

Appendicectomy

This leaflet explains about appendicectomy, including the benefits, risks and any alternatives and what you can expect when you come to hospital. If you have any further questions, please speak to a doctor or nurse caring for you.

What is appendicitis?

Appendicitis means inflammation of your appendix. Your appendix is a finger-like projection attached to your large bowel, on the right-hand side of your abdomen. When it becomes inflamed, it causes pain and can make you feel unwell. Appendicitis is a common problem that happens to approximately seven per cent of people in their lifetime.

Your surgeon, who is responsible for your care, has recommended an appendicectomy. This is the surgical removal of the appendix. It is your decision whether to go ahead with the operation or not and this leaflet will help you make an informed decision.

Why does appendicitis happen?

The precise cause of appendicitis is not clear. Possible causes of an inflamed appendix include bacterial infection or blockage of the opening between the appendix and the large bowel.

What are the benefits of appendicectomy?

The aim of surgery is to remove the inflamed appendix and wash out any infected pus that may be nearby. The main aim is to prevent any complications of appendicitis. These complications include infection spreading to the rest of the abdomen (peritonitis) and sepsis.

Are there any other alternatives to appendicectomy?

Sometimes, appendicitis can be treated with antibiotics. Of those treated with antibiotics, the risk of having another episode of

appendicitis in their lifetime is shown below:

25% will have another episode of appendicitis within one year

30% will have another episode of appendicitis within two years

35% will have another episode of appendicitis within three years

40% will have another episode of appendicitis within four years

Should an abscess form (a collection of pus) around the appendix, antibiotics can be used to treat this infection. Appendicectomy, in this instance, is often postponed and other treatments (alongside antibiotics) can be explored. These included draining the abscess via a small cut in the skin and use of plastic pipes to drain the pus.

What will happen if I decide not to have an appendicectomy?

Surgery is strongly recommended for patients with appendicitis. It is the only known procedure that can cure appendicitis. If left untreated, appendicitis can become worse and it is your decision if you would like to proceed with an operation. If you choose to decline an operation, other treatments will be explored, as mentioned in the paragraph above.

What does the operation involve?

The operation is performed under general anaesthetic. This means you will be put to sleep by an anaesthetist whilst the operation is being performed. The operation usually takes approximately one hour. You will likely be given antibiotics during the operation (if not already given) along with injections of local anaesthetic to help with pain.

If your appendix looks normal during the operation, the rest of the abdomen will be examined to find a cause for your symptoms. If another cause of your symptoms is found, this may be treated

during the same operation. Other healthcare professionals may be involved in your care should another cause be found for your pain.

If another cause is not found for your pain and the appendix looks normal, your surgeon will still likely remove your appendix.

Sometimes the appendix can look normal to the naked eye but be inflamed when examined under a microscope in the laboratory.

There are two different ways to remove the appendix which will be discussed below.

Keyhole (Laparoscopic) Surgery

Your surgeon may choose to perform the surgery by keyhole.

The advantages of keyhole surgery include smaller cuts to the skin, less scarring and a faster return to normal activities.

A cut will be made near your umbilicus (belly button) to allow the introduction of a keyhole camera into your abdominal cavity.

Your abdomen will then be inflated with gas (carbon dioxide) to give your surgeon room to perform the procedure. Several other smaller cuts will be made to allow other instruments to be inserted into the abdomen.

Open Surgery

With open surgery, the operation is performed by a larger cut on the lower right side of the abdomen. Your surgeon may choose to perform the procedure using the 'open approach' from the beginning. They may convert from a keyhole to an open approach if larger access is needed or if there is evidence of widespread infection in the abdomen (peritonitis).

What are the complications of the surgery?

The surgeon looking after you will try to complete the surgery without any complications.

It is important to know the potential risks of the procedure before deciding about proceeding with surgery.

The figures quoted below are taken from studies involving patients who have had this operation. These percentage risks are for a generic patient and the risk that applies to you may be higher or lower than this number. If you are being treated for a burst (perforated) appendicitis, then your risk will be higher.

General complications of any operation

- **Pain.** The pain from the operation will feel different to the pain from the appendicitis and in many people, this pain is less severe than the pain from the appendicitis. Your surgical team will give you pain relief to help with this. It is important that you take enough pain killers to allow you to move freely after the operation.
- **Bleeding.** This can occur during or after the operation. It is rarely significant enough to require another operation. Treatment for excessive blood loss includes a blood transfusion. If you wish to not be considered for a blood transfusion, you must tell your surgeon when they are completing the consent form with you.
- **Infection.** Sites of infection include the surgical wound site, urine system, lungs or within the abdominal cavity. When you are discharged from hospital you should be aware of potential signs of infection. These are listed later in the leaflet.
- **Hernia.** At the surgical wound sites, the deep muscles of the abdomen can sometimes fail to heal. Fat or bowel can protrude through the gaps in these muscles to cause a hernia. The risk of this is greater if you have 'Open' rather than 'Keyhole' surgery. This can appear as a lump or bulge beneath the

scar(s) on your abdomen. For 'Keyhole' surgery, the risk is 1 in 100 (1%). For 'Open' surgery, the risk is greater.

- **Blood clots.** Blood clots can occur in the legs (Deep Vein Thrombosis or "DVT") or the lungs (Pulmonary Embolism – "PE") or both. Symptoms and signs that may indicate a DVT are a red, swollen and painful calf muscle. There can be redness to the calf and other veins nearby can often look larger than normal. Symptoms and signs of a PE include shortness of breath, chest pain and coughing up blood.

To reduce the risk of blood clots you will be offered anti-clot stockings to wear on your lower legs, along with an injection of a mild blood thinner. These are heavily recommended and have been proven to greatly reduce the risk of DVT and PE.

Specific complications of appendicectomy

- **Damage to structures nearby the appendix** when inserting instruments into the abdomen. These include other organs, vessels and nerves. Risk: 1 in 300 (0.3%). The risk is increased if you have had previous operations to the abdomen.
- **Abscess.** The risk of developing an abscess within the abdomen after the operation is 7 in 100 (7%). This often occurs after you have gone home. Symptoms to look out for are fevers and continuing or worsening abdominal pain. This often requires antibiotics. If this does not improve with antibiotics alone, the pus will need to be drained via a procedure.
- **Bowel resection** – risk approximately 1 in 100. If the appendix is extremely inflamed and involving the nearby bowel, then a small segment of bowel may need to be removed along with the appendix. The aim is always to join the bowel back together (anastomosis). Very rarely, for your safety and to protect the bowel, the ends of the bowel are brought to the skin to form a

stoma. This is a temporary measure and would be reversed in the near future.

- **Bowel paralysis (Ileus).** Following your operation the bowel can go 'on strike' and refuse to work. This will cause you to become bloated and vomit. You may need a tube placed through your nostrils and down into your stomach (a nasogastric tube) until the bowel starts working again. This usually takes 3-5 days but can be longer with more severe cases of appendicitis. There are no long term complications from having an episode of Ileus.

What happens after the operation?

In Hospital. After the operation you will be transferred to the recovery bay before being moved to the ward. This may not be the same ward from which you came. Your surgeon will come and see you to explain what they found during the operation.

You may not immediately feel hungry which is normal. To help keep you hydrated you may need a drip into the vein and your surgeon may decide to continue treatment with antibiotics through the drip. They will likely tell you whether you will need to stay in hospital or whether you can go home later in the day.

You will be offered painkillers to allow you to move more freely and to be able to take deep breaths. It is extremely important to take deep breaths to help prevent chest infections.

When you go home, you will need to be aware of the following symptoms:

- **Pain that gets worse over time and is not settling with simple painkillers**

- **A high temperature or feeling feverish**
- **Feeling short of breath, lightheaded or faint**
- **Not opening your bowels or not passing wind**
- **Persistent vomiting**
- **Swelling of the abdomen**
- **Difficulty passing urine**
- **Concerns with your wounds (red, angry or leaking pus).**

If you have any of the above symptoms, you should seek medical help. If you are at home, then you can contact your GP. In an emergency you can call an ambulance or go straight to the nearest Accident and Emergency department. In cases that are not an immediate emergency and do not require an ambulance, you should try to go back to the hospital where you had the operation.

At home. It is important that you are out of bed and walking after the operation. This will help prevent blood clots in your legs and lungs. You should carefully follow any instructions given to you by your surgeon and take any medications provided. If you have been wearing special stockings whilst in hospital, it is recommended that you wear these until you are able to freely walk.

You should be able to return to work after about two to four weeks. This timeframe depends on your job and the extent of your surgery.

Your doctor will advise you about heavy lifting and manual work.

Do not drive until you are confident that you can perform an emergency stop, pain free.

Personal Changes

If you are a smoker, stopping will greatly increase your chances of a successful recovery. Try to maintain a healthy weight and be as

mobile as you can. Being overweight increases your risk of complications after the surgery.

Will I have a follow-up appointment?

There is no need for routine follow up appointment after appendicectomy. You should return for review if you experience any of the symptoms above.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health. **Web:** www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones. **Tel:** 111



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