

## **The Effect of Diet Monitoring on Weight Reduction in Obese Patients**

### **Abstract**

The thesis titled "The Effect of Diet Monitoring on Weight Reduction in Obese Patients" I explore weight reduction strategies for obese patients. Specifically, I examine whether respondents who monitor their energy intake using the "Kalorické tabulky" app achieve greater weight loss and changes in body composition. Obesity is a global epidemic, and its prevalence is rising not only in developed countries. According to current trends from the World Obesity Federation, more than 4 billion people may be overweight or obesity by 2035.

For this thesis, I chose a quantitative research approach involving 76 participants attending a nutrition clinic. The participants were divided into two research groups. Specifically, research group 2 included those participants who expressed interest in using the "Kalorické tabulky" app for monitoring caloric intake and who also had a smartphone compatible with this app. Participants who either did not express interest in using the app or did not have a suitable phone were placed in research group 1. The research involved taking a medical history, instructing participants on how to write the five-day diet record, providing individual nutritional interventions based on these diet records, and conducting initial and follow-up weigh-ins using the InBody 370s

The practical part of the thesis is divided into chapters and subchapters according to the research questions. The study found that the average weight of all participants decreased by -2,85 kg after three months. However, there were no statistically significant differences in total weight loss, muscle mass, or adipose tissue between Group 1 and Group 2 after three months from the initial measurement. The average weight loss in research Group 2 was - 1,1 kg higher, and body fat loss was -0,4 kg higher than in Group 1. Muscle mass was better preserved in participants of Group 1. These differences between the groups were, however, not significant. Monitoring energy intake, at least in the short term, likely has a positive impact on increasing awareness of the energy content or individual nutrients in foods, which may be beneficial for weight reduction in the longer term.

A secondary goal of the thesis was to determine whether changes in body composition were more pronounced in women or men. Measurements showed that the differences in body composition between genders were not statistically significant, with women losing an average of 0,8% of adipose tissue and men losing an average of 0,9%.

**Key words** – nutrition; obesity; weight reduction; diet monitoring; nutritional therapy