

# Long-Term Outcomes of Revisional Surgery After Sleeve Gastrectomy: A Comparative Analysis of Re-sleeve, Roux-en Y Gastric Bypass, and Duodenal Switch-type Procedures

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**Introduction:** Sleeve gastrectomy (SG) is the most common bariatric procedure but requires revision in ~30% of cases due to suboptimal response or persistent obesity-related medical problems. Revisional options include re-sleeve gastrectomy, Roux-en Y gastric bypass (RYGB), biliopancreatic diversion with duodenal switch (BPD/DS), and single-anastomosis duodenal switch (SADS), though long-term comparative data are limited. We aimed to assess medium- to long-term outcomes of four revisional surgeries after primary SG for suboptimal weight loss or persistent associated medical problems.

**Methods:** This retrospective study analyzed a prospectively maintained database of patients who underwent revisional bariatric surgery after SG between 2010 and 2021. Indications included suboptimal clinical response (<50% excess weight loss), ≥20% recurrent weight gain, or persistent non-reflux obesity-related medical problems lasting ≥1 year. Revisions included re-sleeve, RYGB, BPD/DS, and SADS. Patients with ≥3 years of follow-up were evaluated for weight loss, associated medical problems resolution, and major complications.

**Results:** Of 113 eligible patients, 89 (79%) had ≥3 years of follow-up (median 70 [35] months). Median pre-revision BMI was 43.0 (8) kg/m<sup>2</sup>, highest in duodenal switch-type procedures (p = 0.005). Median BMI reduction was 6.0 (7) kg/m<sup>2</sup>. BPD/DS showed the highest median total weight loss (20% [12]) and diabetes resolution, though not statistically significant (p = 0.148 and 0.089). Major complications beyond 6 months were similar across groups (p = 0.248).

**Conclusion:** Revisional surgery after primary SG offers modest long-term benefits. Duodenal switch-type procedures show superior trends with comparable safety.