

Abstract

Title: Effect of exercise training and Omega-3 fatty acids on body composition of elderly women

Objectives: The aim of this work is to determine the effect of combined aerobic and dynamic strength activity and supplementation of omega-3 fatty acids on body composition in women of senior age over 65 years.

Methods: The intervention study included 53 women aged 65-80 years. The intervention lasted 4 months and before and after its onset, women underwent clinical examinations, anthropometry, bioimpedation examinations, AT biopsies, blood samples, DEXA and fitness testing.

The intensity of physical activity was 1 hour 3 times a week. Of this, 1 hour was devoted to aerobic activity - Nordic walking and the remaining 2 hours to strength training. The group was also randomly divided into an omega-3 fatty acid moiety and a placebo moiety.

Results: The average input and output values and changes in selected body composition indicators measured by INBODY show that exercise had a statistically significant positive effect on total weight, visceral fat and BMI in both groups. In contrast to the Calanus group, there was a statistically significant improvement in the control group also for proteins and total muscle mass. The additive positive effect of Calanem supplementation was not demonstrated for any variable. While some positive trend compared to placebo can be seen for visceral fat ($r = 0.13$), however, the difference was not statistically significant.

Keywords: physical activity, exercise, training, Omega-3, body composition, elderly women, intervention