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Abs of Steel Hernia Repair
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Abs of Steel
Hernia Repair Brisbane

INGUINAL HERNIA REPAIR

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

YOUR ADMISSION DETAILS:

Your admission date is: _____

On your arrival to hospital, present to Admissions at the designated time. From the main entrance of the hospital, there is a pharmacy on the left. At the end of the pharmacy, there is a lift. Take this to Level 1. This is Admissions.

You will need to stop eating food from: _____

Drink the 2 DEX between: _____

You can drink CLEAR fluids until: _____ **then it is NIL BY MOUTH.**

Your operation date is: _____

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 then click on the ONLINE ADMISSION button

OR

Call Greenslopes Private Hospital Admissions on phone 1800 777 101.

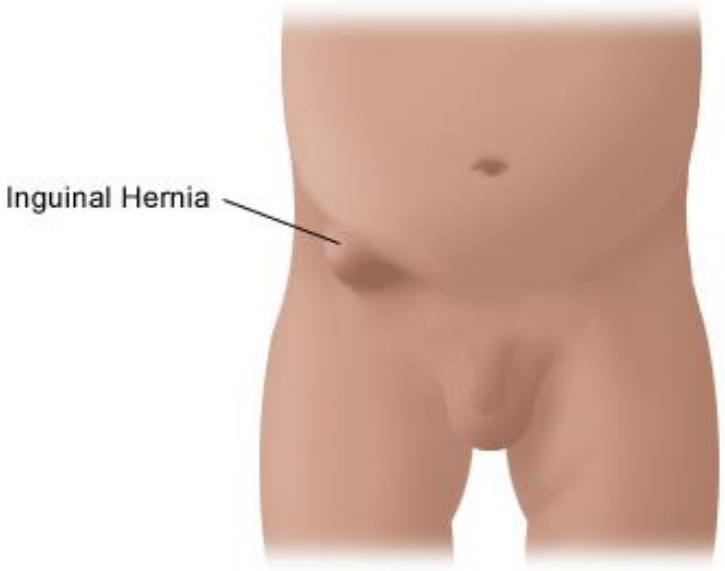
Monday to Friday 8am – 7:30pm or Saturday 8:15am – 12:45pm.

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 GPs will have already ordered an ultrasound but this is not needed.

If there is some doubt about whether an inguinal hernia is truly present, a CT scan is more useful.

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 “Keyhole” 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. I will discuss the pros and cons of both techniques with you.

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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 and a mesh is inserted. Great pains are taken to look after the nerves that run through this area.

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 hole causing the hernia. The mesh is usually held in place with small tacks that dissolve over time.

In both techniques the patient can go home the same day if they wish but many patients enjoy staying overnight.

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.
- **Chronic pain:** fortunately this is rare, however it can be devastating. There are multiple reasons for this pain. Nerves can become trapped in scar tissue, mesh can bunch up. There are multiple approaches to this type of pain and it is a complex thing to fix.
- **Testicular Pain:** occasionally mesh sitting on the vas (the tube that carries sperm) may cause chronic pain in the testicle. This can be a debilitating problem but is fortunately rare.
- **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.

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- **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.

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 causing significant bleeding 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.

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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)

   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.

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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 than 10 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.

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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

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.

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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 do not need to bring your glasses in either. You can use them again when you are back on the ward.

False teeth, caps, crowns

Do not 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 'n 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.

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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 – DVDs, 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.

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 which ***must be pay in full 7 days 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. Patients have a choice when it comes to paying for their health care and you are fully within your rights to shop around.

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YOUR JOURNEY THROUGH THE OPERATING THEATRE

HOW YOU MAY FEEL BEFORE SURGERY

Having a general anaesthetic (being fully put to sleep) can very scary for some people. It brings up issues about loss of control. People worry about what may happen when they are asleep.

Having an anaesthetic involves a lot of trust and in the end you will have to take a leap of faith and believe that you have chosen a team that will look after every part of your body. You should read this article if you would like to know exactly what goes on just before, during and after an anaesthetic for major surgery. For some people, understanding precisely what happens in the operating room brings a sense of calmness.

CHECKING INTO THE OPERATING THEATRES

You will be greeted at the front desk by one of our friendly executive staff who will do the administrative paperwork. They will also collect any hospital excess you may have to pay. Please bring your health fund and Medicare cards. They will also want to know about your next of kin. With your permission I will call a nominated family member at the end of the surgery and the recovery nurse will also let them know when you are ready to go to the ward.

For major surgery, it is best that you remove ***all*** your normal clothes including your underpants and bra. This is so we do not lose them or mess them up with blood or antiseptic fluid during your surgery. You will meet one of the pre-op nurses who will help you change into your glamourous theatre gown and paper underpants. For abdominal operations, it is very common that you will wake up completely naked i.e. without your paper underpants. We often remove them in the operating theatre keep them away from the area we are operating on. Your modesty will be protected as much as possible. Contrary to what you see in the movies, your bottom will not be on view out the back of your gown. Hospital robes wrap around your rear. You will be measured and fitted with white, knee high stockings to prevent clots in the legs. For some operations, you may have a pair of pneumatic leg warmers placed on your calves to gently massage your legs while you are asleep. This prevents clots in the legs. The look is complete with a puffy paper hat. Any jewelry you would like to keep wearing, like a wedding band will be covered with tape.

You will be weighed and your temperature, blood pressure and pulse will be checked. You will be asked about your allergies and will be given an ID band that will stay on for your entire stay. The nurse will ask you if there are any implants or metal in your body. We ask this because we need to place an earthing plate on your body during the surgery and need to place it away from any internal metal.

You will then go through many repetitive identification processes to make sure we have the right patient and that everyone agrees on the operation you are having done. You will be put on a bed and you will wait and wait and wait until it is your turn to be called into theatre. This waiting can be quite stressful and you can get hungry. You may want to bring something to do during this time. There is also a TV to watch and magazines to read.

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Rest assured we are moving as fast as we can and because unexpected events happen all the time, delays in hospitals are inevitable. It is possible to develop a headache due to caffeine withdrawal. This is not harmful and you may have two Panadol with a sip of water to help.

Your clothes, glasses, valuables will be put into a bag and your belongings will be put into a locker whilst you are in theatre. You will be reunited with them when you return to your room in a ward or intensive care. If you have come to theatre from the ward, your belongings will stay in your room and await your return. If you are going to ICU after the surgery, your belonging will travel with you.

Why do I have to fast before surgery?

For an arranged operation, you must have nothing to eat or drink for six hours before. When you have an anaesthetic, all the muscles in your body relax. If you have food in your stomach, it can reflux back up into your mouth and even worse, your lungs. This can produce a life threatening pneumonia. You must also not chew gum prior to surgery as this increases the fluid in your stomach. If you are having a particularly big operation, your anaesthetist may give you a sugary drink two hours prior to surgery to help your recovery. It is OK to take your normal medications with a sip of water any time before surgery. It is also fine to brush your teeth.

Special circumstances

There are a few instances where certain precautions take place.

Latex allergy:

Please let the admission nurses know if you have a latex allergy. We need to remove all the latex products from the operating theatre to protect you.

If you take certain medications:

If you have recently had chemotherapy or take immune suppressing drugs like azathioprine or methotrexate special, measures will be taken to protect staff members against coming into contact with these drugs.

If you have certain bacteria on your skin:

Many people have bacteria living on their skin that have been given special names by hospitals. It is likely you will know this from a previous hospital admission. This does not mean you have an infection. We all have bacteria living in and on our bodies, some just have special names and some have a higher chance of being resistant to some antibiotics. It is best if these bacteria are not passed onto other patients as it promotes antibiotic resistance. If you are MRSA “golden staph”, VRE, CRE or MRAB positive, then isolation precautions will be taken throughout your stay in the hospital.

If you have false teeth or plates:

Please leave these in. It makes it easier for the anaesthetist to help you breathe as you go off to sleep. If needed, the anaesthetist will remove them after you are asleep and they will be returned to you in recovery.

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TAKING YOU INTO THE OPERATING THEATRE

You will be wheeled around to the operating room by one of the theatre orderlies or a nurse. This is where you will say goodbye to your relatives. They will be next able to see you when you return to the ward. Because there are other patients in the recovery unit, relatives are not permitted in.

The next stop is the anaesthetic room. This is a small cubicle adjoining the main operating theatre. The orderly will hand you over to the nurse assisting the anaesthetist. You will then have another identification check (you will be very good at reciting your name by this point). The nurse will check that your consent form is completed and if you are having a surgery where the side is important, I will mark the area with permanent marker.

Then the anaesthetist will arrive. They are the person with the good drugs that will make you relaxed, so be nice to them! If they have not met you earlier, they will go through your medical history again and what to expect. They may also explain some risks of anaesthesia, but because you have read this book, you will be aware of them already. This is not meant to scare you. It is our job to tell you about the good and bad aspects of surgery.

The only thing that will go into your body while you are awake is a small plastic tube in your hand called a cannula, drip or IV. This is a small needle and will hurt for a second or two. When it is in the vein, the needle is taken out and a soft plastic tube is all that is left. Once in, you should not be able to feel it. This tube is used to give the medication that will put you off to sleep. In addition, if you are having an epidural for post-operative pain relief then this will be done prior to going off to sleep.

Occasionally, some patients have a severe needle phobia. This one small needle can create terrible anxiety. If this is the case, we can sometimes give the anaesthetic without a needle at the beginning. This is done by asking you to breathe on gas for a few minutes. You will drift off to sleep. The IV is placed once you are fully out and you will know nothing about it. This is a slower way to go off to sleep, but for some people avoiding a needle while awake makes a big difference.

Once the IV is in, you will be taken into the main operating theatre. This can be a confronting place too. There are usually 5 - 10 people in the room, all wearing masks and talking. We are all there to look after you. Most operating theatres are set up in a predictable way. There will be an anaesthetic machine with all the monitors to ensure you are safe. There will be several tables filled with surgical instruments ready to perform your surgery. There will also be nurses preparing this equipment and counting each and every instrument to ensure that nothing is missing at the end of your operation. There may also be junior medical staff and orderlies. The operating table is in the middle of the room under big lights. They will not be turned on until you are asleep. The table is narrow and cold. It is narrow because we need to stand close to you to operate and it won't be cold for long because during the surgery you will covered with a heating blanket.

The trolley you are on will be placed beside the operating table and if you are mobile, you will be asked to move yourself across onto it. The nurses will make sure you are not lying on your gown as it will usually need to be moved aside to expose the area we need to operate on. If you are in pain or not mobile, we will slide you across to the operating table

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on a special board or float you over on a noisy hover mattress. A lot of activity will then happen around you. We will place padded boards on the side of the bed for you to rest your arms on. Your leg massagers will be hooked up and switched on and you will feel a gentle compression on your calves.

You will have three stickers placed on your forehead. This helps the anaesthetist monitor how deeply asleep you are. Sticky dots to monitor your heart beat will be placed on your chest. Fluid will be hooked up to your IV line and a clip that reads your pulse placed on your finger. A blood pressure cuff will be wrapped around your arm and the first time it takes your blood pressure, it will inflate very tightly. It will only do that once.

You may already be feeling happy, drowsy or talkative as the anaesthetist may have given you a relaxing medication via the IV. You will not go to sleep yet, but it is unlikely you will remember anything after this until you wake up in recovery even though you will continue to talk to us.

WHAT HAPPENS DURING AN ANAESTHETIC

Sometimes knowing what happens during an anaesthetic really helps you relax and realize that you are well taken care of while you are asleep. Many people's greatest fear is the anaesthetic. They worry about vomiting afterward, being aware during surgery and not waking up. Whilst these things very, very rarely occur, having an anaesthetic is actually far safer than anything you have already done that day, like driving into the hospital.

General anaesthetic consists of three phases

1. Going to sleep – similar to taking off in a plane

Just before you go to sleep, the anaesthetic nurse will ask you to breathe into a mask and fill your lungs with oxygen. This makes sure that you have the maximal amount of oxygen in your blood. This does not put you to sleep. A white medication called Propofol is then given through your IV. The anaesthetist will ask you to keep your eyes open. As this medication goes into your veins, it can cause a stinging sensation in your arm. This is normal and does not damage you. After this injection you will be asleep in about ten seconds. Your breathing will temporarily stop and the anaesthetist will take over your breathing for you by blowing oxygen into your lungs. As soon as you are asleep and if you are having abdominal surgery, the anaesthetist will give a medication that stops your muscles moving. This has many functions. It allows your throat to relax so the anaesthetist can safely place the breathing tube into the windpipe. It also relaxes your abdominal muscles and makes surgery on the abdomen easier. If you have false teeth, they will be removed at this point and returned to you in recovery.

As soon as the muscle relaxer has worked, the anaesthetist will use a special tool called a laryngoscope. This is a smooth spatula with a light that is inserted over your tongue and deep into your throat. The anaesthetist will be able to see your vocal cords and beyond this is your trachea or windpipe. A specially designed hollow tube is placed down the spatula and into the wind pipe. A balloon on the end of the tube is inflated by the nurse to fully occlude your airway and stop any vomit or secretions from entering your wind pipe.

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This is often the trickiest part of the anaesthetic and your life can depend on it. There are many signs the anaesthetist will look for before you go to sleep to predict whether getting this tube down will be difficult or not. If you have a small jaw, previous difficulties with intubation, neck problems, difficulty opening your mouth, the anaesthetist will be ready with a different strategy to get the tube down your throat safely. Because your breathing is our number one priority, occasionally putting the breathing tube down can result in damage to your teeth or cuts to your lips. All care is taken and this is uncommon. Having a tube in your throat can leave it sore and dry for a day or too. This is transient. You have also have a swollen uvula (the dangly bit at the back of your throat) for a few days.

Before the surgery starts, if appropriate, you will be given a dose of antibiotics via your drip to help lessen the risk of wound infection. Soft tape will be placed over your eyes to keep them closed and protected. There are other devices we use to monitor your wellbeing during surgery. Tubes like urinary catheters and IV lines will now be placed. Your arms and legs will be padded to protect your pressure areas and you will be positioned for surgery.

2. Staying asleep during the surgery – cruise control

You will be kept asleep by anaesthetic gas piped in via the tube in your windpipe or by a continuous infusion of Propofol in your drip. The anaesthetic machine will steadily and precisely breathe for you. Your anaesthetist will never leave your side and constantly monitors your vital signs. They will give you small doses of medications and fluids to keep everything steady.

3. Waking up – landing the plane

As the surgery comes to an end, the anaesthetist will give you strong dose of pain killer so you will wake up in comfort. They will turn the gas off and give a medication to reverse the paralysis. While you are still asleep, you will be transferred onto your bed. When you are breathing by yourself, the anaesthetist will remove the breathing tube and suction your throat. Patients rarely remember this. An oxygen mask will be placed on your face and you will be wheeled out to recovery.

APART FROM THE SURGERY, WHAT ELSE HAPPENS WHEN I AM ASLEEP

If you have body hair on the area having surgery, it will be clipped off. Often a larger area that is needed will be shaved. An earthing plate will be placed somewhere on your body so the electrocautery device can be used to stop bleeding as required. This will be removed before you wake up.

Just before surgery, everyone in the theatre will stop what they are doing and check once again your identity and the operation we are performing.

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WHAT SOME PEOPLE WORRY ABOUT BUT WERE TOO AFRAID TO ASK

What if I have my period on the day of surgery?

This makes no difference to you or us. Having a period is a normal part of life. I would suggest that you use a pad and not a tampon as it may be some time before you can change it. If you have any questions about this, ask the nurse who checks you in.

My bladder feels full – will I wet myself?

Just before you go into the operating theatre, many people feel like they need to pass urine. This is usually anxiety. If you have gone to the toilet in the waiting area, it is very unlikely that you will need to go again.

For big operations, we will put a tube in you bladder that will catch all your urine. If you are having a smaller operation and still need to go once you reach the theatre, the nurse will take you to the bathroom.

It is a fact of life that some people occasionally wet themselves during the operation. It does not bother us and you will be cleaned up before you go to the recovery room.

What if I think I am pregnant?

You must let us know at check in, even if you are only suspicious. If you are pregnant it is likely we will delay the surgery. If you are not sure, there are quick pregnancy tests available to check. It is essential that we know because the surgery and anaesthetic drugs can harm your unborn child and even lead to miscarriage.

I always vomit after an anaesthetic

Nausea and even vomiting can happen after an anaesthetic. It is such an unpleasant feeling that it may be an enduring memory of previous surgery. Post anaesthetic nausea is more common if you suffer with motion sickness. Your anaesthetist will discuss this with you and there are many strategies to avoid this troubling side effect.

What if I am breastfeeding?

Breast feeding should not stop you from having a surgery you need. Very small amounts of anaesthetic and pain relieving drugs will pass into your breast milk. Theoretically, this is low risk for your baby. Anaesthetic guidelines suggest you pump and discard breast milk for 24 hours after an anaesthetic. Your baby will need to be fed with previously pumped milk or formula. It is almost certainly perfectly safe however to feed your baby less than 24 hours later. Whether you are up to it of course is another matter. Occasionally, surgery may cause a decrease or even cessation of your milk supply.

Who will be in the operating theatre with me?

It is necessary for your safety for a number of staff, both male and female to be in the operating theatre both before and during you surgery. In addition to your surgeon and anesthetist, there may be junior doctors, a number of nursing staff, theatre orderlies and x-ray technicians. As this is a teaching facility there may be medical students present.

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All of these staff are highly professional. There are definitely moments where you will be exposed whilst preparing you for surgery, but extreme efforts are made to preserve your modesty.

Do you play music while I am asleep?

No. We are concentrating on your care. Music tends to be a distraction. There are many sounds of machines and monitors in the operating theatre and we are listening to those. We also need quiet to enable communication between staff.

What if my bowels work while I am asleep?

This is quite uncommon. If it does occur however, you will be cleaned up prior to moving to recovery.

I am worried about waking up during the operation

Awareness during anesthesia is exceptionally rare. Making sure you are fully asleep is the anaesthetists' main objective. There are a number of monitors and alarms that you will be hooked up to absolutely ensure that this doesn't occur.

I am on the oral contraceptive pill

There is a medication given as the end of some anaesthetics that can interfere with the effectiveness of the pill. Please tell your anaesthetist if you are on the pill. If the medication is used, then you will need to use an alternate contraception for two weeks to avoid pregnancy.

I am worried about my memory after the anaesthetic

There is no doubt that a condition called post anaesthetic cognitive disorder is a real thing. It is more common on patients over 60 and it can result in memory loss that may be permanent. It is not fully understood. If you have concerns your anaesthetist would be happy to discuss it with you.

RECOVERY – THE WAKE UP ROOM

When you wake up, is likely that you will be wearing a gown but be completely naked underneath. You will be covered with a blanket.

The recovery room is the first thing most patients will remember after going to sleep. It will almost be like no time has passed.

You will have a nurse by your side who will be monitoring your vital signs. You will stay in recovery until you are fully awake and your observations are within normal limits. The nurse will monitor your pain and keep you comfortable.

If you have a catheter in your bladder, you may feel a need to pass urine. This feeling will go away.

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As you wake up you may have a tube in your throat that the nurse will remove. It is unlikely you will remember this.

If you snore you may have a small tube in your nose or mouth to help you breathe until you are fully awake.

If you have false teeth, they will be returned to you in recovery.

Your family is not allowed in recovery so we can respect the privacy of other patients.

RETURN TO THE WARD

When you return to the ward you may be drowsy, nauseated or in pain. Your nurse will be monitoring these things closely.

They will be checking you pulse, blood pressure, temperature and dressings regularly for abnormalities.

There is a very strict criteria of observations that the nurses must follow. If you fall outside these criteria for any reason the nurses must notify the medical team. Very often this is just a false alarm. It may sometimes seem dramatic, but it is done for your safety.

If you are on strong pain killers like morphine or Fentanyl you will be required to wear an oxygen mask.

HOW DO I HANDLE MY ANXIETY?

Every person suffers from some level of anxiety. You are not human if you do not. Having an operation is up there in the top ten of major life events. A little bit of anxiety can be good thing. It can make you hesitate before taking a misstep. When anxiety gets out of control however, it becomes a medical problem and stops you doing things that you should or want to do. Some people suffer anxiety about many things and for some it can be an issue only in certain situations.

Common symptoms of anxiety are

- Overwhelming negative thoughts
- Sleepless with worry
- A constant stream of bad thoughts “the chatter”
- Physical symptoms such as chest pain, nausea, headache

There are many techniques to address your anxiety. There are mindfulness, meditation and distraction techniques. Sometimes anxiety is so bad that medication is needed.

It is normal to be anxious before surgery but if the feeling of anxiety is overwhelming please talk to me or your GP about it. Help and suggestions are also available at Beyond Blue: www.beyondblue.com.au

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ABOUT YOUR SURGEON

A/Prof Kellee Slater MBBS (Hons) FRACS FACS

2018	Associate Professor University of Queensland
2015	Fellow of the American College of Surgeons
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
2002	Fellow of the Royal Australian College of Surgeons (FRACS) General Surgery
1989 – 1994	MBBS (Honours) University of Queensland

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