

BARIATRICBOX

Pre-operative Very Low Calorie Diet to avoid complications and for a better result

Today, bariatric surgery is one of the most common surgical procedures in the world. Worldwide, around 340,000 procedures are carried out each year. Today, bariatric surgery is the most effective treatment for morbid obesity (BMI > 40). Nevertheless, bariatric procedures in overweight patients are not a simple matter and not without complications. These complications can, however, be avoided by following a Very Low Calorie Diet (VLCD) for at least two weeks prior to the operation.

1. What are the complications of bariatric surgery?

The Roux-and-Y gastric bypass operation (RYBP) is the most common bariatric procedure. The sleeve is also becoming increasingly popular. These procedures are mainly carried out by laparoscopy, also known as minimally invasive surgery. Laparoscopic surgery in morbidly obese patients is a challenge because of the increased amount of visceral fat, the thickness of the abdominal wall and liver steatosis, better known as enlarged liver^{1,2}. This means the intra-abdominal cavity is smaller, and the visibility of the organs and precision of surgical movements limited^{1,2,3,4}. NASH, non-alcoholic steatohepatitis, can also lead to an increased level of fat in the left lobe of the liver. A thicker left lobe makes the operation more difficult and makes the liver more fragile and more sensitive to damage and bleeding^{1,3,4}. In addition, all these symptoms also affect the length of the operation and hospitalisation time, as well as intra- and post-operative complications such as more bleeding.

2. How can complications be avoided?

An increased amount of visceral fat, a thick abdominal wall, liver steatosis and NASH are all reversible metabolic phenomena. With an appropriate diet, a Very Low Calorie Diet (VLCD), these phenomena can be normalised or reduced.

3. What is a Very Low Calorie Diet?

The VLCD contains 6 meal sachets a day. These meals have a very low fat and carbohydrate content and a very high protein content. Because of the very low number of carbohydrates and fats, our body draws on its own reserves for energy. After 48 hours, these are mainly the body's own fat reserves (through ketosis). Thanks to the high protein content, the fat-free mass is protected as much as possible^{1,2,3,4,5,6,7,8}.

4. What is the effect of a pre-operative Very Low Calorie Diet?

- Reduced liver volume^{2,3,4}.
- Less liver fat (NASH)^{1,2,3,4}.
- Reduced visceral fat¹.
- Lower difficulty of the surgery.
- Fewer complications during surgery^{5,7,8}.
- Shorter operation time^{1,5,7,8}.
- Fewer pre-operative complications (so shorter hospitalisation time)^{1,5,7,8}.
- Increased weight loss after the operation (up to 15 kg)^{5,7,8}.

5. When should the pre-operative Very Low Calorie Diet be followed?

Ideally for at least two weeks before the bariatric procedure.

6. How should the pre-operative Very Low Calorie Diet be used?

Follow The guidelines for the Bariatric box.

Always provide adequate fluid intake.

7. Possible side effects and contraindications of the pre-operative Very Low Calorie Diet:

Contraindications:

- Pregnant or breastfeeding women, children below the age of 12, adolescents and the elderly must not follow the diet.
- Absolute contraindications: renal insufficiency, liver problems, anorexia, bulimia, type-1 diabetes, heart attack, heart failure, hypokalaemia, severe depression, phenylketonuria, porphyria, cancer, recent major operation, haemopathy, electrolyte imbalance, drug abuse.
- Relative contraindications (close monitoring by doctor recommended): arrhythmias, use of beta-blockers, cardiovascular disease, hyperuricaemia, gout, use of antidepressants, multiple sclerosis, Crohn's disease, cortisone use, colchicine use, use of diuretics, cerebral infarction, CVA, thrombosis, kidney stones.

8. Why choose the Pro Well Nutrition pre-operative Very Low Calorie Diet?

- Pro Well Medical Nutrition products contain high-quality proteins (all essential amino acids).
- All Pro Well Medical Nutrition meal sachets have a notification number from the Belgian Federal Public Service Health.
- In addition to macronutrients, Pro Well Medical Nutrition products also contain sufficient vitamins and minerals 6 sachets = 90 % of DRI.
- Pro Well Medical Nutrition has a wide choice of flavours, both in liquid and solid food (solid meals, soups, desserts, hot and cold drinks, instant products).

9. The Bariatric box with 42 meal sachets:

One Bariatric box contains 42 meal sachets. For most morbidly obese patients (> 90 kg) this equates to a 7-day diet (42 = 7 x 6 meal sachets). The Bariatric box allows the patient to get to know our dietary products, including both hot and cold drinks, soups, desserts and solid meals. After the Bariatric box, the patient can choose to buy one or more Bariatric boxes or buy his or her favourite flavours separately in boxes of 6 meal sachets (choice of more than 50 flavours).

- 1 Faria et al., Effects of a very low calorie diet in the preoperative stage of bariatric surgery: a randomized trial, Surgery for Obesity and Related Diseases, 2015.
- 2 Colles et al., Preoperative weight loss with a very-low-energy diet: quantitation of changes in liver and abdominal fat by serial imaging, The American journal of clinical nutrition, 2006.
- 3 Van Nieuwenhove et al., Preoperative very low-calorie diet and operative outcome after laparoscopic gastric bypass: a randomized multicenter study, Archives of Surgery, 2011. 4 Edholm et al., Preoperative 4-week low-calorie diet reduces liver volume and intrahepatic fat, and facilitates laparoscopic gastric bypass in morbidly obese.
- 5 Giordano et al., The impact of preoperative weight loss before laparoscopic gastric bypass, Obesity surgery, 2014.
- 6 Lewis et al., Change in liver size and fat content after treatment with Optifast® very low calorie diet, Obesity Surgery, 2006.
- 7 Vargas et al., Preoperative weight loss in patients with indication of bariatric surgery: which is the best method?, Nutr. Hosp., 2011.
- 8 Still et al., Outcomes of preoperative weight loss in high-risk patients undergoing gastric bypass surgery, Archives of surgery, 2007.