

GS07 Appendicectomy

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Local information

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What is appendicitis?

Appendicitis means inflammation of your appendix. Your appendix is a part of your large bowel. It has no function in human beings. When it is inflamed it causes pain and makes you feel unwell (see figure 1). Appendicitis is a common problem that is best treated by surgery.

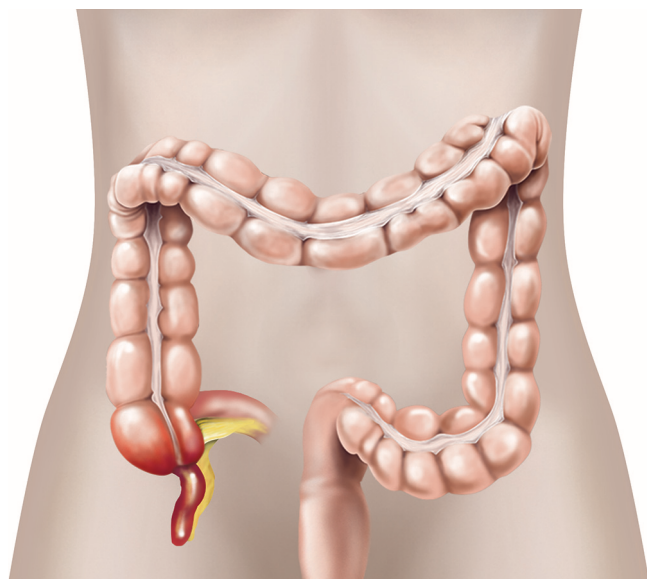


Figure 1
An inflamed appendix

Your surgeon has recommended an appendicectomy, which is an operation to remove your appendix. However, it is your decision to go ahead with the operation or not. This document will give you information about the benefits and risks to help you to make an informed decision. If you have any questions that this document does not answer, ask your surgeon or the healthcare team.

How does appendicitis happen?

The cause of appendicitis is unclear. Inflammation is often caused by bacterial infection. Your appendix becoming blocked where it joins your bowel may make inflammation more likely.

What are the benefits of surgery?

Surgery removes the inflamed appendix and allows infected pus to be washed out. The aim is to prevent the serious complications that appendicitis can cause.

Are there any alternatives to surgery?

Sometimes your body's defence mechanisms will fight infection in your appendix. This results in inflammation of the tissues around your appendix.

An abscess (a collection of pus in the tissues) can sometimes form. Antibiotics can be used to treat inflammation or an abscess but only if you are well enough. If an abscess continues or if you become unwell even with antibiotics, you will need an operation.

What will happen if I decide not to have the operation?

Surgery is strongly recommended as it is the only dependable cure. If appendicitis is left untreated, your appendix may burst and infection will spread throughout your abdomen (peritonitis). This is life-threatening and needs a larger operation with a higher risk of developing serious complications. 2 in 3 people who have antibiotics to treat appendicitis may be cured. 1 in 6 people whose appendicitis is cured by antibiotics will have another episode of appendicitis. So most surgeons recommend an appendicectomy to prevent another infection.

What does the operation involve?

The healthcare team will carry out a number of checks to make sure you have the operation you came in for. You can help by confirming to your surgeon and the healthcare team your name and the operation you are having.

The operation is performed under a general anaesthetic and usually takes one to two hours. You may also have injections of local anaesthetic to help with the pain after the operation. You may be given antibiotics during the operation to reduce the risk of infection.

If your appendix looks normal, your surgeon will examine other parts of your bowel and nearby organs to find a cause for the pain. If your surgeon finds a different cause and you need further surgery, your surgeon may perform it at the same time. They may need to involve other specialist surgeons, depending on the cause of the pain.

Your surgeon will secure the blood supply to your appendix, stitch the base and then remove it.

If your appendix is not inflamed and there is no other obvious cause for the pain, your surgeon will usually remove your appendix anyway. The reason is that sometimes the inside of the appendix can be inflamed while the outside looks normal.

• Laparoscopic (keyhole) surgery

Your surgeon may use keyhole surgery as this is associated with less pain, less scarring and a faster return to normal activities.

Your surgeon will make a small cut on or near your umbilicus (belly button) so they can insert an instrument in your abdominal cavity to inflate it with gas (carbon dioxide). They will make several small cuts on your abdomen so they can insert tubes (ports) into your abdomen. Your surgeon will insert surgical instruments through the ports along with a telescope so they can see inside your abdomen and perform the operation (see figure 2).

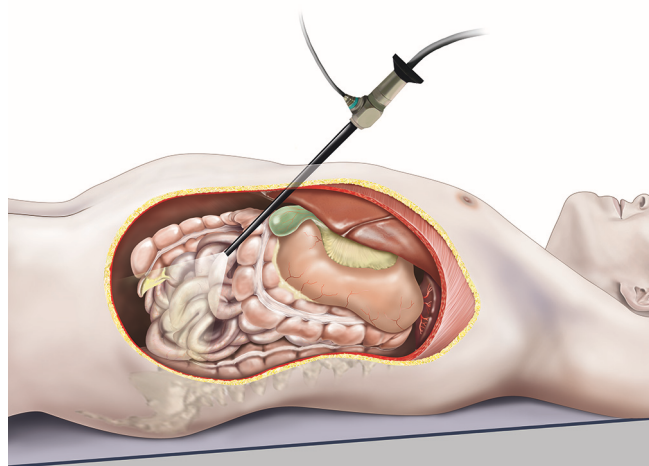


Figure 2

Laparoscopic surgery

For a few people your surgeon will perform the operation through a single cut near your umbilicus.

For about 1 in 10 people it will not be possible to complete the operation using keyhole surgery. The operation will be changed (converted) to open surgery.

Your surgeon will remove the instruments and close the cuts.

• Open surgery

The operation is the same but it is performed through a larger cut on your lower abdomen. Open surgery can often be a better technique if you have peritonitis.

Your surgeon may insert a drain (tube) in your abdomen to drain away infected fluid.

What should I do about my medication?

Let your doctor know about all the medication you take and follow their advice. This includes all blood-thinning medication as well as herbal and complementary remedies, dietary supplements, and medication you can buy over the counter.

What can I do to help make the operation a success?

You can reduce your risk of infection in a surgical wound.

- Do not shave or wax the area where a cut is likely to be made.
- Try to have a bath or shower either the day before or on the day of the operation.
- Keep warm around the time of the operation. Let the healthcare team know if you feel cold.

What complications can happen?

The healthcare team will try to make the operation as safe as possible but complications can happen. Some of these can be serious and can even cause death (risk: less than 1 in 10,000). Using keyhole surgery means it is more difficult for your surgeon to notice some complications that may happen during the operation. When you are recovering, you need to be aware of the symptoms that may show that you have a serious complication. You should ask your doctor if there is anything you do not understand. Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you. The risks are higher if you are having surgery to remove a burst appendix.

1 Complications of anaesthesia

Your anaesthetist will be able to discuss with you the possible complications of having an anaesthetic.

2 General complications of any operation

- Pain. The pain from the operation should be less severe than the pain from the appendicitis. The healthcare team will give you medication to control the pain and it is important that you take it as you are told so you can move about and cough freely.

- Bleeding during or after the operation. If bleeding happens within your abdomen, you may need another operation.
- Infection of the surgical site (wound). It is usually safe to shower after two days but you should check with the healthcare team. Let the healthcare team know if you get a high temperature, notice pus in your wound, or if your wound becomes red, sore or painful. An infection usually settles with antibiotics but you may need another operation.
- Blood clot in your leg (deep-vein thrombosis – DVT). This can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. The healthcare team will assess your risk. They will encourage you to get out of bed soon after the operation and may give you injections, medication, or special stockings to wear. Let the healthcare team know straightaway if you think you might have a DVT.
- Blood clot in your lung (pulmonary embolus), if a blood clot moves through your bloodstream to your lungs. If you become short of breath, feel pain in your chest or upper back, or if you cough up blood, let the healthcare team know straightaway. If you are at home, call an ambulance or go immediately to your nearest Emergency department.
- Unsightly scarring of your skin.

3 Specific complications of this operation

a Keyhole surgery complications

- Damage to structures such as your bowel, bladder or blood vessels when inserting instruments into your abdomen (risk: less than 3 in 1,000). The risk is higher if you have had previous surgery to your abdomen. If an injury does happen, you may need open surgery. About 1 in 3 of these injuries is not obvious until after the operation.
- Developing a hernia near one of the cuts used to insert the ports (risk: 1 in 100). Your surgeon will try to reduce this risk by using small ports (less than a centimetre in diameter) where possible or, if they need to use larger ports, using deeper stitching to close the cuts.
- Injury to your bowel during surgery or if your bowel becomes trapped between the mesh and your abdominal wall, causing bowel obstruction (risk: 1 in 200). You may need another operation.
- Surgical emphysema (crackling sensation in your skin caused by trapped carbon dioxide gas), which settles quickly and is not serious.

b Appendicectomy complications

- Incorrect diagnosis, as there is no definite way of confirming the diagnosis without surgery (risk: 1 in 10). It is safer to remove a normal appendix than to leave an inflamed appendix alone, which may cause peritonitis.
- Developing an abscess within your abdomen (risk: less than 7 in 100). If this does not improve with antibiotics, the pus will need to be drained.
- Difficulty passing urine. You may need a catheter (tube) in your bladder for one to two days.
- Continued bowel paralysis (ileus), where your bowel stops working for more than a few days, causing you to become bloated and to be sick. You may need a tube (nasogastric or NG tube) placed in your nostrils and down into your bowel until your bowel starts to work again.
- Developing a leak where your appendix has been cut off from your bowel. This may lead to an abnormal connection (fistula) from your bowel to the cut on your skin. This is rare and usually heals but you may need another operation.
- Obstruction of your bowel caused by adhesions (scar tissue) at the site of surgery (risk: 2 in 100). This can happen many years later.
- Pylephlebitis, where infection spreads to your liver. This is rare.

How soon will I recover?

• In hospital

After the operation you will be transferred to the recovery area and then to the ward. Your surgeon will tell you how inflamed your appendix was and will decide if you need to continue treatment with antibiotics.

It may be some time before you can eat and drink properly so you may need a drip (small tube) in a vein in your arm.

Simple painkillers such as paracetamol should allow you to move about freely.

You should be able to go home three to five days after an operation for simple appendicitis or about a week after an operation for a burst appendix.

You need to be aware of the following symptoms as they may show that you have a serious complication.

- Pain that gets worse over time or is severe when you move, breathe or cough.
- A high temperature or fever.
- Dizziness, feeling faint or shortness of breath.
- Feeling sick or not having any appetite (and this gets worse after the first one to two days).

- Not opening your bowels and not passing wind.
- Swelling of your abdomen.
- Difficulty passing urine.

If you do not continue to improve over the first few days, or if you have any of these symptoms, let the healthcare team know straightaway. If you are at home, contact your surgeon or GP. In an emergency, call an ambulance or go immediately to your nearest Emergency department.

• **Returning to normal activities**

To reduce the risk of a blood clot, make sure you follow carefully the instructions of the healthcare team if you have been given medication or need to wear special stockings.

You should be able to return to work after about two to four weeks, depending on the extent of surgery and your type of work. Some people may need to stay off work longer.

Your doctor may tell you not to do any manual work for a while. Do not lift anything heavy for a few weeks.

Do not drive until you are confident about controlling your vehicle and always check your insurance policy and with your doctor.

• **Lifestyle changes**

If you smoke, stopping smoking will improve your long-term health.

Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight.

Regular exercise should improve your long-term health. Before you start exercising, ask the healthcare team or your GP for advice.

• **The future**

Most people make a full recovery and can return to normal activities.

Summary

Appendicitis is a common condition where your appendix becomes inflamed. Surgery should prevent the serious complications that appendicitis can cause.

Surgery is usually safe and effective but complications can happen. You need to know about them to help you to make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.

Keep this information leaflet. Use it to help you if you need to talk to a healthcare professional.

Acknowledgements

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