



Laparoscopic Inguinal Hernia Repair (TEP)

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What is an Inguinal Hernia?

An Inguinal Hernia is a common type of hernia, causing a lump and sometimes pain in your groin. Your surgeon has recommended a totally extra peritoneal (TEP) hernia operation. However it is your decision to go ahead with the operation or not. This document will give you information about the benefits and risks to help you to make an informed decision. If you have any questions that this document does not answer, ask your surgeon or the healthcare team.

How does a hernia happen?

Your abdominal cavity contains your intestines and other structures. These are protected by your abdominal wall, which is made up of four layers. The inner layer is a membrane. The second layer is a wall made of muscle. A layer of fat separates the muscle from the outer layer of skin. Weak spots can develop in the layer of muscle, resulting in the contents of your abdomen, along with the inner layer, pushing through your abdominal wall. This produces a lump called a hernia (see figure 1)

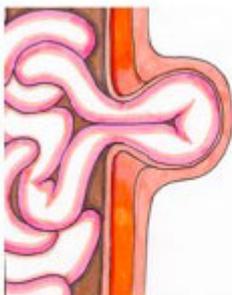


Figure 1
Hernia – bowel pushing through a weakness in the muscle wall of the abdomen

An inguinal hernia happens at the Inguinal canal (see figure 2). This is a narrow passage in which blood vessels pass through the abdominal wall. The inguinal canal is prone to hernias, which can be caused by a

defect from birth or from gradual weakening of the muscles.

What are the benefits of surgery?

You should no longer have a hernia. Surgery should prevent the serious complications that a hernia can cause and allow you to return to normal activities.



Figure 2: Position of left inguinal hernia

Are there any alternatives to surgery?

Surgery is recommended as it is the only dependable way to cure the condition. You can sometimes control the hernia with a truss (padded support belt) or simply leave it alone. It will not get better without surgery.

What will happen if I decide not to have the operation?

The hernia will get larger with time. It can also be dangerous because your intestines or other structures within your abdomen can get trapped and have their blood supply cut off (strangulated hernia). This needs an urgent and larger operation, with a higher risk of developing serious complications. If left untreated, a strangulated hernia can cause death.

What does the operation involve?

The healthcare team will carry out a number of checks to make sure that you have the operation you came in for and on the correct side. You can help by confirming to your surgeon and the healthcare team your name and the operation that you are having.

The operation is performed under general anaesthetic and usually takes about 30 minutes (less than an hour for a repair to both sides). You may also have injections of local anaesthetic to help with the pain after the operation. You may be given antibiotics during the operation to reduce the risk of infection. Your surgeon will use laparoscopic (keyhole) surgery as this is associated with less pain, less scarring and a faster return to normal activities.

Your surgeon will make a small cut on or near your belly button so that they can insert tubes (ports) into your abdomen. Your surgeon will insert surgical instruments through the ports along with a telescope so they can see inside your abdomen and perform the operation.

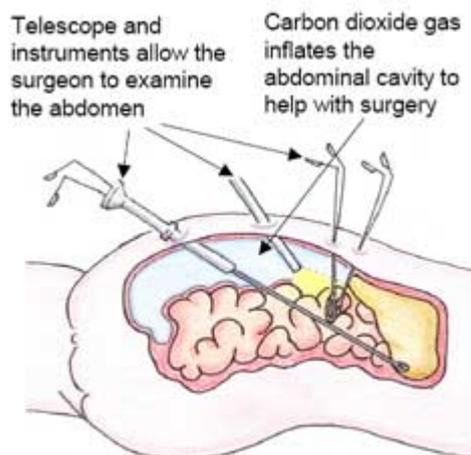


Figure 3 – the technique for laparoscopic surgery

Your surgeon will return the part of your abdomen that is causing the hernia, and insert a synthetic mesh to cover the weak spot. They will close the small cut and holes with stitches or glue. For about 1 in 100 people it will not be possible to complete the surgery using keyhole surgery. The operation will be changed (converted) to either a Trans abdominal laparoscopic procedure, where the instruments are inserted in your abdominal cavity, or to open surgery, which involves a larger cut to the groin. Your surgeon will remove the instruments and close the cuts.

What should I do about my medication?

Let your doctor know about all the medication that you take and follow their advice. This includes all blood-thinning medication as well as herbal and complimentary remedies, dietary supplements and medication that you can buy over the counter.

What can I do to make the operation a success?

If you smoke then stopping smoking several weeks or more before the operation may reduce your risk of developing complications and will improve your long-term health. Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight. Regular exercise should help prepare

you for the operation, help you recover and improve your long-term health. Before you start exercising, ask you GP for advice. You can reduce the risk of infection in a surgical wound by not shaving or waxing the area where the cut is likely to be in the week before the operation, have a bath or shower on the day of or the day before your operation and by keeping warm around the time of the operation. Please let the nursing team know if you are feeling cold.

What complications can happen?

The healthcare team will try to make to operation as safe as possible but complications can happen. Some of these can be serious and even very rarely cause death (risk: 1 in 500). When you are recovering you need to be aware of the symptoms that may show you have a serious complication. You should ask your doctor if there is anything that you don't understand. Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you.

1. Complication of anaesthesia

Your anaesthetist will be able to discuss with you the possible complications of having an anaesthetic.

2. General complications of any operation

- Pain. The healthcare team will give you medication to control the pain and it is important that you take it as you are told to so you can move about and cough freely. After keyhole surgery, it is common to have some pain in your shoulders because a small amount of carbon dioxide gas may be left under your diaphragm. Your body will naturally absorb the gas over the next 24 hours, which will ease the symptoms.
- Bleeding during or after the operation. It is common for your groin to be bruised and, for men, for your scrotum or penis to be bruised. You will not usually need a blood transfusion or another operation.
- Unsightly scarring of your skin.
- Infection in the wound. It is usually safe to shower after 2 days but you should check with healthcare team. Let the team know if you get a high temperature, notice pus in your wound, or if your wound becomes red, sore or painful. An infection usually settles with antibiotics but you may need another operation.
- Blood clot in your leg (deep-vein thrombosis DVT) this can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. The healthcare team will assess your risk. They will encourage you to get out of bed soon after the operation and may give you injections, medication, or special stockings to wear. Let the healthcare team know straightaway if you think you may have a DVT.

- Blood clot in your lung (pulmonary embolus) if a blood clot moves through your bloodstream to your lungs. If you become short of breath, feel pain in your chest or upper back, or if your cough up blood, let the healthcare team know straight away. If you are at home, call an ambulance or go immediately to your nearest Emergency department.

Specific complications of this operation

Keyhole surgery complications

- Surgical emphysema (crackling sensation in in your skin caused by trapped carbon dioxide gas, which settles quickly and is not serious)
- Injury to your bowel during surgery or if your bowel becomes trapped between the mesh and your abdominal wall, causing bowel obstruction. You may need another operation.

Hernia repair complications

- Continued pain
- Developing a lump at the site of the original hernia caused by a collection of blood or fluid (risk: 1 in 10). This usually settles within a few weeks.
- For men, discomfort or pain in your testicles on the side of the operation.
- For Men, difficulty in passing urine. You may need a catheter (tube) in your bladder for one to two days (risk 1 :100)
- For men, damage to the blood supply of your testicle (risk 1: 1000). Your testical on the same side as the operation may shrink and not work.

How soon will I recover?

In hospital

After the operation you will be transferred to the recovery area and then the ward. You should be able to go home the same day or the day after. However your doctor may recommend that you stay a little longer. If you do go home on the same day, a responsible adult should take you home in a car or taxi and stay with you for at least 24 hours. Be near a telephone in case of emergency. You need to be aware of the following symptoms as they may show that you have a serious complication.

- Pain that gets worse over time or is severe when you move, breath or cough.
- A high temperature or fever
- Dizziness, feeling faint or shortness of breath
- Feeling sick or not having any appetite (and this gets worse after the first one or two days)
- Not opening your bowels and not passing wind.
- Swelling of your abdomen
- Difficulty passing urine

If you do not continue to improve over the first few days, or if you have any of these symptoms, let the healthcare team know straight away. If you are at home, contact your surgeon or GP. In an emergency, call an ambulance or go immediately to your nearest emergency department.

Returning to normal activities

Do not drive, operate machinery (this includes cooking) or do any potentially dangerous activities for at least 24 hours and not until you have fully recovered feeling, movement and coordination. Usually patients are unable to drive for about 7 days after the operation.

If you have had a general anaesthetic or sedation, you should also not sign legal documents or drink alcohol for at least 24 hours.

To reduce the risk of a blood clot, make sure you follow carefully the instructions of the healthcare team if you have been given medication or need to wear special stockings.

You may return to normal activities when you feel comfortable to do so, usually after 1 week. You should avoid lifting heavy weights during the first 2 to 4 weeks. Do not play sports or do strenuous exercise for 4 weeks.

Regular exercise should help you return to normal activities as soon as possible. Before you start exercising, ask the healthcare team or your GP for advice. Do not drive until you are confident about controlling your vehicle and always check your in insurance policy with your doctor.

The future.

You should make full recovery and be able to return to normal activities. However a hernia can come back (risk: less than 3 in 100). This depends on the size of the hernia, the strength of the abdominal muscles, if you are overweight or if you have underlying medical problems. The hernia can come back many years later and you may need another operation.

Summary

An inguinal hernia is a common condition caused by a weakness in you abdominal wall, near the inguinal canal. If left untreated an inguinal hernia can cause serious complication. Surgery is usually safe and effective but complications can happen. You need to know about them to help you make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.