

# An Introduction to Bariatric Surgery

## What is bariatric surgery?

Bariatric surgery is a treatment used to help people with obesity manage their health and weight.

## Why use surgery to manage obesity?

Obesity is a complex chronic disease. Bariatric surgery is the most effective treatment we have.

Bariatric surgery is suggested when:

- a person has health problems that can improve with weight loss.
- a person's weight is still very high even after making lifestyle changes.
- possible benefits are greater than the risks.

Although bariatric surgery is a good treatment, it is **not a cure**. Bariatric surgery is not right for everyone with obesity. It is only one tool used to treat obesity. It does not replace other treatments.

## What are the benefits of surgery?

The most important benefits are an improvement in your weight, health, and quality of life.

The benefits of bariatric surgery may include:

- better weight loss than other treatments alone
- improved blood sugar and blood pressure
- improved breathing
- ability to move better and be more active
- improved fertility and pregnancy outcomes
- lower risk of death from heart disease and some cancers

## What are the risks of surgery?

While bariatric surgery has benefits, it also has risks such as:

- Nausea or vomiting
- Higher risk of vitamin and mineral deficiencies

- Major or life-threatening effects such as blood clots, leaks, infections, or even death
- Many people need to have plastic surgery to remove extra skin after they have lost a lot of weight.
- As with any major life event, some people may have changes in their mental health, or find that relationships with friends and family change after their surgery. Sometimes these changes are for the better and sometimes they are worse.

Bariatric surgery is **not a cure** for obesity. Some people regain some or all of the weight they lose after surgery.

## Who can be considered for bariatric surgery?

There are guidelines to help your doctor, surgeon, and other healthcare providers decide if bariatric surgery is the right treatment for you.

People who may benefit from bariatric surgery are:

- over 18 years old
- have a body mass index (BMI; see box below) of 40 kg/m<sup>2</sup> or higher

**or**

- have a BMI 35 kg/m<sup>2</sup> or higher with one or more weight-related health problems, such as high cholesterol, high blood pressure, sleep apnea, diabetes, or joint problems
- have tried several methods to manage their weight, but their weight is still high
- have learned about the benefits and risks of bariatric surgery
- are ready and able to make important lifestyle changes and maintain these changes over time

**Body Mass Index (BMI)** is a number that measures the ratio of your weight to your height. BMI can help predict whether you have a higher risk of health problems.

## When is surgery not the right treatment?

For some people, bariatric surgery may not be the right treatment because:

- they are too young or too old
- their BMI is below the guideline level
- they have certain medical conditions
- their risk of surgery is too high
- they aren't able to follow or understand directions
- they smoke
- they're not able or not willing to keep appointments
- they're not able or not willing to follow through with recommendations
- they're pregnant, planning to become pregnant, or are breastfeeding

## Is surgery the right treatment for me?

Deciding if surgery is right for you is more than just meeting the guidelines. Every person has different treatment needs. Your family doctor and specialists can work with you to develop a plan that is best for you.

If you're interested in learning more about bariatric surgery, talk to your doctor.

## How much weight would I lose?

As with any treatment, the amount of weight loss after surgery is different for everyone. A good outcome after bariatric surgery is loss of about one-third (30%) of your starting weight, or about half (50%) of your excess weight. Many people continue to lose weight for 12–18 months after surgery.

Many people think that after surgery they will reach “normal” or “ideal” weight from a chart or BMI ranges. This is not a realistic goal. Talk to your healthcare provider about a realistic goal for you.

## Can I gain weight after surgery?

Bariatric surgery is a treatment but not a cure for obesity. Some people regain some of their weight around 2–5 years after surgery. A few people may gain back all of their weight after the surgery.

Obesity is a complex chronic disease that requires a long-term plan. After surgery, continue with a healthy lifestyle, which can include:

- healthy eating habits
- taking your vitamin and mineral supplements
- making time for activity each day
- keeping track of your goals with a journal
- keeping track of your weight
- managing your stress
- getting enough sleep
- following-up with your doctor and other specialists

## Will my eating habits need to change after surgery?

Bariatric surgery changes the size of your stomach and how it works. After surgery, you will have to make many changes to what and how you eat. Talk to a dietitian about making healthy lifestyle changes.

After bariatric surgery, your healthcare team will ask you to:

- choose small portions of food.
- eat slowly and chew your food well.
- take vitamin and mineral supplements as recommended for the rest of your life.

You will also need to avoid:

- drinking and eating at the same time
- drinks with bubbles (carbonated)
- foods and drinks higher in sugar
- some foods with textures that are hard to chew, such as sticky, gummy, stringy, or tough foods

## What can I do to improve my weight and health right now?

Below are lifestyle habits which can help people manage their weight and health.

### Ask yourself if you're ready to make changes

- Think about what healthy habits are working well for you.
- Think about what has kept you from your goals. Is it a lack of time? Your mood? Lack of energy or sleep?
- Ask yourself: Am I ready to make a change now?

### Build healthy habits

- Find non-food ways to cope with stress and reward yourself. You may find it helpful to go for a walk, spend time with a friend, read a book, or take time for hobbies you enjoy.
- If you smoke, talk to your health care provider about strategies to help you quit. You can't have bariatric surgery if you smoke.

### Keep a journal

People who use a journal to track their progress are more likely to make changes that last a long time.

In your daily journal, you can track:

- what and how much you eat and drink
- your activity
- your mood or thoughts
- how you sleep
- your weight (for example, once a week)

### Be active every day

- Make a plan to be active every day. If you are not active now, start with 10 minutes at a time.
- You can use a pedometer to measure how many steps you take each day. Record your steps in your journal.

### Eat healthy

- A healthy meal pattern for most people is 3 small meals plus 1 or 2 small snacks every day.
- Fill half your plate with vegetables and/or fruit at each meal.
- Eating fewer calories can help you to lose weight and help you prevent weight gain. Tips to reduce calories:
  - Limit higher-fat foods and added fats.
  - Limit eating out to 0–2 times a week.
  - Limit sweets and extras to 0–2 times a week.
  - Choose calorie-free drinks and low-fat milk.

## Are there different types of bariatric surgery?

There are two types of bariatric surgery commonly done in Alberta:

- gastric bypass
- sleeve gastrectomy

Each surgery can help to treat obesity by making your stomach smaller. This means you would be able to eat only a very small amount of food at one time.

Surgery also changes the digestive tract, decreasing the amount of some nutrients absorbed by the body.

The gastric bypass and sleeve gastrectomy surgeries are described on the next 2 pages. Each surgery has risks and benefits. It's important to talk with your surgeon and doctor about what type of surgery might be right for you.

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# Gastric Bypass

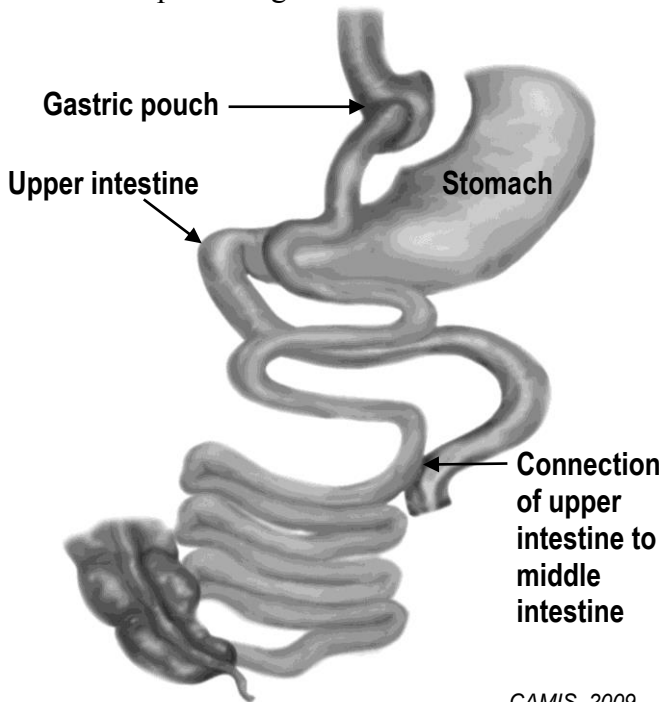
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## How is it done?

A surgeon makes several small openings in the abdomen to place the laparoscopic (surgical) tools. Surgical staples are used to create a small pouch in the upper stomach. The pouch is about the size of an egg or golf ball (30–50 mL or 2–3 Tbsp).

More staples are used to separate the upper part of the intestine from the middle intestine. The middle part is then attached to the gastric pouch. Food will now empty into the middle intestine, not the bottom part of the stomach.

The upper part of the intestine is then re-attached further down the intestine, so that digestive juices from the pancreas and gallbladder can mix with the food to help with digestion.



## How does it work?

The small pouch limits the amount of food you can eat at one time to about  $\frac{1}{2}$ –1 cup (125–250 mL). You will feel full after eating smaller portions. When you eat less food, you may take in fewer calories, which can help you lose weight.

A small opening slows down the movement of food and drinks out of the pouch. This may help you feel full longer.

Your body will also absorb fewer nutrients from the food you eat because it does not go into the bottom part of the stomach and the upper intestine.

## What are the risks or side effects?

- If you eat more than the pouch can hold, you will be uncomfortable. You may feel sick to your stomach and throw up.
- If you have food and drinks that are higher in sugar, you may get **dumping syndrome**. Symptoms may include nausea, vomiting, diarrhea, abdominal cramping, weakness, dizziness, flushing, sweating, anxiety, and a fast heart rate.
- You are at risk for low levels of many vitamins and minerals because you are not eating as much food and not as many nutrients are being absorbed.
- To get enough vitamins and minerals after surgery:
  - eat healthy meals and snacks.
  - take vitamin and mineral supplements each day.
  - go for blood tests regularly.
- You may take in extra calories and regain weight if you:
  - choose high calorie foods more often.
  - eat too much or too often (grazing).
  - choose very soft or liquid food and drinks that go through the gastric pouch easily.

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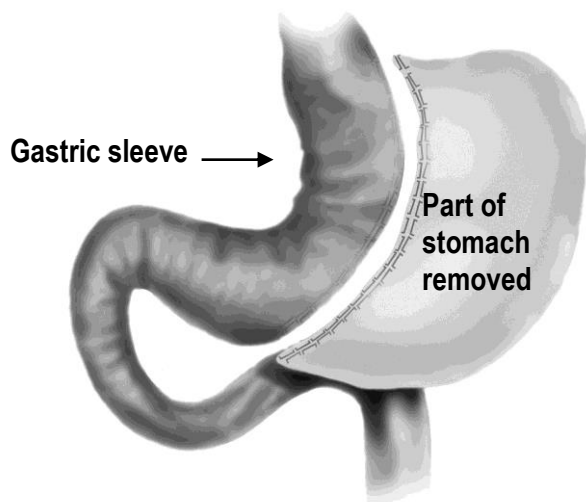
# Sleeve Gastrectomy

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## How is it done?

A surgeon makes several small openings in the abdomen to place the laparoscopic (surgical) tools. Surgical staples are used to divide the stomach into two sections. One section is long and narrow, called a *sleeve*. Most of the stomach (about 80%) is removed from your body (see the picture below).

Food passes into the sleeve from the throat and out into the intestine. The size of the gastric sleeve is about  $\frac{1}{3}$ – $\frac{1}{2}$  cup (80–125 mL).



CAMIS, 2009

## How does it work?

The small pouch limits the amount of food you can eat at one time to about 1 cup (250 mL). You will feel full eating smaller portions. When you eat less food, you may take in fewer calories, which will help you lose weight.

After surgery, your body will produce less *ghrelin*, which is an appetite hormone. This helps you to feel less hungry.

There will be no changes to your intestine; the only changes will be to your stomach. This means your body will absorb most of the nutrients from the foods you eat.

## What are the risks or side effects?

- This procedure cannot be reversed because most of the stomach is removed. Some people may have another surgery to change to a gastric bypass.
- You are at risk for low levels of vitamins and minerals because you are not eating as much food and not as many nutrients are absorbed.
- To get enough vitamins and minerals after surgery:
  - eat healthy meals and snacks.
  - take vitamin and mineral supplements each day.
  - go for blood tests regularly.
- You may take in extra calories and regain weight if you:
  - choose high calorie foods more often.
  - eat too much or too often (grazing).