

Surg Obes Relat Dis **2010 May-Jun**;6(3):260-6. Epub 2010 Feb 6.

Aerobic endurance training improves weight loss, body composition, and co-morbidities in patients after laparoscopic Roux-en-Y gastric bypass.Shang E, Hasenberg T.

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BACKGROUND:

One of the most effective treatments of patients with morbid obesity is laparoscopic Roux-en-Y gastric bypass (RYGB). Sudden weight loss after RYGB for morbid obesity can result in a concurrent decrease in the lean body mass. However, the long-term results (weight reduction and reduced co-morbidities) depend on the postoperative long-term therapy. Aerobic physical exercise (APE) has been considered conservative treatment of obesity and type 2 diabetes mellitus. The aim of the present study was to assess the efficacy of APE on weight loss, body composition, and co-morbidities in patients after laparoscopic RYGB. The study was performed at a university hospital in Germany.

METHODS:

A total of 60 consecutive morbidly obese patients underwent laparoscopic RYGB. The patients were prospectively randomized into a low-exercise group (APE 1 time for 1 hr/wk) or a multiple-exercise group (APE 2 times for 1 hr/wk). The following prospective data were collected: age, gender, length of hospital stay, operative details, co-morbidities, postoperative complications, initial body weight and height, postoperative weight, and body composition. The patients' body composition was assessed every 8 weeks during the 24-month follow-up period.

RESULTS:

The average body mass index (52 kg/m²) and other baseline characteristics were distributed equally in the 2 groups. No major complications and no significant differences in the minor complications were found postoperatively between the 2 groups. The multiple exercise group had a significantly more rapid reduction of body mass index, excess weight loss, and fat mass compared with the low-exercise group. The initial loss of body cell mass and lean body mass was significantly lower in the multiple exercise group and was regained more rapidly in the low-exercise group. In addition, the multiple exercise group showed significantly earlier resolution or improvement of co-morbidities.

CONCLUSION:

Aerobic Physical Exercise (APE) positively influenced weight loss, body composition, and co-morbidity resolution after RYGB for obesity. Additional controlled studies and longer follow-up are needed to confirm these positive findings.