

GS07 Appendicectomy

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Local Information

You can get information locally from:
Ealing Hospital main switchboard on 020 8967 5000

- Central Middlesex Hospital main switchboard on 020 8965 5733
- Northwick Park and St Mark's Hospitals main switchboard on 020 8864 3232
- Our website – www.lnwh.nhs.uk

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PALS is a confidential service for people who would like information, help or advice about the services provided by any of our hospitals.

To contact PALS:

At Northwick Park, St Mark's and Central Middlesex Hospitals on 020 8869 5118 or email PALS at LNWH-tr.PALS@nhs.net

At Ealing Hospital and community services on Freephone 0800 064 1120 or 020 8967 5221 between 9.30 am and 4 pm or email PALS at LNWH-tr.ehPALS@nhs.net

Please note that this service does not provide clinical advice so please contact the relevant department directly to discuss any concerns or queries about your upcoming test, examination or operation.

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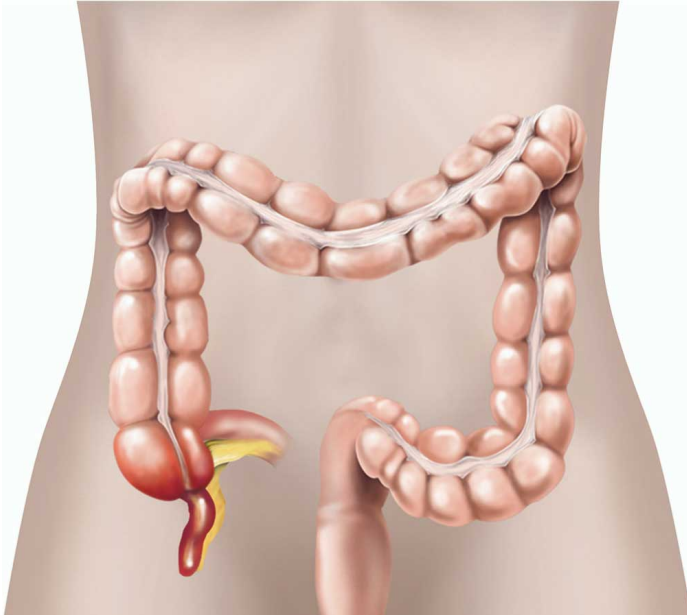
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What is appendicitis?

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. Appendicitis is a common problem that is best treated by surgery.



An inflamed appendix

Your surgeon has suggested 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, it is important that you ask your surgeon or the healthcare team. Once all your questions have been answered and you feel ready to go ahead with the procedure, you will be asked to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point.

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?

Studies have shown that antibiotics can be as effective as surgery. They help your body's defence mechanisms to fight the infection. However, your recovery may be longer and sometimes the antibiotics are not effective and an abscess (a collection of pus) can form in the tissues. If an abscess continues or if you become unwell even with antibiotics, you will need an operation. If you would prefer to be treated with antibiotics, you will need to discuss this with your surgical team.

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

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 in the future.

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 1 to 2 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.

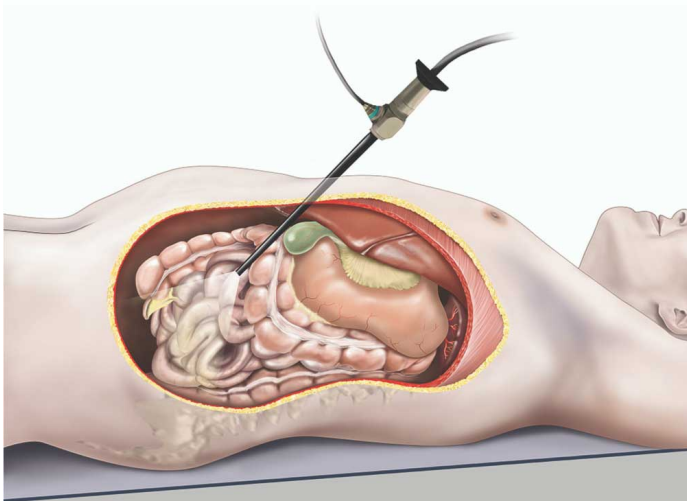
Your surgeon will tie off the blood supply to your appendix, stitch the base and then remove it.

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 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.



Laparoscopic surgery

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

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?

Make sure your healthcare team knows 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.
- If you are diabetic, keep your blood sugar levels under control around the time of your procedure.

If you have not had the coronavirus (Covid-19) vaccine, you may be at an increased risk of serious illness related to Covid-19 while you recover. Speak to your doctor or healthcare team if you would like to have the vaccine.

What complications can happen?

The healthcare team will try to reduce the risk of complications.

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. Some risks are higher if you are older, obese, you are a smoker or have other health problems. These health problems include diabetes, heart disease or lung disease.

Some complications can be serious and can even cause death (risk: less than 1 in 10,000). Using keyhole surgery means it may be 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.

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

General complications of any operation

- 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 2 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 special dressings and your wound may take some time to heal. In some cases another operation might be needed. Do not take antibiotics unless you are told you need them.
- Allergic reaction to the equipment, materials or medication. The healthcare team is trained to detect and treat any reactions that might happen. Let your doctor know if you have any allergies or if you have reacted to any medication or tests in the past.
- Developing a hernia in the scar. This appears as a bulge or rupture called an incisional hernia. If this causes problems, 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 straight away 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. Let the healthcare team know straight away if you become short of breath, feel pain in your chest or upper back, or if you cough up blood. If you are at home, call an ambulance or go immediately to your nearest Emergency department.
- Chest infection. If you have the operation within 6 weeks of catching Covid-19, your risk of a chest infection is increased (see the 'Covid-19' section for more information).

Specific complications of this operation

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.
- Surgical emphysema (a crackling sensation in your skin caused by trapped carbon dioxide), which settles quickly and is not serious.
- Gas embolism. This is when gas (carbon dioxide) gets into the bloodstream and blocks a blood vessel. This is very rare but can be serious.

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 1 to 2 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 stomach 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.
- Tissues can join together in an abnormal way (adhesions) when scar tissue develops inside your abdomen. Adhesions do not usually cause any serious problems but can lead to bowel obstruction (risk: 2 in 100). You may need another operation.

Covid-19

A recent Covid-19 infection increases your risk of lung complications or death if you have an operation under general anaesthetic. This risk reduces the longer it is since the infection. After 7 weeks the risk is no higher than someone who has not had Covid-19. However, if you still have symptoms the risk remains high. The risk also depends on your age, overall health and the type of surgery you are having.

You must follow instructions to self-isolate and take a Covid-19 test before your operation. If you have had Covid-19 up to 7 weeks before the operation you should discuss the risks and benefits of delaying it with your surgeon.

Consequences of this procedure

- 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.
- Unsightly scarring of your skin.

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 3 to 5 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 1 to 2 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 straight away. 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 carefully follow 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 2 to 4 weeks, depending on how much surgery you need 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 can control your vehicle, including in an emergency, and always check your insurance policy and with the healthcare team.

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 document. Use it to help you if you need to talk to the healthcare team.

Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you, and they may be able to tell you about any other suitable treatments options.

This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

Acknowledgements

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Illustrator

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