



Surgery at Oxford Hernia Clinic



0800 043 0066 / 01865 764566

Who is this leaflet for?

This leaflet is for patients, and family or carers of patients, undergoing hernia surgery at the Oxford Hernia Clinic, The Manor Hospital, Oxford.

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What is involved in hernia surgery?

The Oxford Hernia Clinic performs virtually all of its hernia operations under local anaesthetic (over 95%). We favour an open 'tension-free mesh' procedure, as we believe this remains by far the best way to fix your hernia long term, however we are happy to perform a 'no mesh' repair when patients request this.

Some cases will be performed under general anaesthetic, this usually includes all incisional hernias and when patients have a hernia that is not 'reducible' i.e. one they can push back in. We have stopped performing all 'keyhole' operations but are happy to refer you on to an experienced surgeon if this is requested or indicated.

Hernia surgery

Open inguinal surgery involves a single cut of about 6-8 cm, depending on the type of hernia. For umbilical or epigastric hernias the cut is usually only about 2-4cm.

The hernia bulge (sac) is sometimes excised and pushed back through the gap into its proper place inside the abdomen or sometimes the sac is simply pushed back in. The weakness in the abdomen wall is then usually covered with a sterile mesh. The mesh we favour is self-fixing which means NO STITCHES are used to hold it in place. There have been studies to show this reduces both short and long-term post-operative pain. It also makes the operation quicker (on average about 20-30 minutes).

The wound is then closed with a stitch under the skin. This dissolves over time and does not need to be taken out.

Smaller umbilical or epigastric hernias often do not need a mesh and we never use mesh for femoral hernia repair.

Tension free mesh repair (Lichtenstein)

This type of repair (also known as a Lichtenstein Repair) does not involve the inguinal ligament being sewn up to the muscle (hence there is no 'tension' in the tissues). The inguinal ligament is the big ligament that connects your hip bone to the pubic bone and runs under the crease at the top of your leg. The abdominal muscles are connected to it.

The mesh will stay in your body and does not dissolve. The body recognises the mesh as a 'foreign material' and so 'rejects it', forming scar tissue, which grows around the mesh and secures the weakness where your hernia bulge was. Once the mesh is completely encased in scar tissue the body can no longer 'see it' and stops making the scar tissue. It is the scar tissue that fixes your hernia, not the mesh, hence the need to avoid heavy lifting or straining after the operation.

Many studies have shown it to be a very effective way of fixing your hernia, significantly reducing the chances of it coming back and is the current recommended technique by all major international hernia associations.



No mesh repair (Bassini Type)

You can choose to have your hernia without the use of mesh. In this type of repair, the inguinal ligament is stitched up to the muscle on the abdominal wall (thus creating some 'tension' in the tissues).

It was first described by an Italian surgeon named Edoardo Bassini in 1884. It remained the standard way of fixing an inguinal hernia for the next 100+ years until the "no tension mesh" technique was shown to be more effective in reducing recurrence rates. Any operation that we perform for over 100 years must be a good one! There are many people walking around with Bassini Type repairs that they had performed many years ago.

However, having a Bassini Type repair without mesh *will not remove the chances of chronic post op pain* and the chances of your hernia returning are significantly higher, particularly if you have a direct hernia (one where the muscle wall of the abdomen has been torn).

Anaesthesia

Virtually of our patients have their surgery under local anaesthetic. General anaesthetic is usually needed when the hernia is very large, will not reduce (go back in) or for most cases of incisional hernia. All keyhole operations require a general anaesthetic.

If you are having local anaesthesia you will be given a very fast acting sedative prior to surgery to help you relax. This wears off very quickly. Whilst you are sleepy for 2-3 minutes the local anaesthetic will be injected over the hernia area, you will not remember this happening.

IMPORTANT: You will not be able to drive or ride a bike afterwards.

Using local anaesthesia ensures:

- No nausea or sickness post op.
- Robust pain management, from 4 -12 hours enabling you to be completely comfortable during your return home
- A quicker recovery from the operation (virtually all our patients leave hospital after 30 minutes)
- Maintain consciousness throughout the procedure
- Appears to be less painful in the week after surgery

NB: Although patients are awake during the procedure, surgical drapes are in place, so you do not see the actual surgical operation.

The surgical and nursing staff talk to you throughout your procedure, keeping you informed and ensuring a relaxing and friendly experience. We listen to Absolute Radio™ in theatre.

If you are feeling stressed then the anaesthetist may give you a touch more of the sedative, not so much to make you sleep but enough to relax you and relieve any stress. This is a big advantage of having an anaesthetist present for your operation. Most patients after the initial injection don't need this though.



Risks of hernia surgery

Mr. Sadler will have discussed your specific risks with you during your consultation.

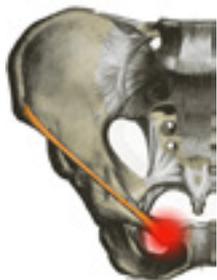
NB: Different patients will have different risk factors.

Potential side-effects of hernia surgery

- **Temporary bruising:** This will vary from patient to patient and usually takes about 2 weeks to disappear. If you continue to take anti-coagulation drugs such as aspirin before your surgery, then bruising can often be quite dramatic and may take longer to go.
- **Swelling:** This is very common after inguinal hernia repair. Men may experience puffiness in the skin of the penis and scrotum for several days. It is just fluid (as happens when you sprain your ankle) and will settle over the course of a week or so.
- **Scarring:** An incision line will always remain, but this fades with time.
- **Temporary difficulty in passing urine:** It is very rare after local and is more likely with general anaesthesia.

- Side effects of a general anaesthetic include **nausea and sickness**
- **Infection:** You may get an infection deep inside your groin or in the wound on your skin, but this is not common. The procedure is always covered with antibiotics.
- **Bleeding:** You can bleed under the skin after the operation. If the blood builds up and clots, your groin will swell and feel tender. This will give you a big bruise called a haematoma. Sometimes it will stop by itself, but sometimes an operation to drain the clot is needed. This is a rare complication.
- **Damage to blood vessels or other organs:** This could be damage to the vessels supplying the testicle and potentially result in the loss of a testicle. Or damage to bowel or bladder if this is stuck in the hernia. These types of complications are very rare. Mr Sadler has never had a patient with this type of complication. It is more likely to occur in re-do surgery
- **Damage to nerves:** Numbness in the skin after surgery is common after hernia surgery. Feeling usually comes back but it may take up to 18 months. Most patients wouldn't notice the numb area long term.
- **Hyperaesthesia:** This is where the area over the operation becomes very sensitive to the touch. You sometimes will get a distinct 'tingling' sensation. Sometimes it can be quite unpleasant initially. It is probably due to the raw nerve endings growing back into the area. It is nothing to worry about and usually quickly improves once you start to massage the area after a few weeks.
- **Risk of the hernia reoccurring:** Hernias do reoccur, clearly the chances of any given hernia re-occurring depend on a number of factors. How big the hernia was to start with (one into your scrotum the size of a melon will be more likely to come back than one the size of a small egg in your groin), whether you have a manual job, etc.

Chronic pain after hernia surgery



Osteitis Pubica

Chronic pain or discomfort does occur after hernia surgery. The most common cause appears to be inflammation around the attachment of the inguinal ligament to the pubic bone. The area becomes very tender to touch and the condition is called Osteitis Pubica. It is possibly caused by tension in the inguinal ligament resulting in a traction injury to the boney attachment of the ligament (very similar to 'Tennis or Golfer's Elbow').

The discomfort often doesn't start for 3-9 months after surgery and prior to this everything can be fine. Patients are usually aware of an initial slight discomfort, sometimes in certain positions like driving or sitting, often walking around or standing up straight relieves the discomfort. There is no associated lump or bulge.

The discomfort is often similar to the ache patients had from their hernia in the first place and they may worry that the hernia has come back.

The good news is that the problem is often fixable through a combination of a small steroid injection and massage (much the same way that Tennis Elbow is fixed). If the pain is not relieved, then a second injection may help and in very rare cases it may be necessary to release the attachment of the ligament off the bone.

This problem still exists with no mesh surgery! So not having a mesh will not remove the chances of having chronic discomfort. Surgeons performing the Bassini Repair were often taught to put the first stitch through the bone to secure the stitch, so osteitis pubica could result

as well as putting tension on the inguinal ligament through stitching this up to the muscle (the Bassini Repair is a tension repair).

Neuralgia

Another cause of chronic discomfort can be chronic pain from damaged nerves. The nerve may be caught up in scar tissue, been cut and have a raw end or have been caught with a stitch.

Careful surgery and attention to identifying nerves during the procedure will help reduce this problem.

It is less common but more difficult to treat than Osteitis Pubica. It may respond to steroid injection, re-operation and dividing the affected nerve (neurectomy) or very rarely actually remove the mesh. Mr Sadler has not got any patients in whom this has been needed.

To try and reduce the chances of chronic pain we favour the use of a mesh that requires no stitches to hold the mesh in place, this has both the advantage of performing a tension free mesh repair and avoiding potentially catching nerves with stitches. However, we still have patients who have discomfort that comes on after surgery, this appears to be about 1-2% of patients, it still means that most patients don't have any problems at all with a mesh repair.

Chronic pain after umbilical, epigastric or femoral repair appears to be rare. If you develop chronic pain, then Mr Sadler will be happy to see you in clinic to discuss treatment options.

Whatever technique you have to fix your hernia; open or keyhole, mesh or no mesh, there is always a potential to develop long-term pain after the surgery. We will take all possible steps to try and ensure that this does not happen and if it does we will endeavour to try and remedy it for you. However, despite all these efforts a very small number of patients will have pain that proves difficult to remedy, it is an unfortunate downside of hernia surgery.

Preparing for your surgery

- Do not eat any food, chew gum or suck sweets after midnight the night before your operation
- Drink plenty of fluids, preferably water, the day before your operation to help keep your body hydrated
- You can drink clear fluids throughout the night and up to 6 a.m. on the day of surgery (e.g. water, black coffee or tea, but NOT juice or fizzy drinks).
- Take your regular medication as usual unless otherwise instructed
- Don't worry about shaving the surgical site – this will be done in theatre.
- Please leave jewellery and valuables at home. A wedding band can be left on and will be taped before going to theatre.
- Please remove any make-up and nail varnish (from fingernails and toenails)
- Do not smoke on the morning of surgery. (If possible, try to give up smoking altogether, or to cut down.) The hospital has a no smoking policy, so you will be unable to smoke before or after your operation.

Arriving at the hospital

Go to the reception

The reception staff will direct you to the Day Suite where staff will book you in, check your personal details and put your identification wristband on.

You will then be shown the changing room; you should remove all your garments; an operating gown, dressing gown and slippers are provided for your use.

A nurse will take you through to the anaesthetic room to record your blood pressure, pulse and temperature and ask you some questions for the operation checklist to ensure you are correctly prepared for your operation. Staff will explain what will happen throughout the day.



Surgeon

Mr. Greg Sadler, your surgeon, will meet you to talk to you about your operation, exam you and answer any remaining questions you may have. Mr. Sadler will ask you to sign a consent form to demonstrate your understanding of the risk and benefits of the operation and that you have read and understand this booklet.

The operation site will be marked with a marker pen.



Anaesthetist

Dr Mark Stoneham, your anaesthetist (the doctor who manages your anaesthesia i.e. blocking of pain and sensation) will talk to you about the anaesthesia and answer any questions or concerns.

Going to the operating room

The anaesthetist will give you a small injection (a sedative) in the back of the hand. Whilst you are feeling sleepy local anaesthetic will be injected over your hernia site to completely numb the area. You will not remember this happening!

The anaesthetic takes about 20 minutes to work but lasts for 4 -12 hours so you will remain pain free for most of the remaining day and able to travel home in comfort.

You will then be taken through to the operating suite.

If you are having a general anaesthetic the anaesthetist will put a needle into a vein in the back of your hand to give you the anaesthetic. When you are asleep a tube will be put into your windpipe to aid your breathing. This will be taken out before you wake up. (This may leave you with a sore throat after surgery but drinking water little and often will help relieve this.)

During surgery

For patients under local anaesthetic you will be conscious throughout the surgical repair, you will be aware of the procedure taking place but you won't have any pain due to your anaesthesia; a surgical drape is in place preventing you from actually observing the operation.

The length of time the repair takes will vary from patient to patient but usually lasts between 20 – 30 minutes.

A member of the surgical team will be available to talk to you throughout the procedure to ensure you are comfortable and relaxed.

You may bring your own music to listen to if you want but music will be playing in the operating theatre. Absolute Radio™ is preferred by the operating team!

Recovery

Local anaesthetic patients will be taken to the recovery lounge where you will be checked on by a nurse and offered a cup of tea, biscuits and sandwiches (the Manor ones are excellent).

You can leave the recovery lounge when the nurse is happy you are in a suitable condition and there is a responsible adult in attendance to escort you to your transport. Most patients are ready to leave after 30 minutes or so.

The nurse will provide you with a home pack and pain medication.

General anaesthetic patients will take a couple of hours to recover before they can be discharged, occasionally they may need to stay overnight in hospital.

Discharge Instructions

It is preferable that you have a responsible and able adult to take you home following your surgery, though we do occasionally have patients who travel home alone on public transport. **You will not be able to drive a car or ride a motorbike.**



Our patients Mr S and Mr B (above) relaxing before their surgery, and (below) Mr M and Mr F in the recovery lounge 30 minutes after their operations. Thank you to our patients for kindly allowing us to use their photographs.



Recovering from surgery

Oxford Hernia Clinic will write to your doctor about your surgical repair so your NHS records are update. It is not usually necessary to see your GP/District Nurse following the operation.

Wound care

You will have three layers over your wound after surgery.

- **Top layer:** A pressure dressing/strapping to reduced swelling and prevent bleeding from the wound edges.
- **Middle layer:** A white wound dressing over the Steri-Strips
- **Bottom layer (next to the skin):** Paper Steri-Strips – closing the wound

There are NO stitches for you to remove; they are dissolvable ones under the skin. **The wound should be kept dry and the pressure dressing left for 48 hours. After this period:**

1. Remove the top pressure layer.
2. Have a shower.
3. After the shower remove the middle layer (the wound dressing)
4. Dab the Steri-Strips dry with a towel and **leave them in place.**
5. You can now shower regularly with the Steri-Strips in place but gently dry them with a towel after each shower.
6. After 7 days remove the Steri-Strips and wash the wound. Do not use scented soap or talcum powder near the wound. Pat the wound dry with a clean towel. You may use a hairdryer to dry it further if you wish.



Above, left to right: Steri-Strips applied for inguinal hernia (1) and umbilical hernia (2); middle layer wound dressing (3) and top layer pressure dressing (4).

Wound infection

Wound infection is a potential complication of surgery, your operation will be covered with antibiotics routinely but it still happens. The first sign will be an increase in pain and the wound will start to look either pink or red, feeling warm or hot to touch.

If this happens you will need to see your GP as soon as possible. If it is out of hours you should ring 111.

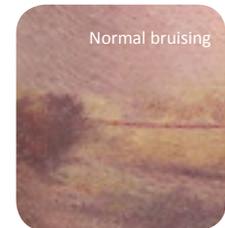
Usually a short course of antibiotics will be prescribed to clear up the infection. Some high-risk patients (diabetics, etc) will often be sent home with a short course of antibiotics to take as a precaution.

Bleeding

You may see a little blood under the dressing. Please leave the dressing in place, as the bleeding should stop of its own accord. If bleeding is persistent or heavy, apply firm pressure to the wound for 30 minutes. If it continues to bleed after this time, then please contact the Manor Hospital on the numbers provided the switchboard is manned continually. If you live a distance away you may need to go to the local Emergency Department.

Bruising

It is normal to experience some level of bruising following surgery; some patients may experience a more profound bruising with the forming of a haematoma (collection of blood under the skin), which can be uncomfortable and require painkillers. Gravity takes the bruising southwards and it can often be quite dramatic, especially if you are on or have been on anti-coagulants. If you are worried then give us a ring.



Pain management

You will be given the following painkillers to take home:

- Paracetamol 500mg Tablets
- Co-Codamol 8/500mg Tablets
- Ibuprofen 400mg Tablets

Standard pain relief

Inguinal Hernia surgery is painful! The first couple of days are usually quite sore, plan to do little for the first few days.

We recommend that you start painkillers tablets 4 hours after leaving the hospital and continue for the next 3-4 days.

Take 2 (two) paracetamol 500mg tablets and one Ibuprofen 400mg tablet regularly every 6 hours.

NB: You can take a maximum of 8 paracetamol and 4 Ibuprofen in 24 hours.

This should be sufficient to control your pain in the first few days after your surgery

Do not drink alcohol, operate any machinery or sign any legal documents for 48 hours after your operation.

Severe pain relief

You should replace the paracetamol 500mg tablets with the Co-Codamol tablet.

Take 2 (two) Co-Codamol and 1 (one) Ibuprofen tablet regularly every 6 hours.

You can take a maximum of 8 Co-Codamol and 4 Ibuprofen tablets in a 24-hour period.

VERY IMPORTANT: YOU MUST NOT TAKE PARACETAMOL AND CO-CODAMOL TABLETS TOGETHER. This will exceed the safe dose of paracetamol.

NB: Co-codamol can be constipating; you should ask your pharmacist for a laxative if you feel constipated or take co-codamol regularly for a couple of days

Most people continue to experience some discomfort for a few weeks after the operation, but this will gradually settle. If you are about to cough or sneeze, it will help if you put light supportive pressure on your wound site with your hand or with a small pillow.

Shooting pain in the repair

You may experience an occasional sharp shooting pain (lasting a brief second or two) in the repair; this is common and is nothing to worry about, it will gradually settle.

Continual pain, redness or swelling of the wound suggest a possible infection and you should consult your GP.

Massage

Shortly after your operation you will start to feel a hard 'sausage-like' ridge about 2cm wide and 6cm long this is the scar tissue forming around the mesh. Over the next 6-9 months this will slowly disappear. You can speed up this process with regular daily massage of the ridge using soapy suds in the shower or a simple moisturiser.

Speeding up your recovery

You can speed up your recovery if you:

Eat healthily

Eating a healthy diet will help to ensure that your body has all the nutrients it needs to heal. A high fibre diet will help avoid constipation and reduce the strain on the site of the operation.

Stop smoking

By not smoking- even if it's just for the time that you're recovering-you will start to improve your circulation and breathing

Allow family and friends to:

- help you practically, such as driving, shopping, taking out the bins!
- keep your spirits up

Keep a routine

Get up at your normal time in the morning, get dressed and move about the house.

If you get tired you can rest later. Don't be afraid to stand up straight, you won't pull at your wound. The first morning you may feel a little uncomfortable getting out of bed, this will get easier. Roll onto your side and push yourself up sideways, this will avoid having to contract your stomach muscles and be more comfortable, it's also good for your back!

Build up gradually

When you are building up your activities, listen to what your body is telling you, if it feels painful it's too early to do what you are doing.

Remember in the first few days you will probably be taking regular pain relief; so, don't try anything too vigorous.

Use common sense, avoid lifting weights which cause straining (usually over 3-5Kgs) or doing anything strenuous involving pushing, pulling or stretching, for 4-6 weeks.

Driving

You may drive again when you can **confidently perform an emergency stop** without worrying your hernia repair. This is usually between 7-10 days after the operation.

NB: Your insurance company should be informed about your operation. Some companies will not insure drivers for a number of weeks after surgery so it's important to check.

Return to work

The length of time you take off work depends on the job you do, how you heal and how you respond to surgery.

Most patients will be back in the following time scale:

- Light/supervisory work: 1-2 weeks
- Minimal lifting work: 2-3 weeks
- Heavy Labour: 6 weeks

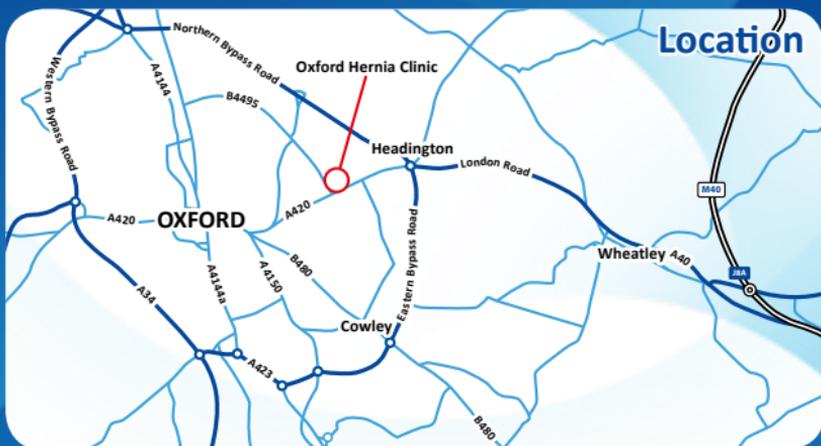
Returning to non-manual work earlier won't cause any harm but you may experience significant discomfort if you do.

Sexual activity

Sexual activity can be resumed as soon as you are comfortable enough; there are no set rules or times

Sports hernia – athletes

Athletes can resume some exercising after 14 days if they feel comfortable. Athletes should expect to return to full training after 4-6 weeks depending on the surgery that has been performed, however they should gradually work up to it with a tailored programme of exercise in agreement with their physiotherapist. Mr. Sadler will discuss individual requirements.



Contact numbers: in an emergency always dial 999

- Oxford Hernia Clinic: **0800 043 0066** or **01865 764566**
- Manor Hospital: **01865 307777**
(the hospital's switchboard is staffed 24 hours a day)
- Your GP
- Out of hours: **111**

Website

- www.OxfordHerniaClinic.com



The Oxford Hernia Clinic

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