

Having surgery to remove your appendix

Department of

Information for Patients

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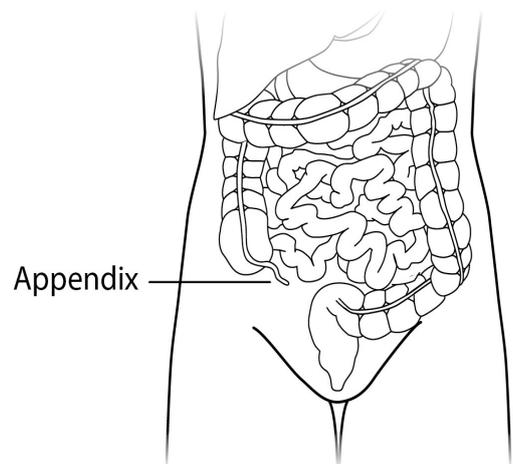
What is appendicitis?

Appendicitis is inflammation of the appendix. The appendix is a small closed-ended pouch that is normally around the size of your little finger. It is attached to the bowel (large intestine) in the lower right hand side of your tummy (abdomen). Why we have an appendix is not fully understood and you can live a completely normal life without it.

What causes appendicitis?

In most cases it is not clear what causes appendicitis. Sometimes the appendix becomes blocked by a small piece of poo (faeces) or a swollen lymph node within the wall of the intestine. This blockage can cause inflammation and swelling. This leads to an increase in pressure within the appendix. At this point the appendix may burst (perforate). When the appendix bursts there is a risk of pus and poo spilling out of the intestine. This causes an infection of the inner lining of the tummy called the peritoneum. This condition is called peritonitis and if left untreated can be fatal.

In some cases the intestine and fat within the tummy can create a wall around the inflamed appendix to seal it off. It is possible that an abscess can form within the sealed off appendix which then needs draining.



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To give feedback about this information sheet, contact InformationForPatients@uhl-tr.nhs.uk

What are the symptoms of appendicitis?

The main symptom of appendicitis is usually tummy (abdominal) pain.

Appendicitis causes pain in the right hand side of your lower tummy where the appendix lies. It is common for the pain to start in the centre of the tummy and then move to the lower right side. The pain may come and go at first and then become constant and more severe. The pain usually gets worse when you apply pressure to the area, cough or move around and may be better at rest.

Other symptoms that may occur include:

- Lack of appetite
- Feeling sick (nausea)
- Being sick (vomiting)
- Fever
- Becoming constipated or having diarrhoea
- Having to wee (pass urine) more often than usual
- Feeling generally unwell

How is the appendix removed?

The operation to take out the appendix is called an appendicectomy. Appendicectomy is done under a general anaesthetic meaning you are asleep during the procedure. The anaesthetist will talk to you about the general anaesthetic before your operation.

While you are asleep it is sometimes necessary to empty your bladder using a small tube (catheter). We will remove this before you wake up.

We can take the appendix out in 2 ways:

1. Keyhole surgery through small cuts on the tummy.
2. Open surgery through larger cuts in the tummy.

In most cases the appendix is removed using keyhole surgery (laparoscopic appendicectomy).

During keyhole surgery:

- at least 3 small cuts between 0.5cm and 1.5cm are made in the tummy. This is so that the surgical instruments and a small camera (laparoscope) can be inserted.
- A gas (carbon dioxide) is used to inflate the tummy cavity to give space for the operation and to be able to see the appendix properly.
- The appendix is cut away at the point it is attached to the large intestine.
- The connection to the large bowel is sealed with stitches (sutures), surgical clips or staples.
- If there is any pus inside or an abscess around where the appendix was, this will be washed away.

- If the appendix has burst or there is an abscess, it is possible that a small tube called an abdominal drain will be inserted during the operation. This tube will stick out of your tummy and be connected to a container or bag. It collects any fluid that needs to be drained away after the surgery. This is usually fluid used to wash out the infection. The drain is usually removed before you leave the hospital.
- Sometimes it is not possible to take out the appendix with a keyhole procedure and a larger cut is needed. This is called an 'open appendicectomy'. This is something that may be decided before your surgery.
- Sometimes the operation is started as a keyhole operation but then it is decided after looking inside with the camera that it is safer to continue the surgery with a larger cut on the tummy. This is called converting to an open appendicectomy. This cut may be made in the middle of the tummy or on the lower right hand side of the tummy. The position and length of the cut depends on how difficult the appendix is to remove.
- At the end of the operation the muscles are stitched closed and the skin is closed with stitches (that may or may not need removing) or staples or glue.

Are there any alternatives to surgery?

In some cases, appendicitis can be treated with antibiotics if there is no evidence of it having burst or an abscess. We call this "conservative management". This will be discussed with you by the doctor. Sometimes these antibiotics will need to be given to you through a small tube (cannula) in the vein and you will have to stay in hospital until your condition has improved. Sometimes antibiotic tablets can be given and you will be discharged home with the advice that if your symptoms get worse you will need to return to the hospital. We may also arrange an appointment to assess you again in the hospital towards the end of the course of antibiotics. It is important to understand that there is a chance that the appendix may become inflamed again in the future if treated with antibiotics and not surgically removed.

Are there any risks or possible complications of the operation?

All surgery has a risk of complications. Please be reassured that the chance of serious complications during and after appendicectomy is low but you must be aware of the risks before consenting to have the procedure. These risks will be explained to you before you sign a consent form.

Risks associated with surgical removal of the appendix are:

- **Risk of general anaesthesia:** Serious complications from general anaesthetic are rare. These will be discussed with you by an anaesthetist before your operation.
- **Pain:** You will be given painkillers before and after surgery. You may ask for more painkillers if needed.
- **Changing from keyhole to open surgery:** In some cases the surgeon may not be able to remove the appendix using keyhole surgery as intended and will need to make a larger cut on the tummy.

- **Normal appendix:** In most cases, appendicitis will be diagnosed after a scan. Although scans are very accurate even if you have had a scan suggesting that your appendix is inflamed, sometimes the appendix is normal when the surgeon looks at it directly. If the appendix looks normal it may not be removed.
- **Bleeding:** Bleeding from the wound or within the tummy may occur. In rare cases this may need a blood transfusion or further surgery. Bleeding is more common if you have been taking blood thinning medication.
- **Difficulty weeing:** Sometimes after a general anaesthetic you may find it more difficult to wee. This usually settles in time but in rare cases, you may need a small tube called a catheter inserted, to drain the bladder.
- **Injury to surrounding organs or bloods vessels:** in rare cases other parts of the body inside the tummy such as the bowel, bladder or blood vessels can be damaged. Any injury will be fixed at the time of the operation, which can sometimes involve making a larger cut in the tummy. Occasionally damage to other parts of the body may not be identified until after the operation is finished and you may need a further operation.
- **Ileus:** In rare cases, when the intestine is handled during an operation it becomes sluggish. This usually settles on its own by resting the bowel through not eating.
- **Bowel resection:** Sometimes the inflammation of the tissues around the appendix may involve nearby bowel or it may be found that there is a problem with the bowel itself. In rare cases, in order to treat the infection and inflammation inside the tummy safely, it may be necessary to remove part of the large or small bowel. If this is needed, then the bowel ends are usually joined back up inside the tummy. In very rare cases, the bowel may have to be connected to the skin, so the bowel contents empty into a bag. This is called a stoma or ileostomy or colostomy. It is formed if it is felt that it is necessary to prevent a serious risk of further complications or a risk to your life. A stoma can usually be reversed in the future.
- **Wound infection:** Wound infection is rare in keyhole surgery. Wounds may become red and leak pus. You may start to get a temperature and feel unwell. The treatment for this is antibiotics.
- **Abdominal collection:** Collections of infected fluid may form beneath the wound or deeper within the tummy. If this happens, you may need to come back to the hospital for a scan. You may need antibiotics or insertion of a plastic tube (drain) through the skin to drain fluid and pus away. In rare cases you may need to have another operation.
- **Blood clots:** A blood clot or a deep vein thrombosis (DVT) may form in the leg after surgery. A part of the clot may break off and travel to the lungs causing a pulmonary embolism (PE).
- **Scarring:** There will be a scar or several smaller scars on the tummy after surgery.
- **Abdominal adhesions:** Adhesions are scar tissue that can form in the tummy and cause a blockage in the intestine. This may need a stay in hospital and in some cases further surgery.
- **Hernia:** A hernia occurs when an internal part of the body pushes through a weakness in the muscle or tissue wall. A weakness in the wound may occur resulting in a hernia which may need further surgery.

What happens before the operation?

You will see a doctor or an advanced clinical practitioner who will talk to you about the operation and answer any questions you may have. They will explain the risks and benefits of the procedure and ask you to sign a consent form.

You will be placed on an emergency theatre list. The length of this list varies depending on the amount of emergency admissions there are on that day. The sickest patients will be taken to theatre first, before those who are more well. Although quick treatment of appendicitis is important, for safety reasons we may not do your surgery overnight if you are well. For these reasons it is possible that you may not have your operation on the day of admission.

You will not be allowed anything to eat or drink before the operation. You will usually be able to take your regular medications by mouth. A small tube (cannula) will be inserted into your vein to allow us to give you the following intravenously:

- Intravenous (IV) fluids to keep you hydrated.
- Antibiotics to help lessen the chance of complications and the risk of infection after surgery.
- Pain relief and anti-sickness

You will be given some stockings and a daily injection to prevent blood clots.

What happens after the operation?

On the ward

In most cases you will return to the same ward that you were on before the operation but sometimes you may be taken to another surgical ward. In very rare cases you may need to be cared for in the high dependency unit after the surgery. Your property will be transferred to the relevant area.

For a keyhole appendicectomy you should expect to stay in hospital for 24 to 48 hours on average. This can be longer if you need a longer course of intravenous antibiotics or open surgery. In some cases you may be discharged sooner than 24 hours after your operation if it is safe to do so.

You should be allowed to eat soon after the surgery and you will be encouraged to get up and walk as soon as you feel able. After keyhole surgery it is normal to have a bloated tummy and shoulder tip pain due to the gas that is used to inflate the abdominal cavity. Walking around will help to relieve these symptoms.

You will be prescribed pain relief and anti-sickness medication and you are encouraged to ask for this if needed.

At home

Medication

You will be given painkillers to take home. You may also be given anti-sickness medication and antibiotics. We will discuss these medications with you before discharge. We will also give you a

copy of your discharge summary paperwork. This has details of the medications and your stay in hospital.

Personal Hygiene

You can shower normally the day after your surgery. Try to avoid putting perfumed soaps onto the wounds. After showering, pat wounds dry and cover with clean dressings.

Wound care

Keyhole wounds will usually be glued on the surface. Do not try to remove this, it will lift off over time. If stitches are used they are normally dissolvable. If stitches need to be removed this will be explained to you. You will be given some dressings. In some cases we will ask you to arrange dressing changes with the practice nurse at your GP practice or you will be referred to a district nurse to change the dressings in the community. You usually need to use dressings for a few days. After this the wounds can be left open to the air.

If the surgeon has made a longer cut it is possible that metal clips have been used to close the wound. These will need to be taken out by the practice nurse or district nurse after 10 days. We will explain the details of this to you on discharge. It is important to keep all wounds clean and dry and look out for any signs of infection such as redness, pus, swelling and fever.

Eating and drinking

You can have a normal diet after discharge from hospital. You may want to start with lighter, more frequent meals and gradually progress to normal meals as you feel able. Make sure you are well hydrated by drinking the recommended 2 litres of water daily.

Driving

It is recommended that you do not drive for at least 1 week after keyhole surgery and 2 weeks after an open appendicectomy. The DVLA advises that you must not drive until you can safely and comfortably do an emergency stop. This will vary from person to person and you need to be confident you are safe to drive before you do so.

Physical activity

It is important to be walk around as soon as possible after the operation, however try not to do too much too soon. Try to avoid strenuous exercise and heavy lifting for at least 6 weeks. It is normal to feel more tired for several weeks after surgery.

Going back to work

The length of time you will need off work depends on the job that you do and the type of surgery

you had. Most people who have had keyhole surgery will be able to return to a desk job or light duties after 2 weeks. If your job involves heavy lifting you may need longer off work. We can give you a sick note when you go home for a minimum period of 2 weeks. Your GP can give you another sick if more time is needed to recover.

Holidays

Flying soon after an operation is generally not advised and you may not be covered by your insurance. If you wish to travel please discuss with your insurance provider.

Follow up appointments

You do not usually need to see a doctor for a follow-up appointment after an appendicectomy.

If the procedure has been more complicated you may be asked to attend a follow up at the hospital. We will tell you if you are having a follow up appointment when you leave hospital.

If you are concerned about any symptom or problem relating to your surgery, after you go home you should telephone the ward where you had your operation (last page of leaflet). Or you can contact NHS 111 or your GP.

Contact details

Leicester Royal Infirmary

Ward 16 Surgical Assessment Unit

0116 258 5332

0116 258 7513

0116 258 6519

Ward 15 Surgical Assessment Unit

0116 258 5215

0116 258 0304

0116 258 0305

Ward 21

0116 258 5475

Ward 22

0116 258 4165

When you call it would be helpful if you can provide:

- The patient's full name and date of birth
- Hospital number (printed on discharge summary)
- Type and date of surgery

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على هذه المعلومات بلغةٍ أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل
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Previous reference:

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