

## Current issue

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## Journal Abstract

The effect of strength exercise on lipid peroxidation products concentration and glutathione metabolism in blood of the body – builders

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The study was carried out on twelve males subjected to strength exercise. Before exercise, immediately after exercise, after 30 min and 24 h rest, the following parameters were estimated in blood samples collected from the body builders: levels of lactate (LA), reduced (GSH) and total glutathione (GSH+GSSG), glutathione reductase (GR) and creatine kinase (CK) activity, and lipid peroxidation products (TBARS) concentration. The applied strength test at the maximal intensity ( $LA\ 9.83\pm 3.08\ \text{mmol}\cdot\text{l}^{-1}$ ) caused statistically significant increase of tested parameters after 24 h rest. The GSH/GSH+GSSG ratio decreased after 24 h ( $P<0.05$ ). The positive correlation  $r=0.821$  ( $P<0.001$ ) between the creatine kinase activity (CK) and the lipid peroxidation products (TBARS) level was observed. It indicates there is relationship between the exercise – induced muscle damage and oxidative stress during the restitution.

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**FULL TEXT** 287 KB

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