## **ABSTRACT**

This bachelor thesis deals with problems of obesity, diabetes mellitus and subsequent medical complications. We will focus on topic of obesity in the theoretical part. Obesity has become a global epidemic. In this thesis we will focus on the treatment of obesity and the follow up topic of diabetes mellitus in great detail. Diabetes mellitus counts as a disease of obesity. Diabetes mellitus causes grave illness when we do not keep to regime measures. Successful changes lifestyle, eating habits and increased physical activity have a positive impact on the health of the patient. If these measure do not help to improve the patient's health, then we turn to surgical treatment. We will compare the affect of different methods with metabolic parameters. The 54 patients participated in the scientific research, there of 33 diabetics and 21 nondiabetics. It was caused by a significant decrease in weight reduction in both groups. The method of gastric bypass showed the biggest affect in weight reduction by group of diabetics. The weight loss is 32,6 kg after two years. The method of sleeve gastrectomy reduced blood glucose the best in the years after the surgical intervetion. From blood glucose 7,27 mmol/l to 5,62 mmol/l. The same method has a good affect in decrease of glycated hemoglobin. From 6,09 % to 4,26 %. It shows, that the bariatric surgical has the affect in weight reduction and diabetic profile of the patient.

**Keywords:** obesity, diabetes mellitus, blood glucose, glycated hemoglobin, medical complications, bariatric procedures