Section APPLIED ANTHROPOLOGY

CHARACTERISTICS OF THE SPATIAL POSITION OF THE TORSO, PELVIS AND FOOT IN THE MALE ELITE ATHLETES OF DIFFERENT SPORTS

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Characteristics of the musculoskeletal system in 231 elite male athletes from 11 Olympic sports, age of 19–36 were investigated. The purpose of research is to study type-specific traits of the spatial position of torso, pelvis and foot in elite athletes men specializing in different kinds of sport with the use of modern quantitative methods. The methods included computer optical topography (1994, Novosibirsk). Disorders of orientation and shape of the body sagittal, front and horizontal planes, the frequency of local deviations in posture from the norm were determined. Characteristics of the position and arch of the foot were determined by a computer complex "Diasled-Scan". The type-specific risks of incorrect posture and foot related to sports specialization were identified. It was shown that the deviation of the spatial orientation and shape of the body, the position of the foot setting were correlated under the intense muscular activity; they have an influence on the increase of the evolutionarily formed functional asymmetry in humans, aggravated by strenuous physical activity. Main motor stereotype, in a long-accented training process, forms a specific muscle profile with the imbalance of the paired torso muscle groups, and the agonists-antagonists muscles of the lower limbs and trunk. Most general and essential posture indicators in the total subpopulation of athletes are the round or round-shouldered back, a left-side curvature of the spine in chest department and a right-hand twisting of a trunk towards pelvis. Common positions of violations are supplemented with the type-specific changes, particularly in sports, both "symmetric", and "asymmetric" in terms of biomechanics of the competitive exercise: archery, cross-country skiing, biathlon, curling. Positional settings stop athletes characterized mainly by valgus-varus of the left-right asymmetry from a greater support on the left foot that is a direct projection of the left-hand shift of the spinal processes with right-to-torso twisting.

Key words: *musculoskeletal system, posture, foot, elite athletes*

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THE CHALLENGES OF THE EXCAVATION PROCESS OF WELLS USED AS BURIAL FEATURES IN CYPRUS. DEALING WITH THE RECOVERY OF HUMAN REMAINS

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The principal objective of this paper is to demonstrate the challenges of locating, excavating and recovering human remains from wells, one of the most common burial features that the Committee on Missing Persons in Cyprus (CMP) is dealing with. The frequency of burials in wells can be explained by the little amount of time and effort needed in burying the bodies since they already exist and are not distinguishable from the surrounding environment. For our purpose, wells are divided in two main categories, those that are open and the filled ones. While the open wells are visible and easy to find, special methods need to be applied in order to locate the filled ones. In both situations, the scientists have to deal with the depth of the wells. That is

why an access ramp is constructed by the excavator to reach the undefined level where the human remains, which are situated in the well, are located. During the removal of the deposit of the wells different challenges, either caused by nature or humans, can be encountered. For example, during the years these abandoned wells were used as "trash pits" (garbage, dead animals, discarded materials) or were altered (e.g., collapsed, water existence) by natural forces. The same reasons can be present during the exhumation process. Once these difficulties are confronted, with the use of several techniques the scientists have to concentrate on the exhumation process, which is mainly followed manually. The procedure depends primarily on the type of burial (single or multiple/commingled), the existence of water or not, whether it was disturbed, and the decomposition of human remains inside the well.

Key words: *forensic anthropology, wells, Cyprus, CMP, human remains, excavation, exhumation*

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COMPARATIVE ANALYZIS OF ANTHROPOMETRIC INDICES OF ATHLETES SPECIALIZING IN SHORT-TRACK AND MOSCOW SCHOOLCHILDREN AT THE AGE FROM 7 TO 16 YEARS

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The aim of the paper is to study and compare variability of individual anthropometric indices in short-track athletes with the control group of Moscow schoolchildren from 7 to 16 years of age. Anthropometric measurements were conducted in conformity with classical methods, accepted at the Institute and Museum of Anthropology, Lomonosov Moscow State University.

Conducted research has allowed to establish that the basic differences between athletes and schoolchildren of both gender groups have been observed at the age of 7–12. Schoolchildren have conceded athletes in all measured parameters. The 13–16-year-old schoolchildren are significantly smaller in all circumferences, but exceed in hand grip strength in both gender groups.

The obtained anthropometric characteristics might be used in sport selection as well as for conducting a medico-biological monitoring.

Key words: *anthropometric indices, short-track athletes, Moscow schoolchildren*

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T/A POLYMORPHISM OF THE FTO GENE IS ASSOCIATED WITH THE PREDISPOSITION TO FAT ACCUMULATION IN THE KALMYKIAN MALES

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The problem of human fatness is one of the most urgent in the modern world. Studies in the field of anthropogenetics revealed some genetic determinants of increased fat accumulation and, as a consequence, of obesity development. The T/A polymorphism (rs9939609) in the fat mass and obesity associated (FTO)