## Materials of Conferences

## PHYSIOLOGICAL PARAMETERS OF EXTERNAL RESPIRATION IN SPORTSMEN WITH DISEASES OF MUSCULOSKELETAL SYSTEM

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Nowadays, much importance is being attached to the functional condition of the ventilation system of sportsmen, which is a factor reflecting body's physical characteristics and its ability for prolonged intensive muscle activity. The interest is determined by the fact that high training loads can cause additional pathologic changes in the organisms of unprepared disabled sportsmen.

The aim of the research was to study how powerlifting influences some of the characteristics of the respiratory system in disabled sportsmen with diseases of musculoskeletal system (DMS).

To analyze the external respiration parameters, we used diagnostic spiroanalyzer Spirolab MIR III with the SpO<sub>2</sub> function (Italy). The breathing capacity (BC), inspiratory and expiratory reserve volumes (IRV, ERV) have been measured.

21 disabled sportsmen, aged between 17 and 25, took part in the observation. The research participants had the following sport rankings: I sport category (5), sub-master sportsmen /SMS/ (6), master sportsmen /MS/ (9), master of sport of international level /MSIL/ (1).

Our control group included 27 apparently healthy people of the same age, who did not do sports.

The comparing parameters of the static lung volumes in both groups has revealed that the BC of the disabled sportsmen was 18% higher than in the control group (reliability p < 0.05).

Inspiratory and expiratory reserve volumes of sportsmen with DMS, who did powerlifitng workouts, differed from those of the control group. For instance, ETV of non-sportsmen was several times higher than that of the disabled sportsmen:  $1315 \pm 3.8$  ml and  $1190 \pm 6.3$  ml correspondingly (though these figures did not exceed the average statistic physiologic values). As for the IRV, the disabled sportsmen proved to have higher values than the apparently healthy persons ( $1867 \pm 5.3$ ;  $1613 \pm 8.2$ ; p < 0.05).

Upon the obtained data, we came to a conclusion that there is a certain trend in characteristics of the ventilation system in sportsmen with DMS, connected with their professional activity.

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## THE TEENAGERS OBESITY COMPLEX MULTIFACTORIAL REHABILITATION IN COMBINATION WITH THE ARTERIAL HYPERTENSION

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The carbohydrate, the lipid, and also the other metabolism types' disorders complex combination diagnostics challenges are being caused the great scientific and the considerable practical interest, and their role discussion in the chronic diseases pathogenesis of the internal organs in the last and the recent years.

In this connection, the epidemiological researches and the studies currency is quite understandable, with the purpose of the earliest detection and its diagnosis of the risk factors, and the prophylactic arrangements commencement. For all this, it is quite necessary to be taken into consideration and such fact, that the arterial hypertension (AH), the overweight (ORW) human body, the lipid spectrum violation are often being passed against the background of the exo – and the endogenous intoxications [1, 3].

Thus, the main challenge is being confronted before the human organism – the normal homeostasis preservation, and also its optimization [2], at the endogenous intoxication. By V.M. Dilman expression, «the law deviation of the homeostasis» is being begun to be worked.

Thus, the work's target has been the complex endo-ecological rehabilitation influence study and the examination upon the risk factors of the chronic non – infectious diseases.

## The Material and the Method

The complex rehabilitation program has been consisted in the following approaches: the