PROCEDURE

Spleen removal

Spleen removal is surgery to remove part or all of the spleen.

PURPOSE
Remove a damaged or disease-affected spleen

PROCEDURE TYPE
Therapeutic surgery, usually minimally invasive or open

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General anaesthesia

HOW LONG IT TAKES
About 1 to 4 hours

PREPARATION
Fasting, medicine review, blood tests, and planned vaccines

RECOVERY
One to several hospital days; driving restricted during early recovery

MAIN RISKS
Bleeding, infection, blood clots, nearby-organ injury

RESULTS
Surgical outcome immediately; laboratory pathology in several days

Overview

Spleen removal, called a splenectomy , is surgery to remove all or part of your spleen. The spleen sits under the ribs on the upper left side of your abdomen. It filters blood, removes old blood cells, and helps your immune system respond to certain infections.

You can live without a spleen. However, your lifelong risk of some serious infections increases after it is removed. Vaccination, awareness of infection symptoms, and sometimes antibiotics like amoxicillin or doxycycline help manage this risk.

Most planned splenectomies are done through several small cuts using a camera. This is called laparoscopic or minimally invasive surgery. Open surgery uses one larger cut and may be needed for severe bleeding, a very large spleen, extensive scar tissue, or technical difficulties.

Why the procedure is performed

Spleen removal may be recommended when keeping the spleen is more harmful than removing it. Reasons include:

For some blood disorders, splenectomy is considered only when medicines or other treatments have not worked well enough. In an emergency, it may be needed to control life-threatening internal bleeding.

- Severe spleen injury or uncontrolled bleeding after trauma
- Certain blood disorders that destroy or trap blood cells
- A very enlarged spleen causing pain or blood-cell problems
- A spleen abscess, cyst, or tumour that cannot be managed another way
- Cancer involving the spleen
- Problems with blood flow through the spleen

Who should and should not have it

You may be offered splenectomy if tests show that removing the spleen is likely to control bleeding, improve a blood disorder, or treat a spleen growth or infection. Your surgical team should explain the expected benefit for your specific condition.

Splenectomy is not automatically the best choice for every spleen problem. Observation, medicines, or a procedure that reduces blood flow to the spleen may be safer in some situations.

Planned surgery may be delayed if you have an active infection, an uncontrolled bleeding problem, or a medical condition that makes general anaesthesia temporarily unsafe. Vaccinations and other preparation may also need to be completed first when time allows.

A minimally invasive operation may not be suitable if the spleen is extremely large, bleeding is difficult to control, or previous surgery has caused extensive internal scar tissue. The surgeon may plan an open operation or change to one during surgery.

In an emergency, the need to stop bleeding may outweigh reasons that would normally delay surgery.

How to prepare

Your treating facility's own instructions take priority because preparation differs between planned and emergency surgery.

Before planned surgery, you may have blood tests, imaging, and an anaesthetic assessment. Tell the team about all prescription medicines, over-the-counter products, supplements, allergies, previous reactions to anaesthesia, and any chance of pregnancy.

You will usually need to stop eating and drinking before general anaesthesia. Follow the exact fasting times provided by the facility.

Medicines that affect bleeding, including anticoagulants or "blood thinners like warfarin or apixaban ," may need adjustment. Do not stop them on your own. The plan must balance surgical bleeding against the reason you take the medicine.

When possible, recommended vaccines are given before planned spleen removal. These commonly include vaccines against pneumococcal, meningococcal, and Haemophilus influenzae type b infections. If surgery is an emergency, vaccination is arranged afterward. Your schedule will reflect your previous vaccines, age, health, and local guidance.

Arrange for help at home and transport after discharge. You will not be able to drive yourself home.

What happens during the procedure

After you receive general anaesthesia, you will be unconscious and will not feel the operation. A breathing tube supports your breathing.

During minimally invasive surgery, the surgeon makes several small cuts in your abdomen. A camera and narrow surgical instruments are inserted through these cuts. The blood vessels attached to the spleen are sealed, and the spleen is separated from nearby tissues and removed.

During open surgery, the surgeon reaches the spleen through one larger abdominal cut. Open surgery provides faster or wider access when there is major bleeding or a technically difficult spleen.

The surgeon checks for bleeding before closing the cuts. A temporary drainage tube is sometimes placed. The spleen is usually sent to a laboratory for examination, particularly when it was removed because of a blood disorder, growth, or unexplained enlargement.

Recovery and what to expect afterward

Pain: Soreness around the cuts is expected. After keyhole surgery, gas used during the operation can also cause temporary shoulder-tip pain. Pain usually improves over several days and is treated with medicines.

Eating: You may begin with fluids and then return to food as your stomach and bowel function recover. Nausea, bloating, or a reduced appetite can occur at first.

Activity: Walking soon after surgery helps reduce blood clots and chest problems. Avoid heavy lifting and strenuous activity until the surgical team says your abdominal wall has healed. Recovery is often quicker after minimally invasive surgery than after open surgery.

Driving: Do not drive while taking medicines that make you drowsy. You must also be able to turn comfortably, wear a seat belt, and perform an emergency stop without pain. Follow your surgeon's instructions and any insurance restrictions.

Work: Return depends on whether surgery was minimally invasive or open and whether your job involves lifting. Desk work may be possible sooner than physical work. Fatigue can last longer than the wound pain.

Risks and possible complications

Possible surgical and anaesthetic complications include:

After total spleen removal, you have a lifelong increased risk of severe infection, especially from certain bacteria. Vaccines lower this risk but do not remove it completely. Some people are prescribed daily or emergency antibiotics based on age, medical history, local policy, and individual risk.

Platelet levels can rise after surgery. Your team may monitor your blood count and decide whether any treatment is needed.

- Bleeding that may require a transfusion or another procedure
- Infection in the wound, abdomen, lungs, or urinary tract
- Blood clots in the legs, lungs, or abdominal veins
- Injury to nearby structures, including the stomach, pancreas, bowel, or diaphragm
- A collection of fluid or pus inside the abdomen
- A hernia or ongoing discomfort at an incision

Results and follow up

The surgeon can usually tell you soon afterward whether the spleen was removed as planned and whether there were immediate concerns. Laboratory examination of the spleen may take several days or longer.

Routine follow-up checks your wounds, pain, recovery, blood counts, and pathology results. The team should also review your vaccine plan and whether you need antibiotics.

Keep a record showing that you do not have a spleen. A medical alert card, bracelet, or phone record can help healthcare workers act quickly if you become unwell.

Alternatives

The realistic alternatives depend on why splenectomy was offered.

Ask what is likely to happen without surgery and what each alternative gives up in effectiveness, speed, or long-term control.

- Careful observation: Some stable spleen injuries can be monitored with repeated examinations, blood tests, and imaging. This avoids surgery but requires close monitoring because bleeding can begin or worsen.
- Splenic artery embolization: A radiologist blocks selected blood vessels through a thin tube inserted into an artery. This may control bleeding while preserving some spleen tissue, but it may fail or cause tissue damage and infection.
- Medicines: Steroids like prednisone or hydrocortisone , immune treatments, or other medicines may control certain blood disorders. They avoid surgery but can have side effects, may need repeated courses, and may not provide lasting control.
- Partial splenectomy: Removing only part of the spleen may preserve some immune function. It is not technically suitable for every injury or disease, and the original problem can remain or return.
- Treatment of the underlying condition: Chemotherapy or other cancer treatment may sometimes be used instead of immediate surgery. It may not relieve spleen-related bleeding, pain, or blood-cell problems quickly.

When to call your healthcare team

Contact your surgical team promptly for increasing wound redness, drainage, worsening pain, repeated vomiting, trouble eating or drinking, or a swollen abdomen. Also call about new calf pain or swelling.

Because infection can become serious more quickly without a spleen, seek urgent medical advice for a fever, shaking chills, or feeling suddenly very unwell. Follow any emergency antibiotic plan you were given, but do not let taking an antibiotic delay assessment.

Call emergency services for difficulty breathing, chest pain, fainting, confusion, uncontrolled bleeding, or severe and rapidly worsening abdominal pain.

For routine care, tell healthcare professionals that you have no spleen. Ask for advice before travel to places where malaria is present and after an animal bite, because extra prevention or treatment may be needed.

Common questions

Will I be asleep?

Yes. Splenectomy is performed under general anaesthesia, so you will be unconscious during the operation.

Can I drive home?

No. You will need someone else to take you home. Resume driving only when you are no longer taking sedating pain medicine and can safely control the vehicle.

How painful is spleen removal?

Pain is expected around the incisions, particularly when moving or coughing. It is usually managed with pain medicine and improves as the wounds heal. Open surgery generally causes more discomfort and a longer recovery than minimally invasive surgery.

When will I know the results?

The surgeon can discuss the immediate surgical result soon afterward. If the spleen is examined in a laboratory, the full report usually takes several days or longer.

How long will I be in hospital?

Some people go home after a short stay following minimally invasive surgery. Open or emergency surgery often requires a longer stay, especially when there are other injuries or medical problems.

Can I live normally without a spleen?

Most people return to their usual activities. You will need lifelong attention to vaccination, fever, infection prevention, and travel or animal-bite precautions.

Sources

- Centers for Disease Control and Prevention. Altered Immunocompetence: General Best Practice Guidelines for Immunization
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- American College of Surgeons. Splenectomy: Surgical Removal of the Spleen
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