

## Abstract

**Objective:** LCD and VLCD diets are short-term indicated (days to weeks) low caloric and very low caloric diets, which should be supervised by a doctor – e. g. by means a weight loss hospitalization (WLH). LCD and VLCD diets are used in preoperative preparation of obese patients and to break insulin resistance in patients with type 2 diabetes mellitus (DM II). The theoretical part of the bachelor's thesis is focused on LCD and VLCD in obesity and diabetes mellitus treatment - the two most common diseases that can be found in the medical history of patients indicated for WLH. The aim of the theoretical part is to compare obesity treatment in medical care and commercial weight loss programs (for commercial weight loss programs the term “obesity management” is used). The study evaluate the most common indications for WLH, determine weight changes during the hospitalization and compare the weight of patients with DM II and without DM II (nDM II) one year after the WLH.

**Methods:** The input data were obtained from the Medea database. These are the anamnestic data of patients hospitalized for the purpose of losing weight on the Third Medical Department of First Faculty of Medicine Charles University and General University Hospital in Prague in the period of January 2014 - January 2015.

There were 93 WLHs evaluated in total. It was the first WLH for 46 evaluated patients. As input data were used: an indication for WLH, a weight before, immediately after and one year after WLH. Weight loss was compared in the DM and nDM II patients.

**Results:** There were 28 women and 18 men. 22 of them were DM II patients. The most common indications for WLH were preparation for bariatric operation and necessity of weight loss itself. During the first WLH there was a significant decrease in body weight in all groups. The average weight loss in DM II women was 6.3 ( $\pm$  3.3)%. The weight one year after WLH was evaluated in 76.1% of patients. DM II women exhibited the lowest average weight loss of 6.6 ( $\pm$  13.9)%. In contrast, the DM II men exhibited the highest average weight loss of 15.3 ( $\pm$  14.8)%.

**Conclusions:** The most common indications in LCD and VLCD diets are preparation for bariatric surgery, as well as the necessity of reduction itself or compensation of DM II. The hypothesis that the DM II patients lose weight with more difficulties than nDM II was confirmed only in DM II women one year after WLH. Minimal weight loss achieved one year

after WLH was 6.6% (max 15.3%). The average weight loss in WLH patients complies with the current goal of obesity treatment, i.e. to reduce the risk of lifestyle diseases by weight loss of at least 5 – 10%. For this reason the WLHs evaluated in this thesis were found to be effective.

## **Keywords**

LCD diets, VLCD diets, hospitalization, obesity, type 2 diabetes mellitus, indication