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Patient Information Sheet: Groin Hernias

What are groin hernias?

A groin hernia is a condition where a part of the abdominal contents, such as fat or bowel, protrudes through a weakness or defect in the abdominal wall in the groin area. The groin area is the lower part of the abdomen near the thigh. There are three types of groin hernias: indirect inguinal, direct inguinal, and femoral hernias.

An indirect inguinal hernia occurs when the abdominal contents pass through the inguinal canal, a natural passage that connects the abdomen to the scrotum or labia. This type of hernia is more common in males and can be present from birth or develop later in life.

A direct inguinal hernia occurs when the abdominal contents push directly through the posterior wall of the inguinal canal. This type of hernia is more common in older males and is usually caused by weakening of the abdominal muscles due to aging, obesity, or chronic coughing.

A femoral hernia occurs when the abdominal contents pass through the femoral canal, a narrow space that allows the femoral artery and vein to pass from the abdomen to the leg. This type of hernia is more common in females and the elderly, due to the wider female pelvis and the loss of muscles mass as people age.

How common are groin hernias?

Groin hernias are very common with an estimated lifetime prevalence of 27-43% in males and 3-6% in females; a male to female ratio of about 9:1. Indirect inguinal hernias are the most common type of groin hernia, accounting for about 70% of all cases. Direct inguinal hernias account for about 25% of cases, and femoral hernias account for about 5% of cases.

What causes groin hernias?

Groin hernias are caused by a combination of factors that increase the pressure inside the abdomen and weaken the abdominal wall. Some of these factors are:

Male sex: The passage of the testicle from the abdomen into the scrotum via the inguinal canal during development creates a natural weakness and point through which groin hernias can develop.

Family history: People who have a first degree relative who have had a groin hernia are more likely to develop groin hernias themselves. This is likely due to a combination of genetically-influenced developmental factors, such as an incomplete regression of the tunica vaginalis, as well as an individual's genetically-determined collagen composition.

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Medical conditions: Some diseases or conditions that affect the connective tissue, such as Marfan syndrome, Ehlers-Danlos syndrome, or collagen vascular diseases, can make the abdominal wall weaker and more prone to herniation.

Ageing: As people get older, the abdominal muscles and tissues lose their strength and elasticity, making them more susceptible to tearing or stretching.

Lifestyle factors: Obesity, smoking, chronic coughing, constipation, heavy lifting, and strenuous exercise can all increase the intra-abdominal pressure and strain the abdominal wall, but whether these factors increase groin hernia rates is not entirely clear.

What are the symptoms of groin hernias?

The most common symptom of a groin hernia is a bulge or lump in the groin area that may or may not be painful. The bulge may be more noticeable when standing, coughing, or straining, and may disappear or reduce in size when lying down or relaxing. Some people may not have any symptoms and may only discover their hernia during a routine physical examination or an imaging test for another reason.

Some other possible symptoms of a groin hernia are:

- Discomfort or pain in the groin area, especially when bending, lifting, or exercising.
- A feeling of heaviness, pressure, dragging, or throbbing in the groin area.
- Difficulty urinating or having bowel movements if the hernia is very large.

How are groin hernias diagnosed?

Groin hernias are usually diagnosed by a physical examination, where the doctor will ask about the symptoms, medical history, and lifestyle factors, and will examine the abdomen and groin area. The doctor may ask the patient to cough, stand, or strain to see if the hernia becomes more prominent or changes in size or shape. The doctor may also feel the hernia to determine its type, location, and size.

In some cases, the doctor may order some imaging tests, such as an ultrasound, a CT scan, or an MRI, to confirm the diagnosis, to rule out other possible causes of the symptoms, or to plan the treatment. These tests can provide more detailed information about the hernia and the surrounding structures.

How are groin hernias treated?

The only definitive treatment for a groin hernia is surgery, where the hernia is repaired and the abdominal wall is strengthened. Surgery is usually recommended for symptomatic hernias, large hernias, or hernias that are at risk of complications, such as incarceration or strangulation. Incarceration occurs when the hernia becomes trapped and cannot be pushed back into the abdomen. Strangulation occurs when the blood supply to the herniated tissue is cut off, leading to

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tissue death and infection. These complications are medical emergencies and require immediate surgery.

There are two main types of surgery for groin hernias: laparoscopic and open. Both types of surgery are performed under general anaesthesia and usually take about an hour to complete.

Laparoscopic surgery: This is a minimally invasive technique where the surgeon makes several small incisions in the abdomen and inserts a thin tube with a camera and surgical instruments. The surgeon then repairs the hernia from inside the abdomen using a synthetic mesh to reinforce the abdominal wall. The advantages of this technique are less pain, including chronic pain, a faster recovery, smaller scars, and lower risk of infection.

Open surgery: This is a traditional technique where the surgeon makes a larger incision in the groin area and repairs the hernia from outside the abdomen. The surgeon may use a synthetic mesh to close the defect and strengthen the abdominal wall. The advantages of this technique are lower risk of recurrence in large hernias, a slightly lower risk of injury to bowel or major blood vessels, and better suitability for complex or recurrent hernias.

The choice of surgery depends on several factors, such as the type, size, and location of the hernia, any previous surgeries, as well as the patient's age, health, and preference. The surgeon will discuss the options and the risks and benefits of each technique with the patient before the surgery.

These procedures are usually performed as day surgeries although in some circumstances an overnight stay may be necessary. The patient will be advised to avoid strenuous activities for six weeks and driving for a few weeks. A follow-up with the surgeon will monitor the healing process and the outcome of surgery.

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Patient Consent Form for Groin Hernia Repair

What is a Groin Hernia?

A groin hernia is a condition where a part of the abdominal contents, such as fat or bowel, protrudes through a weakness or defect in the groin area.

There are three types of groin hernias:

1. Indirect inguinal
2. Direct inguinal
3. Femoral hernias

You usually have one of these but occasionally may have two and even all three at the same time!

How is a Groin Hernia Repair Performed?

Groin hernia repair is a surgical procedure aimed at returning the displaced tissue back into the abdomen and strengthening the weakened area.

The surgery can be performed using either open surgery or laparoscopic surgery. In open surgery, a single larger incision is made in the groin, whereas laparoscopic surgery involves several small incisions made in the midline and the use of specialised instruments to repair the defect from within.

In both cases mesh is used as the primary mechanism used to reinforce the area.

One of the key benefits of the laparoscopic approach over the open one is the reduced post-operative pain and faster return to work associated with keyhole surgery.

What are the benefits?

- ☐ Relief from pain and discomfort caused by the hernia.
- ☐ Prevention of potential complications such as bowel obstruction or strangulation.
- ☐ Improved ability to perform daily activities.
- ☐ Enhanced quality of life.

What are the risks?

Both the open and laparoscopic approaches have similar risks, although their weighting depends a little on which approach is taken.

- ☐ Damage to viscera such as bowel or bladder requiring a larger operation. The damage may be occult (not recognised at the time), leading to a delayed complication diagnosis.
- ☐ Damage to the vas deferens (sperm tube) or testicular blood vessels. This can result in sub-fertility or even (rarely) testicular loss.
- ☐ Infection at the incision site, including of the mesh. Mesh infections are hard to clear and may require multiple hospital admissions and even mesh removal to treat.
- ☐ Other potential mesh complications such as bowel adhesions causing obstruction or fistulation and requiring further surgery.
- ☐ Bleeding or hematoma formation, which can extend down to the scrotum/labia.
- ☐ Chronic pain or discomfort in the groin area. Usually this improves with time, but sometimes is lifelong.
- ☐ Recurrence of the hernia.

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- ☐ General operative and anaesthetic risks such as a heart attack, stroke, deep vein thrombosis or pulmonary embolus development, infection of other organs such as the lung.
- ☐ Death as a result of this operation is rare.

What are the alternatives?

- ☐ Watchful waiting: Monitoring the hernia without immediate surgery is an option, particularly if you are asymptomatic, older, and/or have other significant medical conditions.
- ☐ Non-surgical treatments: Using a truss or binder to support the hernia externally, though this is variably effective and typically a temporary solution.

What to expect before, during, and after the procedure

Before the procedure:

- ☐ Pre-operative optimisation including smoking cessation, weight loss and good diabetes control is important.
- ☐ There will be a period of fasting on the day of surgery before the procedure.
- ☐ Discuss any medications you are taking with your surgeon and anaesthetist, as some may need to be paused.

During the procedure:

- ☐ You will receive general anaesthesia to ensure you are comfortable and pain-free during the surgery.
- ☐ Typically the operation takes about 60 minutes, although it may be longer if the hernia is more complex.

After the procedure:

- ☐ You will be monitored in the recovery room until the anaesthesia wears off and typically discharge the same day.
- ☐ The dressings should be kept clean and dry and remain on for 5-7 days. The sutures are usually dissolvable.
- ☐ After a hernia repair you need to take it easy and avoid vigorous exercise and lifting >5kg for 6 weeks.
- ☐ Return to work on light duties is usually possible after 1-2 weeks.
- ☐ Attend your planned follow-up appointment. If you have concerns prior to this, contact your surgeon, see your GP or present to the Emergency Department.

Questions

Please write any questions you may have regarding the procedure below:

_____

_____

Consent

I understand the information provided above regarding the groin hernia repair procedure, its benefits, risks, and alternatives. I have had the opportunity to ask questions and have received satisfactory answers. I give my consent to undergo the groin hernia repair.

Patient Name: _____

Patient Signature: _____

Date: _____

Surgeon Name: _____

Surgeon Signature: _____

Date: _____