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Gallbladder
Liver
Pancreas

Brisbane Liver and Gallbladder Surgery
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INGUINAL HERNIA REPAIR

THIS INFORMATION REFLECTS THE PERSONAL PRACTICE OF DR KELLEE SLATER ONLY AND DOES NOT SUBSTITUTE FOR DISCUSSION WITH YOUR SURGEON.

YOUR ADMISSION DETAILS:

Your admission date is: _____

Date of your operation: _____

The Rooms will call you a day prior to when you are due to enter the hospital to confirm your admission time and when to start fasting.

Register your admission to confirm your personal details and health history.

This must be done at least 48 hours prior to your admission. It can be done in two ways:

You can complete the admission form online at:

http://www.greenslopesprivate.com.au/For-Patients/online-admission-form.aspx

OR

Call Greenslopes Private Hospital Admissions on phone 1800 777 101.

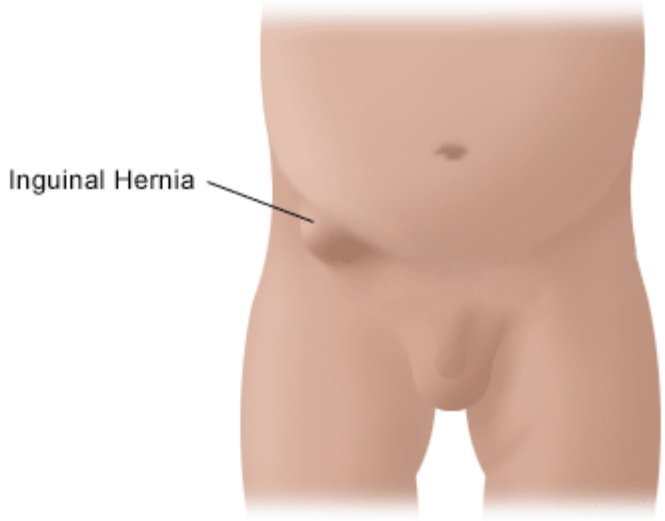
Monday to Friday 8am – 7:30pm or Saturday 8:15am – 12:45pm.

WHAT IS AN INGUINAL HERNIA?

An inguinal hernia is a protrusion of bowel or fat through a weakening or hole in the groin. In both men and women, there is a natural weakening at this point. An inguinal hernia may occur on either side or on both sides at the same time. The lump can be quite small but some hernias become so big that they extend well down into the scrotum or labia.

They occur more commonly in men because the descent of the testicles through the groin leaves the area weak. Women also get hernias, but much less often.

Hernias occur at any age from newborns to the very elderly.



WHO IS MOST AT RISK TO GET AN INGUINAL HERNIA?

Anything that increases the pressure in the tummy will increase the chance of the natural hole in the groin getting larger. Some common reasons are:

- Being overweight.
- People who lift heavy weights.
- Smokers and people with chronic coughs.
- People with constipation and prostate problems, because of straining.
- You may be born with an inguinal hernia.
- Patients with abdominal cancer like bowel, ovary or pancreas.
- Patients with cirrhosis of the liver.

If you have any symptoms of a change of bowel habit, I will also recommend that you have a colonoscopy. (A telescope passed around the bowel to ensure there is no cancer present.)

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WHAT ARE THE SYMPTOMS OF AN INGUINAL HERNIA?

Most people will describe a lump in the groin. It is usually something that develops slowly, but some people notice a lump appearing suddenly after heavy lifting. The lump usually gets bigger after a day of standing up and goes away when you lie down. Big hernias can be very uncomfortable when trying to use your bowels. It is common that you will be able to push the hernia back in and there may be discomfort when you do this. Sometimes hernias cannot be pushed back in at all and there is always a lump present.

Some hernias become so large that a long length of the bowel will be contained in the hernia. This may make it difficult to have a bowel movement and may interfere with urination.

If the lump suddenly becomes painful, then it is possible that the hernia has become trapped. If this occurs, you should lie down immediately, try to relax and gently press over the lump to make it go back in. If the lump goes back in, you should contact me immediately and let me know what has happened. The hernia should be fixed as soon as possible. If the lump does not go back in, or remains painful in any way, you should urgently attend the Emergency Department. The risk is that if the hernia remains stuck for more than a few hours there is a chance that the bowel could die. This can be life threatening.

WHY SHOULD A HERNIA BE REPAIRED?

Once you have a hernia, there is nothing you can do to make it go away. As time goes on, it will become progressively larger and more uncomfortable.

Groin support garments or trusses do not work and can make the hernia worse.

Hernias are fixed for comfort and to prevent the serious complication of entrapment and strangulation of the bowel.

WHAT IF I HAVE GROIN PAIN?

Most hernias are uncomfortable but not painful. To diagnose a hernia, a lump should be present. Groin pain is very common and is rarely caused by a hernia. The most common reasons for groin pain are ligament problems of the hip and pelvis, back problems and groin strain. Patients who have groin pain will very frequently have an ultrasound to investigate this pain. It is usual that the ultrasound will find a very small inguinal hernia. This is because everyone has a natural weak point in the groin. Just because the ultrasound may detect a small hernia, does not mean it is responsible for the pain in the groin. Caution should be exercised in attempting to fix a tiny hernia for the symptom of pain because it is very common that the pain has been caused by something else.

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DO I NEED ANY TESTS TO HAVE AN INGUINAL HERNIA REPAIRED?

All that is needed to diagnose a hernia is a physical examination. Most GP's will have already ordered an ultrasound, but this is not needed.

You will need blood tests and an ECG if you have other medical problems as part of a routine work up for surgery.

HOW IS AN INGUINAL HERNIA REPAIRED?

A hernia is repaired by returning the bowels to the abdominal cavity and then covering the hole that the hernia has come through. This is done by inserting a soft nylon "mesh". A good way to think about fixing a hernia is to liken it to patching a hole in a plaster wall. The edges of the hole are difficult to pull together, so a patch or mesh is placed behind the defect. This reinforces the weakened tissue and muscle. This mesh acts like a frame, for your body to grow strong fibrous tissue into and repair the defect. The mesh is very soft and you will not feel it.

There are many types of mesh on the market and the choice will often boil down to surgeon preference and experience in using that type of mesh. The most common type of mesh used in inguinal hernias is one that partially dissolves over time.

Ethicon's Ultrapro™ Mesh

There are two ways to fix an inguinal hernia:

1. Open technique
2. Laparoscopic or "Key-hole" surgery technique (not suitable for everyone)

In my experience and in the literature, there is very little difference in recovery between the two techniques. Both methods are currently very acceptable.

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In open inguinal hernia repair, a small cut is made over the lump. The contents of the hernia lump are placed back in the abdomen. In laparoscopic repair, a 10mm incision is made just below the belly button. Two more 5mm incisions are made below this in the midline. A camera and long instruments are then placed in the abdominal wall behind the hernia and a mesh is placed over the hernia. In both techniques the patient can go home the same day if they wish.

WHAT TYPE OF ANAESTHETIC WILL I HAVE?

Hernias may be repaired under general anaesthesia (completely asleep), regional or spinal anaesthesia (needle in the back to numb the legs but you are awake) or local anaesthesia (injections into the groin to numb the area, you are awake). Your anaesthetist will discuss this with you and there are pros and cons of each method.

WHAT ARE THE COMPLICATIONS OF OPEN INGUINAL HERNIA SURGERY?

Specific Risks:

- **Recurrence of the hernia:** occurs in approximately 1% of patients. No repair is perfect and the hernia may come back. You will require another hernia operation if this occurs. Often hernias come back because the patient has continued to lift heavy objects in the post-op period or they are a smoker with a chronic cough.
- **Nerve damage:** this is rare. Occasionally patients may have chronic groin pain due to nerve entrapment in scar tissue. This can be a debilitating problem.
- **Infection of wound or mesh:** wound infection is quite uncommon after hernia surgery. If it occurs, it may require treatment with antibiotics. Very rarely infection of the mesh may occur. This may require removal of the mesh down the track.
- **Bleeding:** occasionally there is bleeding under the skin that requires a return to the operating theatre in the first few days. It is also quite common for there to be some bruising around the wound. With time, this bruise may travel down and cause bruising on the penis and scrotum. This will get better.
- **Urinary Retention:** it is very common for men over 60 to have an enlarged prostate. After hernia surgery, the symptoms of an enlarged prostate get worse and the patient cannot pass urine. This will require a urinary catheter to be inserted. This is usually temporary and normal urine flow will occur again a few days later. Occasionally though, the swelling will uncover a significant prostate problem and you may need to go home with a catheter in for some time and may need a prostate operation. This is usually in patients with significant urinary symptoms before the surgery.
- **Removal of the testicle:** occasionally hernias are so large that the blood supply to the testicle is at risk during the repair. I must then make a decision whether or not to remove the testicle. You would usually be warned about this prior to surgery. You can live normally with one testicle, although your fertility may be reduced.
- **Damage to the artery of the testicle:** this is very rarely damaged during the surgery and may result in a painful swollen testicle. This usually gets better with no treatment. Occasionally the effected testicle may need to be removed.

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WHAT ARE THE COMPLICATIONS OF KEYHOLE HERNIA SURGERY?

All of the above risks apply. In addition:

- **Damage to the vein that supplies the leg:** there is a higher chance of damage to this vessel in the laparoscopic approach.
- **Damage to the bowel and internal hernias:** laparoscopic hernia surgery is performed in the layer of the abdominal wall. Occasionally, there may be a hole made in the lining of the tummy and the abdominal cavity may be entered. This may cause another type of hernia to form and this may cause a blockage of the bowel that requires major open surgery.
- **Conversion to open surgery:** if there is significant bleeding or the operation is unable to be completed with laparoscopy, I will convert to an open operation. This is considered sound judgment.

General Risks:

- Death: approximately 1/50,000 risk for all patients having a general anaesthetic. There is a small risk of severe allergy, inhalation of vomitus and drug reaction during an anaesthetic.
- Blood vessel problems: heart attack, stroke. This is very rare.
- Infections: wound, pneumonia, urine, IV line related.
- Clots in the legs that may travel to the lungs and be fatal.
- Wound pain, abnormal (keloid) scarring or hernia of the wound.

WHAT TO EXPECT IMMEDIATELY AFTER SURGERY

Pain Relief

Every effort will be made to minimise the discomfort. Your nurses will be monitoring your level of pain control frequently.

Local anaesthetic will be used in the wound and lasts for about 12 hours.

There are two major types of pain relievers after hernia surgery:

1. Panadol, Panamax, Paracetamol

   You will be amazed the power of regular paracetamol. It will cut down the need for the very strong pain pills.

   They do not cause constipation.

   Do not take more than 8 tablets a day or serious liver damage may occur.

2. NSAIDs (Indocid, Brufen, Mobic)

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Another excellent pain reliever. They do not cause constipation.

Must be used very cautiously in the elderly and those with kidney problems because it might cause kidney failure.

They may cause stomach ulcers. If you experience any pain in the upper abdomen you must stop this medication immediately and seek advice.

It is uncommon to need anything stronger than these medications after you go home. Try and avoid codeine or narcotic containing products – like Panadeine, Panadeine Forte or Endone as they cause constipation and may put strain on your hernia repair.

Eating

It is usual to return to a normal diet within a day of hernia surgery. There are no restrictions. It is very common to feel slightly nauseated for 12 hours following surgery.

Urinating/Bowel Movements

After any surgery, you may have trouble passing urine. This is uncommon and usually temporary. Occasionally a catheter needs to be inserted to help you pass urine (see above). This may be avoided by standing up to pass urine after the surgery and relaxing. Sometimes it is easier to pass urine while standing in a warm shower.

There may be some disturbance to your bowels in the week after surgery. You should make sure that you drink 2-3 litres of water per day and eat plenty of fruit and vegetables. If you tend toward constipation, then you should take an over the counter laxative. It is more difficult to push a bowel motion out in the week after the operation. Straining may increase the chance of the hernia repair failing.

Activity

It is usual to be discharged 1 – 2 days after routine hernia surgery. It is very important to begin light activity shortly after surgery. This is to prevent pneumonia, clots in the legs and loss of general condition. You must not lift heavy weights or play strenuous sport until six weeks after your surgery. After this time, the wound will not get any stronger, but caution should always be used.

AFTER DISCHARGE

Your Incision

You can expect to have a waterproof dressing over your incision. You may remove this after five days or earlier if it is dirty. You will be able to shower with this dressing. It is quite common to have a small amount of leakage from the wound or a bubble of fluid under the dressing.

You can peel the dressing off 5 days after the surgery. The wounds should be healed by this time. It is common for the wounds to be bruised.

There will not be any stitches to remove. They will be of the dissolving type. It is very common for an end of the stitch to poke out of the wound. If it bothers you, you may snip it off with a pair of scissors. Otherwise it will fall off about 6 weeks after the operation.

Once uncovered, you may gently wash of the dried material around your incision and let water run over it. Pat the wound dry with a towel. Do not rub soap or moisturizer into your incision for at least 4 weeks or until it is fully healed. After this time, you may rub vitamin E cream into the wound.

It is normal to have a **hard ridge of tissue under the wound.** All patients experience this and it will disappear in approximately three months. It is normal to have a patch of numbness under the wound and this may be permanent. You will stop noticing it after a while Your incision might become slightly red. This is normal. Over the next few months your incision will fade and become less prominent.

After a keyhole hernia repair it is normal to have swelling of the scrotum due to the gas used during the operation. This swelling will get better within 48 hours.

Activity

Do not drive until you feel you could respond in an emergency. This usually takes a week or so.

You may walk normally and climb stairs. You may lift your arms above your head.

Do not lift more that 15 kg for 6 weeks after surgery. (This is about the weight of a heavy bag of groceries) This also applies to lifting children. Your body will not let you lift anything too heavy anyway because it will hurt.

You may start some light exercise like walking on a treadmill when you feel comfortable. Strenuous sport should be avoided for 6 weeks.

Heavy exercise may be started after 6 weeks - but use common sense and go slowly at first.

You may gently swim after 2 weeks

You may resume sexual activity when you feel ready.

USE COMMON SENSE AND IF IT HURTS – STOP!

How you may feel

It is quite common to feel quite tired for a few weeks after surgery.

WHAT PREPARATIONS DO I NEED TO MAKE BEFORE MY SURGERY?

Hospital

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The hospital and my office will call you the day before your operation to confirm your admission time.

Fasting

You must have nothing to eat or drink for six hours prior to surgery. (You may take sips of water up until 2 hours before the operation and you may take your medications with a sip of water). You may brush your teeth. You must not chew gum or smoke on the day of the operation.

Shaving and showering

You do not need to shave any body hair from your abdomen before the surgery. If needed, I will do this with sterile clippers after you are asleep, just before the surgery commences. This gives the lowest chance of infection.

There is no evidence to suggest that having a shower in antiseptic prior to surgery decreases infection rates, so just shower normally on the morning of surgery. Do not use any perfume.

Belly buttons

You need to remove any belly button piercings. You can put the ring back in 4 weeks after the operation.

For people with very deep belly buttons, it is normal to have a build up of lint and old skin hiding in there. This can be very smelly. Try and clean your belly button with a cotton bud and water a few days before the surgery to decrease the risk of a wound infection.

Make up, nail polish and jewellery

I understand that some women feel quite anxious about going without their make up. Most of your body will be covered during the operation, so it is important that the anaesthetist can see your face clearly. Your colour can be a good monitor of how much oxygen you are getting. For this reason, it is best to come to theatre with a clean, makeup free face.

Nail polish is OK with me as long as you keep it clear on your fingernails. Coloured nail polish can interfere with the device we use to measure the oxygen in your blood. For many women, having a pedicure the day before the surgery is a good way to relieve some anxiety.

Any jewellery you are comfortable with removing, you should leave at home. If you would like to leave your wedding ring on, you may, but this will be covered with tape for the duration of the surgery.

Glasses and contact lenses

You should remove your contact lenses prior to coming to the hospital. You don't need to bring your glasses in either. You can use them again when you are back on the ward.

False teeth, caps, crowns

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Don't take your teeth out before you come to the operating theatre. They will usually be removed by the anaesthetist after you go to sleep. Keeping your teeth in will help the anaesthetic doctor get a good seal on your mouth with the oxygen mask. Your teeth will be well taken care of during your operation and returned to you in recovery before anyone can see you.

Preparations at home

Ensure that you have someone available to care for small children for a week or so, to take the pressure off your recovery. If you are handy in the kitchen, try to cook and freeze some easy meals to have on hand for when you do not feel like cooking. Another option is to consider ordering precooked meals from companies like Lite and Easy. Consider hiring some help around the house for a few weeks after the surgery or enlist willing (or unwilling) relatives to help out. Make sure all your bills are paid ahead or on automated payments to reduce the things you have to think about in the recovery period.

Medications

- If you are on blood thinners such as Aspirin, Warfarin, Plavix, Iscover, Clopidogrel, Pradaxa, Dabigatran, Rivaroxaban, Xarelto or anti-inflammatory drugs (Brufen, Mobic, Voltaren, etc), they can cause bleeding during surgery. I will advise you about what to do with these drugs prior to surgery. You must let me know about these drugs and the decision to stop them is based on each individual patient's needs.
- Diabetic medications: I will give you advice on whether to take your diabetic medications on the morning of surgery or not. Some diabetics will be admitted the night before the operation and be looked after by a diabetic doctor.
- If you are on Prednisone, you should not stop this drug suddenly.
- Cholesterol lowering medication should not be taken when you are fasting.
- If you are taking any complementary medications e.g. St John's Wort, fish oil or garlic, you should stop these tablets one week before surgery as they may result in excess bleeding.
- You may continue to take a multivitamin.
- Continue to take all other medications, even on the morning of surgery, with a small sip of water.

Other things to know

- You must bring all relevant x-rays to the hospital with you.
- If you smoke, it is in your best interests to stop completely as soon as you can. See your GP for alternatives or call Quitline (13 18 48) if you wish to seek advice.
- You should also abstain from drinking alcohol 24 hours prior to any surgery.
- Bring all your current medications with you to the hospital.
- Bring comfortable pyjamas, personal toiletries, small change for newspapers etc.
- Bring something to do - DVD's, books, laptops. Alternately you can use hospitalisation as an opportunity to rest completely without distractions of the outside world.
- Do not bring large amounts of cash or valuables.
- will also let you valuables.

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WHAT WILL THIS SURGERY COST?

I largely work as a 'no-gap' doctor. This means that the surgeon fee for your operation will be sent to your health fund and there will be no 'gap' or extra amount of money to pay. There are always exceptions and decisions regarding this are made on a case-by-case basis.

If you do not have private health insurance or if you have overseas insurance, you will be given a quotation for surgery, anaesthetic and hospital fees and must pay in full *prior* to the operation.

If your Body Mass Index is >35, i.e. you are morbidly obese, the surgery is far more difficult and the risks of complications including recurrence of the hernia is higher. If it is medically suitable, I may recommend a period of weight loss with a program called INTENSIV before contemplation of this operation so it can be done more safely and have better results. This will incur an extra out of pocket expense.

Outpatient consultations are not covered by the health funds and there will be a charge for these meetings. You will get a proportion of this money back from Medicare. There is no fee to be paid for normal care after the operation.

There may be other out-of-pocket fees from your anaesthetist and any other specialists who are asked to look after you. You should ask them ahead of time any out-of-pocket costs. Ask us who will be performing your anaesthetic and you can make enquiries with them about any out-of-pocket expenses.

There may be extra costs for x-ray, pharmacy and pathology. You have a right to gain 'informed financial consent'. Fees from other practitioners are beyond our control and you should ask for the costs from each person who is asked to look after you. Patient's have a choice when it comes to paying for their health care and you are fully within your rights to shop around.

ABOUT YOUR SURGEON

Dr Kellee Slater MBBS (Hons) FRACS

2006 – Present	Staff Surgeon Hepatopancreatic-Biliary-Liver Transplant Princess Alexandra Hospital and Greenslopes Private Hospital Brisbane, Queensland
2004 – 2006	Hepatobiliary and Liver Transplant Fellowship Princess Alexandra Hospital Brisbane, Queensland
2002 – 2004	Liver and Kidney Transplant Fellowship University of Colorado Hospital Denver, Colorado, United States of America

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2002	Fellow of the Royal Australian College of Surgeons (FRACS) General Surgery
1989 – 1994	MBBS (Honours) University of Queensland

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