

JOINT EVENT

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&
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Effect of exercise on body composition in children differing in body mass**Václav Bunc**

Charles University, Czech Republic

Statement of the Problem: Childhood overweight and obesity are a worldwide problem. Childhood overweight and obesity has major consequences in all stages of life; it is associated with co-morbidities such as glucose intolerance, diabetes, metabolic syndrome and other cardiovascular risks factors at young adulthood. Alongside a range of health problems associated with increased body mass (BM): Overweight or obesity is an important limiting factor for realization of PE and qualitative life style.

Methods: In study, we assess the effect of exercise in children differing in BM. Study was carried out in 98 children with normal BM (age=12.4±2.2 years; BM=48.0±3.6 kg; height=157.0±4.8 cm), 68 overweight (12.1±2.0; 61.6±3.0; 157.7±4.5) and 59 obese (12.7±2.6; 71.2±3.8; 155.1±4.2). The mean energy content of exercise/week in normal BM children was 1920±310 kcal, in overweight 1990±230 kcal, and in obese 2260±290 kcal. The exercise was based on walking (82.0±3.1%) of all movement activities.

Results: Relative changes after the imposed movement intervention in % BF ranged from 15.4 in obese to 16.6% in normal BM and in VO₂ peak from 13.9 in normal BM to 15.7% in obese. Children shows absolute changes in somatic and functional parameters like a result of imposed exercise based on walking substantively and statistically significant. On the contrary, differences in relative terms are insignificant.

Conclusions: We may conclude that similar exercise program may invoke the similar BC and functional performance changes in pre-pubertal children differing in BM.

Biography

Václav Bunc has his expertise in "Application of mathematical methods and models in PE and sport, using of biocybernetics by evaluation of physical fitness, exercise physiology, functional and physical testing in laboratory and field, body composition, BIA methods, moving regimes for prevention in cardiac patients". He is the first author of more than 400 research articles published in various scientific journals.

bunc@ftvs.cuni.cz

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