetrization and elimination of bilateral body deficit; terms specific to mechanical physics in relation to the oscillations of physical systems or bodies; the human body as a self-oscillating biomechanical system; the levers of the human body, the lever system in sports situations; the movements of the body and body segments, from a biomechanical perspective.

*Chapter III* deals with a series of aspects regarding collision with the working surface and object, from a plyometric perspective; plyometrics in relation to integrated neuromuscular training and proprioceptive neuromuscular facilitation; controlled stretching in plyometric training, ballistic stretching, proprioceptive neuromuscular facilitation stretching, isostatic stretching; dynamic stretching, effects monitored by applying controlled stretching, short-term, medium-term and long-term effects, and recommendations regarding their use in training programs.

*Chapter IV* presents the muscular system and plyometric training: a brief incursion into myology, criteria regarding the morphological and structural typology of skeletal muscles; functional typology of skeletal muscles; topographic elements of skeletal muscles; fundamental properties of somatic muscles, electrical manifestations of muscle contraction; chemical manifestations with the stages of anaerobic and aerobic energy mechanisms; mechanical manifestations of muscle contraction: the contraction force of a skeletal muscle, absolute contraction force, relative contraction force, relative contraction force in relation to body weight, individual contraction force coefficient, relative contraction force in relation to other body segments and to the duration of execution and power; mechanical work; power; weight of a body; thermal and acoustic manifestations of muscle contraction.

Through this book written in several distinct and complementary registers, *informative-explanatory*, by introducing into the scientific circuit fundamental theories and concepts related to plyometric training, *critical-evaluative*, by presenting this type of training corroborated with some observations that help in optimizing the training methodology, and not least, *epistemological-methodological*, the author manages to increase awareness about and demonstrate the complexity of a profession that involves a level of interdisciplinary training beyond unipersonal empiricism and motivation.

This volume is extremely important for the field of motor activities in general and for high performance sport in particular through the informational support made available to scientific users, as well as by the way of addressing issues submitted to analysis and scientific interpretation. The critical and objective spirit, the accuracy, the dynamics and the coherence of ideas confer this book idea fluency, epistemological and praxiological balance.

Through its theoretical and didactic utility, and especially through its argumentative, scientific support, the volume *Fundamentals of plyometric training* elaborated by Prof. Dr. Nicolae Neagu is an asset of sports theory in Romania, as a reference book for specialists working in the field of human motor function.

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