

Program Summary

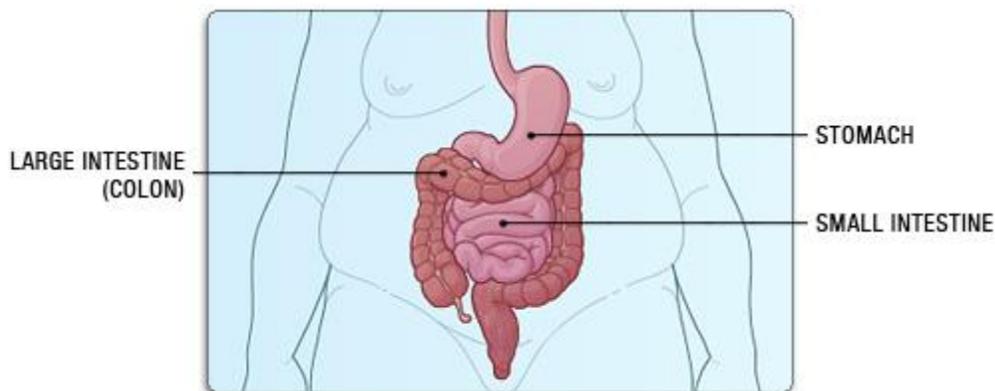
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SLEEVE GASTRECTOMY

The Basics

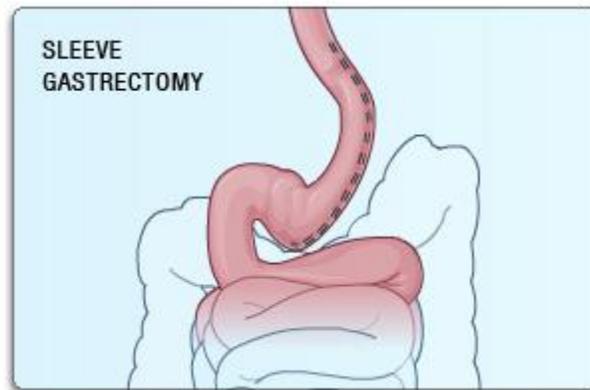
How the digestive system works

1. Food travels to your **stomach**, where it starts to break down.
2. From the stomach, the now-mushy food moves into the **small intestine**.
3. In the first part of the small intestine, food gets broken down even more so it's small enough for your body to absorb.
4. These smaller particles move through the rest of your small intestine, which absorbs calories, vitamins, and other nutrients.
5. Whatever your body does not absorb moves through your **large intestine (colon)** and out as waste.



Sleeve gastrectomy makes a couple of changes to your digestive system.

1. Most of the stomach is permanently removed. After surgery the stomach is basically a thin tube (sleeve) that holds only a little bit of food. You'll only be able to eat small amounts at a time.



2. Many people feel less hungry the rest of the time. Removing so much of the stomach seems to affect some of the hormones that control things like your appetite. People may feel less hungry. This can make it easier to stick to a new meal plan after surgery.

These changes to the digestive system, along with healthy food choices and exercise, help people lose weight.

Your Decision

A sleeve gastrectomy can help you lose a lot of weight. It can also improve your overall health and help you live a longer, fuller life. You need to understand that this surgery is permanent. Once part of your stomach is removed, there's no way to put it back. You have to be committed to changing the way you eat for the rest of your life.

Relationship with food

For many people, food is a source of comfort or a stress reliever. That complicated relationship won't magically change after surgery. When they can no longer eat as much as they're used to, some people can become depressed, or they may lean more on other unhealthy behaviors to help them deal with daily stress.

Before surgery, talk to your surgeon about meeting with a psychologist or a therapist to discuss things like:

- Why you're thinking about surgery now
- The results you're hoping for

- How surgery can help you achieve those results

The goal of surgery

No surgery can get you to your ideal body weight. What surgery can do is get you to a healthier **Body Mass Index (BMI)**. As you may know, BMI is a number that's found by plugging a person's height and weight into a formula. This number is a good indication of how much body fat someone has.

The goal is to lower your BMI. A sleeve gastrectomy can help many people do that.

Before Your Surgery

Your surgeon may be a man or woman, but to keep things simple, this summary will refer to your surgeon as a "he."

Health history

In the weeks or months before surgery, it's very important for your surgeon to learn about your overall health and health history. Tell him if:

- You have any health conditions or allergies
- You or anyone in your family has ever had a bad reaction to anesthesia

Medications

You may need to get some medications out of your system in the weeks or months before surgery. Some things can increase the risk of bleeding or blood clots. For your safety, make a list of everything you take, including:

- All prescription medications
- Things you get over-the-counter (like aspirin, Advil[®], or Motrin[®])
- Vitamins
- Herbal supplements (like Echinacea or Ginkgo biloba)
- Recreational drugs.

If you take a blood-thinning drug, you'll need to talk to the doctor who put you on this medication to find out what to do. These include medications like warfarin (Coumadin[®]), Plavix[®], Pradaxa[®], Xarelto[®], Eliquis[®], and many others. Do not stop taking this kind of medication on your own. Your doctor needs to help you do this safely.

It's important to know which medications you should keep taking. If you take medication now for conditions like high blood pressure or diabetes, let your surgeon know.

Smoking and nicotine products

If you smoke, chew tobacco, or use anything with nicotine in it (including nicotine patches or gum), make sure your surgeon knows. Smoking and nicotine can cause problems with healing, so your surgeon will most likely tell you that you need to quit before he'll do the operation.

For a complete list of what to stop taking, and when, ask your surgeon.

Special diet

Your surgeon may want you to go on a special diet a few days or even weeks before surgery. Be sure to ask about this.

Partner in care

It's a good idea to have a family member or a friend with you on the day of surgery for comfort and support. Think of this person as your partner in care. Doctors and nurses like to have one "go to" person for all communication. He or she should be able to speak up for you, ask questions, and give information about your health. Be sure to introduce this person to your doctors and your nurses so they know it's OK to share your health information with them.

The night before surgery

You'll probably get a list of instructions telling you what to do. Find out when you need to stop eating or drinking before your surgery. If there's anything in your stomach and you throw up during surgery, it can be very dangerous. Find out exactly what your doctor's instructions are for you — you'll need to follow them, or your surgery may need to be rescheduled.

The morning before surgery

Your doctor may have you take some or all of your regular medications. You may need to take them with just a sip of water.

Your Surgery

While your surgeon will have a specific plan for your operation and recovery, this summary will give you a general sense of how it will go.

Before surgery begins

An IV will be placed in your hand or arm. This is so you can get antibiotics, medications, and fluids.

Then you'll go to the operating room. When you get there, you'll be connected to monitors that measure your blood pressure, heart rate, and the amount of oxygen in your blood. You may also have compression boots or get some blood-thinning medication to help lower the risk of blood clots. Then they'll start the anesthesia.

Anesthesia

This operation is done under general anesthesia, which puts you into a deep sleep. Here's what happens:

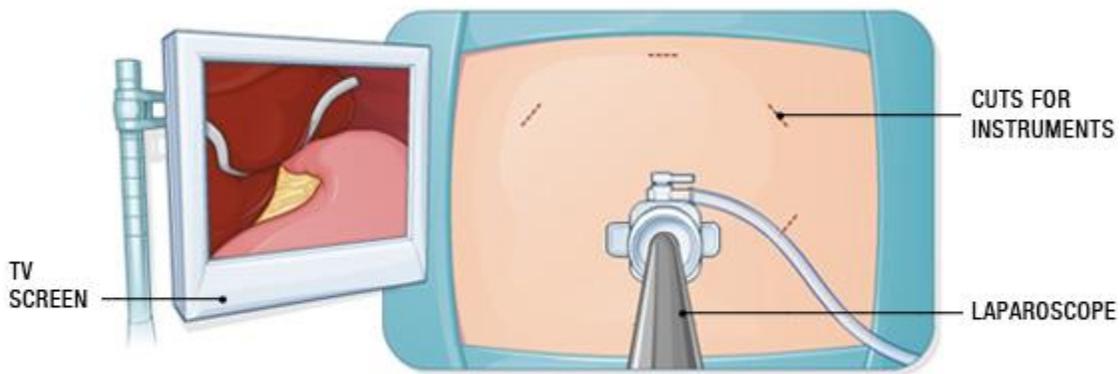
1. An oxygen mask will be placed over your mouth and nose and you'll be asked to take deep breaths.
2. You'll get the anesthesia through your IV. (The medication may sting or burn a little bit when it goes in, but don't worry — that's normal.)
3. Very quickly, you'll fall asleep. After this you really won't remember anything about the procedure.

Once you're asleep

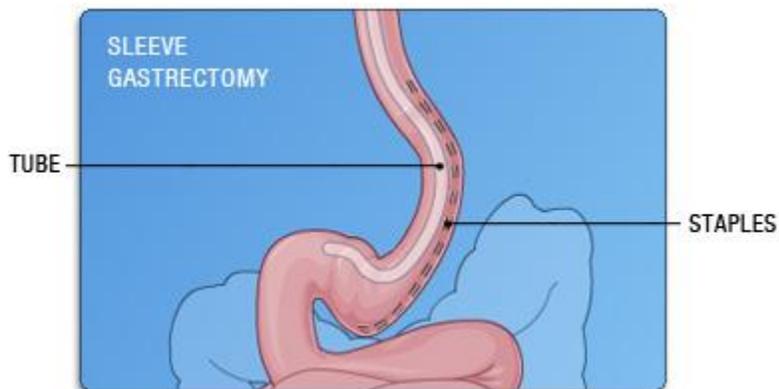
A tube is placed in the back of your throat or down your windpipe to help you breathe. You won't feel the tube going in or coming out, but when you wake up, your throat may be a little sore. Sometimes a soft tube may also be placed in your bladder to drain urine during the operation.

Surgery

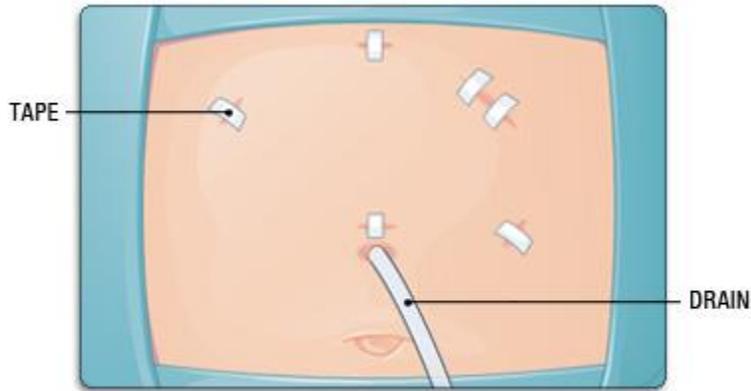
Once everything is ready, surgery can begin. It usually takes an hour or 2, sometimes longer. Some surgeons use a special surgical robot to help with this. Your surgeon can tell you more about this if it's something he plans to use.



1. The operation starts with a small cut near the belly button.
2. Your belly is then filled with a gas to create space so it's easier for your surgeon to operate.
3. A thin tool (**laparoscope**) is placed through the cut. It has a light and a tiny camera that sends a picture to a TV screen.
4. A few other small cuts are made nearby so other tools can be inserted.



5. Your surgeon will place a small tube in your mouth and guide it down to your stomach. This tube is about the size and shape your stomach will be after surgery.
6. Using the laparoscope to see, your surgeon can cut the stomach along the tube's outline with tools placed through the cuts in your belly.
7. Most of the stomach is then removed, and the part left behind is closed with permanent staples.
8. The tube is then pulled back out.
9. A **leak test** may be done to make sure everything looks good.



10. When your surgeon is finished, he may place a small tube in your belly to drain fluids.
11. Then any cuts are closed. (The stitches are usually under the skin, so you won't see them.)
12. The cuts are covered with surgical tape or glue.

Your next stop is the recovery room.

After Your Surgery

Expect to feel groggy and a little out of it when you wake up. If you feel sick to your stomach or have the chills, just ask your nurse to help you get comfortable.

In recovery

You may be hooked up to some monitors and your IV line for medication and fluids. Your team can give you medication to help with any pain or soreness.

Walking

Now as soon as possible, your nurse will help you get up and walk. Moving around helps prevent blood clots. Don't try to get up by yourself. A nurse will need to help you.

Deep breathing

Breathing deeply is very important as you recover. You may be asked to use a device called an **incentive spirometer**. It looks like a small plastic toy. As you breathe in, a little ball flies up to show how deeply you're breathing. Taking deep breaths helps prevent infections, like pneumonia.

What will you eat right after surgery?

You'll probably start by sucking on ice chips and drinking fluids. It goes really slowly because your new connections are healing and need to be treated gently.

Medications

Your surgeon may have specific instructions about taking medicines. He may tell you not to take things like aspirin or anti-inflammatory pills (like Advil®) or he may have very specific instructions about HOW to take these if you have to. For things like headaches, doctors usually say Tylenol® is OK. Ask your doctor to go over all your medications with you and even write out how to take them or what you need to stay away from.

Going home

Most people leave the hospital the day after this operation. Sometimes the stay is a little longer. You can go home once your surgeon thinks you're ready. If you have any questions about this, ask your surgeon what you can expect in your case.

Have someone drive you home

Make sure you have someone to drive you home. In fact, you won't be allowed to drive until your surgeon says it's OK.

Follow-up appointments

Before you leave, make sure you have a follow-up appointment to see your surgeon and other members of the healthcare team as necessary. Most likely, you'll have another appointment within the first 2 weeks after surgery. You may also need to get your stitches removed a week or 2 after surgery. Some kinds of stitches dissolve on their own and don't need to be removed. Ask your surgeon what you can expect in your case.

You'll see your healthcare providers regularly for the first year or 2. Expect to have follow-up visits each year to make sure that you are in strong health and there are no problems. Many people go in for follow-ups for at least 5 years.

When I get home, will I be in a lot of pain?

Most people say the pain after this surgery isn't bad at all. Your surgeon will prescribe pain medication, so make sure you know how and when to take it. Many people never need it.

Be sure to follow your surgeon's instructions carefully on:

- Bathing: do not soak in water until you get the OK from your surgeon
- When you can get back to normal activities
- Getting back to work: this depends on what you do for a living
- When it's OK to lift anything that's even a little heavy
- Exercises you should do (like walking)

Walking

Walking is a great way to help you regain strength and prevent blood clots. Try to walk as much as you can. Just take it slow at first. Make it your goal to walk a little farther every time you go out.

Sex

You want to give your body a chance to heal, but you can probably have sex as soon as you feel up to it. Check with your surgeon to see if he has any specific instructions for you.

Getting pregnant

If they want to, most women are able to get pregnant after having this procedure. In fact, for many women, losing weight makes it easier to get pregnant. Most doctors recommend waiting a year or more after surgery before getting pregnant. Your doctor can give you more information if you're interested.

Call your surgeon right away if you have:

- A fever of 101° or higher
- Sudden shortness of breath
- Chest pain
- A fast heartbeat
- Pain in your left shoulder that starts 2 days or more after surgery
- Pain, redness, swelling, or a cramping feeling in your legs
- Severe pain in your belly
- Pain or swelling
- Pus leaking from any cuts
- You feel sick to your stomach and it won't go away
- You throw up a lot

Call if you experience anything unusual. If something just feels wrong, let your surgeon know.

What you'll eat

It's *really* important to follow your surgeon's instructions about what and how

much to eat. People usually start with a liquid diet and move on to soft or pureed foods that are low in fat and have no sugar. Things like:

- Unsweetened applesauce
- Chicken, other meats, and vegetables that have been pureed

It will be a while before you're eating solid foods. Ask your surgeon if you have any questions about when you can start. Once you are eating solid foods, you'll need to eat very small amounts and chew really well before swallowing. You'll be surprised at how quickly you feel full and how long it takes to eat even a couple of bites.

Water

Every doctor and dietitian will want you to drink plenty of water.

Protein

Protein is the most important thing you'll eat, and you get it by eating things like:

- Beef
- Chicken
- Fish
- Tofu

There are also protein shakes and bars and you can add protein powder to your meals.

Vitamins

You'll probably take a multivitamin every day for the rest of your life. The vitamin should have **follic acid (folate)** in it. Be sure to ask your surgeon what you need to take.

Stay away from high-sugar foods

You need to avoid foods like cookies, doughnuts, and other desserts. These fill you up on empty calories when you need to focus on one thing — protein. High-sugar foods also slow down weight loss and can lead to weight gain (even after surgery). You need to be especially careful with alcohol and soft foods like ice cream. These are very high in calories and a lot can sneak through the smaller stomach before you feel full.

Do NOT eat more than your meal plan allows

If you eat more than this, you may stop losing weight. You may even gain weight.

Even when you follow your meal plan, your stomach stretches naturally. Eating more than you should stretches the stomach too fast, which lets you eat even more. Then you stop losing and may even regain weight. Again, stick to your meal plan.

The keys to success after this surgery

- Eat the right foods in the right amounts
- Get regular exercise
- Avoid unhealthy foods and other bad habits

If I do everything right, what kind of weight loss can I expect?

Everyone is different, but after a sleeve gastrectomy many people lose 50 to 60 percent of their extra body weight. People tend to lose a lot of weight in the first 3 months after surgery — even up to a pound a day. They keep losing weight over the next few months, but it comes off more slowly. Then 12 to 18 months after surgery, weight loss usually stops.

Extra skin

Many people are worried about having a lot of extra skin after losing weight. A lot depends on you and your body, so if you have any questions about this, talk to your doctor.

Most people won't get to their ideal body weight after surgery.

You should focus on how you look, how you feel, and on lowering your BMI. If you follow your meal plan and get regular exercise, surgery can help you do that.

Risks and Benefits

Benefits

The biggest benefit is that a sleeve gastrectomy can help you lose a lot of weight. As you do that, you'll probably also notice changes in your quality of life. You can improve many health problems, like:

- Diabetes

- High blood pressure
- High cholesterol
- Sleep disorders (like sleep apnea or snoring)

If you take medications for any of these problems now, you may be able to stop taking them after surgery.

Don't forget about how good you'll feel about yourself.

- Your self-esteem may improve
- You may feel more confident and want to try new things
- You should have more energy, making everyday tasks easier

Risks

Like any surgery, a sleeve gastrectomy has some risks, and it's important for you to understand everything that's involved. If you have any questions about how these risks relate to you, please ask your surgeon. Even though 11 risks are described, there are some very unusual risks that will not be covered. Please do not consider this list complete.

There is a risk of bleeding both during and after the surgery. In rare cases, a blood transfusion or more surgery may be needed.

With any surgery, there is a risk of bleeding during and after the operation. If there's bleeding, in most cases your doctor will be able to control it. Although it's rare, if you lose too much blood, you may need a blood transfusion. Although banked blood is checked for diseases (like HIV/AIDS or hepatitis) to make sure it's as safe as possible, there's still an extremely small chance you could get a virus or your body could reject the blood.

While it's very rare, you may have internal bleeding in the days after surgery. If this happens, there is a chance you may need another operation to control the bleeding. Signs of internal bleeding include:

- Strong pain and swelling in your belly
- You feel lightheaded
- Changes in how often you poop, or if it looks red or black.

If you think you have internal bleeding, please call your doctor or seek emergency help right away.

There's a risk the juices in your stomach that help you digest food can leak from where the stomach was cut and stapled. If a leak is not treated, it can be life threatening.

Even though your surgeon will do everything he can to make sure your stomach is sealed tightly, there is a risk digestive juices can leak out after the operation. If a leak is found, it will be treated right away.

- A tube may be placed to drain fluid from the area.
- Another procedure (**endoscopy**) may also be needed to put something (like a small tube called a **stent**) into the stomach to cover the leak while it heals.
- If a leak is large, an operation may be needed to repair it.

While you heal, you may not be able to eat or drink any food by mouth. Instead, you may need to be fed through an IV or through a tube that goes into your intestines.

If a leak isn't found and treated, an infection (**peritonitis**) can develop. This can be very serious, and can even be life threatening. It's very important for your surgeon to know if there's a leak. Call him right away if you:

- Feel sick to your stomach and it doesn't go away
- Have pain in your left shoulder that starts 2 days or more after surgery
- Have severe pain in your belly
- Have a fast heartbeat
- Have a fever of 101° F or higher
- Have chills
- Throw up a lot

There is a risk of blood clots that, in rare cases, can be life threatening.

Blood clots can form in your blood vessels during or after surgery. In rare cases, a blood clot can travel to the heart or lungs. This can be very dangerous and can even be life threatening. Signs of blood clots include:

- Sudden shortness of breath
- Severe chest pain
- Pain, redness, swelling, or a cramping feeling in one or both of your legs

If you have any of these signs, call your surgeon or get emergency help right away.

There is a risk of lung infections or other breathing problems. In rare cases, a machine called a "ventilator" may be needed to help you breathe.

There is a risk that after surgery, you could get a lung infection (like **pneumonia**) or have other breathing problems. The best way to help prevent lung problems is to take deep breaths after surgery. Sometimes people are asked to use a small device (**incentive spirometer**) after surgery to help them breathe deeply.

Lung problems can usually be cured with antibiotics. People whose lungs were weak even before surgery may need the help of a machine (**ventilator**) until they can breathe on their own.

There is a risk your new stomach can become too narrow. Another procedure or operation may be needed to widen your stomach.

In the weeks or months after surgery, the stomach may become too narrow. If this happens, food can't pass through the stomach as it should. This can cause you to:

- Feel sick to your stomach
- Have belly pain
- Throw up

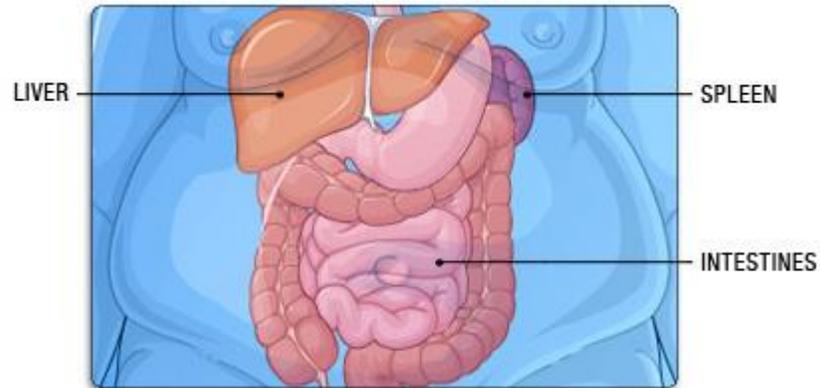
Most of the time, this problem can be treated with a simple non-surgical procedure. In rare cases, another operation may be needed to widen the stomach or create a **gastric bypass** (another type of weight loss surgery).

There is a risk the intestines, liver, spleen, or other organs may be injured during the operation. If this happens, another operation may be needed.

Although it doesn't happen very often, there is a risk that organs near the surgical area may be injured during the operation.

These organs include the:

- Liver
- Spleen
- Intestines



An injury can lead to a bad infection, a lot of bleeding, or long-term problems with the injured organ. Most of the time, an injury is repaired during the operation. Very rarely, another operation may be needed to fix an injury.

During the operation, your surgeon may discover he cannot perform the procedure with a laparoscope. If this happens, he will have to make a longer cut in your belly. This increases the risk of infection and of an "incisional hernia."

Your surgeon may discover during surgery that instead of several smaller cuts, one large cut is needed for the best result. This is called an **open approach**. This might be needed to do the operation successfully if:

- You have a lot of scar tissue in the belly from a previous operation
- Bleeding has made it difficult for your surgeon to see well

Because a larger cut is made, your recovery time may be a little longer than if a laparoscope was used. There's also a higher risk of a wound infection and of an **incisional hernia**. After surgery, a hole can form where cuts (**incisions**) were made inside the belly. Any time after the operation, part of the intestine can bulge through this hole. This is an incisional hernia. If this happens, another operation will be needed to repair the problem.

After surgery, there is a risk of developing malnutrition, anemia, or dehydration.

Making sure you're getting enough water and nutrients (like iron and protein) is very important after surgery. If your body isn't getting what it needs, you may have to go to the hospital for a few days of treatment.

If you have a lot of bleeding after surgery or if you're not getting enough iron in your diet, you may become anemic. This means you have fewer red blood cells than you should have. Early signs of anemia to watch for include:

- Feeling very tired
- Looking pale

If you're severely anemic you may need a blood transfusion. If you notice any of these signs, call your surgeon or get emergency help right away.

Dehydration can cause **constipation** (where you can't poop), and it can lead to **kidney stones**. To help avoid this:

- Slowly sip water between meals.
- Stay away from alcohol and any drinks with caffeine in them.
- Follow the instructions in your food and drink plan very carefully.

There is a risk of infection. Most of the time, antibiotics alone can get rid of an infection. In rare cases, another procedure may be needed.

Although your surgeon will take great care to prevent it, you may get an infection in the area surgery was done, or in other parts of your body (like in your lungs or bladder). Signs of infection include:

- Redness
- Swelling
- Fluid draining from the area surgery was done
- Pain that gets worse
- A high fever or chills

If you feel any of these things, call your surgeon right away.

Most of the time, antibiotics alone can get rid of an infection. In some cases, you may need to be admitted to the hospital for surgery or other treatments.

There's a risk of bad or allergic reactions to the anesthesia, medications, or materials that are used. While it's very rare, you can die from a serious reaction.

Some people may have bad reactions to anesthesia. For example, they may feel sick to their stomach or throw up after their procedure.

An allergic reaction happens when your body tries to get rid of something it doesn't want. Your body's response can be serious. Signs can include:

- Dizziness
- Swelling
- A rash

- Trouble breathing

Your healthcare team is trained and ready to respond to allergic reactions, but in rare cases people can die.

If you've ever had an allergic reaction, or know you are allergic to any drugs, foods, or materials (like latex), please let your doctors know. Also let them know if you or anyone in your family has ever had a serious reaction to anesthesia.

There is a risk of a stroke, heart attack, or death.

How your body handles surgery depends on many things. Age, illnesses, heart conditions, past strokes, and other things (like being very overweight) may make it harder to perform surgery successfully. It's also important for you to understand that your weight and other weight-related illnesses (like diabetes or high blood pressure) increase the risk of complications during any surgery or recovery period. Even though the risk is small, you may have a stroke, heart attack, or die from any of the risks above or for other reasons.

Alternatives

No surgery

One alternative is to not have surgery and continue trying to lose weight with diet and exercise. You may have tried everything and found that success has only been temporary. Even though not losing weight is an option, it's not a healthy one. You're still at a high risk for conditions like high blood pressure, diabetes, and heart disease.

Medication and exercise

For some people, combining medications with diet and exercise to help them lose weight may be an option. Your doctor can give you more information if you're interested.

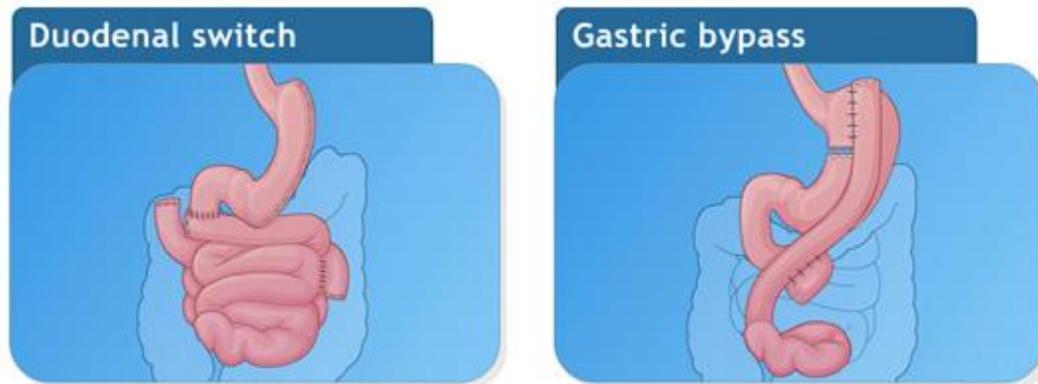
Surgical alternatives

There are 2 other main types of weight-loss surgery.

Duodenal switch and gastric bypass surgeries

These procedures shrink the size of the stomach and rearrange the path food follows, so it skips the first part of the small intestine. That means food gets

broken down less and fewer calories are absorbed, which leads to weight loss.



Surgery is a tool.

Surgery is only a tool to help you lose weight. It's not a quick fix. For any weight-loss operation to work, you have to be committed to a healthy lifestyle afterward. That means:

- Eating the right amounts of the right foods
- Staying away from the bad stuff
- Getting regular exercise

If you're ready to do all that, then a sleeve gastrectomy can be a great way to lose weight and improve your health.

Health Information Forms

After you print this summary, you can fill out the following forms. Keep a copy at home and take a copy to your next doctor's appointment.

MY HEALTH INFORMATION

Name: _____

Please fill this out and share it with your doctor.

Date: _____

My Health Conditions: Include anything like diabetes or heart disease, if you may be pregnant, or if you've had an illness or any surgery before. Also write down if an illness or condition runs in your family.

Blank lined area for writing health conditions.



MY HEALTH INFORMATION

Name: _____

Please fill this out and share it with your doctor.

Date: _____

My Allergies: (for example: penicillin, shellfish, peanuts, latex)



A large rounded rectangular box with a thin black border, containing 15 horizontal lines for writing. The lines are evenly spaced and extend across most of the width of the box, leaving a small margin on the left and right sides.

MY HEALTH INFORMATION

Name: _____

Please fill this out and share it with your doctor.

Date: _____

Past Surgeries or Procedures:

Have you, or anyone in your family, ever had any kind of bad reaction to anesthesia? Please describe:

DISCLAIMER

This Emmi® program is for your information and education only. Using this program does not take the place of conversations between you and your healthcare provider. This program gives general information about how some health problems may be treated. This information is extra education in addition to your appointments with your healthcare provider. This Emmi program is meant to educate you about medical conditions and/or surgical procedures, but it does not cover everything. This program may

go over the most common possible risks and complications of medical treatments or surgical procedures. But there may be other problems, known and unknown, that can happen after treatment or surgery. No guarantees or warranties are made about the treatment or surgery itself.

This Emmi program is not meant to give exact medical or surgical advice to anyone. And it does not replace the informed consent process you will go through with your healthcare provider. Please talk with your healthcare provider about any questions or concerns you have about the information in this program. Also talk with your healthcare provider in person about what kinds of problems you may have if you do not have this treatment.

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