

Abstract

Title: Muscle mass estimation using alternative methods in children

Objectives: The aim of the work was to find out whether there were simple alternative methods for estimating the amount of muscle mass in younger school-age children based on the data obtained from the Children and Youth Sports Festival.

Methods: The work has the character of a cross-sectional study. There were 101 children included in the survey participants who were measured in three cities in the Czech Republic. The bioelectric impedance InBody 720 was used to measure the body composition and the tape measure was used to measure the circumferences.

Results: There was a strong correlation between muscle mass and the forearm circumference and forearm and hand circumferences divided by body weight.

Keywords: body weight, palm circumference, forearm circumference, school children