

Patient information from BMJ

Last published: Feb 01, 2022

Inguinal hernia: hernia surgery

This information tells you about an operation to repair a hernia in your groin.

It explains how the operation is done, how it can help, what the risks are, and what happens afterwards.

Procedures can vary slightly between hospitals. You can use our information to discuss your treatment with the doctors and nurses treating you.

What is an inguinal hernia repair?

An inguinal hernia is a bulge that you can see or feel in your groin. The word **inguinal** means groin. To repair the hernia, a surgeon will usually push the lump back into place and cover it with a patch of mesh to keep it there.

The hernia is caused by a weak spot in the muscles in your abdomen. Tissue such as fat and a section of your bowel can slip through a weak place in the muscle and down into your groin.

Inside your abdomen, your bowel is covered by a thin film of tissue called the **peritoneum**. When the bowel slips through the weak spot in the muscle, this film of tissue falls with it.

The hernia is like a pouch with fat, tissue, and bowel in the middle of the peritoneum. Doctors call this pouch the **hernia sac**.

Usually, the muscles in your abdomen are tight and strong enough to keep your bowel in place. But weak points can occur in two ways, causing two different kinds of hernia.

Both types of hernia are more common in men than in women.

Indirect hernia

If you have an indirect hernia, you are born with a weakness in the muscles in your abdomen.

By the time boys are born, or soon after, the testicles drop from the abdomen into the scrotum through a gap in the abdomen muscles, called the inguinal canal.

This gap usually closes soon after birth. But if the gap stays open, part of the bowel can fall through it.

Women can have this type of hernia, too.

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Direct hernia

A direct hernia happens when you strain your abdomen. It's called a direct hernia because the hernia pushes directly through the weak point in the muscles. This can be caused by:

- severe coughing
- straining when urinating or having a bowel movement, or
- lifting heavy objects.

Why might I need this operation?

There are several reasons why you might want a hernia operation.

To remove the bulge and relieve symptoms

An inguinal hernia can be uncomfortable and feel tender, especially when you bend or lift. The symptoms might go away by themselves after a while, but you'll still have the bulge in your groin.

In men, the lump can move into the scrotum (the bag that holds the testicles), making it swollen and sore. Some people can feel gurgling in the part of the bowel inside the lump. Others feel a burning sensation in their groin.

Untreated hernias can get bigger and become more painful and uncomfortable. Some people find that it stops them playing sport or having sex.

Not everyone with a hernia has symptoms, but most people don't like having the bulge in their groin.

To prevent a blocked bowel

The part of the bowel in the bulge can become squeezed by the small opening it has slipped through. This can cut off the blood supply to the bowel.

If blood stops flowing to this part of the bowel, it can die. Doctors call this a **strangulated hernia**. It's very serious and you'll need to have an operation to repair the hernia straight away.

Untreated strangulated hernias can cause death. About 5 in 100 people need emergency surgery for a first hernia.

To repair a hernia that has come back

Hernia surgery works well for most people, but it is not uncommon for hernias to come back and for people to need a second operation.

Does every hernia need surgery?

Doctors usually suggest that people with a hernia should have it repaired. But if your hernia is small and you don't have any other symptoms (such as pain or redness), you might not need it repaired straight away. You can wait until it's convenient.

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Some people can push the hernia back in, but it's likely to come out again. Babies and children tend to have hernias fixed straight away, because hernias in children are more likely to become strangulated.

If you are older and have another serious illness, such as heart problems or breathing problems, talk to your doctor about whether it's best to have hernia surgery or to leave it alone.

What will happen?

The operation takes between 30 and 50 minutes. You might be able to go home the same day, but some people stay in hospital overnight.

Before the operation you'll need to go to the toilet to empty your bladder. A full bladder is more likely to be damaged during the operation or to block the surgeon's view of your hernia.

There are two ways to do this operation:

- With **open surgery** the surgeon opens up your groin so that he or she can see inside
- With **keyhole surgery** the surgeon uses a tiny camera to see inside your groin, so a large cut is not needed.

Open surgery

Open hernia surgery can be done with either a general or local anaesthetic.

With a general anaesthetic you'll be asleep during the operation. With a local anaesthetic in the groin or an epidural (a pain-killing injection into the spine) you'll be awake but you won't feel any pain.

You'll need to have the hair in your groin area shaved off.

During the operation:

- your surgeon makes a cut through your groin. The cut will be about 5 to 10 centimetres long (about 2 inches to 4 inches)
- the bowel and fat are pushed back into place
- the surgeon usually covers the hole in the muscle with a patch of mesh. This strengthens the muscle to stop your bowel slipping through again. You'll probably need stitches to close the wound. These will eventually dissolve.

Keyhole surgery

During this type of hernia surgery:

- you'll have a general anaesthetic to make you sleep. The surgeon makes a small cut in, or just below, your belly button.
- a thin tube with a light and camera on the end (called a laparoscope) is put through the cut and down to your groin. The camera sends pictures to a screen so the surgeon can see inside your abdomen.

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- instruments to repair the hernia are inserted through another small cut lower down your abdomen. Your surgeon pushes the section of bowel in the hernia back into your abdomen and closes the hole with a mesh patch.

Which type of surgery is best?

You might be able to choose what type of surgery you have. Often, the type of surgery you are offered will depend on what is usually used where you are being treated.

For example, it might be that your surgeon has a lot of experience with one technique. You should ask your doctor about what type of surgery you will have and why.

There are advantages to each type of surgery. Some doctors recommend keyhole surgery for several reasons. For example:

- your scars will be smaller. **Keyhole operations** leave two small scars near your belly button. Each scar is about 1 centimetre (half an inch) long. If you have **open surgery** you'll have a scar in your groin that's about 5 to 10 centimetres (2 to 4 inches) long
- you might be able to leave hospital a few hours sooner than if you have open surgery
- you'll probably recover faster. People who have a keyhole operation can usually get back to their normal daily activities a few days sooner than people who have open surgery
- you might have less pain and numbness in the days after your surgery, so you won't need to take as many painkillers
- you are less likely to have pain that drags on for months or even years after the hernia has been repaired (doctors call this chronic groin pain).

But one downside of keyhole surgery is that you will need a general anaesthetic, while open surgery can be done with a local anaesthetic. A local anaesthetic is less likely to cause problems such as nausea and, rarely, allergic reactions.

Serious problems, such as damage to other organs, are rare. But they might be more likely to happen with keyhole surgery.

What are the risks?

All operations have risks, and your surgeon should discuss them with you before you have your hernia repaired.

Anaesthetics can have side effects. These are more common with general anaesthetics. The most common side effect is feeling nauseous for a while after you wake up.

Anaesthetics can also cause allergic reactions in some people. You should tell your doctor before your operation if you have any allergies.

The list of possible complications below might look long and worrying. But remember, these are just things that might happen, not that definitely will. Most people have no problems with hernia surgery.

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You are more likely to have problems during or after hernia surgery if you smoke or if you are very overweight.

Problems that can happen in the short term

Complications that can happen during or soon after the operation include:

- heavy bleeding under the skin after the operation. If the blood builds up and clots, your groin will swell and feel tender. This causes a large bruise called a **haematoma**. Haematomas often go away by themselves. But if the bleeding doesn't stop you might need an operation to stop it
- a temporary build-up of fluid in the groin area. Doctors call this a **seroma**
- an infection deep inside your groin or in the wound on your skin. This is very rare. But if it happens you will need antibiotics to treat it
- injured blood vessels and organs. This is more common with keyhole surgery. In men, it's possible to damage the tube (called the vas deferens) that carries sperm from each testicle to the penis. If this happens, you might not be able to produce sperm
- switching to an open operation. Your surgeon might start the operation using the keyhole method but then might need to cut open your groin part way through
- temporary swelling in the testicles. It's common for men to have slightly swollen testicles for a few days after the operation. But in some men, the testicles become very large and painful. This is called **testicular atrophy**. It happens if the blood supply to the scrotum or testicles is cut off during the operation.

Possible longer-term problems

Problems that can last a long time or that can start some time after your operation include:

- long-lasting groin pain. This is a common complication of this kind of surgery. It happens to about 10 in 100 people. Some people have pain that drags on for months or even years. This is called **chronic groin pain**. This probably happens when nerves get trapped in the stitches or mesh or become damaged during the operation.

People describe it as a stabbing, gnawing, and tugging pain in their groin and upper thigh. It can be bad enough to affect people's quality of life. For example, it can affect your mood and your relationships. In some people it's so serious that it affects their sleep and their ability to walk.

Chronic groin pain seems to be more common in people who were in a lot of pain before their operation, and it seems to happen more often with open surgery than with keyhole surgery

- numbness in your groin. If nerves are damaged during the operation your groin area might go numb. The feeling might return, but in some people it takes months or even years. This problem is more common after open surgery
- your hernia coming back. This affects about 2 in 100 people. Your hernia might be more likely to come back if you smoke, because smoking affects the healing process.

What can I expect afterwards?

Straight after the operation: a nurse will take your temperature, pulse, and blood pressure regularly. You might feel a little nauseous from the anaesthetic. But you should be able to get up and eat and drink normally within a few hours.

Your groin will feel sore and uncomfortable for a while after your operation. But you'll be given painkillers. If you're still in pain, you should tell your nurse. Being in pain can slow your recovery. You might need a higher dose or a different painkiller.

If the pain is severe or lasts longer than a week, you should see your doctor, as you could have an infection or a trapped nerve.

People who have keyhole surgery tend to have less pain than those who have open surgery.

At home: taking gentle exercise when you get home can help healing, but you should avoid doing sport or heavy lifting for a while.

Drink plenty of water and eat foods that are high in fibre (such as wholemeal bread and green vegetables) to prevent constipation. Straining to empty your bowels can put pressure on your abdomen.

If you had open surgery, the dressing stays in place for two to five days. Most dressings are waterproof, but check this with your surgeon or a nurse before you take a shower or bath.

You'll have scars either in your groin or on your abdomen, but the redness should fade.

Back to work. It will take two to three weeks before you can get back to your usual activities, such as walking, working, and sport. But you might recover faster if you've had a keyhole operation.

People with physically demanding jobs take about four weeks off, while people who work sitting down tend to take less than two weeks off.

Sex. You might find sex painful or uncomfortable at first, but it's fine to have sex as soon as you feel ready.

Driving. It's best not to drive for the first few days while your groin is healing. This is because you might not be able to brake suddenly if you need to, and the impact of stopping might hurt and could cause the hernia to come back.

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