PROCEDURE

Vertical sleeve gastrectomy

Vertical sleeve gastrectomy removes most of the stomach to support weight loss.

PURPOSE
Support major weight loss and improve obesity-related health conditions

PROCEDURE TYPE
Therapeutic minimally invasive surgery

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General anaesthesia

HOW LONG IT TAKES
Usually 60 to 120 minutes

PREPARATION
Fasting, medication review, smoking cessation, and preoperative diet

RECOVERY
One to two nights; no driving while using opioid pain medicines

MAIN RISKS
Staple-line leak, bleeding, blood clots, reflux

RESULTS
New stomach size immediate; weight loss unfolds over months

Overview

Vertical sleeve gastrectomy is an operation that removes most of your stomach. The remaining stomach is a narrow tube, or sleeve, that holds less food.

The operation can also affect hormones involved in hunger, fullness, and blood sugar control. It supports weight loss, but it does not work on its own. Long-term results also rely on eating changes, physical activity, vitamin supplements, and regular follow-up.

The surgery is usually performed through several small cuts in the abdomen using a camera and long instruments. This is called laparoscopic or minimally invasive surgery. The removed part of the stomach cannot be replaced, so the procedure is considered permanent.

Unlike gastric bypass, sleeve surgery does not reroute the intestines. Food continues through the digestive system in the usual order.

Why the procedure is performed

Vertical sleeve gastrectomy is used to treat obesity when less invasive approaches have not produced enough lasting improvement. It may help you lose substantial weight and improve conditions linked with obesity, such as:

Improvement is not guaranteed. Some conditions improve quickly, while others require continued treatment. The operation is not intended as a cosmetic procedure or a short-term way to lose weight.

- Type 2 diabetes
- High blood pressure
- Obstructive sleep apnoea
- Fatty liver disease
- Joint pain and reduced mobility
- Abnormal cholesterol levels

Who should and should not have it

Your team considers your body mass index, or BMI, together with your health conditions, previous weight-management treatment, surgical risk, and ability to follow lifelong care. BMI compares weight with height but does not describe your health by itself.

Current specialist guidance recommends metabolic and bariatric surgery for many adults with a BMI of 35 or higher. It may also be considered at a BMI of 30 to 34.9 when metabolic disease or unsuccessful nonsurgical treatment is present. Local eligibility rules may differ.

You need to understand the permanent change, possible complications, eating restrictions, and need for supplements and follow-up.

Surgery may be avoided or delayed if you:

Smoking raises the risk of breathing problems, blood clots, poor healing, and leakage. Your programme may require you to stop before surgery.

Severe acid reflux or Barrett's oesophagus, which is damage to the swallowing tube from long-term reflux, may make gastric bypass a better option. This is not the same for everyone and requires individual assessment.

- Are pregnant or planning pregnancy soon

- Have an untreated alcohol or drug-use disorder
- Have a severe mental health or eating disorder that is not stable
- Cannot safely have general anaesthesia
- Have an active infection or an unstable medical condition
- Cannot take part in the required nutrition and follow-up programme

How to prepare

Your treating facility's own instructions take priority because fasting, medicines, and admission plans differ between programmes.

You may meet a surgeon, anaesthesia professional, dietitian, and other members of the bariatric team. Testing may include blood tests, an electrocardiogram, sleep apnoea assessment, or other tests based on your health.

Many programmes prescribe a low-calorie diet before surgery. This can shrink the liver and make the operation safer to perform. Follow the plan exactly rather than creating your own.

Tell the team about every medicine, vitamin, and supplement you use. Blood thinners like warfarin or apixaban , diabetes medicines, and medicines that affect stomach emptying may need special instructions. Do not stop a prescribed medicine unless your treating team tells you to.

You will need to stop eating and drinking before anaesthesia. Bring your CPAP machine if you use one for sleep apnoea. Arrange help at home and transport after discharge.

What happens during the procedure

You receive general anaesthesia, so you are unconscious and do not feel the operation.

The surgeon makes several small cuts in your abdomen and fills the abdominal space with gas to improve visibility. A camera and surgical instruments are inserted through the cuts.

A sizing tube helps guide the shape of the new stomach. The surgeon divides the stomach vertically with surgical staples and removes the larger outer portion. The narrow stomach sleeve remains connected to the oesophagus above and the small intestine below.

The team may test the staple line for leakage or bleeding. The instruments are removed and the cuts are closed. Occasionally, an operation must be changed to an open procedure with a larger incision if this is safer.

Recovery and what to expect afterward

Abdominal soreness and discomfort around the small cuts are common. Pain should gradually improve and can usually be managed with the plan provided by your team. Severe or increasing pain needs prompt assessment.

You will begin with small amounts of fluid. Food advances in stages from liquids to puréed or soft foods and then to suitable solid foods. Eat slowly, stop when full, and follow your dietitian's plan. Lifelong vitamin and mineral supplements are usually required.

Short, frequent walks help recovery and lower the risk of blood clots. Avoid heavy lifting and strenuous exercise until your surgical team says these are safe.

Do not drive home. Resume driving only when you are no longer taking medicines that impair alertness, can move comfortably enough to control the vehicle, and have been cleared under your programme's instructions.

Return-to-work timing reflects your recovery and job demands. Desk work is usually possible sooner than heavy or physically demanding work.

Risks and possible complications

All major surgery carries risk. Possible early complications include bleeding, infection, blood clots, breathing problems, and reactions to anaesthesia.

A leak can develop where the stomach was stapled. It may cause fever, a fast heartbeat, worsening abdominal or shoulder pain, or shortness of breath. A leak may require drainage, an endoscopic procedure, antibiotics like amoxicillin or doxycycline , or another operation.

Later problems can include:

Some complications need additional procedures. A sleeve may occasionally need to be converted to another type of bariatric operation.

- Acid reflux or worsening heartburn
- Narrowing or twisting of the stomach sleeve
- Nausea, vomiting, or difficulty tolerating food
- Vitamin and mineral deficiencies
- Gallstones during rapid weight loss
- Hernia at an incision

- Inadequate weight loss or weight regain

Results and follow up

The change in stomach size is immediate, but weight loss occurs over months. The amount and pace differ between people. Weight may eventually stabilise, and some regain can occur.

Blood sugar or blood pressure may improve early. Do not change diabetes, blood pressure, or other medicines on your own; doses may need prompt review as your health changes.

Follow-up usually includes visits with the surgical and nutrition teams. Blood tests check for anaemia and low levels of iron, vitamin B12, folate, vitamin D, calcium, and other nutrients. Continue supplements and recommended testing even when you feel well.

Persistent reflux, vomiting, swallowing difficulty, or renewed weight gain should be discussed during follow-up rather than managed by restricting food or supplements without advice.

Alternatives

Alternatives offer different balances of effectiveness, risk, reversibility, and long-term care.

Continuing your current treatment is also an option. Ask what benefit surgery is expected to provide in your situation and what may happen without it.

- Structured nutrition, activity, and behavioural treatment: avoids surgery but usually produces less weight loss and requires continued support
- Weight-management medicines: avoid an operation and can be effective, but side effects, cost, long-term use, and weight regain after stopping may matter
- Roux-en-Y gastric bypass: may provide stronger reflux and diabetes benefits, but reroutes the intestine and carries greater risk of internal hernia, ulcers, and nutrient deficiencies
- Adjustable gastric band: does not remove stomach tissue and can be removed, but usually gives less weight loss and often requires adjustments or later surgery
- Duodenal switch procedures: can produce greater weight loss, but have higher risks of diarrhoea, malnutrition, and vitamin deficiencies
- Endoscopic sleeve gastroplasty: uses an endoscope through the mouth without removing stomach tissue, but usually produces less weight loss and may not be locally available

When to call your healthcare team

Contact your surgical team promptly for fever, increasing wound redness, worsening abdominal pain, repeated vomiting, inability to drink, reduced urination, persistent fast heartbeat, worsening reflux, or difficulty swallowing.

Seek emergency help for severe breathing difficulty, chest pain, fainting, vomiting blood, black stools, sudden severe abdominal pain, or a painful swollen leg. These can be signs of bleeding, a blood clot, or another serious complication.

Routine questions about diet stages, supplements, wound care, work, or planned medicine changes can usually wait for normal clinic hours.

Common questions

Will I be asleep?

Yes. Vertical sleeve gastrectomy is performed under general anaesthesia, so you are unconscious throughout the operation.

Can I drive home?

No. You need someone else to take you home. Do not drive while using opioid pain medicine or until you can safely control the vehicle.

How painful is it?

Soreness and pressure are common, especially around the incisions. Pain should improve. Severe, sudden, or worsening pain is not routine and needs medical assessment.

When will I know whether it worked?

The surgeon can confirm the operation immediately. Weight loss and changes in related health conditions become clearer over the following months.

Can the stomach grow back?

The removed stomach does not grow back. The remaining sleeve can stretch over time, which may allow larger portions and contribute to weight regain.

Will I need vitamins forever?

Usually, yes. The smaller food intake can make deficiencies more likely even though the intestines have not been rerouted.

Sources

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