Weight Loss Surgery: Common Questions

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It is often reported that weight loss surgery is the most effective weight loss method for extreme obesity. The number of procedures has increased dramatically during the past decade. From 1999–2001 to 2002–2004, the number increased more than ninefold, topping 100,000 procedures performed annually.

Several studies have outlined the benefits of weight loss surgery on obesity-related comorbidities, including hypertension, hyperlipidemia, and diabetes. As the health-related benefits of weight loss surgery, particularly related to type 2 diabetes, continue to become elucidated, diabetes educators will be increasingly called on to provide pre- and postsurgery support to patients. This article outlines some common questions asked during patient visits and presents evidence-informed responses.

Question: Are exercise and weight loss before bariatric surgery beneficial?

Answer: The question of whether to encourage—or even require—weight loss before bariatric surgery remains debatable. However, recent studies point to the increasing benefits of modest weight loss in obese adults before surgery. Weight loss benefits related to the surgery itself include reduced liver size and reduced operating time. Extreme obesity often accompanies an enlarged, fatty liver. The increased size of the liver poses technical difficulties in terms of the surgeon’s ability to view and maneuver during surgery, especially during laparoscopic procedures.

Looking at the connection between preoperative weight loss and liver size and found that weight loss strongly correlated to reduction in liver size. Additionally, some studies have found that preoperative weight loss may lead to reduction in operating time. One study found that preoperative weight loss greater than 5% shortened operating time by 36 minutes.

Patients who lose weight before surgery may be more successful at weight loss after surgery. Alvarado found that, of 90 subjects studied, a loss of 1% of their initial weight before surgery correlated with an increase of 1.8% excess weight loss 1 year after surgery. Likewise, Still et al. found that patients who lost more than 10% of their excess body weight before surgery were twice as likely to achieve a loss of 70% of excess weight.

Increased exercise contributes to weight loss before weight loss surgery and improves cardiovascular fitness, which may result in fewer surgical complications and a shorter recovery time. Including aerobic exercise along with strength training will assist patients with weight loss before and after surgery and help to maintain lean body mass. Studies indicate that people who are already active or begin an exercise program before surgery are almost twice as likely to exercise consistently after surgery as those who do not exercise before surgery.

Question: What is the reason for eliminating soda—even sugar-free soda—and coffee?

Answer: Most surgical teams recommend that their patients...
avoid carbonated beverages and caffeine to prevent gastric irritation and intolerance.11 There is little scientific evidence to support this; these guidelines are largely based on anecdotal evidence and patient observation. Further research will determine whether these dietary changes are necessary. At this point, it is advisable for patients to follow their surgeon’s individual recommendations.

Alternative beverages that are typically allowed (in addition to water) include decaffeinated teas and coffee, “flat” sugar-free sodas, and unsweetened flavored water. Practitioners should encourage patients to read nutrition labels and drink only sugar-free beverages to avoid excess nonnutritive calories.

**Question:** How will my diabetes management change after weight loss surgery?

**Answer:** Weight loss is associated with better glycemic control and a reduction in mortality for people with diabetes.12,13 Bariatric surgery is an effective approach to weight loss in obese patients and has been shown to improve outcomes of patients with diabetes.3,14–17 The differences in outcomes depend partly on the type of surgery performed. Buchwald et al.4 found that gastric bypass surgery resolved diabetes in ~ 84% of postsurgery patients, and laparoscopic adjustable gastric banding resolved diabetes in ~ 48% of postsurgery patients. Complete resolution of diabetes means that patients are able to discontinue diabetes-related medications and still maintain glycemic control. Even if complete resolution was not achieved, 86% of patients who underwent all types of gastric bypass surgery saw some improvement in their diabetes.

Proper diabetes care begins preoperatively. Patients undergo clinical lab testing through their weight loss surgery clinic and should keep detailed blood glucose records before surgery. These records provide a baseline to help manage postsurgery diabetes care. Protocol for care is determined by the hospital or weight loss surgery clinic,16 but most patients with diabetes see adjustments to their medication or insulin regimen immediately after surgery. After discharge, frequent follow-up is necessary for diabetes care during the first 6–8 weeks. Individualized follow-up should continue during the first year as dietary intake, activity level, and weight stabilize.18 Patients should also remember that some weight regain is possible after bariatric surgery19 and that total excess weight loss may affect potential glycemic improvement after surgery.20 Patients should work with their weight loss surgery care team, including follow-up as needed to ensure lasting weight loss results.21

**Question:** How do I meet my protein needs after weight loss surgery?

**Answer:** Protein intake after bariatric surgery is essential for preventing loss of lean muscle tissue and preventing the conservation of visceral fat.11 Complete proteins are those that contain all nine indispensable amino acids and adequate substrates for the 11 dispensable amino acids. The body is best able to use casein, soy, and whey sources of protein (from eggs, soy, and milk) for new protein synthesis,22 and these should be the primary sources of protein in a patient’s diet. Other animal- and plant-based sources of protein, although not considered complete, can help patients meet their amino acid needs when included in a varied diet.11 To meet protein needs after weight loss surgery, patients should eat their protein first at each meal. Moist protein sources taken in small bites and chewed to applesauce consistency are tolerated best.

Protein needs can be assessed individually using the range of 1.0–1.5 g/kg ideal body weight for gastric bypass and lap-band patients.11 Because of malabsorption of protein in the biliopancreatic diversion procedure, protein needs should be increased by ~ 30%. This equates to ~ 60–80 g/day for gastric bypass and lap band and 90 g/day for biliopancreatic diversion.23

In the period immediately after surgery, most surgical teams recommend the use of either liquid protein supplements or protein powders to meet protein goals.24 Although solid proteins are considered to be the ideal source because of their prolonged satiety effect, liquid protein supplementation plays an important role during the first year. Intake should be assessed to ensure that patients are choosing a casein, soy, or whey protein supplement.

**Question:** Why should I attend a support group after weight loss surgery?

**Answer:** Support group attendance after weight loss surgery is a valuable component of follow-up care. Evidence shows that 1 year after surgery, there are significant differences in excess weight lost between patients who attend support groups and those who do not.25,26 Support groups can be held in the traditional format of a structured or informal classroom or can be facilitated online.

Support groups can provide patients with a sense of connection with peers, motivation to adhere to their weight loss program, accountability, and reinforcement and can provide a place for peer education.23 It has also been suggested that support groups may take the place of clinical follow-up for patients who feel guilty about nonadherence to clinical recommendations.27 Attendance may help these patients get back on track before attending crucial appointments with their bariatric clinicians. This is important because missed clinical appointments are associated with poorer long-term weight loss.28

As the prevalence of bariatric surgery grows, patient care will increasingly be provided by clinicians outside of the traditional bariatric team. Certified diabetes educators can supply patients with support and guidance during preparation for bariatric surgery and continue to be a resource for patients after their procedure is complete. Staying current with the latest evidence-based guidelines in bariatric care will aid clinicians in providing optimal care to this growing patient population.

**References**


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