

Abstract:

Patients with Crohn's disease lose a significant amount of muscle mass during the acute phase. The amount of muscle mass plays a crucial role in determining an individual's physical fitness, quality of life, and improves the prognosis of the disease.

The theoretical part of the presented work focuses on the importance of muscle mass, its growth in relation to protein intake, the issues related to Crohn's disease, and the increase of muscle mass during remission.

In the practical part of the study, the goal was to determine how many kilograms patients with Crohn's disease typically lose during the acute phase of the illness and compare it with the weight loss in patients with ulcerative colitis. The aim was also to verify the impact of protein intake education and recommendations for the frequency and type of exercise on muscle mass growth, increased muscle strength, and walking speed in patients with Crohn's disease.

In the practical part, it was found that patients with Crohn's disease lose between 11.79 to 16.29 kg during the acute phase of the illness. In the study with education, each participant underwent two measurements with an interval of 4–6 weeks. The parameters examined included the amount of muscle mass, a 4-meter walking test, and handgrip strength. After the first measurement, participants were educated about protein intake and aerobic and strength exercises.

There was a statistically significant increase in handgrip strength, time spent on aerobic exercise, and time spent on strength training. A statistically significant correlation was found only between protein intake and the percentage increase in muscle mass.

An intake of 1.4 g per kilogram of body weight was shown to be sufficient for increasing muscle mass. The study confirmed the significance of education by a nutritionist for patients with Crohn's disease.