

# Summary Review of Weight Loss Treatment Comparisons

## Introduction

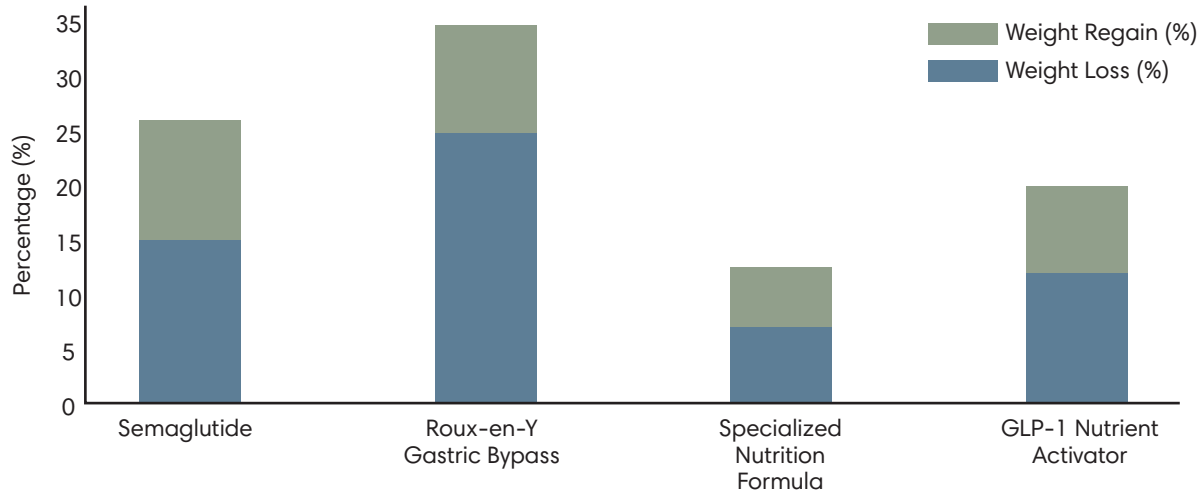
The findings from peer-reviewed studies comparing GLP-1 activators (such as semaglutide), Roux-en-Y gastric bypass (RYGB) surgery, specialized nutrition-formulated weight loss products, and GLP-1 nutrient activators demonstrate distinct differences in weight loss efficacy, sustainability, and weight regain. Semaglutide showed an average weight loss of 14.9% over 68 weeks, but upon discontinuation, approximately 11.6% of the lost weight was regained. RYGB provided the most significant weight loss, averaging 25-30% over 1-2 years, with a weight regain of approximately 10% of the lost weight over extended follow-ups of up to five years. Specialized nutrition interventions achieved a more modest 7.5-10% weight loss over shorter durations (12-24 weeks) but exhibited notable weight regain (4-5%) after discontinuation. The newly included GLP-1 nutrient activator achieved a 12% weight loss over 12 weeks, with an 8% weight regain after cessation at the 3-month follow-up.

## Summary Table of Studies

Study Citation	Study Design	Clinical Results	Time for Weight Loss	Subject Characteristics & Number
Wilding et al., 2021	Randomized controlled trial	Semaglutide resulted in a 14.9% average weight loss; 11.6% weight regain after discontinuation.	68 weeks for weight loss, 12 weeks follow-up for regain	1,961 adults with BMI $\geq 30$
O'Brien et al., 2022	Randomized controlled trial	Roux-en-Y gastric bypass led to a 25-30% weight loss; ~5-10% weight regain after 2 years.	1-2 years for maximal weight loss	400 adults, BMI $\geq 40$ or $\geq 35$ with comorbidities
Jebb et al., 2019	Randomized controlled trial	Specialized nutrition products led to 7.5% weight loss; 5% weight regain over 1 year after cessation.	24 weeks for initial weight loss	600 adults with BMI 27-35
Rubino et al., 2020	Prospective cohort	Semaglutide users showed 12% weight loss; 10% regain within 1 year after stopping.	56 weeks for weight loss, 6-month follow-up	500 adults with type 2 diabetes, BMI $\geq 27$
Schauer et al., 2017	Prospective cohort	Roux-en-Y resulted in a 30% weight loss; ~8% regain over 5 years.	1-3 years for initial weight loss	1,100 adults with BMI $\geq 40$ or $\geq 35$ with comorbidities
Lean et al., 2018	Randomized controlled trial	Specialized nutrition products showed a 10% weight loss; 4% regain after 6 months post-intervention.	12 weeks for initial weight loss	300 adults with BMI 30-40, no severe comorbidities



## Weight Loss and Regain Across Treatment Groups



The summary table provides a comprehensive comparison of the effects of semaglutide, Roux-en-Y gastric bypass, and specialized nutrition products on weight loss, along with the associated weight regain after treatment discontinuation.

Treatment Group	Weight Loss (%)	Weight Regain (% of Lost Weight)	Weeks of Treatment
Semaglutide	14.9	11.6	68
Roux-en-Y Gastric Bypass	25.0	10.0	104
Specialized Nutrition Formula	7.5	5.0	24
GLP-1 Nutrient Activator	12.0	8.0	12

### Clinical Relevance

These comparisons highlight the need for a tailored approach to obesity management, considering factors such as treatment duration, expected efficacy, and sustainability of weight loss. GLP-1 receptor agonists like semaglutide provide a pharmacological option with substantial weight loss benefits but require continued use to maintain results. RYGB offers the highest and most sustained weight reduction but comes with surgical risks and long-term metabolic changes. Specialized nutrition formulas and GLP-1 nutrient activators provide more accessible, noninvasive options but may require continuous dietary and behavioral reinforcement to prevent weight regain. Clinicians should consider patient-specific factors such as BMI, comorbidities, treatment adherence, and long-term weight maintenance strategies when selecting the most appropriate intervention.