

## **Gastric Restrictive/Malabsorptive Procedures at the University of Iowa Hospitals and Clinics**

Severe Obesity is a disease that affects more than four million people in the United States. It is defined as being at least 100 pounds overweight or 100 % above ideal weight. In this disease excess energy is stored in the form of fat. Severe Obesity is associated with the early onset of other diseases and decreased lifespan.

Studies have shown that diets, weight-loss medications, behavior modification and exercise programs alone have a 95% failure rate in the severely obese patients. The basis for severe obesity is unknown. Multiple factors contribute to the cause of severe obesity. Scientific research is only in the early stages of discovering genetic factors that contribute to obesity.

Severe obesity is also associated with the following health risks:

- Hypertension (High Blood Pressure)
- Diabetes
- Increased cholesterol and triglyceride levels
- Sleep Apnea (where you stop breathing for 20 to 30 seconds during sleep; this may be associated with dangerously low oxygen levels in the blood stream which may produce heart and lung disease)
- Urinary incontinence in women.

The physical effects and social stigmas associated with severe obesity can impact quality of life. The goal of surgical treatment for severe obesity is to achieve a durable weight loss that reduces life threatening health risks and improve performance of the activities of daily living.

Surgical treatment of severe obesity is not a cure. It is not a cosmetic procedure. It is only a helpful part of a life-long weight management program. The effectiveness of surgical treatment depends on:

- patients changing the way they eat for their entire lives
- vitamin and mineral supplementation
- exercise
- counseling (individual and/or group)
- faithful attendance at follow-up visits.

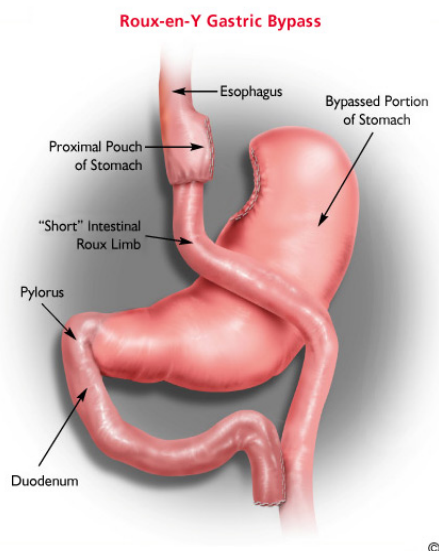
As with any surgery, there are risks. A decision to choose surgical treatment is a grave one. It must not be done without careful thought and discussion about the risks and complications of major surgery and general anesthesia. Risks associated with surgical treatment of morbid obesity include death (1 in 100), major operative complications (i.e. leak, deep venous thrombosis, pulmonary embolism etc) and the failure to lose weight.

Successful maintenance of weight loss after surgery requires life-long behavior changes by the patient. The lifelong eating behavior changes are the following:

- eating three meals a day
- fully chewing food before swallowing
- drinking no liquids with meals
- stop eating at the first sign of fullness
- avoid high calorie foods and beverages
- take daily vitamin supplements
- exercise for 30 minutes a day

Presently, the surgical treatment preferred at the University of Iowa, Department of Surgery is:

### **(Laparoscopic) Roux-en-Y Gastric Bypass**



### **Roux-en-Y Gastric Bypass and How it Works**

This operation is the most common of the gastric bypass procedures. First, a small (1/2-1 ounce) stomach pouch is created by stapling and dividing the stomach. This results in a decrease in food intake. Next, a Y shaped section of the small intestine is attached to the pouch to allow food to bypass the duodenum (the first segment of the small intestine) as well as the first portion of the jejunum (the second segment of the small intestine). This causes reduced calorie and nutrient absorption. Normally, the body absorbs calories and nutrients at all sections of the digestive tract. With two of these sections bypassed, the body has less ability to absorb digestive material. The fewer calories the body can absorb, the greater the weight loss. Patients who have bypass operations generally lose two-thirds of their excess weight within two years.

Gastric Bypass operations also may cause “dumping syndrome,” whereby stomach contents move too quickly through the small intestine. Symptoms include nausea, sweating, faintness, and occasionally, diarrhea after eating. If sweets are taken the person may become so weak and sweaty that they must lie down until the symptoms pass.

The risks for pouch stretching, breakdown of staple lines, and leakage of stomach contents into the abdomen are about 1 – 2%. Because gastric bypass operations cause food to skip the duodenum, (first part of the small intestine) where most iron and calcium are absorbed, risks for nutritional deficiencies are higher in these procedures. Anemia (low red blood cell or low hemoglobin count) may result from malabsorption of vitamin B12 and iron and is more common in menstruating women. Adverse metabolic bone changes and/or worsening of osteoporosis may result from decreased absorption of calcium.

Patients are **required** to take nutritional supplements for the rest of their lives to prevent the deficiencies. These include daily multivitamins, Iron, Vitamin B complex and B 12 and Calcium/Vitamin D supplements. Additional risks specific for the gastric bypass are that patients may develop ulcers either in the small intestine attached to the stomach bypass or in the bypassed stomach. Also, the stomach is not accessible for an endoscopy (Looking into the stomach with a flexible scope) or x-rays. This may make it difficult to treat diseases of the stomach or duodenum in the future.

The laparoscopic approach to obesity surgery is exactly the same as the open approach except six small incisions (1/4 to 1/2 inch) are used instead of a 10 to 12 inch abdominal incision. Almost all gastric bypass surgeries at UIHC are being performed using the laparoscopic approach. This is discussed further in the section on Laparoscopic Procedures.

- The death rate with a gastric bypass is 0.5% to 1.0%.
- The wound infection rate is less than 1%.
- The incidence of clinically apparent blood clots to the lung is 1% to 2%.
- The post-operative leak rate from the stapled stomach is 1-2%.
- The need for surgical removal of the spleen is 0.4%.
- The occurrence of pneumonia and abscess under the diaphragm is 0.2%.
- The potential weight loss with a gastric bypass averages 70% to 80% of the patient's highest known body weight. In many cases this degree of weight loss is associated with improvement in chronic disease like sleep apnea, high blood pressure, diabetes, arthritis and stress incontinence.

### **Laparoscopic Procedures**

In a laparoscopic procedure, the laparoscope, which is connected to a video camera, is inserted through the small abdominal incisions, giving the surgeon a magnified view of the patient's internal organs on a television monitor. The procedure itself is the same as when performed through the open incision. Even if the procedure is begun laparoscopically, it may be necessary to finish the operation using the open incision. Your doctor will use the laparoscope technique as long as he/she feels it is safe to continue.

Instead of a 5-8 day hospital stay (for an open procedure) and 4-6 weeks of recovery at home, most patients leave the hospital after two nights and return to normal activity after two weeks. When the laparoscopic procedure is done your diet will consist of clear liquids for seven days, full liquids for 21 days, a pureed diet for two weeks and then a slow addition of soft foods until you are ready for a normal diet. Drinking 6-8 glasses of water a day is essential to help continued weight loss and keep yourself hydrated.

Patients lose weight rapidly after surgery (up to 6 pounds per week at first), and continue to do so for 18 to 24 months. At that time your weight will stabilize at about 10 percent above your ideal body weight. In 2 to 5 years after surgery, it is common to regain some lost weight, but few patients ever regain it all. Of course, diet and activity level after surgery will have an effect on how much weight is lost. People who exercise usually lose more weight.

### **Health Benefits of Weight Loss**

More important than the actual number of pounds lost is the overall improved health you will gain after surgical treatment for obesity. The most important benefit is the improvement or elimination of many weight-related diseases. Studies have shown that hypertension, sleep apnea, and lipid abnormalities improve markedly after weight reduction surgery. And many patients with Type II diabetes find that their blood-sugar levels are normal within one year of surgery, many times without insulin or oral medication. While it is true that patients who undergo vertical banded gastroplasty and laparoscopic banding on average don't lose quite as much weight as gastric bypass patients, they have the advantage of having a normal digestion of their food therefore eliminating some of the nutritional risks of the gastric bypass. There are tradeoffs with either procedure and you should discuss with your doctor which procedure may be best for you.

Gastric surgery for weight loss must not be taken lightly. It was designed to help obese people lose weight so that co-existing health problems can be diminished or eliminated. It is **NOT** cosmetic surgery.

Surgery is reserved as the last option – if there is any way to lose substantial weight and keep it off other than bariatric surgery that is better for the patient.

As you explore your options you will be getting the idea that bariatric surgery is not an “easy way out” for weight loss – it brings with it many planned and many potential tradeoffs in your lifestyle. Only the patient can decide when (s)he has reached this point where all other options are exhausted. The decision whether to undergo this operation should be made jointly between you, your primary doctor and the surgical team.

**In a case where you have had previous bariatric surgery, please use the contact information below to send copies of your previous bariatric surgery operation report and the most recent x-ray or test results to us so that we may review your specific case prior to an appointment being scheduled.**

If you have any questions about an appointment date or need to reschedule, please contact us:

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