

White Paper

PREOPERATIVE, INTRAOPERATIVE, AND POSTOPERATIVE BENEFITS OF USING A MEDICALLY-SUPERVISED DIET IN CONJUNCTION WITH BARIATRIC SURGERY

EXECUTIVE SUMMARY

The growing number of high-risk patients being referred for bariatric surgery in the United States has grown exponentially. The evolving advancement of surgery for morbidly obese patients necessitates a need for bariatric surgeons to persistently consider how the procedure can be more effective, safe, and efficient. Maximizing and demonstrating the positive patient outcomes is paramount. Employing a multi-disciplined medically-supervised Very Low Calorie Diet (VLCD) or Low Calorie Diet (LCD) program has been shown to deliver proven benefits to patients in all three distinct perioperative periods (preoperative, intraoperative, and postoperative) of bariatric surgery.

INTRODUCTION

In their clinical practice guidelines for the perioperative nutritional, metabolic, and nonsurgical support of the bariatric surgery patient, The Obesity Society (TOS), the American Society for Metabolic and Bariatric Surgery (ASMBS) and the American Association of Clinical Endocrinologists (AACE) acknowledge that bariatric surgery remains a safe and effective intervention for select patients with obesity. However, they also stress that a team approach to perioperative care is mandatory with special attention given to nutritional and metabolic issues.¹

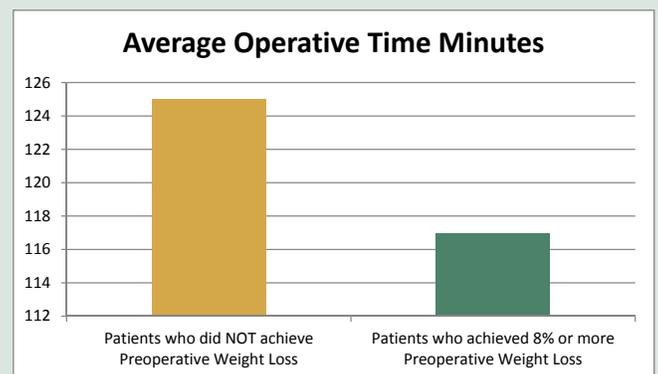
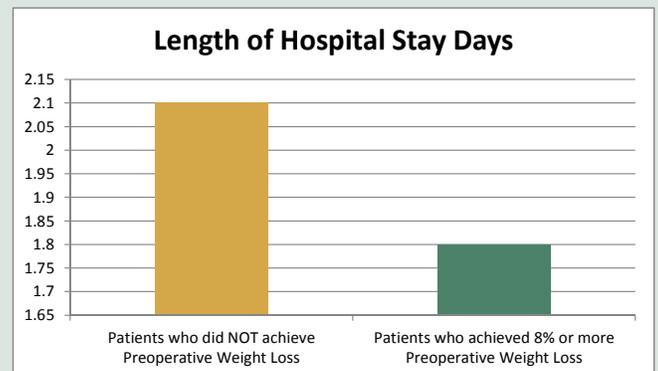
As such, a protocol for bariatric surgery based on the established guidelines for medical evaluations and clearances should include a defined patient education curriculum, as well as VLCD and LCD nutrition recommendations, in all three distinct perioperative periods.

PREOPERATIVE, INTRAOPERATIVE AND POSTOPERATIVE BENEFITS

Numerous benefits to preoperative weight loss have been noted in several studies over the past decade. A reduction in the size of the liver after four weeks of dieting and an increase in ease of surgical exposure are well documented.²

A recent study found that patients who lose at least eight percent of excess weight prior to bariatric surgery achieve greater weight loss after surgery. In addition, it also showed a reduction in hospital length of stay (1.8 days vs. 2.1 days) for patients who achieved that target weight loss (eight percent or greater), and the average operative time was shorter (117 minutes vs. 125 minutes).³

Further, patients who consumed a liquid diet presented a positive effect on reducing visceral fat (VF) and greater weight loss than a normal diet. A VLCD presented benefits offering a protective effect during the preoperative stage.⁴



When bariatric surgery is inadvisable, the most common reason cited is non-alcoholic fatty liver disease (NFLAD). Bariatric surgical candidates can reduce their liver size using a VLCD, resulting in a much higher likelihood of being eligible for bariatric surgery. Many patients entering into a VLCD program present with elevated transaminases, typically due to fatty liver. Research shows that fatty liver responds well to weight loss and biopsies demonstrate improvement in hepatic fatty liver infiltration. Since the majority of patients who enter into a program present with elevated transaminases resulting from fatty liver, a VLCD is beneficial. Pre-bariatric surgery patients also benefit from a VLCD. Studies have shown a 30 percent reduction in liver volume, with 80 percent of the decrease within the first two weeks. Most VLCD recommendations are for two weeks, with optimal combinations of liver size and visceral fat loss around 12 weeks.^{4,5,6,7}

Many studies have shown that preoperative weight loss also can reduce the difficulty of surgery and postoperative complications. In a randomized, multi-center study, patients undergoing laparoscopic gastric bypass procedures (LRYGBP) had fewer postoperative complications following a two-week VLCD. Surgeons, who were blinded as to who received the diet, also rated the operations as easier in those who received the diet. As a result, reduced postoperative complication rates suggest that a VLCD regimen should be recommended before bariatric surgery.⁶

Up to 18 months subsequent to surgery, when many physical and metabolic changes occur that help facilitate weight loss, there is a “key window” of opportunity, according to a 2018 study. Following that time period patients must rely on diet, exercise, and lifestyle management to maintain their weight loss.

Study coauthor John David Scott, MD, FACS, FASMBS says:



“We call it the honeymoon period of bariatric surgery...After a year or year and a half, your body starts to figure out what it can and can’t do, and your behaviors may change a little bit, so the odds that you are going to lose a significant amount of weight after that time period are definitely decreased. Therefore, the more weight you can lose during that honeymoon period, the better, because that effort will help establish a set point, in terms of where your steady weight is going to be further down the road.”

CONCLUSION

Preoperative weight loss before bariatric surgery provides numerous benefits to the patient and to the surgeon. In summary, incorporating preoperative weight loss into a bariatric treatment plan can:

- Reduce the size of the liver and increase likelihood of candidacy for bariatric surgery
- Improve operability in patients
- Increase postoperative weight loss at one year
- Increase postoperative weight loss for the long-term
- Reduce surgical complications
- Decrease operative time and facilitate the procedure

Using a medically-supervised VLCD for as little as six weeks prior to surgery has been shown to achieve an average weight loss of three to five pounds weekly and can be used to obtain the recommended five to 10 percent weight loss associated with the above outcomes. In fact, even as little as three percent sustained weight loss can reduce the risk for the development of type 2 diabetes as well as result in clinically meaningful reductions in triglycerides, blood glucose, and other risk factors for cardiovascular disease.⁸ Complemented with ongoing medical monitoring and nutritional, behavioral, and exercise education, a complete VLCD program supports the goals of bariatric surgery programs and can be integrated into any treatment plan.

REFERENCES:

1. *Mechanick, Jeffrey I. et al. Clinical Practice Guidelines for the Perioperative Nutritional, Metabolic, and Nonsurgical Support of the Bariatric Surgery Patient-2013 Update: Cosponsored by American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic & Bariatric Surgery. Wiley-Blackwell, 26 Mar. 2013, onlinelibrary.wiley.com/doi/full/10.1002/oby.20461.*
2. *Kadeli, D. K., Sczepaniak, J. P., Kumar, K., Youssef, C., Mahdavi, A., & Owens, M. (2012). The Effect of Preoperative Weight Loss before Gastric Bypass: A Systematic Review. Journal of Obesity, 2012, 1-7. doi:10.1155/2012/867540*
3. *Hutcheon, Deborah A. et al. (2018), Short-Term Preoperative Weight Loss and Postoperative Outcomes in Bariatric Surgery, Journal of the American College of Surgeons, Volume 226, Issue 4, 514 - 524*
4. *Faria, Silvia Leite, Orlando Pereira Faria, Mariane De Almeida Cardeal, and Marina Kiyomi Ito. Effects of a Very Low Calorie Diet in the Preoperative Stage of Bariatric Surgery: A Randomized Trial. Surgery for Obesity and Related Diseases 11.1 (2015): n. pag. Web.*
5. *Colles SL, Dixon JB, Marks P, Strauss BJ, O'Brien PE. Preoperative Weight Loss with a Very-Low-Energy Diet: Quantitation of Changes in Liver and Abdominal Fat by Serial Imaging. American Journal of Clinical Nutrition, 2006;84:304–11.*
6. *Nieuwenhove, Yves Van. Preoperative Very Low-Calorie Diet and Operative Outcome after Laparoscopic Gastric Bypass. Arch Surg. Archives of Surgery 146.11 (2011):1300. Web.*
7. *Screening for Hepatitis C Virus Infection in Adults: U.S. Preventive Services Task Force Recommendation Statement. (2013). Annals of Internal Medicine Ann Intern Med, 159(5).doi:10.7326/0003-4819-159-5-201309030-00003*
8. *Jensen MD, Ryan DH, Apovian CM, et al. 2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society. J Am Coll Cardiol. 2014;63(25_PA). doi:10.1016/j.jacc.2013.11.004.*

About Robard

For more than four decades, Robard's turnkey medically-supervised obesity treatment programs have complemented patient care during all stages of bariatric surgery. Our evidence-based medical protocols are based on the ASMBS established guidelines for medical evaluations and clearances and include a defined patient education curriculum (including nutrition, behavior and exercise modules) and field-tested recommendations to outline your staff's role in the process. Complimented by scientifically-designed meal replacements that are well-known in the industry for their variety and delicious taste, our programs offer an independent solution to treat more patients, increase surgical candidates, and achieve better outcomes. In addition, we offer an ever-expanding suite of **complimentary** business growth services, training and education for all of our customers. To learn more, please call us at (800) 222-9201 or visit www.Robard.com.

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