

Abstract

Title: The influence of a combination of exercise and omega-3 fatty acids supplementation on a memory in elderly

Objectives: The main aim for this thesis is to detect through already collected data from a screening test POBAV on the occasion of the EXODYA study, if supplementing omega-3 polyunsaturated fatty acids in combination with exercise has any effect to elder women cognitive functions – mainly memory.

Methods: A group of 71 senior women aged 56 to 80 years (mean 70.75 ± 4.41) with a BMI of 19.8-38.1 (27.2 ± 4.01) was divided into 3 groups. The first group (N = 27) underwent a 4-month exercise program and supplemented with omega-3 fatty acids in Calanus tablets. The second group (N = 24), in addition to exercise, received placebo in the form of sunflower oil tablets. Third, the control group (N = 21), did not exercise or supplement. All groups were measured for memory status before and after the research using the POBAV screening test.

Results: The measured data in both exercise groups showed significant statistical differences. The omega-3 fatty acid supplementation group in showed the best results in measuring memory. 70% of the senior women of this group, managed to increase the value of POBAV after the training period. The placebo group increased in 50% of senior women and in the control group in 57%. Although, the possible differences are not statistically significant in the control group.

Keywords: gerontology, aging, physical activity, exercise, omega-3 polyunsaturated fatty acids