

Bariatric and Metabolic Surgery

Moderator: Darren Tishler, MD, FACS, FASMBS

Chief, Bariatrics, Hartford Hospital, Past President, Connecticut Chapter of The American Society of Bariatric and Metabolic Surgery

Judge(s): Connecticut Chapter of The American Society of Bariatric and Metabolic Surgery

Juan Cobar, MD, MBA	University of Connecticut School of Medicine	Impact of Cholecystectomy on Weight Loss following Metabolic Bariatric Surgery
Amir Ebadinejad, MD	Hartford Hospital	The Association Between Physical Activity and Obesity Phenotypes in Bariatric Surgery Candidates
Julia Silverman, BS	University of Connecticut School of Medicine	Bariatric Decision Making- What to do When a Tension-Free Anastomosis Isn't Possible: A Case Report
Ikhianosen Ukhuedoba, BS	Frank H Netter MD School of Medicine	Endoscopic and surgical management of gastric outlet obstruction of the excluded stomach after Roux-en-Y Gastric Bypass
Safraz Hamid, MD	Yale School of Medicine	Analysis of Crowdfunding Prevalence, Motives, and Success Factors Among Patients Seeking Metabolic and Bariatric Surgery in the United States
Sara Saeidishahri, MD	Hartford Healthcare	Do changes in food and physical activity liking predict weight loss after sleeve gastrectomy?
Nicole Taylor, MD	Saint Mary's Hospital	Grow No More: Robotic Gastric Pouch Reduction After Roux-en-Y Gastric Bypass
Sara Saeidishahri, MD	Hartford Healthcare	Evaluating Importance of Food Wanting and Liking in Relation to Number and Severity of Food Addiction Symptoms after Sleeve Gastrectomy
Elizabeth Hughes, MD	University of Connecticut School of Medicine	Neighborhood Walkability and Weight Loss in the Pediatric Bariatric Population At a Single Institution.
Akanksha Arora, MD	Saint Mary's Hospital	Comparison of BMI Changes Between Patients Using and not Using Weight Loss Drugs before Bariatric Surgery: A Retrospective Cohort Study

Impact of Cholecystectomy on Weight Loss following Metabolic Bariatric Surgery

Juan P. Cobar, MD (1) (2); Amir Ebadinejad, MD (1); Yin Wu, PhD (1); Connie Santana, BS (1); Darren Tishler, MD (1); Dale Bond, PhD (1); Pavlos Pappasavas, MD (1)

(1) Hartford Hospital Metabolic and Bariatric Surgery Program (2) Department of Surgery, University of Connecticut

Introduction The role of bile acids (BAs) as regulators of metabolic physiology and weight loss in the context of metabolic and bariatric surgery (MBS) is of considerable interest. Through the activation of cellular receptors, BAs contribute to the body's hormonal response to meals, regulating glucose, lipids, and tissue energy expenditure. Roux-en-Y gastric bypass (RYGB) increases post-prandial plasma BA response, which may contribute to greater weight loss and metabolic improvements. Cholecystectomy (CL) is one of the most commonly performed surgeries and has been associated with loss of rhythmic secretion of bile and metabolic derangements such as non-alcoholic fatty liver disease and metabolic syndrome. In a previous study of RYGB and sleeve gastrectomy (SG) patients, only RYGB with concomitant CL had a greater 1-year BMI change compared to RYGB without CL. The effect of CL before or concomitant with MBS on weight loss at multiple time points in the first postoperative year when accounting for potential confounders is unclear and requires further investigation.

Methods We conducted a retrospective, single-center review of MBS patients from 2016 to 2023. Patients were classified according to prior history of CL and type of primary MBS; RYGB or SG. Weight loss outcomes were obtained at 30 days, 6 months, and 1 year postoperatively. Mixed models were run to analyze the effect of CL on percent total weight loss (%TWL) across three time points while controlling for age, gender, race, BMI, and presence of dyslipidemia and diabetes.

Results We identified 2437 patients with MBS during the study period; mean age 43.1 ± 11.7 years, female 81.7%, white 54.7%, black 17.6%, SG 87.4%. The mean BMI was 44.7 ± 7.1 kg/m²; 507 (20.8%) had diabetes, and 592 (24.3%) had dyslipidemia. A total of 541 (22.2%) patients had CL, 514 (21.1%) prior to MBS, and 27 (1.1%) concurrent with MBS. There was no significant %TWL difference at any time point for SG patients. RYGB patients with CL experienced greater %TWL at 1 year compared to those without CL (32.7% vs. 29.5%; $p = 0.002$).

Conclusion RYGB patients with a history of or concurrent CL experience 3.2% greater TWL compared to those without CL. This study provides more robust confirmatory evidence that CL, regardless of whether it occurs before or concurrently with RYGB, is associated with greater weight loss at 1-year post-surgery. Given the loss of rhythmic bile secretion and related metabolic derangements with CL, additional mechanistic research is needed to understand this paradoxical phenomenon.

The Association of Physical Activity on Obesity Phenotypes in Bariatric Surgery Candidates

Amir Ebadinejad, MD¹; Pavlos Pappasavas, MD¹; Yin Wu, PhD¹; Juan P. Cobar, MD¹; Raymond McKay, MD²; Connie Santana¹; Lucas J. Carr, PhD³; Anna Schwartz, MPH¹, Darren Tishler, MD¹; Dale Bond, PhD¹

1. Department of Surgery, Hartford Hospital, Hartford, CT
2. Department of Cardiology, Hartford Hospital, Hartford, CT
3. Department of Health and Human Physiology, University of Iowa, Iowa City, IA

Introduction: Metabolically healthy obesity (MHO) and metabolically unhealthy obesity (MUO) phenotypes are largely underexplored in the context of metabolic bariatric surgery (MBS). Moreover, it is not known if physical activity (PA), which plays a critical role in improving and maintaining cardiometabolic health, differentiates MBS patients with the MHO versus the MUO phenotype. Therefore, our study aimed to assess whether MBS patients who meet the national aerobic PA guideline are more likely to be categorized as MHO versus MUO.

Method(s): We conducted a cross-sectional, single-center, observational study of 490 patients with obesity who were pursuing MBS between August 2022 and November 2023. Participants were classified as having MHO or MUO based on the revised National Cholesterol Education Program (NCEP) Adult Treatment Panel III (ATP III) criteria. Participants who met ≥ 2 abnormal findings out of 4 (i.e., high blood pressure ($\geq 130/85$ mmHg or Rx); high triglycerides (≥ 150 mg/dL or Rx); low HDL-C (≤ 40 and 50 mg/dL in men and women, respectively or Rx); high glucose (fasting plasma glucose ≥ 100 mg/dL or HbA1C ≥ 5.7 or Rx) were classified as having MUO. The Physical Activity Vital Sign (PAVS) screening tool identified whether patients were meeting the national PA guideline (i.e., ≥ 150 weekly minutes of moderate-to-vigorous intensity PA). The comparisons between MHO and MUO groups were tested with Independent-Samples Mann-Whitney U tests or Person Chi-square/Fisher's Exact tests. A multivariate logistic regression was performed to evaluate whether being physically active was associated with higher likelihood of being in the MHO group.

Results: Of the 490 participants (82.2% female, mean age=41.9 \pm 11.3 years; mean BMI=43.9 \pm 7.0 kg/m²) 389 (79.4%) had MUO and 101 (20.6%) had MHO. The population comprised 45.1% white and 16.7% black, with the majority being non-Hispanic/Latino (60.6%), showing no significant difference between the groups. A higher proportion of MHO were active compared to MUO (37.6% vs. 27.4%, $p=.045$). Additionally, participants who were active had 75% greater odds of being in the MHO group compared to those who were inactive, adjusting for age, sex, smoking status, and BMI (OR = 1.7, 95% CI: 1.05, 2.91, $p=.03$).

Conclusion(s): One-fifth of patients pursuing MBS were classified as having the MHO phenotype. Patients who were active were more likely to have the MHO phenotype compared to those patients who were inactive. These findings support additional research to test whether phenotypic switching (MUO to MHO) in the context of severe obesity is possible through PA intervention.

Bariatric Decision Making- What to do When a Tension-Free Anastomosis Isn't Possible: A Case Report

Julia Silverman, BS¹, Pavlos Pappasavas, MD^{1,2}, Edward Hannoush, MD^{1,2}, Ryan Desrochers, MD², Darren Tishler, MD^{1,2}

1. University of Connecticut School of Medicine, Farmington, CT.
2. Department of Surgery, Hartford Hospital, Hartford, CT.

Introduction: A robotic-assisted Roux-en-Y Gastric Bypass (RYGB) is a common bariatric surgery for patients with morbid obesity. While most RYGB are performed in a minimally invasive fashion, there is always a possibility to convert to an open procedure if there is inadequate visualization or other anatomic considerations preventing a minimally invasive approach. There are two main anatomic construction techniques for the gastrojejunostomy. The alimentary (Roux) limb can be oriented either ante-colic / ante-gastric or retro-colic / retro-gastric for the creation of the gastrojejunal (GJ) anastomosis. Proponents of the ante-colic/ante-gastric configuration favor it for its technical simplicity, while the retro-colic/retro-gastric approach may be preferred by some for reducing tension on the anastomosis. We present a case of an attempted RYGB where a tension free anastomosis was not possible.

Description of Case: The patient is a 38-year-old male with morbid obesity (BMI of 56.2 kg/m²), complicated by type 2 diabetes, hypertension, and GERD. Upon entry into the patient's abdomen, he was noted to have a significant amount of visceral fat, despite significant preoperative weight loss using anti-obesity medications (AOM). A 5cm long gastric pouch was created over a 34 French orogastric tube. A 150 cm biliopancreatic (BP) limb was measured and divided, and a 100 cm Roux limb was measured. The creation of the side-to-side jejunojejunostomy was difficult due to the presence of a large amount of retroperitoneal fat and shortened mesentery. The Roux limb was then brought up to the pouch after division of the omentum in an ante-colic/ ante-gastric fashion and an initial attempt was made at a handsewn 2-layer gastrojejunostomy (GJ). During the closure of the anterior wall of the GJ, there was significant tension on the anastomosis due to the retroperitoneal fat and foreshortened mesentery. Several maneuvers were performed to relieve the tension on the anastomosis. The tension could not be relieved and the initial GJ was resected. A second anastomotic attempt was made via a retro-colic / retro-gastric positioning of the Roux limb but again could not be successfully constructed without tension. A retro-colic / ante-gastric anastomosis was then attempted but also unsuccessful to relieve the tension. Maneuvers to relieve the tension included altering the position of the table and placing a hitch suture alongside the GJ and mobilizing the posterior aspect of the gastric pouch. Despite these maneuvers, the GJ could not be created. An open conversion was made, and additional attempts were made to relieve the tension on the small intestine. Once open, it was noted that the mesentery was at most 2 to 3 cm long in some places. The only possible option at this point was to reverse the gastric bypass to restore the original anatomy. The bypass was reversed by resecting the roux limb, creating a side-to-side jejunojejunostomy, and performing a gastrogastrostomy. A G-tube was placed in the body of the stomach and the abdomen was closed. Postoperatively, the patient recovered well from surgery, with minimal pain. The patient is still interested in potential surgical management for his obesity. A CTA of his abdomen is planned to perform volumetric analysis of the retroperitoneal fat and to confirm continued patency of the left gastric artery. The patient will continue to work with a multimodal treatment plan including Very-low Calorie Diet (VLCD) and AOMs. If the patient can reduce the volume of his retroperitoneal fat and attain additional preoperative weight loss, alternative surgical treatment will be performed.

Conclusion(s): Familiarity with all potential anastomotic options, and comfort with open procedures is necessary when planned minimally invasive interventions are not able to be performed in bariatric surgery. Though rare, the need to return to original anatomy intra-operatively may be necessary. However, future bariatric surgical options may still be possible through a multimodal treatment approach for obesity.

Endoscopic and surgical management of gastric outlet obstruction of the excluded stomach after Roux-en-Y Gastric Bypass

Ikhianosen Ukhuedoba, Osama Siddique MD, Aziz Benbrahim, MD FACS, FASMBS.
Frank H. Netter School of Medicine, North Haven, CT

Frank H. Netter School of Medicine, North Haven, CT, Midstate Medical Center, Meriden, CT

Introduction: The Roux-en-Y Gastric Bypass (RYGB) is the second most-performed bariatric surgery in the United States. Common complications with Roux and Y gastric bypass include cholelithiasis, stricture formation, most commonly at the level of the anastomoses, gastro-gastric fistulas, marginal ulcers, and bowel obstruction. However, complete gastric outlet obstruction secondary to fibrosis from benign disease in the excluded stomach is rare.

A 54-year-old female with a history of retro-colic retro-gastric RYGB 22 years prior presented with acute onset of sharp left upper quadrant and epigastric abdominal pain associated with nausea, poor oral intake, and vomiting. A CT scan of the abdomen and pelvis showed a fluid-distended excluded stomach thickening of the pylorus and luminal narrowing.

Method(s):

Radiological guided drainage of the excluded stomach for decompression was performed with placement of gastrostomy tube. Fluoroscopy showed no distal propagation of contrast and complete gastric outlet obstruction. Subsequent anterograde endoscopy through a G-tube and retrograde approach through the alimentary tract with biopsies were performed. Given the inability to rule out malignancy and severe non-remitting symptoms, a robotic total gastrectomy of the excluded stomach was performed. Indocyanine green dye (ICG) was utilized to identify the hepatobiliary system.

Results: Biopsies were obtained from the antrum via gastrostomy site endoscopy and from the duodenal side of the pylorus through a retrograde approach. The biopsies showed gastric mucosa with intestinal metaplasia and were negative for malignancy. Post operative pathology confirmed the absence of malignancy and the complete obstruction of the pylorus. The patient was seen in the clinic two weeks post-op, with symptoms resolution.

Conclusion(s):

Similar patients with complete occlusion of the excluded stomach, endoscopic evaluation using trans-gastric endoscopy or retrograde approach should be attempted to rule out malignancy. Surgical management may be an option including total gastrectomy of the excluded stomach.

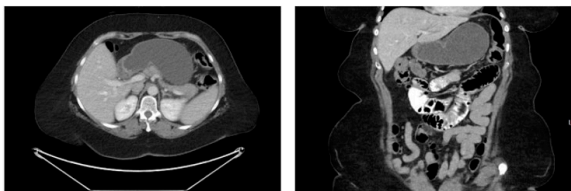


Figure 1: CT Abdomen and Pelvis showing acute gastric outlet obstruction.

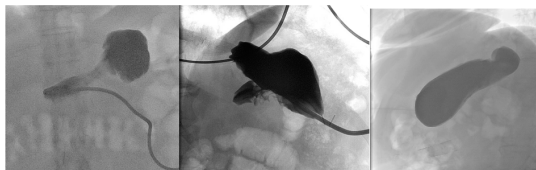


Figure 2: Fluoroscopic imaging of remnant stomach one month post gastrostomy tube

Analysis of Crowdfunding Prevalence, Motives, and Success Factors Among Patients Seeking Metabolic and Bariatric Surgery in the United States

Safraz A. Hamid MD, Elena Graetz PhD, Baylee Bakkila MD, Grace F. Chao MD, MSc, Emily J. Zolfaghari MD, MS, Kurt S. Schultz MD, Ashwin Chetty BS, Maissa Trabiltsy MA, Eric Schneider PhD, Karen E. Gibbs MD

Department of Surgery, Yale School of Medicine, New Haven, CT

Introduction: For patients in the United States (US), metabolic and bariatric surgery (MBS) is associated with significant costs. Online medical crowdfunding has gained popularity in the US as a means of mitigating health-related cost burden, but it is unknown whether MBS patients use crowdfunding to subsidize costs. We aimed to identify GoFundMe campaigns seeking funds for MBS and, through analysis of their contents, characterize medical and non-medical sources of financial strain. We also aimed to determine factors associated with successful crowdfunding.

Method(s): We searched GoFundMe from inception (2010) to December 20, 2023 for campaigns raising funds for primary sleeve gastrectomy (SG), Roux-en-Y gastric bypass (RYGB), or biliopancreatic diversion with duodenal switch (BPD/DS). We included campaigns created in the US, written in English, and active for at least 30 days. Patient sociodemographic and clinical characteristics and crowdfunding motives were extracted by two investigators with disagreements resolved by a third investigator. We assessed associations between these data items and category of funds raised using ordered logistic regression.

Results: We identified 539 GoFundMe campaigns, of which 33.6% were raising funds for sleeve gastrectomy, 24.1% for RYGB, and 2.0% for BPD/DS. Most campaigns were created by the patient (73.1%) who had health insurance (53.4%) and at least one comorbidity (56.8%). Over half (53.6%) sought funds for a direct medical expense and 35.1% sought funds for a direct non-medical expense, which included lost wages (15.6%), food (10.8%), transportation (10.2%), childcare (7.1%), and/or housing (5.8%). The median amount of money requested was \$8,000 (IQR 10,440) and the median amount raised was \$860 (IQR 3,173). Only 8.0% of campaigns raised all of their requested amount; the majority (63.1%) earned less than 25% of their requested amount. Campaigns that shared mental health comorbidities (aOR 0.55, 95% CI 0.32-0.95) and non-surgical attempts to lose weight (aOR 0.59, 95% CI 0.37-0.94) had lower odds of raising a higher category of money compared to campaigns not disclosing these details.

Conclusion(s): Patients pursuing MBS in the US use online crowdfunding to subsidize both medical and non-medical expenses, but the majority of campaigns are unsuccessful. Disclosure of the clinical impact of obesity did not result in more funds raised. Our study highlights unmet financial need among MBS candidates.

Do changes in food and physical activity liking predict weight loss after sleeve gastrectomy?

Sara Saeidishahri MD, Connor Montgomery, Yin Wu, Isabel Michalak, Dale Bond PhD, Tara McLaughlin PhD, Godfrey Pearlson MD, Michael Stevens PhD, Valerie Duffy PhD, Darren Tishler MD FACS FASMBS, Pavlos Pappas MD FACS FASMBS
Hartford Hospital, Hartford Healthcare, CT 6106

Introduction:

Bariatric surgery might change liking (i.e., pleasure for things in the moment) of food and physical activity (PA) in ways that promote weight loss. However, few studies have characterized these changes and their associations with weight loss after sleeve gastrectomy (SG). To evaluate whether postoperative changes in liking of “healthy” and “unhealthy” foods and PA are associated with 1-year percent total weight loss (%TWL) after SG.

Methods:

Participants completed a validated Food Liking Survey rating their liking of 87 foods/beverages, physical/sedentary activities, and pleasant/unpleasant experiences (scale 0-100). Food groups were constructed into a dietary quality index (DQI) based on healthiness. A healthy behavior index (HBI) included all groups in DQI plus the physical activity group. Repeated measures ANOVA, and linear regression were used to examine changes in DQI/HBI and their associations with %TWL.

Results:

Fifty-seven participants (82% female, mean age 42.2 years, BMI 45.3) completed the FLS pre- and one year postoperatively. There were significant changes in liking of fats (-2.84, $p=0.037$), sweet foods (-4.67, $p=0.003$), sweet drinks (-6.26, $p<0.001$), refined carbohydrates (-6.36, $p<0.001$), alcohol (-6.44, $p=0.031$), and PA (+6.82, $p<0.001$). Postoperative increase in HBI was associated with %TWL after controlling for demographics and baseline BMI ($n=52$, $p<0.05$, $\beta=0.295$).

Conclusion:

Increase of HBI reflected by decreased liking of “unhealthy” foods and increased liking of PA is associated with greater %TWL after SG. Additional research is needed to identify mechanisms of postoperative changes in liking and how best to target them to optimize weight loss and health outcomes.

Grow No More: Robotic Gastric Pouch Reduction After Roux-en-Y Gastric Bypass

Nicole Taylor MD, Nicholas Druar MD MPH, Priscilla Lam MD, Shohan Shetty MD FACS

The Stanley J Dudrick Department of Surgery, Saint Mary's Hospital, Waterbury, Connecticut

Introduction

Nearly 140,000 Roux-en-Y gastric bypasses are performed each year, accounting for 18% of all bariatric surgeries. Although many patients are successful in their weight loss journey after this surgery, there are a subset of patients that continue to have weight gain years later, often secondary to a widened gastric pouch. Recently, gastric pouch reduction has become an option to help these patients achieve their weight goals. We sought to investigate the outcomes of patients who underwent robotic-assisted gastric pouch reduction at a bariatric center of excellence.

Methods

The authors performed a case series of 9 patients who underwent robotic-assisted gastric pouch reduction from 2020-2024 at a single institution. Patients with gastrojejunal anastomosis revision at the time of pouch reduction were excluded. Patient factors such as sex, ethnicity, age and comorbidities were studied. Additionally, complications, reoperation rate, length of stay, specimen length/diameter were reported. Change in BMI at 30 and 180 days postoperatively was calculated.

Results

There were 9 patients who underwent robotic-assisted gastric pouch reduction from 2020-2024 after confirmation of dilated gastric pouch on preoperative endoscopy. All of the patients were female, seven patients were caucasian and the average age was 50.30 ± 9.3 years old. Two patients had preoperative gastroesophageal reflux, two had preoperative sleep apnea, four had preoperative hypertension. The average time from index operation to pouch revision was 9.22 ± 3.9 years. The average procedure time was 79.55 ± 18.3 minutes and the average length and diameter of the specimen was 5 ± 1.5 cm x 2.09 ± 0.8 cm. No patients required reoperation. No patients suffered complications such as superficial or deep surgical site infections, wound dehiscence, or acute blood loss anemia requiring transfusion. The mean hospital stay was one day. The average preoperative BMI was 41.95. At 30 days postoperatively, the average change in BMI was -2.62 ± 0.9 and at 180 days postoperatively, the average change in BMI was -5.34 ± 3.5 .

Conclusions

Weight gain after Roux-en-Y gastric bypass continues to be multifactorial through patient-driven and anatomic factors. Robotic gastric pouch reduction led to adequate weight loss with minimal risk in our patient sample. As most of our patients presented nearly a decade after their index operation with weight gain, it would be important to follow these patients and their BMI over a time period greater than 6 months. We aim to follow these patients and add to our sample size to further investigate the benefits of gastric pouch reduction as a method for these patients to achieve their health goals.

Evaluating Importance of Food Wanting and Liking in Relation to Number and Severity of Food Addiction Symptoms after Sleeve Gastrectomy

Sara Saeidishahri MD, Dale Bond PhD, Vaughn Steele , Yin Wu PhD, Isabel Michalak, James Mitchell Chaska , Godfrey Pearlson MD, Michael Stevens PhD, Darren Tishler MD FACS FASMBS, Pavlos Papasavas MD FACS FASMBS

Hartford Hospital/HealthCare

Background:

Research suggests addictive-like eating behaviors (e.g., diminished control over consumption) triggered by exposure to highly-processed foods are common among patients undergoing metabolic and bariatric surgery (MBS). Yet, little is known about changes in food addiction (FA) symptoms and relations with food wanting (motivation to consume food) and liking (pleasure from tasting food) after MBS.

Objective:

Evaluate pre- to 1-year postoperative changes in FA symptom count and severity after sleeve gastrectomy (SG); and associations of changes in food wanting/liking with changes in FA symptoms.

Methods:

Participants completed the: Yale Food Addiction Survey (YFAS) to determine FA symptom count (range=0-7) and severity (frequency/presence of addictive behaviors across all symptoms combined, score range=0-76); Power of Food Scale (PFS) to measure food wanting (higher scores=more food wanting); and Food Liking Survey Dietary Quality Index (higher scores=healthier food liking). Multiple linear regression assessed associations between changes in food wanting/liking and FA symptom count/severity, controlling for baseline demographics, depression severity, and FA symptoms.

Results:

Participants (n=57) on average reported decreases in FA symptom count (2.48 ± 1.45 to 1.95 ± 1.53 , $p=.019$) and severity (19.0 ± 9.43 to 14.90 ± 10.73 , $p=.004$) postoperatively. Decreases in PFS-total scores related to decreases in FA symptom count and severity (β s=0.41-0.58, $ps<.001$). Increases in DQI scores were related to decreases in symptom count only ($\beta=0.21$, $p=.023$).

Conclusion:

Decreased food wanting and increased liking of healthier foods were related to favorable FA symptom changes after SG. Future research should examine whether changes in FA symptoms and relationships with food wanting/liking are sustained beyond the immediate postoperative year

Neighborhood Walkability and Weight Loss in the Pediatric Bariatric Population At a Single Institution.

Elizabeth Hughes MD, Megan Anderson BS, Prabhath Mannam BS, James Healy MD MPH FACS, Christine Finck MD FACS

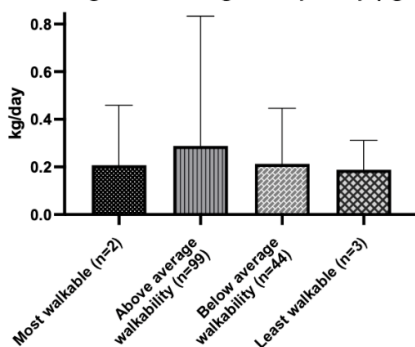
Introduction: As bariatric surgery in the pediatric population becomes more common, it is important to assess whether environmental risk factors have an outsized influence on outcomes. The Environmental Protection Agency (EPA) created a tool named the National Walkability Index (NWI) in 2019, which stratifies US neighborhoods by their relative walkability. Factors that contribute to this score (1-20) include intersection density, proximity to transit stops, and diversity of land usage (ie. Retail or industrial). Our aim was to compare patients' NWI score to their rate of weight loss following bariatric surgery in order to determine whether or not this population health metric correlated with patient success after weight loss surgery. We expected to observe increased success after weight loss surgery in patients who reside in areas with higher walkability.

Methods: Electronic medical records of all patients undergoing bariatric surgery cared for at a freestanding pediatric academic medical center between 2014-2024 were queried. Procedures were laparoscopic or robotic sleeve gastrectomy with or without cholecystectomy. Parameters included patients' NWI based on zip code, pre-surgery weight and post-surgery weights collected at multiple post-operative visits. Patients were grouped based on zip code into NWI zones as defined by the EPA using their interactive geospatial map: from least walkable to most walkable. Next, rate of weight loss (difference from pre-surgery weight over days post-op) was averaged within each group. Data was analyzed using descriptive statistics and ANOVA, with significance set to $p < 0.05$.

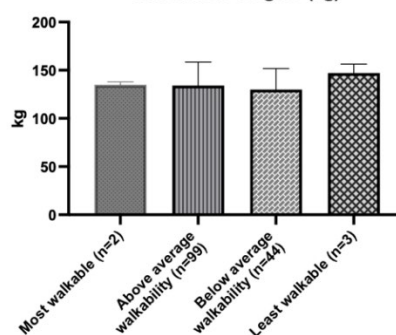
Results: Out of 149 patients aged 12-24 reviewed, 66% lived in an area considered above average walkability ($n=99$) and 0.01% lived in areas considered most walkable ($n=2$), while 30% of patients lived in areas below average walkability ($n=44$) and 0.02% lived in areas considered least walkable ($n=3$). Of those living in above average walkability areas, average rate of weight loss post-operatively was 0.28 kg/day, compared to 0.21 kg/day in the most walkable group. In the below average walkability group, average rate of weight loss was also 0.21 kg/day, and 0.11 kg/day in the least walkable group. Additionally, patients in the most walkable group had an average enrollment weight of 134.9 kg, compared to 147 kg in the least walkable group. There was no significant difference between NWI scores and patient enrollment weights or average rates of weight loss post-op ($p=0.55$, $p=0.80$, respectively).

Conclusions: Our data suggest there is no correlation between pediatric bariatric patient success after weight loss surgery and NWI score. Furthermore, there was no significant difference between NWI score and patient weight at time of enrollment in our institution's weight management program. This lack of correlation suggests that neighborhood walkability may not have a substantial influence on post-op weight loss, however, there are several limitations. The NWI uses geographical block groups that often have a wide range of scores within one zip code, it does not take into account safety concerns like local crime rates, and it is only one component of a patient's social determinants of health. Further study is needed to determine whether additional social factors influence weight outcomes following bariatric surgery.

Average rates of weight loss post-op (kg/day)



Enrollment weights (kg)



Comparison of BMI Changes Between Patients Using and not Using Weight Loss Drugs before Bariatric Surgery: A Retrospective Cohort Study

Akanksha Arora MD, Laura Godkin BS, Nicholas Druar MD, MPH, Shohan Shetty MD
St. Mary's Hospital

Introduction: The increasing prevalence of obesity has caused a rise in the use of weight loss drugs (WLDs) as an adjunct to bariatric surgery. This study aims to compare the effectiveness of WLDs on body mass index (BMI) changes 30-day post bariatric surgery.

Method(s): We conducted a retrospective analysis of 527 patients stratified into two groups: those who used WLDs (n=172) and those who did not (n=355). The cohort consisted of 24 males and 148 females in the WLD group and 66 males and 289 females in the non-WLD group. The WLD group and non-WLD group had mean ages of 44.2 and 38.5 respectively. Mean Change in BMI (henceforth referred as MCBMI) 30 days after bariatric surgery was compared between the groups. MCBMI was also compared between patients who used multiple WLDs before surgery and those who used none. Lastly, MCBMI was compared among patients taking specific WLDs, including Ozempic, Metformin, and Phentermine. T-test was used to compare MCBMI between WLD and non-WLD groups and between multiple WLD and non-WLD groups. One-way ANOVA test was used to compare MCBMI among patients who used Ozempic, Metformin, or Phentermine.

Results: There was no statistically significant difference in MCBMI between WLD and non-WLD groups ($p=0.279$). There was also no significant difference in MCBMI between multiple WLDs and non-WLD groups ($p=0.99$). Lastly, there was no significant difference in MCBMI among patients using Ozempic, Metformin, or Phentermine ($p=0.9$).

Conclusion(s): The use of one or multiple WLDs was not associated with a significant BMI reduction 30 days after bariatric surgery. Among three common WLDs, no significant difference in BMI change was observed. These findings suggest that the use of WLDs may not have a large impact on BMI changes when paired with bariatric surgery. Further research is warranted to explore the potential benefits of WLDs when used in adjunct to bariatric surgery.

	WLD	Non-WLD
Male	24	66
Female	148	289
Total	172	355

	WLD	Non-WLD
Mean Age	44.2	38.5
Mean Change in BMI	3.83	3.98

	Ozempic	Metformin	Phentermine
Mean Change in BMI	3.9	3.83	3.93