Our Vision
To provide every patient with the care we want for those we love the most

Norfolk and Norwich University Hospitals NHS
NHS Foundation Trust

General Surgery Department

Inguinal hernia

The condition, treatment, and what to expect following a operation.

What is it?

An inguinal hernia is an abnormal protrusion through a weakness in the abdominal wall in the groin region. The protrusion consists of a sac, which can be empty or contain loops of bowel. The weakness is basically a hole through the muscle layers of the abdominal wall.

An inguinal hernia is the most common type of groin hernia and can affect men and women. The lump may disappear on lying flat or may be pushed back only to reappear on standing, coughing or straining. It can cause discomfort and can increase in size with time.

Any lump in the groin that can be pushed back when lying flat is very likely to be a hernia.

What causes it?

These hernias are caused by a weakness or tear in the muscles of the abdominal wall. Often there is no specific cause though factors that contribute to the development of inguinal hernias are obesity, coughing, smoking, heavy work, sports etc.

How are hernias diagnosed?

Most groin hernias are diagnosed by the clinical history and examination alone. Occasionally, if the diagnosis is unclear or if pain is the predominant symptom and there is no obvious swelling further investigations may be used. These include MRI scans, Ct scans and ultrasound scans. However, these scans have the problem that they may 'over diagnose" hernias. In such cases they report a 'possible' or 'small bulge', which is really just a bit of normal tissue. So you can't rely 100% on scans. Be guided by your surgeon

What is the treatment for an inguinal hernia?

1. If the hernia is giving no symptoms then there is no need for any treatment and it can be safely left alone.

2. The ideal treatment for inguinal hernias giving symptoms is surgical repair. Further details on surgery are provided below.

3. A truss is an alternative for a hernia giving symptoms provided the contents of the hernia can be reduced (pushed back into place). This is a padded belt placed over the site of the weakness in the muscle wall and should be worn when you are walking around. A truss can be obtained quite cheaply online or, alternatively, through the NHS.

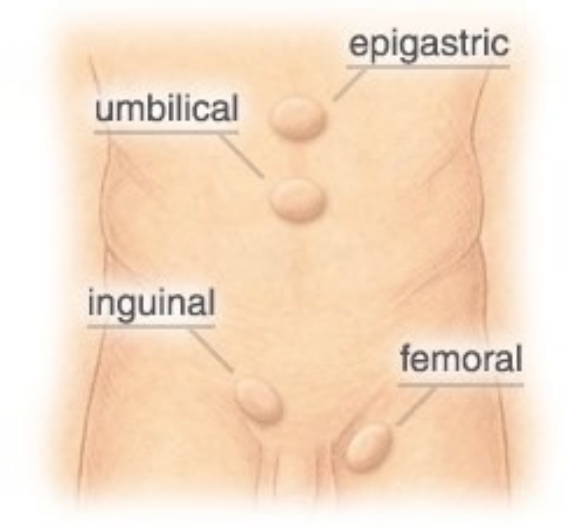
A correctly placed truss prevents the pouch from protruding through the weakness. If a truss is not holding back the swelling, you

should either not wear it or else have it changed for a more effective one.

What would happen if the hernia was not treated?

If the hernia gives you no symptoms then usually it can be safely left alone.

The weakness in the muscle wall can enlarge and very rarely may contain loops of bowel. In these circumstances if you are unable to push the hernia back, a blockage of the bowel may occur, which causes vomiting and abdominal pain.
This is very rare but If you experience this you should contact your doctor immediately as you may require an emergency operation.



Surgery: Inguinal Hernia Repair

Surgical repair is normally carried out under local anaesthetic, but can, in certain circumstances, be carried out under a general anaesthetic as a keyhole procedure (laparoscopic hernia repair). The choice depends partly on which you prefer and partly on what your anaesthetist and surgeon think is best.

You will be admitted on the day of surgery and almost all patients go home on the operation day (day case) though a few will be required to spend a night in hospital.

When giving local anaesthetic it is usual to also give an intravenous sedative beforehand. This will wear off quite quickly but may mean you will not remember much about the operation.
The local anaesthetic is then given into the area of the hernia and acts within a few minutes. You may feel some pulling but you shouldn't feel any pain during the procedure.
The incision is usually made in the groin overlying the site of the hernia.
The pouch (hernia sac) is first dealt with and the weakness in the abdominal wall is strengthened. This is done using a patch of inert nylon mesh that is stitched in place over the defect in the muscle layer; the wound is then closed using a dissolvable stitch and covered with a waterproof dressing.

Laparoscopic Hernia Repair

In some instances such as recurrent hernia, double hernia (hernia on both sides or bilateral) a keyhole approach is used. This can also be used for a single sided inguinal hernia if recovery time is very important for work. Again the operation is done as a day case but this always needs a general anaesthetic. A small hole is made in the belly button and two further holes at each flank. The repair is done from 'inside' again using mesh. The wounds are smaller than for a local hernia repair and the recovery time is slightly quicker but it does need a general anaesthetic and the chance of recurrence may be slightly higher.

What are the risks/complications of surgery?

- Wound haematoma - bleeding under the skin can produce a firm swelling of a blood clot (haematoma). This may simply dissipate gradually or leak out through the wound. Rarely this may result in a second operation in order for it to be dealt with. Some bruising in the scrotum and around the base of the penis is normal in men.

- Wound infection - minor wound infections do not need any specific treatment. Occasionally deep mesh infections can require antibiotic treatment. Infection is commoner is smokers, people with diabetes and obese individuals.

• Damage to testicular vessels: in men inguinal hernias are very close to the spermatic cord, which contains the blood supply to the testis. In operations for recurrent hernia, there is a risk of injuring the testicular vessels. Damage to the blood supply can rarely lead to swelling, pain and later shrinkage of the testis.

• Nerve damage: several nerves cross the operative field in hernia surgery. Some patients develop **chronic pain** after hernia surgery, probably due to pressure from the scar tissue on the nerves (occurs in about 3% of hernia repairs). Such chronic pain can last months and, on occasion years. It is because of this risk that hernias not giving symptoms are best left alone.

The treatment of chronic pain can include pain killers, physiotherapy, nerve root injections and possible further surgery.

• Recurrence - fortunately recurrence after hernia surgery should be rare (1-3%). It is higher in smokers and those who do a physically demanding job.

• Urinary Retention. If you have a general anaesthetic there is a risk of not being able to pass urine after surgery. This is treated with a temporary catheter which is usually removed after 24-48 hours.

These risks/complications will be explained and discussed with you when the surgeon asks you to sign the consent form.

What are the problems with mesh repair?

The use of mesh to repair the majority of hernias has been the preferred method in the UK and worldwide for over 25 years. There is a large volume of data on the outcome of various hernia operations and different meshes.Indeed when surgeons themselves have hernias they opt for mesh repairs. Meshes used in surgery are tightly regulated and require a CE-mark to be used in patients in the European Union. Patient safety is a critical component of this regulation and regulatory compliance is subject to periodic reviews by UK authorities.

'Many patients who develop a hernia, have a 'tissue weakness' which doesn't hold stitches well. This explains why repairs with stitches have a higher failure rate than those with additional mesh. For the vast majority of patients, mesh poses little if any additional risk, and coupled with a lower recurrence rate, has resulted in the use of mesh becoming the gold standard in hernia repairs.

Mesh is foreign material, like any synthetic implant(dentures, crowns, heart valves etc). It can become infected but this is a rare event. Some patients can develop chronic pain after surgery. There is no firm relationship with the use of mesh and chronic pain, and non-mesh repairs can equally result in this problem. For most patients mesh is a safe and reliable way to repair a hernia. Millions of hernia repairs have been successfully performed with mesh. Alternatives are available and will be discussed to help you make an informed decision.

What should you expect after surgery?

You will be able to eat and drink as soon as the operation is over..

Some discomfort is to be expected after the operation. Therefore pain relief consisting of tablets may be required in the first few days.

If you feel sick after the operation, please tell the nurse looking after you, as she/he will give you an injection to help with this.

The wound will be sealed within 24 hours after which time the dressing may be removed and you may take a bath or a shower.

It is important to avoid constipation and straining when you go to the toilet. Take plenty of fibre in your diet and drink plenty of fluids. If you find you continue having difficulty with your bowels on your return seek advice from your GP.

You may resume sexual relations as soon as this feels comfortable to do so.

After the operation activity is encouraged. You should try and walk every day for at least 30 minutes and do some light stretching exercises. You should avoid suddenly putting extra strain on the wound for at least 4 weeks. However, it is essential you progressively increase your activity day by day.

It is wise not to drive for at least 5 days; some people feel they need a little longer. Usually if you can get in and out of the bath without any discomfort and/or assistance you can consider driving and, over time, increase the distance of your trips. However, please check with your insurance company, as some policies carry restrictions that vary with individual companies.

If you require a certificate for work please ask a member of staff before discharge. If your work does not involve heavy lifting or vigorous exercise, then return to work could be as soon as ten days. If it does, then it is safer to wait for two weeks. If this advice is not heeded, the repair could give way and the hernia will recur.

Some swelling or bruising around the wound site is not unusual and there will be some discomfort and tenderness where the incision has been made. Bruising will often extend down to the scrotum and around the base of the penis in men or the labia in women.

There is often a feeling of a thick rope underneath the wound for the first eight weeks- this disappears fairly soon afterwards.

The skin is usually closed with an absorbable stitch. You may find that the ends of the wound can develop small pustules around two weeks after the operation as the skin absorbs the stitch. A tiny amount of pus like fluid may discharge from these. This is nothing to worry about and will usually settle quickly.

As the superficial nerves grow back you may experience some prickling sensations underneath the scar at about the 8-12 week period.

In the period following your operation you should seek medical advice if you notice any of the following problems:

- Increased pain, redness, swelling or discharge of the wound
- Persistent bleeding
- Difficulty in passing urine
- High temperature
- Nausea or vomiting

Please retain this information leaflet throughout your admission, making notes of specific questions you may wish to ask the Doctor and/or Nurses before discharge

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Useful contacts for further information

If you have any queries prior to the procedures outlined and its implications to you or your relatives/carers, please contact the Surgical Pre-Admission Assessment Clinic on 01603 287819.
If you have any queries following your surgery please contact the ward from which you are discharged, via the main hospital switchboard on 01603 286286.

NHS Direct
Tel: 0845 4647

Web address: www.nhsdirect.nhs.uk

British Hernia Society: http://www.britishherniasociety.org/

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