

# 10 Years Follow-Up after Bariatric Surgery: Body Composition, Weight and Diabetes

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## Introduction

Bariatric surgery for grade III obesity is considered the most effective method of achieving significant weight loss and maintaining a reduced weight over time [1,2]. In general, at 12 months, changes in weight are greater in the gastric bypass than in the clinical treatment [3]. In addition, grade I-II obese patients after bariatric surgery usually show better glycemic control or even Type 2 diabetes mellitus (T2DM) remission [4-6].

Moreover, in addition to loss of fat mass after bariatric surgery, there is a degree of skeletal muscle loss that also occurs, approximately 31%, raising the possibility of a negative effect on muscle strength, quality of life and physical performance. Fatigue and functional impairment also occur [2,7-11]. Besides that, muscle is involved in post-prandial glucose disposal and is a major determinant of insulin sensitivity [11]. For this reason, after bariatric surgery, it is important to evaluate, besides the amount of weight loss, changes in body composition. This can be estimated through ultrasound (US) measurements of muscle and fat thickness in the thighs. It is a practical, high cost-benefit, safe, reproducible, accurate and validated method for fat and muscle evaluation in obese and bariatric surgery patients [2,12].

Thus, the primary aim of the present study was to describe muscle and fat mass thickness of right and left thigh changes after 30 days, 90

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0,5( $\pm$ 0.2 cm). We evaluated 12 patients, who did not answer our call, either (Table1).

the reduction of muscle and SAT thickness and weight 10 years

activity or protein intake in these participants; both of which could have affected the time course of changes in muscle and fat thickness after surgery. Indeed, US is an accurate method to evaluate visceral fat, despite the fact that we did not use it.

## Conclusion

After 10 years of surgery a significant reduction in quadriceps SAT and muscle thickness, evaluated by US, was observed.

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