How the COVID-19 Coronavirus Pandemic Lockdown Affected Post-Bariatric Surgery Weight Loss

Emily Ortega Goddard M.D., James Patrick Ryan M.D.
Department of General Surgery, WellSpan York Hospital, York, PA

BACKGROUND.

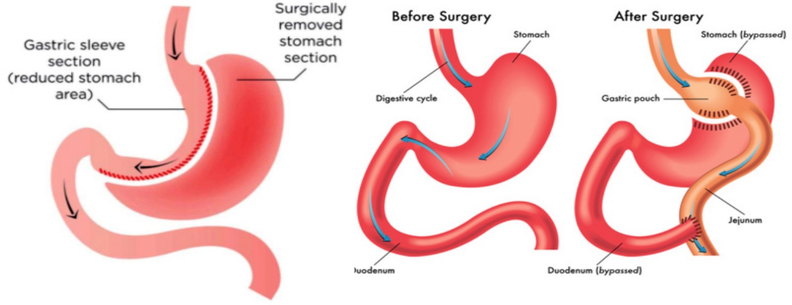
For years it has been appreciated that psychosocial stress can influence the ability to lose weight. In the spring of 2020, much of the United States experienced stress by way of the COVID-19 Coronavirus Pandemic. We suspected the combination of stress inherent to quarantining along with major disruptions in daily life would adversely affect successful weight loss.

OBJECTIVE.

The goal of this study was to assess **if the COVID-19 pandemic and resulting quarantine orders affected post-bariatric surgery weight loss.**

SLEEVE GASTRECTOMY SURGERY

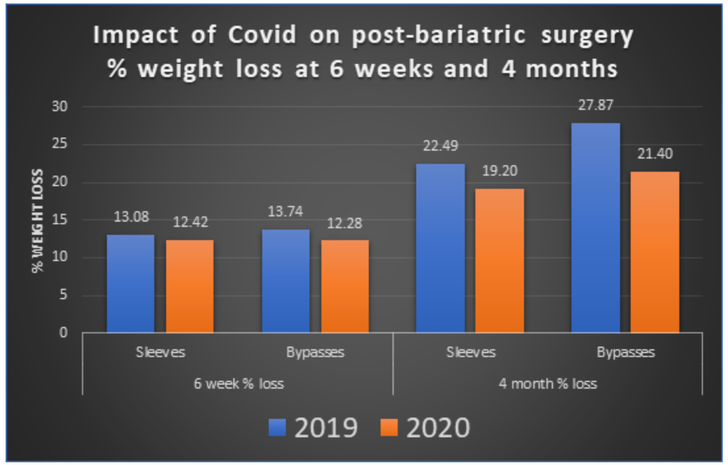
ROUX-EN-Y GASTRIC BYPASS SURGERY



References:
1. "Laparoscopic Sleeve GASTRECTOMY." *Weight Loss Surgery Options – Brigham and Women's Hospital*, www.brighamandwomens.org/cwmw/laparoscopic-sleeve-gastrectomy.

DESIGNS AND METHODS.

This was a retrospective study. Patients who had bariatric surgery between February 24, 2020 and March 20, 2020, the four-week period preceding the stay-at- home orders, were compared to patients who had surgery the year prior in a similar four-week period between February 25, 2019 and March 22, 2019. Patient data was organized according to the type of surgery, laparoscopic sleeve gastrectomy and laparoscopic Roux-en-Y gastric bypass (RNYGB), and year performed. Percent weight loss at six weeks and four months following surgery were organized, and the mean percent weight loss was calculated. Four compare groups were defined and a Two-sided Two-Sample t-Test Assuming Equal Variances was performed. The alpha-level was set at 0.05.



RESULTS.

The laparoscopic sleeve gastrectomy patients were found to have lost 13.08 % of their body weight in 2019 and 12.42 % in 2020 at the six-week post-operative appointment (p=0.247) and 22.49% and 19.20% (p=0.018) at the four-month appointment, respectively. The laparoscopic RNYGB patients were found to have lost 13.74 % of their body weight in 2019 and 12.28 % in 2020 at the six-week post-operative appointment (p=0.134) and 27.87 % and 21.40% (p=0.002) at the four-month appointment, respectively. On average, both laparoscopic sleeve gastrectomy and laparoscopic RNYGB patients were found to have significantly decreased weight loss in 2020 compared to 2019 at the four-month post-operative appointment.

DISCUSSION.

During the pandemic's lockdown period, there was a statistically significant decrease in post-bariatric surgery weight loss. Research has shown that the RNYGB typically results in greater weight-loss when compared to the gastric sleeve, rendering it an arguably more powerful surgical tool. Interestingly, the weight-loss appreciated at the 4-month period during the lockdown was very similar between the sleeves and the bypasses (19.2% weight-loss compared to 21.4%). The effects of the lockdown seem to have blunted the full benefits of the RNYGB. It is unlikely that the stay-at-home orders themselves are the cause of this decrease, but rather the stressors of quarantine which greatly impacted both physiologic and emotional health. Future studies will be aimed at assessing if this decreased weigh loss is sustained through the one-year post-operative period, in addition to assessing which factors contribute most to weight loss in the post-surgical period.