

Bridging Gaps: When to Use Medications over Revisional RGB Surgery

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Disclosures

- Honoraria
 - Medtronic, Stryker, Ethicon, Novo Nordisk



Technical Failure

- Pouch too big (58.9%)
 - Stoma too big (28.8%)
 - Both (12.3%)
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- Yimcharoen et al
 - Duration of weight recurrence impacts on weight loss amount



Weight Loss Trajectory

- 2918 RYGB patients from a comprehensive medical center used data up to year 7 post-surgery.
- Three weight change trajectories were identified (above average, average, and below average). Mean percentage weight change: **above average group was -42.85% compared with -31.57% in the average group and -22.74% in the below average group**
- Below average group was more likely to be male and have diabetes
- Lower initial weight loss post-surgery was associated with a greater chance of a poorer weight outcomes (OR = 1.64, P < .0001).
 - Surg Obes Relat Dis. 2018 Nov;14(11):1680-1685. Demographic, clinical, and behavioral determinants of 7-year weight change trajectories in Roux-en-Y gastric bypass patients. Lent MR

Predictors of Weight Recurrence

- 1278 patients with adequate follow-up up to 7 years
- Postsurgery behaviors independently associated with **weight recurrence: sedentary time, eating fast food, eating when feeling full, eating continuously, binge eating and loss-of-control eating and weighing oneself <weekly.**
- Postsurgery characteristics independently associated with **greater weight recurrence** included: **younger age, venous edema, poorer physical function, and more depressive symptoms**
 - Ann Surg. 2019 Apr 4. Patient Behaviors and Characteristics Related to Weight Regain After Roux-en-Y Gastric Bypass: A Multicenter Prospective Cohort Study. King WC et al.

Medication Class	Weight Loss Mechanism	Food Intake	Expected Weight Loss
Phentermine	indirect sympathomimetic	↓	5% TBW
<u>Qysmia</u> (phentermine and topiramate)	indirect sympathomimetic and increased satiety	↓	5% TBW at low dose 10% TBW at high dose
Orlistat	decreased fat absorption	↔	>5% TBW
<u>Contrave</u> (naltrexone/bupropion)	affects hypothalamus and dopamine pathways of CNS	↓	10% TBW
GLP-1 Receptor Agonists (incretin hormones)	act on GLP-1 receptor to delay gastric emptying and reduce food intake	↓	4-15% TBW
<u>Tirzepatide</u> (GLP-1, GIP dual agonist)	Acts on GLP-1 receptor and GIP, delays gastric emptying and reduces food intake	↓	20% TBW

Predictors of Inadequate Weight Loss

- 227 LRGB patients
- Preoperative factors that predict inadequate EWL at 12 months:
 - higher initial BMI
 - older age
 - presence of DM
 - preoperative weight gain
 - Al-Khyatt W, Obes Surg 2017



Weight Loss Nadir or Weight Regain?

- Young adults aged 21 to 30 following Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG) between November 2000 and June 2014.
- Patients who used **topiramate, phentermine, and/or metformin** postoperatively
- 54.1% of study patients lost $\geq 5\%$ of their postsurgical weight; 34.3% and 22.9% lost $\geq 10\%$ and $\geq 15\%$, respectively. RYGB had higher median percent weight loss (-8.1%) than SG (-3.3%) ($p = 0.0515$).
- **No difference was found in median percent weight loss with medications started at weight plateau (-6.0%) versus after weight regain (-5.4%) ($p = 0.5304$).**
 - Children (Basel). 2018 Aug 29;5(9). pii: E116. Weight Loss Medications in Young Adults after Bariatric Surgery for Weight Regain or Inadequate Weight Loss: A Multi-Center Study. Toth AT

Weight Loss Nadir or Weight Regain?

- **BUT!!!** Patients taking **medications at weight loss plateau lost 41.2% of total body weight from before surgery versus 27.1% after weight regain** ($p = 0.076$).
- Median percent weight change on metformin was -2.9% compared to the rest of the cohort at -7.7% ($p = 0.0241$)
- RYGB patients achieve more weight loss on medications but both RYGB and SG benefit.
- **Median total body weight loss from pre-surgical weight may be higher in patients that start medication at postsurgical nadir weight.**
 - Children (Basel). 2018 Aug 29;5(9). pii: E116. Weight Loss Medications in Young Adults after Bariatric Surgery for Weight Regain or Inadequate Weight Loss: A Multi-Center Study. Toth AT



Preoperative and early adjuvant weight loss medications in bariatric surgery patients with body mass index over 60 or suboptimal initial response to surgery

Jessica G Cunningham¹, Nova Szoka¹, Lawrence E Tabone¹, Stephanie Cox², Laura Aylward²,
Salim Abunnaja³

98 patients: 93 (94.9%) undergoing sleeve gastrectomy and 5 (5.1%) undergoing Roux-en-Y gastric bypass surgery

At postoperative year 1, patients who received pharmacotherapy preoperatively lost 31.3% of their total body weight (TBW) compared with 25.3% TBW for patients with suboptimal weight loss who received medication in the first postoperative year, and 20.8% TBW for patients who did not receive any antiobesity medication in the first postoperative year

Weight Loss post Weight Recurrence

- Patients entering the weight management program had weight recurrence 20% above nadir and time since surgery averaged 6 years (range = 1 to 20 years)
- mean weight loss of - 2.3 kg after 3 months and - 4.4 kg at 6 months into the program.
- **Individuals most successful with weight loss were those treated with anorexigenic pharmaceuticals**
 - Obes Surg. 2018 Aug;28(8):2241-2246. A Specialized Medical Management Program to Address Post-operative Weight Regain in Bariatric Patients. Srivastava G(1)(2)(3), Buffington C(4).

> Obesity (Silver Spring). 2020 Jun;28(6):1023-1030. doi: 10.1002/oby.22786.

The Mitigating Effect of Phentermine and Topiramate on Weight Regain After Roux-en-Y Gastric Bypass Surgery

Nawfal W Istfan ¹, Wendy A Anderson ², Donald T Hess ², Liqun Yu ¹, Brian Carmine ²,
Caroline M Apovian ¹

- Phentermine and topiramate, used individually or in combination, can significantly reduce WR after RYGB



> *Obes Sci Pract.* 2022 Sep 24;9(3):203-209. doi: 10.1002/osp4.635. eCollection 2023 Jun.

Combination anti-obesity medications to effectively treat bariatric surgery weight regain at an academic obesity center

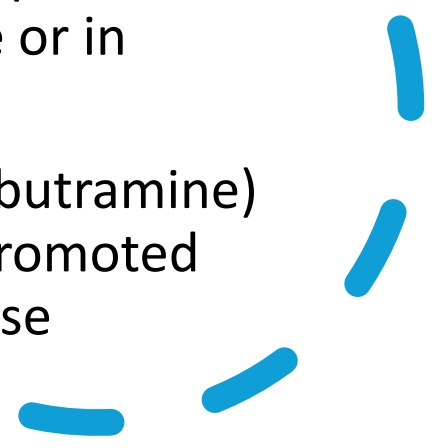
Gunther Wong^{1 2}, Erica M Garner^{1 2}, Sahar Takkouche^{1 2}, Matthew D Spann^{2 3},
Wayne J English^{2 3}, Vance L Albaugh⁴, Gitanjali Srivastava^{1 2 3 5}

- At 12 months, individuals prescribed 3 or more AOMs lost more weight than those prescribed one (-14.5 ± 9.0 kg vs. -4.9 ± 5.7 kg, $p < 0.05$) irrespective of age, gender, number of comorbidities, initial weight or BMI, type of surgery, or GLP1 use

> *Obes Surg.* 2023 Sep;33(9):2941-2944. doi: 10.1007/s11695-023-06736-7. Epub 2023 Jul 19.

Treatment with Antiobesity Drugs in Weight Regain After Bariatric Surgery: a Retrospective Cohort Study

Bibiana S Boger ¹, Nara L Queiroz ¹, Paulo E P Noriega ¹, Maicon C Canuto ¹,
Matheo A M Stumpf ², Cintia Cercato ¹, Marcio C Mancini ¹, Maria E de Melo ¹

- Topiramate-alone (- 3.2 kg), topiramate plus sibutramine (- 6.1kg), and orlistat-alone or in combination (- 3.9kg)
 - Topiramate (alone or associated with sibutramine) and orlistat (alone or in combination) promoted significant weight loss after 2 years of use
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A randomized, double-blind, placebo-controlled trial of weight loss using liraglutide 3.0 mg for weight recurrence after Roux-en-Y gastric bypass

Holly F Lofton¹, Gabrielle Maranga², Robert Hold², George Fielding², Heekoung Youn², Akash Gujral², Sean Heffron³, Christine Fielding²

- A 56-week, double-blind, placebo-controlled study was conducted in 132 subjects, who achieved $\geq 25\%$ total body weight loss (TBWL) status-post-RYGB and regained $\geq 10\%$ TBWL after reaching nadir weight (NW)
- 53.4% of the placebo group and 65% of the liraglutide group completed the trial due to Severe acute respiratory syndrome coronavirus 2 pandemic.
- The change in %TBWL from baseline to 56-weeks was -8.8 (8.5, -29.2 to 9.7) and 1.1 (3.5, -7.9 to 5.99) in the liraglutide and placebo groups,
- 51% and 26.0% of the liraglutide group achieved $\geq 10\%$ and $\geq 15\%$ TBWL, respectively

Intravene Early: My Strategy



First Fall off

Only lost 2
lbs in 3
months




First Weight Gain



Increase frequency of visits



Educate, Monitor and Medicate

- Review Dietary plans
 - Go back to rules – no eating and drinking same time, 30 minutes
 - Low Carb
 - Keto
 - Intermittent Fasting
 - 5/2 diet
 - And Medicate as needed
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Conclusions

- Consider weight loss trajectory
- Sometimes start before nadir weight
- We have several options to keep patients on their weight loss journey

