# *Influence of depression scores on weight loss post Sleeve Gastrectomy*


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### *Background*

There are few studies that have analysed the influence of pre-operative depression in weight loss surgery. Most studies in the literature focus on psychological well-being post gastric banding or bypass procedures. There is limited data on the psychological outcomes of patients who undergo Laparoscopic Sleeve Gastrectomy (LSG).

### *Objectives*

To evaluate the relationship between pre-operative Beck's Depression Index (BDI) scores and post-operative weight outcomes.

### *Methods*

117 patients underwent LSG. BDI, a validated tool for assessing psychometric properties, was completed pre-operatively. All patients were reviewed by psychologists specialising in weight loss surgery peri-operatively. Pre and post-operative BMI, percent Total Weight Loss (%TWL) and percent Excess Weight Loss (%EWL) were recorded.

### *Results*

Among 88 females and 29 males, the mean pre-operative weight and BMI is 123.7 kg and 43.1 kg/m$^2$, respectively. 2 of 117 patients were lost to follow-up. A median reduction of 13.3 kg/m$^2$ in BMI at one year post-operatively was found. This equates to mean %TWL and %EWL of 30.4% and 77%, respectively. The median BDI score is 14 (Range 1-52), correlating to 'mild' depression. 49.6% and 23.5% of patients reported minimal and mild depression, respectively.

On univariate analysis, when compared to patients with BDI scores for minimal depression, those with moderate depression were 2.56 times more likely to achieve a %TWL equal to, or greater than the median of 31.8% observed in our cohort (OR 2.56; 95% CI 0.944-6.93, p=0.065). Patients with moderate to severe BDI scores were also more likely to achieve a reduction in BMI that was higher than the median value of 13.3 kg/m$^2$ (OR 2.2 95% CI 0.5 to 10.5, p=0.07). While this was not statistically significant, there was a clinical trend relating severity of depression to greater weight loss.

### *Conclusion*

There was a trend for increased weight loss with higher pre-operative BDI. Although this was not statistically significant this study provides useful insight into factors that may influence weight loss post surgery.