

A person is walking on a sandy beach, their shadow cast long on the sand. The ocean waves are breaking in the distance under a bright blue sky. The overall scene is serene and suggests a journey or a path forward.

***Minimally Invasive
Obesity Surgery***

***Laparoscopic
Gastric-Bypass Surgery***

This educational brochure is intended for patients who might be considering gastric-bypass surgery. It offers a broad overview of the procedure, focusing on the modern laparoscopic approach.

Obesity is at epidemic proportions in the USA. Over 50% of the adult population is overweight. Over 5% of the population, roughly 15 million people are severely overweight. This population, called clinically severe obesity is defined as people who are greater than 100 pounds over their ideal body weight for their height. Medical therapies such as dieting, behavior modification or drugs do not have a long term effect. However, clinically severe obesity can be treated surgically. One such operation is called gastric-bypass surgery.

In gastric-bypass surgery, ones stomach is reduced in size and the outlet to the small intestine, known as the duodenum, is by-passed directly to the rest of the small intestine.



Severe Obesity Related Health Problems

Millions of Americans fall into the category of clinically severe obesity—more than 100 pounds overweight with a body mass index of 40 or higher. Body mass index is a calculation of weight in relation to height.

This condition includes about three times as many women as men. It is much more than a cosmetic predicament. At the minimum, it markedly affects quality of life. For some people, it's a matter of life and death.

Three-hundred-thousand Americans die prematurely each year of obesity-related complications, also known as co-morbidities. At the top of the list of these complications is adult onset diabetes, which may resolve completely with weight loss. High blood pressure caused by clinically severe obesity can contribute to heart attacks, congestive heart failure, and stroke.

And there are also health issues that affect quality of life. To begin with, people with clinically severe obesity may have sleep apnea or suffer from asthma. They may undergo the misery of low-back pain, urinary stress incontinence, and severe acid reflux. Significant weight loss can often ease these conditions or reverse them completely.

People with clinically severe obesity are at great medical risk of disability or premature death.

For nearly all people with clinically severe obesity, surgery is the standard of care.

Three-hundred-thousand Americans die prematurely each year of obesity related complications.

Journal of the American Medical Association, 1999

Gastric-Bypass Surgery

Gastric-bypass surgery has been endorsed by a consensus panel convened by the National Institutes of Health as the only effective means of inducing significant long-term weight loss for the vast majority of patients with clinically severe obesity. See BMI Chart, page 3.

Since that 1991 endorsement, which is still the standard of care for most patients with clinically severe obesity, there have been significant enhancements to the gastric-bypass procedure, including the advent of minimally invasive surgery by laparoscopic techniques. With the use of laparoscopy, major operations are performed through tiny incisions with special miniaturized instruments. The smaller incisions bestow a wealth of benefits. They help reduce post-surgical pain, shorten hospital stays, shorten overall recovery times, and reduce the risk of infections.

Laparoscopy's Benefits

- ***Smaller incisions***
- ***Reduced pain after surgery***
- ***Shortened hospital stay***
- ***Shortened recovery time***
- ***Reduced risk of infection***

Five years after the procedure, patients have usually lost 50% to 75% of their excess weight. Long before that, complications of clinically severe obesity begin to resolve. These include control of diabetes; lowered blood pressure and total cholesterol; relief from sleep apnea, severe acid reflux, and urinary stress incontinence; and eased low-back and osteoarthritis pain. Patients report improved mobility. Their mood and self-esteem also improve.

Five Years After Gastric-Bypass Surgery, Patients Have Usually Lost 50% - 70% of Their Excess Weight.

Many patients with adult onset diabetes find that their blood-sugar levels improve almost immediately and become completely normal within a year of surgery.



Calculated BMI

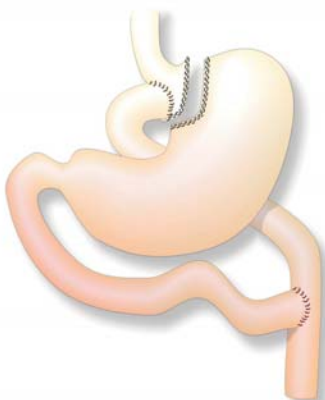
Weight (lbs) **Height (feet and inches)**



	5'0"	5'3"	5'6"	5'9"	6'0"	6'3"
220	43	39	36	33	30	28
230	45	41	37	34	31	29
240	47	43	39	36	33	30
250	49	44	40	37	34	31
260	51	46	42	38	35	32
270	53	48	44	40	37	34
280	55	50	45	41	38	35
290	57	51	47	43	39	36
300	59	53	48	44	41	37
310	61	55	50	46	42	39
320	62	57	52	47	43	40
330	64	58	53	49	45	41
340	66	60	55	50	46	42
350	68	62	56	52	47	44
360	70	64	58	53	49	45
370	72	66	60	55	50	46
380	74	67	61	56	52	47
390	76	69	63	58	53	49
400	78	71	65	59	54	50
410	80	73	66	61	56	51
420	82	74	68	62	57	52
430	84	76	69	63	58	54
440	86	78	71	65	60	55

Surgery for Weight Loss

When other medically supervised methods have failed, surgery offers the best option of long-term weight control for those with clinically severe obesity. One of the most popular and successful surgical approaches is the ***Roux-en-Y*** gastric-bypass.



This procedure involves a modification of the stomach so that only a small amount of food can be eaten at one time. A small pouch is created at the top of the stomach effectively shrinking the volume of the stomach to two ounces from a gallon.

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). The pouch is sealed shut with a line of staples.

As gastric-bypass implies, food is routed past much of the stomach and the first part of the small intestine. Patients lose weight because this small pouch restricts the amount of food that can be eaten comfortably and less nutrient absorption due to the intestinal bypass.

Minimally Invasive Gastric-Bypass Surgery

A few years ago, the Roux-en-Y gastric-bypass could only be done by what surgeons call an open procedure. This open procedure requires a major incision from the breast-bone to the belly-button.

The Roux-en-Y gastric-bypass procedure can now be performed using minimally invasive surgical techniques, also known as laparoscopic surgery.

The laparoscopic procedure employs specially designed instruments inserted through small incisions. Surgical video cameras called laparoscopes are also inserted so the surgeon can see inside the body. Surgeons watch on monitors as they perform the surgery.

Surgeons using laparoscopy perform precisely the same operation that is done by the open procedure. The several small incisions instead of one very large one results in a reduction in postsurgical pain, shortened postsurgical time in the hospital, shortened overall patient recovery, and sharply reduced risk of infections.

Weight Loss Without Some of the Complications

The weight loss and reduction in obesity related health problems is the same for the laparoscopic procedure compared to an open Roux-en-Y gastric-bypass.

Published literature on Laparoscopic Roux-en-Y gastric-bypass shows an excess weight loss of about 75% in the first year after surgery. BMI, the measure of obesity, drops from an average of 48 before an operation to an average of 30 at one year and 27 at two years. Diabetes is resolved in over 95% of the patients. The quality of life of patients improves in over 95% of patients after laparoscopic bariatric surgery.

Laparoscopic Gastric-Bypass Patients

People who may benefit from gastric-bypass surgery, either laparoscopic or open procedures include:

- Those with a body mass index of 40 or higher or a body mass index of more than 35 with significant obesity-related health problems, such as type 2 diabetes. Body mass index is a calculation of weight in relation to height. For example, a person who stands five feet, five inches tall and weighs 240 pounds would have body mass index of 40;
and
- Those who have tried other medically managed weight-loss programs without success (studies have shown that only 3% to 5% of people with clinically severe obesity have lasting success with nonsurgical methods);
and
- Those who are motivated and committed to comply with the lifelong postoperative care and lifestyle changes that the procedure demands;
and
- Those who have physical, psychological, social, or economic problems that could be significantly improved by weight loss.



Even those people who meet the above requirements may not be considered for gastric-bypass surgery. For example, in this group are:

- Those whose obesity is caused by a metabolic or endocrine disorder;
or
- Those with a history of substance abuse or a major psychiatric problem;
or
- Those with severe medical problems for whom surgery would be dangerous;
or
- Women thinking about becoming pregnant in the near future.



The Laparoscopic Gastric-Bypass Process

Preoperative Evaluation

In a preoperative evaluation, patients who are medically and psychologically suited for gastric-bypass surgery are selected. At the same time, the procedure's purposes, implications, risks, and benefits are all carefully explained. Here's what may happen in the preoperative evaluation process:

- Patients may be furnished with materials that will help educate and provide them with an overall understanding of the procedure, including information on pre- and postoperative issues.
- A patient's complete medical history may be reviewed, followed by a thorough physical medical exam, and a battery of medical tests to ensure that the patient's overall health is good enough to endure the surgery.
- Patients may have a psychiatric evaluation to assess their mental status and their competency and commitment to comply with the lifelong postoperative follow-up needed for post-surgical success.

Insurance Coverage

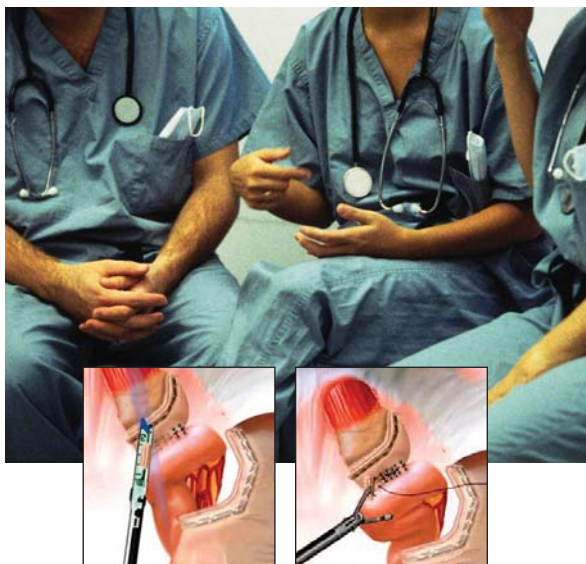
If a patient qualifies medically for gastric-bypass, the surgeon's office will begin a series of steps that begin with a request for pre-approval for coverage of the procedure from the patient's health insurer. This can take from a week to two months. During this process, everything else goes on hold. But when the insurance company gives its pre-authorization, patients are notified by the surgeon's office. In most cases, a date for the operation will be scheduled during this notification. For patients not covered by insurance, there are self-pay options.

Preoperative Preparations

Precise details vary from surgeon to surgeon, but once a date for the operation is scheduled, patients are often asked to come into the office about a week before the procedure. At this point they are given preoperative instructions and a more detailed explanation of what to expect on the day of surgery and the days immediately afterward. Often it is at this point that patients have the opportunity to ask all their remaining questions before signing consent forms indicating that they understand the procedure and the risks associated with it. Surgeons need these signed forms so they can have assurance that patients understand the serious nature of the procedure and that they also appreciate the nature of the lifelong commitment.

Postoperative Follow-Up

Typically, patients whose gastric-bypass surgery is performed laparoscopically stay in the hospital for one or two nights and then see their surgeon again seven to ten days after surgery. For an open gastric-bypass procedure with a full incision, the hospital stay can be seven to ten days or longer.



The Laparoscopic Gastric-Bypass Process (cont'd)

Weight Loss Following Surgery and Nutritional Support

The gastric-bypass procedure can successfully start patients on the road to recovery from clinically severe obesity, but surgery alone will not ensure long-term success.

- Surgery alone will not remove the excess pounds and keep them off. It is only a tool, something to help patients do the work. In order to get down to a healthy weight, patients must adjust their eating habits and exercise patterns. They get help for this from a nutritionist and other members of the support team.
- Initially, a patient's diet is limited to sugar-free clear liquids. It is slowly expanded to include soft foods, and then finally solid foods. Patients find that only a little bit of food will make them feel full. They are instructed to eat small amounts several times a day. A consultation with a nutritionist following surgery helps them adjust to their altered digestive system.
- The greatest weight loss usually occurs in the first year to 18 months following surgery. Five years after the procedure patients have usually lost 50% - 75% of their excess poundage. Many patients regain some of this weight, but few ever regain it all.

Vitamins

Because gastric-bypass changes the digestive process, lifelong nutritional supplements are essential to prevent malnutrition. Patients must take daily multivitamins in addition to B12, iron, and calcium supplements.

A complete detailed list may be furnished by the surgeon's office, usually through the nutritional support team.

Benefits and Risks

Benefits

The medical and emotional benefits of the procedure begin almost immediately after surgery, and the cosmetic benefits follow in their wake.

Over time, the benefits may include:

- Significant sustained weight loss.
- Blood-sugar levels for patients with type 2 diabetes that improve almost immediately and become completely normal within a year of surgery.
- Lower blood pressure.
- Lower cholesterol.
- Relief from sleep apnea and acid reflux.
- Less osteoarthritis pain and improved mobility.
- Improved mood and self-esteem.

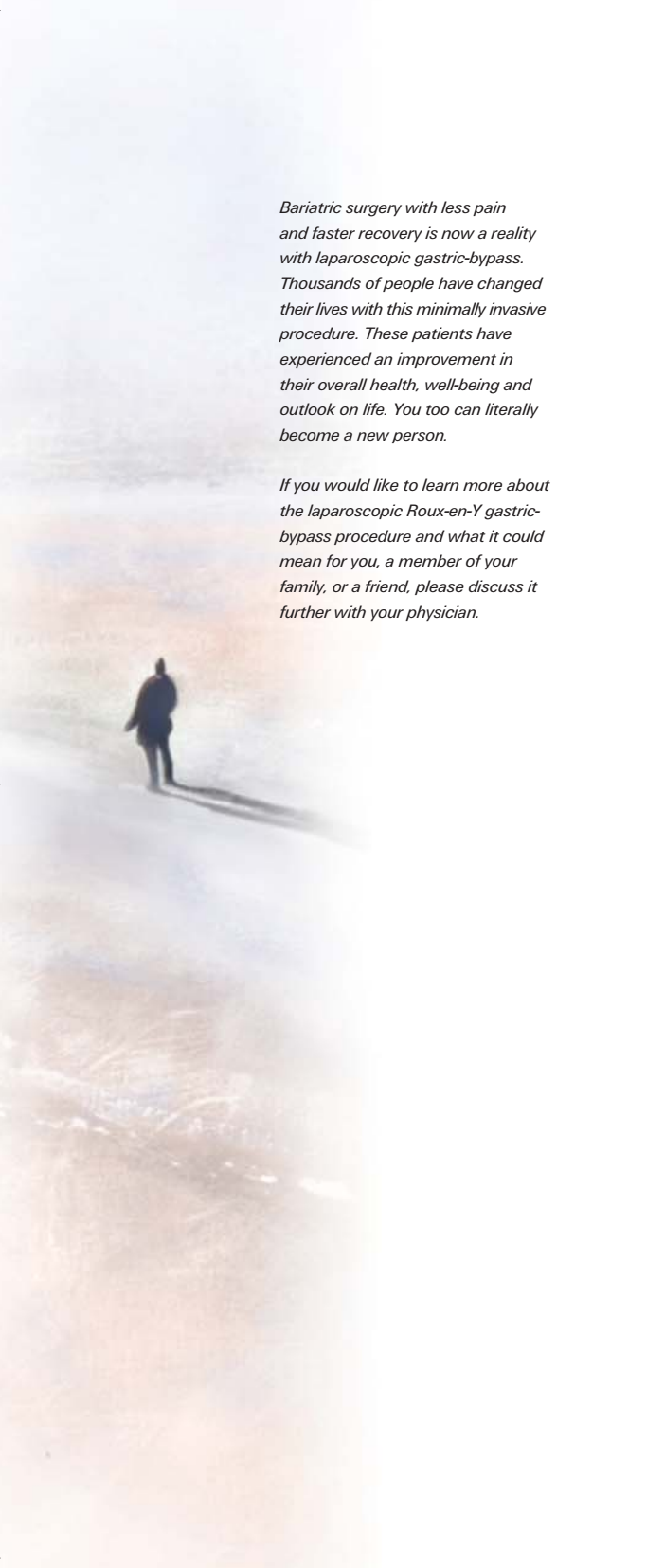


Benefits and Risks *(cont'd)*

Risks

Gastric-bypass, a serious surgical procedure, bears risks. These include:

- Loosening of the line of staples used to create the Roux-en-Y pouch, pouch stretching, or leakage.
- Vomiting because of the decreased size of the stomach.
- So-called dumping syndrome—caused by stomach contents moving too rapidly through the small intestine.
- Wound infection—a risk that is greatly reduced when the procedure is done laparoscopically.
- A tissue tear at the site of the incision, also called a hernia. This, too, is a risk that is greatly reduced by laparoscopic surgery.
- Development of gallstones, which could lead to a laparoscopic procedure known as cholecystectomy to remove the gallbladder.
- Blood clots—which most times can be avoided by wearing special stockings for a few days after surgery.
- Vitamin deficiencies—prevented by taking daily vitamin supplements for life.

A person in a dark jacket is walking away from the camera on a path that leads through a field of tall, dry grass. The background is a soft, hazy landscape with a pale sky, creating a sense of a long, open journey.

Bariatric surgery with less pain and faster recovery is now a reality with laparoscopic gastric-bypass. Thousands of people have changed their lives with this minimally invasive procedure. These patients have experienced an improvement in their overall health, well-being and outlook on life. You too can literally become a new person.

If you would like to learn more about the laparoscopic Roux-en-Y gastric-bypass procedure and what it could mean for you, a member of your family, or a friend, please discuss it further with your physician.



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