

Patient information from the BMJ Group

Hernia

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Hernia

Having a hernia can be uncomfortable and make it difficult for you to carry out normal activities. But the good news is that surgery works well to repair a hernia.

We've brought together the best research about hernias and weighed up the evidence about how to treat them. You can use our information to talk to your doctor and decide which treatment is best for you.

What is a hernia?

An inguinal hernia is a bulge you can see or feel in your groin. The bulge is a bit of fat and bowel that has slipped through a weak spot in the muscles in your abdomen and down into your groin. The word inguinal means groin.

A hernia can be uncomfortable and feel tender, especially when you bend and lift. It may make it difficult for you to do normal activities, like shopping or having sex.

Some people can push their hernia back in, but it's likely to come out again. Surgery is the only way to repair a hernia.

This information is about inguinal hernias. We don't discuss another kind of hernia called a hiatus hernia (which happens where the oesophagus meets the stomach).

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Key points for people with a hernia



You're more likely to have a hernia if you're an older man.

- About 9 in 10 hernias happen in men.
- An operation is the only treatment for a hernia. It can get rid of the bulge and prevent a blocked bowel.
- Surgeons can operate by opening up your groin (**open surgery**) or by making small cuts in your groin and using a camera to see inside (**keyhole surgery**).
- You may recover faster and get less pain and numbness in your groin with keyhole surgery than with open surgery. But not all surgeons are trained to do keyhole operations.
- If you don't have surgery, your hernia may get bigger and more difficult to repair. The bowel that has slipped out of your abdomen can get trapped and lose its blood supply. This is called a **strangulated hernia**. It can be life threatening.

Your abdomen

To understand how a hernia happens, it helps to know more about your lower abdomen and groin.

- The organs in your abdomen, such as your bowel, are covered by a film of tissue. This film is called the peritoneum.
- The organs are held in place by layers of muscle. These muscles are called the abdominal wall. They run from below your ribs into your groin.
- Doctors call the groin area the inguinal area.

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You are born with a natural opening between the layers of abdominal muscles near your groin. This is called the inguinal canal. It's about 4 centimetres (1.5 inches) long, but is usually bigger in men than in women.

- In boys, the testicles drop through this opening into the scrotum by the time they're born or just after. The tube (vas deferens) that carries sperm from the testicles to the penis runs through the inguinal canal.
- In women, a band of tissue that holds the womb in place passes through the inguinal canal.
- The inguinal canal usually closes just after you're born or before you're 2 years old.

What happens if you have a hernia?

Usually, the muscles in your abdomen are tight enough to keep your bowel and other organs in place. But some people have weak points in these muscles.

A hernia happens when a bit of fat and bowel slips through a weak point in the muscle and down into your groin. When the fat and bowel slip through the weak spot, a layer of the peritoneum falls with it. The hernia is like a pouch with fat, folds of peritoneum, and bowel in the middle of it. Doctors call this pouch the hernia sac. The hernia shows as a bulge or swelling in your groin.

Sometimes parts of other organs, such as your bladder, can slip into the hernia.

Weak spots happen in two ways. They cause two different kinds of hernias. ^[1] ^[2]

- You're born with a weakness in the muscles in your abdomen. This can happen if the gap in the muscles (the inguinal canal) hasn't closed as it should. If this gap stays open, part of your bowel can fall through it and bulge in your groin. ^[3] Hernias that happen this way are called indirect hernias. This is the most common type of hernia. ^[4] Nearly all hernias in babies, children, and young adults are indirect hernias. ^[5]
- You strain your stomach. If you cough a lot or strain when you go to the toilet, you can damage the muscles in your abdomen. Heavy lifting can also damage the muscles. The muscles get weak or even tear, and can't keep the bowel in place. Hernias that happen this way are called direct hernias.

In men, the hernia can move into the scrotum. This is called a complete hernia. ^[5] The scrotum can get very large if the hernia isn't repaired.

You may be able to push your hernia back into your abdomen, or it may go back by itself. Doctors call this a reducible hernia.

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Hernia: why me?

Anyone can get a hernia. But there are some things that make it more likely. These are called risk factors. Some of these you can control, and others you can't. But having a risk factor doesn't mean you'll definitely get a hernia.

You may be more likely to get a hernia if: ^[6] ^[7]

- You're male
- You're older
- You strain your abdominal muscles when you go to the toilet. People who get constipated a lot are at higher risk. So are men with an [enlarged prostate](#) who have to strain to urinate
- You have an ongoing heavy cough. This can put pressure on the muscles in your abdomen. People who have [chronic obstructive pulmonary disease](#) (COPD) tend to cough a lot and have a higher risk of a hernia
- You do a lot of heavy lifting
- Other people in your family have had a hernia
- You're pregnant. Being pregnant stretches your abdominal muscles and can cause weak spots
- You get a tear in the muscles in your abdomen because of an injury or surgery.

Babies (especially boys) who are born early and underweight have a high risk of getting a hernia. It's most likely to happen before they're 2 years old, but they have a higher risk until they're about 8. ^[8]

Baby boys whose testicles haven't dropped into their scrotum also have a higher risk of a hernia. This is because the opening in their abdominal muscles (inguinal canal) stays open.

What are the symptoms of a hernia?

An inguinal hernia is a bulge or swelling in your groin. Its size depends on how much bowel and fat has slipped out of your abdomen and down into your groin.

If you have a hernia you may notice the following.

- You can see or feel a bulge or swelling in your groin. It may get bigger when you cough, bend, lift, or strain. You may only be able to feel the lump when you stand up. Some people can push their hernia back into their abdomen.

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- Your groin may feel uncomfortable and tender, especially when you bend or lift. In men, the lump can move into the scrotum (the bag that holds the testicles). This can be painful and it can cause swelling.^[9] Small hernias can be as painful as large hernias.
- The part of your bowel inside your hernia may gurgle. You may also get a burning feeling in your groin.

You can get a hernia on one side of your groin or on both sides. You're more likely to get a hernia on the right side of your body.^{[10] [11]}

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

A hernia may show in babies and children only when they cry or cough. Some children have a hernia but don't have any symptoms until they are adults.

There's a chance that your hernia could lead to a more serious problem. It's important to see a doctor straight away if:

- Your bulge is very painful to touch^[12]
- You have bad pain in your groin that doesn't go away^[12]
- You feel sick, or get a high temperature
- Your hernia looks red, purple, or black.

To read about problems that could happen if you don't have an operation to repair your hernia, see [What will happen to me?](#)

How do doctors diagnose a hernia?

If you have an inguinal hernia you can probably see or feel a bulge or swelling in your groin. Doctors can usually diagnose a hernia by examining your groin. But you may also need an ultrasound or x-ray.

To diagnose a hernia your doctor will probably do the following.

- Ask about your symptoms. You may be asked if your groin is painful, how long you've had symptoms, and whether they are worse when you stand up or strain your muscles.
- Feel your abdomen and groin. You'll need to take off some of your clothes and probably your underwear. While you're standing up, your doctor will gently press your groin to feel the bulge or painful area. You may need to cough to see if a bulge

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appears when you strain the muscles in your abdomen. Your doctor might also want to examine your groin again while you lie on your back. ^[17]

- Examine you internally. If you're a man, your doctor may put a finger against your scrotum and press gently into an opening in your abdominal muscles (called the inguinal canal). If you have a hernia, it will bulge onto the doctor's fingertip when you cough. If you're a woman, your doctor may put a finger just inside your vagina to see if there's a bulge there. ^[17]

Your doctor should check both sides of your groin for hernias. ^[18]

Most people don't need any more tests. However, your doctor may recommend an ultrasound if: ^[17] ^[19]

- You have a soft swelling in your groin, but your doctor isn't sure that it's a hernia
- Your groin is painful but your doctor can't feel a bulge.

An ultrasound is a reliable way to check for hernias. ^[1] ^[20] It uses sound waves to create pictures of the inside of your body, and can show where and how big the gap in your muscles is. And it can show the contents of the hernia. An ultrasound can also be useful if there might be another problem that's causing the pain or swelling in your groin.

Occasionally doctors recommend other scans, such as **MRI** and **CT** scans. An MRI machine uses a magnetic field to create pictures of the inside of your body. A CT scan is a type of x-ray. It takes several pictures from different angles.

How common are hernias?

Inguinal hernias (a hernia in the groin) are common in both adults and children.

Each year, around 70,000 people in England have an operation to repair a hernia. ^[13] But hernias may be more common than this. Some people with a hernia don't have symptoms or see their doctor. ^[14]

- At least 9 in 10 hernias happen to men. This is because men have a weak spot in their groin muscles where the tube that carries sperm from the testicles to the penis passes through.
- Older people are more likely to get a hernia. ^[15] More than half of hernias happen to people over 60. The average age of someone with a hernia is 57.
- Some babies, especially boys, are born with a weakness in the muscles in their abdomen. This can cause a hernia, usually before the age of 1. About 1 in 50 boys get a hernia. It's more common in babies born too early.

What treatments work for a hernia?

An inguinal hernia is a bulge or swelling you can see or feel in your groin. The bulge is a bit of bowel and fat that has slipped out of your abdomen and down into your groin. An operation can get rid of the bulge, reduce pain, and prevent a blocked bowel.

Key points about treating a hernia

- Surgery is the only treatment for a hernia.
- **Open surgery** is done through a cut that opens up your groin. Or you can have **keyhole surgery**, where the surgeon makes small cuts and uses a camera to see inside your groin.
- Both operations will get rid of the bulge in your groin. You may recover faster and get less pain and numbness with keyhole surgery. But there's a higher risk of serious rare problems during a keyhole operation, including damage to other organs or blood vessels.
- Putting a patch of mesh over the opening in your muscles works better than stitching it up. Your hernia is less likely to come back this way.
- If you don't have surgery, the bit of bowel that has slipped out of your abdomen can get trapped and lose its blood supply. This can be life threatening.

Which treatments work best? We've looked at the best research and given a rating for each treatment according to how well it works.

For help in deciding which treatment is best for you, see [How to use research to support your treatment decisions](#).

Treatment Group 1

Treatments for a hernia

Treatments that work

- [Open surgery to repair a hernia](#) : The surgeon makes a cut in your groin and pushes the hernia back into your body. This is called open surgery. [More...](#)
- [Keyhole surgery to repair a hernia](#) : The surgeon uses a camera to see inside your groin instead of opening it up. [More...](#)

Treatments that need further study

- [Watchful waiting](#) : Your doctor keeps you under review. You don't have an operation unless your hernia becomes painful or gets worse. [More...](#)

What will happen to me?

Most people have surgery to repair their hernia. There isn't much research to say what will happen if you don't.

If you choose to leave your hernia, the following might happen.

- It might get bigger and become more painful and uncomfortable. It could stop you doing things like working, carrying anything heavy, exercising, or having sex.
- A bit of your bowel can get squeezed by the opening in the muscle that it has slipped through. The wall of the bowel could split, causing fluid to leak into your abdomen. This can cause a dangerous condition called **peritonitis**.
- The bowel can get trapped by the 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. This is called a **strangulated hernia**. It can be life-threatening, and you'll need to have an operation straight away. If part of your bowel has died, the surgeon will cut out the dead bowel and join the two healthy ends together.

There isn't much research on how likely these problems are. We do know that, each year, about 5 in 100 people with their first hernia get life-threatening problems and need emergency surgery. ^[13]

You have a higher risk of serious problems with your hernia if: ^[16]

- You're older. One study found that people aged around 50 had a higher risk of complications than teenagers and people in their early 20s
- You have another illness, such as **heart disease**, at the same time.

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An operation can repair your hernia and let you get back to normal.

Doctors usually suggest that people with a hernia have an operation to repair it. Surgery can get rid of the bulge in your groin and prevent problems such as a strangulated hernia. But if your hernia is small and you don't have any other symptoms (like a sore groin), you probably don't need to have it repaired straight away. You can wait until it's convenient.

Children tend to have hernias fixed straight away. This is because their hernias are more likely to become strangulated.

If you're older and have a serious illness, such as heart or breathing problems, talk to your doctor about whether you should have your hernia repaired. The research isn't clear on what's the best thing to do.

Questions to ask your doctor

If you've been told you have a hernia, you may want to talk to your doctor to find out more.

Here are some questions that you might want to ask.

Questions about your diagnosis

- What type of hernia do I have?
- Why do I have a hernia?
- Is it OK to push my hernia back into my abdomen?

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Questions about your treatment

- Do I need surgery straight away, or can I wait?
- What will happen if I don't have my hernia repaired?
- How will you repair my hernia?
- How many hernia repairs do you do each year?
- What are the pros and cons of the different ways to repair a hernia?
- Am I suitable for keyhole surgery?
- What type of **anaesthetic** will I need?
- What are the risks of surgery? How likely are they?
- What happens if I've got a hernia on both sides of my groin?
- How long will I need to stay in hospital?
- What's the risk that my hernia will come back?

Questions about what happens after surgery

- Can I expect any problems or side effects after my operation?
- How should I care for my wound? Can I get it wet?
- How quickly can I get back to my usual activities (work, sport, sex, housework, shopping)?
- Should I avoid doing certain things? How long should I avoid these?
- Do I need a check-up? When?
- Are there things I can do to stop my hernia coming back?

Treatments:

Open surgery to repair a hernia

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[How good is the research on open surgery to repair a hernia?](#)

This information is for people who have a hernia. It tells you about having surgery through an open cut in your groin, a treatment used to repair hernias. It is based on the best and most up-to-date research.

Does it work?

Yes. Your surgeon can mend your inguinal hernia through a cut in your groin. This will get rid of the bulge and prevent a blocked bowel.

But you may recover faster and have less pain and numbness in your groin if you have **keyhole surgery** instead.

It's hard to say which type of surgery is best for people with hernias on both sides of their groin or people whose hernia has come back. There's not much research.

What is it?

An inguinal hernia is a bulge you can see or feel in your groin. The bulge is a bit of fat, tissue, and possibly bowel that has slipped through a weak spot in your abdominal muscles and down into your groin. To repair a hernia, a surgeon will usually push the lump back inside your body and cover it with a patch of mesh to keep it there.

There are two main ways to do this operation:

- **Open surgery**, where the surgeon cuts open your groin
- **Keyhole surgery**, where the surgeon makes a few small cuts in your abdomen and uses a camera to see inside your groin instead of opening it up.

This information is about open surgery. To read more about keyhole surgery, see [Keyhole surgery to repair a hernia](#) .

If you have open surgery, you'll probably be given a **general anaesthetic** to make you sleep. Some people have a **local anaesthetic** or an epidural (an injection in the spine) to numb their groin. Having a local anaesthetic may mean you have less pain in the days immediately after surgery than if you had an epidural. ^[21]

Here's what happens during the operation.

- Your surgeon makes a cut between 5 and 10 centimetres long (about 2 to 4 inches long) along the crease of your groin.
- If you have a hernia that's bulging through a hole in your muscles (a direct hernia), the bowel and fat can be pushed into place through the muscle.

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- If you have a hernia that's bulging through the gap between muscles (an indirect hernia), the thin film around the hernia (the hernia sac) is stitched up and cut away or sometimes pushed back.
- The surgeon usually covers the hole in the muscle with a patch of mesh. Some surgeons fix the mesh in place with staples or stitches. Others place it on the muscles and let scar tissue grow around it to hold it in place.
- You'll probably need stitches to close the wound. These will eventually dissolve.

We've prepared some extra information for people thinking of having this operation. To read more, see [Hernia surgery](#).

How can it help?

Having open surgery to repair your inguinal hernia will:

- Get rid of the bulge in your groin
- Make your groin more comfortable and less painful. This will mean you can get back to normal activities and work
- Stop your bowel getting trapped in the hernia and losing its blood supply. This is called a strangulated hernia. It can be life-threatening. To read more, see [What will happen to me?](#)

There's a chance that your hernia will come back, but this doesn't happen to most people. If your hernia comes back it's most likely to happen in the first five years after surgery.

Your hernia is less likely to come back if your surgeon uses a mesh patch instead of stitches to close the gap in your muscles.^[22] A mesh patch strengthens the muscle. This helps stop your bowel slipping into your groin again. Stitching the muscle may make the area feel quite tight and more painful compared with having a mesh patch.^[22]

If you have a mesh patch you are likely to have less pain after your operation and you may be able to go back to work quicker.^[23] ^[24] Using a lightweight patch seems to be as good as using a stronger, heavier one, and you may be less likely to have longer-term pain in your groin.^[25]

What's the best way to repair a hernia?

The National Institute for Health and Care Excellence (NICE), the government organisation that advises doctors about NHS treatments, says that open surgery and keyhole surgery for hernias are both safe and work well.^[13]

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Although both types of surgery work, keyhole surgery has a few advantages. You will:

[\[13\]](#) [\[26\]](#) [\[27\]](#) [\[28\]](#) [\[29\]](#) [\[30\]](#)

- Have a smaller scar
- Recover faster
- Go home from hospital sooner
- Probably get less pain and numbness after your operation
- Be able to get back to your normal activities faster.

A summary of the research found that the chance of a hernia coming back is about the same whether you have open surgery or a type of keyhole surgery called a transabdominal preperitoneal laparoscopic repair (TAPP). However, the risk may be higher if you have a keyhole surgery called totally extraperitoneal laparoscopic repair (TEP). ^[31]

Some people have hernias on both sides of their groin. There hasn't been much research on the best way to repair two hernias. And there's not much research on the best way to repair a hernia that's come back after surgery.

The NICE guidelines say that people with hernias on both sides or a hernia that's come back may do better with a keyhole operation. ^[13]

Talk to your doctor about the best operation for you. Your decision will depend on the size and position of your hernia, if it's one or both sides, whether it's your first hernia, how well you can cope with a general anaesthetic, and the experience of your surgeon.

For information on what might happen if you don't have your hernia repaired, see [What will happen to me?](#)

How does it work?

A hernia is caused by a weak spot in the muscles in your abdomen. The hernia is a bulge of fat and bowel that has slipped through the weak spot in the muscle and down into your groin. Surgery repairs the hernia by pushing the bulge back through the muscle and using a patch of mesh (or sometimes stitches) to cover the hole and stop the bulge slipping through again.

Can it be harmful?

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

Anaesthetics can have side effects. These are more likely with a general anaesthetic. The most common side effect is feeling sick when you wake up. Serious problems are rare, but doctors will keep a close eye on your breathing, heartbeat, temperature, and

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blood pressure. It's possible that you could have an allergic reaction to the anaesthetic. This is rare, but you should always tell the doctors about any allergies you have.

Most of the research shows that between 2 and 3 out of 100 people have problems during or after their hernia operation. But in some studies the chance of side effects was up to 18 in 100. ^[26] ^[32]

Serious problems, such as damage to other organs, are rare.

But serious problems are more common with keyhole surgery than with open surgery. ^[26]

It's possible, but very unlikely, that you could die after a hernia operation. In studies that looked at more than 7,000 people, no one died because of their operation. ^[26]

Here are some of the risks of a hernia operation. Ask your surgeon how the risks and benefits of surgery apply to you.

Problems that can happen straight away

Bleeding

About 10 in 100 people bleed heavily under the skin after their operation. ^[26] If the blood builds up and clots, your groin will swell and feel tender. This will leave a big bruise called a haematoma. Sometimes these go away by themselves, but if the bleeding doesn't stop, you may need another operation. ^[26] ^[28] ^[32]

Bleeding is slightly more common with open surgery than keyhole surgery.

Fluid build-up

About 3 in 100 people who have open surgery get a build-up of fluid in their groin. ^[26] Doctors call this a seroma.

Fluid build-up is more common with keyhole surgery. It happens to about 6 in 100 people after this type of surgery. ^[26]

An infection

You may get an infection deep inside your groin or in the wound on your skin, but this is rare. The infection is caused by the stitches or mesh that the surgeon uses to close the hole in your abdomen. Researchers looked through 41 studies involving more than 7,000 people who had a hernia operation. ^[26] Only three people had a deep infection.

Infections may be slightly more common with open surgery compared with keyhole surgery.

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Injured blood vessels and organs

About 1 in 1,000 people who have open surgery have damage to their blood vessels, bladder, bowel, or other parts of their body during the operation. ^[26] In men, it's possible to damage the blood vessels that supply the testes and vas deferens (tubes that carry sperm). If this happens, you may not be able to produce sperm.

The risk of this happening is about 5 in 1,000 if you have a keyhole operation. ^[33]

Swollen testicles

It's common for men to have slightly swollen testicles for a few days after the operation. But some men's testicles become very big and painful. This is called testicular atrophy. It happens if the blood supply to the scrotum or testicles is cut off during the operation. This is very rare, but we couldn't find any research to say exactly how rare it is.

Long-term problems

Lasting pain in your groin

You may have a stabbing, gnawing, or tugging pain in your groin and upper thigh that drags on for months or even years. It happens because nerves get trapped in the stitches or mesh, or get damaged during the operation. Patients who are given a lightweight mesh patch may be less likely to have lasting pain in their groin than if their surgeon uses a stronger, heavier mesh. ^[25]

You are more likely to have long-lasting pain after open surgery. About 10 in 100 people who have a keyhole operation and 20 in 100 who have open surgery still have groin pain a year later. ^[33] About 6 in 100 people still have pain after six years. ^[34]

Numbness in your groin

About 11 in 100 people who have open surgery have numbness in their groin area a year after the operation. ^[33] The feeling may come back, but the groin area could stay numb for years.

Fewer people (about 3 in 100 people) have numbness after keyhole surgery. ^[33]

How good is the research on open surgery to repair a hernia?

Most of the research looks at the pros and cons of different ways of doing the operation.

We found one summary of the research (called a **systematic review**) that compared people who had a mesh patch to close the gap in their muscles with people who had stitches. ^[22]

We found a lot of research that compared open surgery with [keyhole surgery](#). ^[23] ^[27]
^[28] ^[30] ^[32] ^[35] ^[36] ^[37] ^[38]

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Most of the research looked at people with a hernia on one side of their groin who hadn't had a hernia before. So we don't know what type of operation works best for people with a hernia on both sides of the groin or people whose hernia has come back.

Keyhole surgery to repair a hernia

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[How good is the research on keyhole surgery to repair a hernia?](#)

This information is for people who have a hernia. It tells you about keyhole surgery, a treatment used for repairing hernias. It is based on the best and most up-to-date research.

Does it work?

Yes. A surgeon can mend your hernia using keyhole surgery. The operation will get rid of the bulge in your groin and prevent a blocked bowel.

You may recover faster and have less pain and numbness in your groin after **keyhole surgery** than after **open surgery** (where the surgeon makes a cut to open up your groin).

It's harder to say which type of surgery is best for people with hernias on both sides of their groin or people whose hernia has come back. There's not much research.

What is it?

An inguinal hernia is a bulge you can see or feel in your groin. The bulge is a bit of fat and bowel that has slipped through a weak spot in your abdominal muscles and down into your groin. To repair a hernia, a surgeon will usually push the lump back inside your body and cover it with a patch of mesh to keep it there.

There are two main ways to do this operation:

- **Open surgery**, where the surgeon cuts open your groin
- **Keyhole surgery**, where the surgeon makes a few tiny cuts in your abdomen and uses a camera to see inside your groin instead of opening it up.

This information is about keyhole surgery to repair an inguinal hernia. To read more about open surgery see [Open surgery to repair a hernia](#) .

If you have keyhole surgery, you'll probably be given a **general anaesthetic** to make you sleep during the operation.

Here's what happens during surgery.

- The surgeon makes a small cut in, or just below, your belly button.

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- 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 television screen so the surgeon can see inside your groin.
- Small tools to repair the hernia are put in through one or more small cuts lower down your abdomen.
- Your surgeon pushes the bit of bowel in the hernia back into the abdomen and closes the hole, usually with a mesh patch.

There are different ways of doing keyhole surgery for a hernia. Some surgeons cut through the thin film of tissue (peritoneum) that covers the bowel and organs in your abdomen to reach the hernia. They then fill your abdomen with air to make it easy to see in and around the hernia. Doctors call this **transabdominal preperitoneal laparoscopic repair (TAPP)**.

Another way of doing the operation is to mend the hernia without going through the peritoneum. This is called **totally extraperitoneal laparoscopic repair (TEP)**. It's harder to do, but there may be less chance of damaging other parts of your body.

Keyhole operations aren't usually done on babies or children.

How can it help?

Having keyhole surgery to repair your hernia will:

- Get rid of the bulge in your groin
- Make your groin more comfortable and less painful. This will mean you can get back to normal activities and work
- Stop your bowel getting trapped in the hernia and losing its blood supply. This is called a strangulated hernia. It can be life threatening. To read more, see [What will happen to me?](#)

There's a chance that your hernia will come back, but this doesn't happen to most people. If your hernia comes back it's most likely to happen in the first five years after surgery.

Which type of operation works best?

Keyhole surgery has some benefits compared with open surgery.

- Your scar will be smaller. Keyhole operations leave two small scars near your belly button. They're usually about 1 centimetre (half an inch) long. Open surgery leaves a scar about 5 to 10 centimetres (2 to 4 inches) long.
- You'll probably recover faster. ^{[26] [32] [28] [30]} People who have a keyhole operation can get back to their normal activities, such as working and shopping, an average

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of three or four days earlier than people who have open surgery.^[33] In one study, people were back to normal activities after 14 days with a keyhole operation, compared with 20 days with open surgery.^[23]

- You may have less pain and numbness afterwards. Your groin may feel less painful after a keyhole operation, so you won't have to take as many painkillers.^{[32] [28] [30]}
^[39] You're also less likely to get pain that drags on for a long time after your operation.
^{[26] [28] [33]} Your groin is also less likely to feel numb after keyhole surgery.^{[26] [28]}
^{[30] [33]}
- You may spend less time in hospital. People who have a keyhole operation go home two hours to a day sooner than people who have open surgery.^{[26] [27]}

There hasn't been enough research to say whether a TEP or TAPP keyhole repair works better. However, a summary of the research (a **systematic review**) found that your hernia may be more likely to come back if you have a TEP repair than if you have a TAPP repair or open surgery.^[31]

The National Institute for Health and Care Excellence (NICE), the government organisation that advises doctors about treatments, says that keyhole and open surgery for a hernia are both safe and work well.^[13] Talk to your doctor about the best operation for you. Your choice will depend on the size and position of your hernia, how well you can cope with a general anaesthetic, and the experience of your surgeon.^[13]

Some people have two hernias, one on each side of their groin. There hasn't been much research on the best way to repair two hernias. And there isn't much research on the best way to repair a hernia that has come back after surgery.

NICE says that people with hernias on both sides or with a hernia that's come back should have a keyhole operation.^[13] If your hernia has come back, keyhole surgery means your surgeon won't have to cut through the scar from your last operation.

How does it work?

A hernia is caused by a weak spot in the muscles in your abdomen. The hernia is a bulge of fat and bowel that has slipped through the weak spot and down into your groin. Surgery repairs the hernia by pushing the bulge back through the muscle and using a patch of mesh to cover the hole and stop the bulge slipping through again.

Can it be harmful?

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

Anaesthetics can have side effects. These are more likely with a general anaesthetic. The most common side effect is feeling sick when you wake up. Serious problems are

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rare but doctors will keep a close eye on your breathing, heartbeat, temperature, and blood pressure. It's possible that you could have an allergic reaction to the anaesthetic. This is rare, but you should always tell the doctors about any allergies you have.

Most of the research shows that between 2 and 3 out of 100 people have problems during or after their hernia operation. But in some studies the chance of side effects was up to 18 in 100. ^[26] ^[32]

Serious problems, such as damage to other organs, are rare. ^[33]

However, serious problems are more common with keyhole surgery than with open surgery. ^[33]

It's possible, but very unlikely, that you will die after a hernia repair operation. In studies involving more than 7,000 people, no one died because of the operation. ^[26]

Here are some of the risks of a hernia operation. Ask your surgeon how the risks and benefits of surgery apply to you.

Problems that can happen straight away

Bleeding

About 10 in 100 people bleed heavily under the skin after their operation. ^[26] If the blood builds up and clots your groin will swell and feel tender. This will leave a big bruise called a haematoma. Sometimes these go by themselves, but if the bleeding doesn't stop you may need another operation.

Bleeding is slightly more common with open surgery than keyhole surgery. ^[26] ^[32] ^[39]

Fluid build-up

About 6 in 100 people who have keyhole surgery get a build-up of fluid in their groin. ^[26] Doctors call this a seroma. It's less common after open surgery, where it happens to about 3 in 100 people.

An infection

You may get an infection deep inside your groin or in the wound on your skin, but this is very rare. The infection is caused by the stitches or mesh that the surgeon uses to close the hole in your abdomen. Researchers looked through 41 studies involving more than 7,000 people who had a hernia operation. ^[26] Only three people had a deep infection.

Infections may be slightly less common after keyhole surgery compared with open surgery. ^[26]

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Injured blood vessels and organs

About 5 in 1,000 people who have keyhole surgery have damage to their blood vessels, bladder, bowel, or other parts of their body during the operation.^[26] In men, it's possible to damage the blood vessels that supply the testes and vas deferens (tubes that carry sperm). If this happens to you, you may not be able to produce sperm.

The risk of injury is lower (about 1 in 1,000) if you have open surgery.^[33]

Switching to open surgery

Up to 3 in 100 people who start off having a keyhole operation end up having open surgery.^[26]

Swollen testicles

It's common for men to have slightly swollen testicles for a few days after the operation. But this usually goes away by itself.

Long-term problems

Lasting pain in your groin

You may have a stabbing, gnawing, or tugging pain in your groin and upper thigh that drags on for months or even years. It happens because nerves get trapped in the stitches or mesh, or get damaged during the operation. Patients who are given a lightweight mesh patch may be less likely to have lasting pain in their groin than if their surgeon uses a stronger, heavier mesh.^[25]

You are less likely to have long-lasting pain after keyhole surgery.^[28] About 1 in 10 people who have a keyhole operation and 2 in 10 who have open surgery still have groin pain a year later.^[33] About 6 in 100 people still have pain after six years.^[34]

Numbness in your groin

About 3 in 100 people who have keyhole surgery have numbness in their groin area a year after the operation.^[33] The feeling may come back, but the groin area could stay numb for years.

More people (about 11 in 100) have numbness after open surgery.^[33]

How good is the research on keyhole surgery to repair a hernia?

Most of the research looks at the pros and cons of different ways of doing the operation.

We found a lot of good-quality research that compared keyhole surgery with [open surgery](#)^{[26] [32] [28] [30] [23] [27] [38] [40] [41] [42]}.

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Most of the research looked at people with a hernia on one side of their groin who hadn't had a hernia before. So we don't know what type of operation works best for people with a hernia on both sides or people whose hernia has come back.

Watchful waiting

In this section

[Does it work?](#)

[What is it?](#)

[How can it help?](#)

[How does it work?](#)

[Can it be harmful?](#)

[How good is the research on watchful waiting?](#)

This information is for people who have a hernia. It tells you about watchful waiting, a treatment used for hernias. It is based on the best and most up-to-date research.

Does it work?

We don't know what the effect of watchful waiting is for most people who have a hernia. Most people have an operation straight away.

What is it?

Most people who have a hernia are advised to have an operation to repair it. But, if your hernia is small and doesn't hurt, you might want to wait a while and see what happens.

Your hernia won't go away on its own. There's not much research to say what will happen.

^[43] But there are three possibilities:

- It might stay the same, and not cause you any more problems
- It might get bigger, or start to hurt
- You might have a serious complication, where the hernia gets trapped and the blood supply is cut off. This is called a strangulated hernia. If this happens, you will need an emergency operation to repair it.

How can it help?

If your hernia isn't bothering you, and you wait rather than having a hernia operation straight away, you may be able to avoid having surgery at all.

We found one study that looked at 720 men who had a small hernia that wasn't causing them many problems. ^[44] Half had open surgery to repair the hernia straight away while the others waited to see what happened.

During the next two years, 23 in 100 men who waited eventually decided to have the operation because the hernia started to hurt. One man got a strangulated hernia and needed an emergency operation.

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But 77 in 100 men who waited didn't feel the need to have an operation. At the end of the two years they felt as well as the men who had undergone surgery straight away, and they didn't have any more pain.

Another study looked at 160 men with small hernias. It compared men who had surgery straight away with men who waited to see what happened. ^[45] Over one year, 29 in 100 men who waited decided to have an operation. Those who didn't have the operation had no more pain than men who had surgery straight away. But men who had surgery straight away were more likely to feel better about life overall.

Long-term results showed that just over half of the men had surgery within eight years. The main reasons were that the hernia had become painful, although two of the men needed an emergency operation. ^[46]

How does it work?

Some hernias are small, don't hurt, and don't get worse. If it's possible to live with a hernia like this, you can avoid having an operation. Unfortunately, we can't say for sure which hernias will get worse.

Can it be harmful?

Yes. The problem with watchful waiting is that your hernia might get trapped and the blood flow get cut off. This is called a strangulated hernia. It can be dangerous, and you need an emergency operation to repair it.

In the first study, only one man out of 720 men got a strangulated hernia during two years of study. But we need more big studies to be sure this complication isn't more common.

From other research we know that, each year, about 5 in 100 people with their first hernia get life-threatening problems and need emergency surgery. ^[47] Some research has shown that you may be at higher risk of complications if:

- You are older. One study found that people around 50 had a higher risk of complications than teenagers and people in their early 20s
- You have another medical condition, such as **heart disease** .

When you are deciding about your operation you can talk to your surgeon about how likely you are to get problems if you decide to wait before having surgery. You might want to consider the following.

- How much your hernia bothers you. Does it stop you from doing things you enjoy?
- Whether it is convenient to have an operation in the near future. You'll need to plan for two to three weeks off work.

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- Whether you are prepared to take the risk of getting a serious complication with your hernia.

How good is the research on watchful waiting?

There's not much evidence about watchful waiting. We found three studies. [\[44\]](#) [\[45\]](#) [\[46\]](#)
They are good quality, but quite small. We need more studies to be sure about how safe it is to use watchful waiting for hernias.

Further informations:

Glossary:

heart disease

You get heart disease when your heart isn't able to pump blood as well as it should. This can happen for a variety of reasons.

MRI scan

A magnetic resonance imaging (MRI) machine uses a magnetic field to create detailed pictures of the inside of your body.

CT scan

A CT scan is a type of X-ray. It takes several detailed pictures of the inside of your body from different angles. CT stands for computed tomography. It is also called a CAT scan (computed axial tomography).

anaesthetic

An anaesthetic is a chemical that blocks the ability to feel sensations like pain or heat. A local anaesthetic blocks the feeling in a specific area of the body. For example, your dentist uses a local anaesthetic like lignocaine in your gums so that you don't feel the pain of having a cavity filled. A general anaesthetic makes you completely unconscious and is usually used only in a carefully controlled environment like an operating room.

general anaesthetic

You may have a type of medicine called a general anaesthetic when you have surgery. It is given to make you unconscious so you don't feel pain when you have surgery.

local anaesthetic

A local anaesthetic is a painkiller that's used to numb one part of your body. You usually get local anaesthetics as injections.

allergic reaction

You have an allergic reaction when your immune system overreacts to a substance that is normally harmless. You can be allergic to particles in the air you are breathing, like pollen (which causes hay fever) or to chemicals on your skin, like detergents (which can cause a rash). People can also have an allergic reaction to drugs, like penicillin.

systematic reviews

A systematic review is a thorough look through published research on a particular topic. Only studies that have been carried out to a high standard are included. A systematic review may or may not include a meta-analysis, which is when the results from individual studies are put together.

haematoma

A haematoma is a collection of blood in any part of your body. The blood has usually clotted or dried.

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