



Comparative Weight Loss and Metabolic Trajectories After Sleeve Gastrectomy and Semaglutide

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**The Future of Obesity Management:
From Weight Loss to Health Gain**



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Disclosure



Nothing to disclose

No commercial logos, promotional materials, or marketing content are included.



A prospective real-world head-to-head comparison

Treatment selected through shared decision-making after standardized counseling.



Primary outcomes: %TWL and BMI trajectory

Per-protocol analysis of 71 participants completing follow-up



Methods: Interventions

- **Sleeve Gastrectomy**

Standardized laparoscopic SG

Performed by the same experienced surgical team

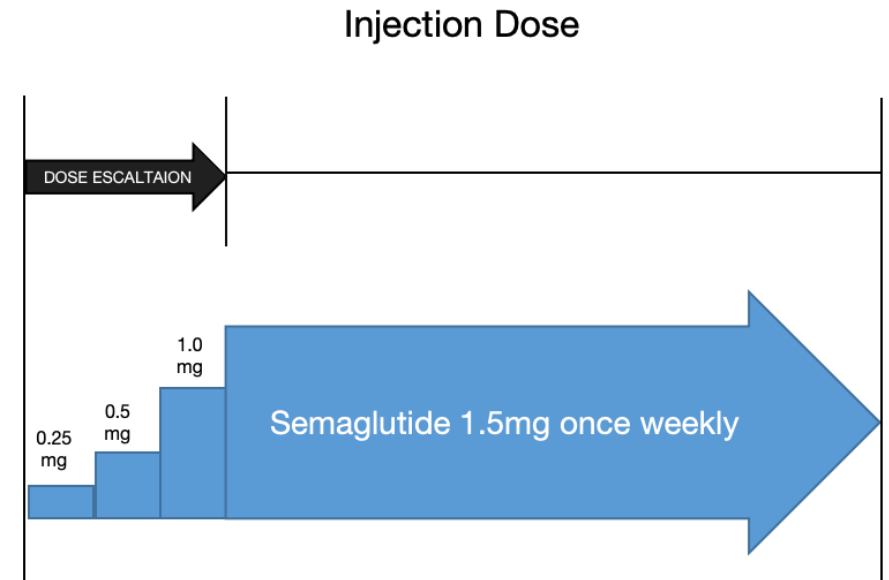
- **Semaglutide**

Once-weekly subcutaneous injection

Dose escalation to 1.5 mg weekly

Planned treatment duration: 24 weeks

Continuation beyond 6 months based on patient preference



SG separated early and remained ahead through 12 months

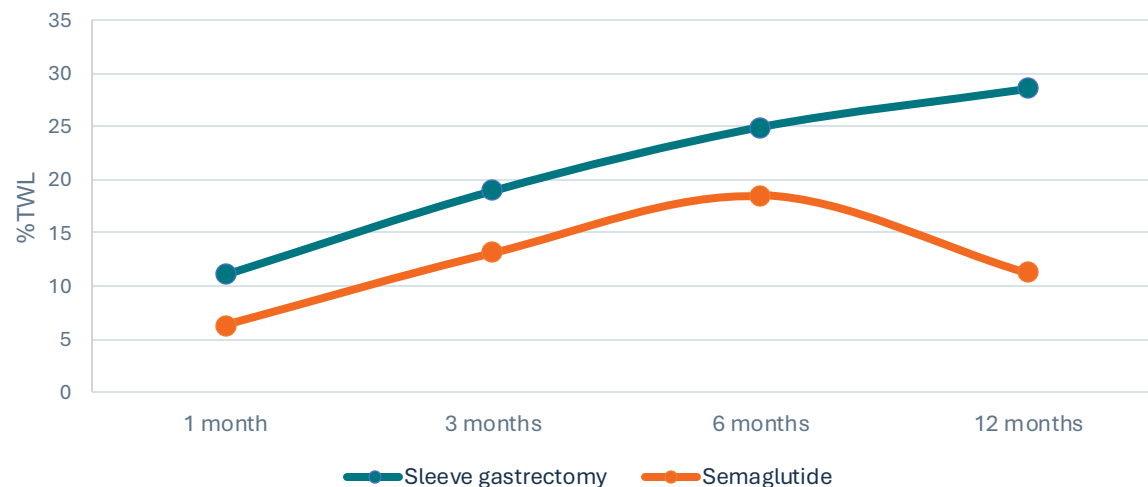
Semaglutide was effective during treatment; durability diverged after month 6.

11.1 vs 6.3% **24.9 vs 18.5%** **28.6 vs 11.3%**

Month 1 %TWL
p<0.001

Month 6 %TWL
p<0.001

Month 12 %TWL
p<0.001



The trajectory—not a single endpoint—reveals the durability gap.

Clinical interpretation

SG continued to improve after 6 months.
The semaglutide average fell after treatment discontinuation.



At 12 months, SG produced substantially greater weight loss

Both %TWL and BMI favored surgery at the end of follow-up.

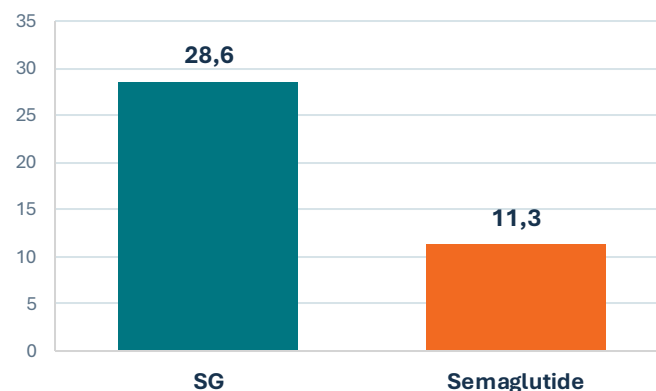
12-month %TWL
28.6% vs 11.3%
≈2.5-fold difference

12-month BMI
23.8 vs 28.4 kg/m²
p<0.001

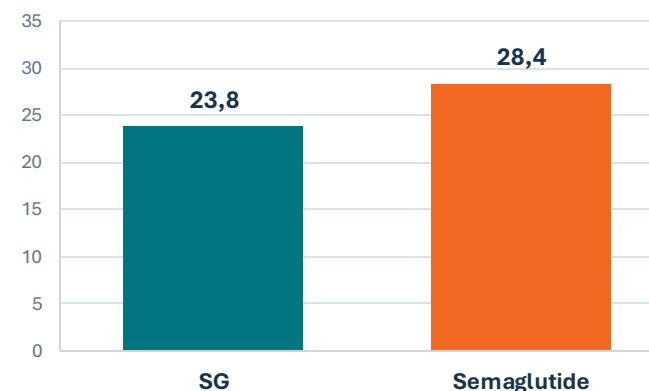
Interpretation

For larger and more durable weight reduction, SG remained the stronger strategy in this cohort.

Total weight loss at 12 months (%)



BMI at 12 months (kg/m²)



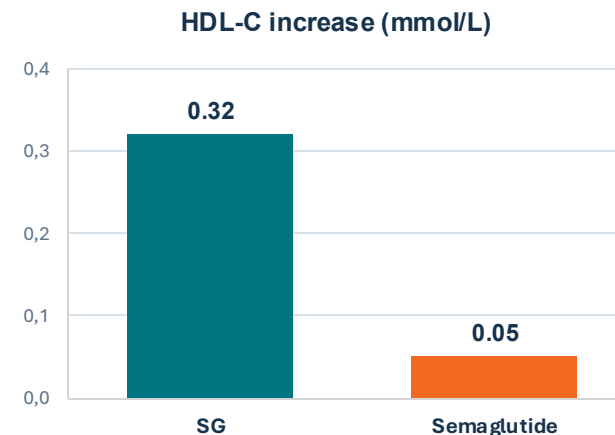
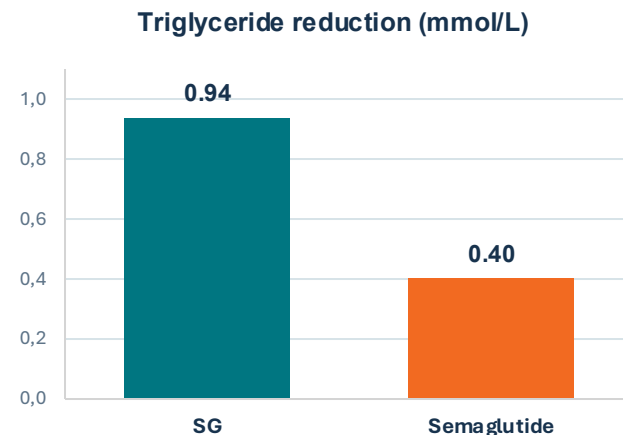
Metabolic benefits overlapped, but TG and HDL-C favored SG

Between-group differences were selective rather than universal.

Triglyceride reduction
0.94 vs 0.40 mmol/L
 $p=0.005$

HDL increase
0.32 vs 0.05 mmol/L
 $p<0.001$

HbA1c, total cholesterol, LDL, liver enzymes, albumin, and uric acid showed no significant between-group difference.



Stopping semaglutide reversed more than half of the loss

Among 25 discontinuers, weight rebounded substantially over the next six months.

90.7 kgBaseline
Before treatment**74.6 kg**Month 6
Last use**83.2 kg**Month 12
6 months off drug

Mean regain after stopping: 8.6 kg—53% of the initial loss.

Clinical interpretation

The 12-month result depends strongly on persistence.
Withdrawal requires planned follow-up.



After stopping, outcomes were heterogeneous

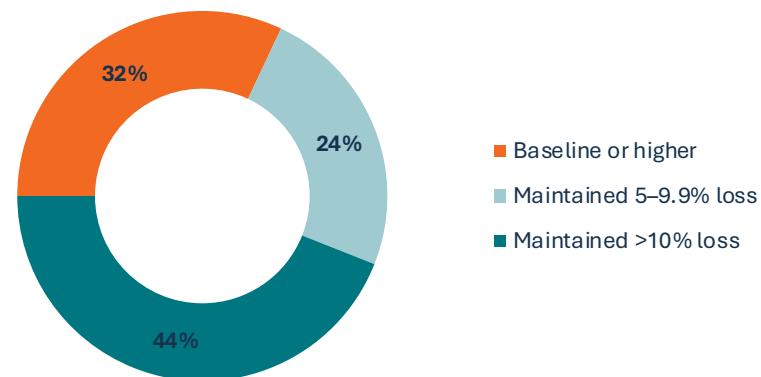
One-third returned to baseline or above, while 44% maintained >10% loss.

32%
Baseline weight
or higher

44%
Maintained >10%
weight loss

Interpretation

Discontinuation is a clinical transition—not the end of obesity treatment.



Results compare real-world strategies—not randomized efficacy

The discontinuation pattern is clinically informative, but it shapes the 12-month contrast.

Strengths
Prospective design
Repeated follow-up

Real-world value
Head-to-head comparison
Withdrawal trajectory

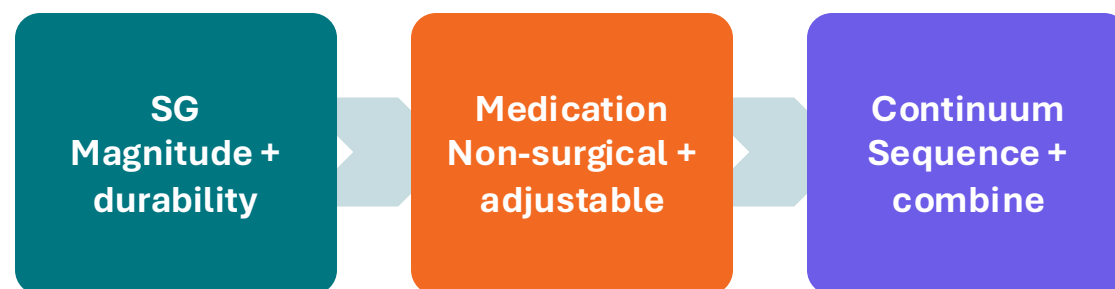
Interpret the effect size in the context of treatment selection, baseline imbalance, and planned 24-week semaglutide use.

- Non-randomized** Patient preference and socioeconomic factors may confound selection.
- Single center, n=71** Modest sample size limits precision and generalizability.
- 24-week drug plan** The 12-month estimate includes a discontinuation strategy.



Surgery and pharmacotherapy belong on one continuum

Choose, sequence, continue, or restart treatment according to patient goals and response.



Clinical message

SG delivered greater and more durable weight loss; semaglutide worked while treatment persisted.

What guidance must define

Duration and continuation criteria
Monitoring after withdrawal
Restart and sequential strategies

Conclusion: do not frame surgery and medication as competitors—build a personalized, longitudinal obesity-care pathway.



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