

Age Verification in Youth Sport: Skeletal Age Does Not Work!

Robert M. Malina

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The concept of skeletal age (SA) and SA data for young athletes are reviewed in the context of age verification for age group competitions. Focus is upon male soccer players and female artistic gymnasts, although data for athletes in other sports are summarized. Variability in SA can exceed 4 years within a CA group, and thus precludes use of SA as a valid tool for verification of CA in age-group competitions. Observations for adolescent male athletes also question magnetic resonance imaging (MRI) as a valid estimate of CA eligibility in youth soccer competitions. Many CA eligible male athletes could be eliminated from a competition because they are advanced in skeletal maturation. Conversely, many CA eligible female artistic gymnasts could be eliminated from a competition because they are delayed in skeletal maturation.

Key-words: GROWTH / SKELETAL AGE / CHRONOLOGICAL AGE / YOUTH

Aerobic mechanism intervention in 800 metres

Enrico Arcelli, Andrea Riboli, Athos Trecroci

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The article deals with the aerobic mechanism in 800 meters, in particular with its contribution on the total energy expenditure for completing the distance. The most advanced works, existing in the literature, especially referring to the physiological aspects related to 800 m. and 400 m.. The different importance of the anaerobic lactic acid mechanism is pointed out in men and women.

Key-words: ENERGY METABOLISM / THEORETICAL MODEL / MIDDLE DISTANCE RUNNING / GENDER DIFFERENCE

Stretching and its effects on performance and injuries. A critical review of scientific literature

Fabio Rastelli, Serena Chiavaroli

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Stretching is a practice commonly used in sport, but until now there are few studies on its real usefulness. Many researches investigated on its acute and chronic effects related to performance improvement and to injuries prevention. Most authors share the concept that stretching has negative acute effects on strength and/or power trials, while long-term data are still partially discordant. Though the studies, investigating stretching effects on endurance performance are limited, it appears that stretching has negative effects on those disciplines, requiring high intensity in the stretching-shortening cycle, such as running. In injury prevention some merits are acknowledged to stretching, even though, according to the method of application, it is possible to have completely different, even opposite, effects. The present work has the goal of explaining the mechanisms of action of stretching and of analysing its effects, and thus, of offering important practical indications.

Key-words: STRETCHING / PERFORMANCE / INJURY / PREVENTION / PHYSIOLOGY / ADAPTATION / STRENGTH

The historical statistics progressions of the male world record in track and field jumping events in the light of some particular and contextual aspects of interdisciplinary technical comparison.

Otello Donzelli

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The topic of the present article is based on some unusual statistics interpretations of the male track and field sector "jumping events" in the track and field, which, from different particular and original points of view, are based on the search of eventual existing historical statistic interconnections, not only in the classical interpretation of a precise chronological parallel sense expressed in the various disciplines, but also with particular attention to the specific development, over the time, of the world records in the respective four disciplines (high jump, pole vault, long jump and triple jump) from the global contextual viewpoint of the sector. The unusual character of this kind of research, as a matter of fact, is represented by the fact that the statistical analysis, even before the

considerations of the technical value of every world record, concerns the degree of technical and historical incidence of every single difference of improvement, produced on the respective previous record. The results of this kind of investigation, especially, the ones regarding a particular statistic interpretation, seen in a humanist sense of the sector, are able to offer further and very interesting knowledge on the mysterious and more and more fascinating topic of the still not indecipherable extreme potentialities of the athlete-man-competitor in a very far future, which is also very difficult to be imaged.

Key-words: PERFORMANCE PREVISION / WORLD / RECORD / JUMPING EVENTS/ STATISTICS / EVOLUTION

Toward a multilateral long term success

Rudolf Schön

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The author is person charged of a promotional project of the German Federation of Track and Field. He presents some main considerations *Program-framework* of the Federation, concerning basic training. It expounds the competencies and the exercises for basic training, providing a global vision of the structure of the program, as well as some practical examples. In particular he answers to the following questions: which are the goals and the competencies of the basic training? And which elements does the coach have to focus , when practising them? Thanks to his contribution it is possible to learn the elements to focus, and what, conversely, will have to become taboos in training young people. In addition, some practical hints for training are indicated. It is possible to study further, in depth, this aspect reading the book of the “Program-framework” on basic training (German Federation of Track and Field).

Key-words: TRAINING / METHOD /TEACHING /CHILD / GERMANY/ADOLESCENT/ THEORY