

Appendicectomy

for Adults and Children

ABOUT YOUR OPERATION

Introduction

We expect you to make a rapid recovery after your operation and to experience no serious problems. However, it is important that you should know about minor problems which are common after this operation, and also about more serious problems which can just occasionally occur. The section of this booklet headed "What problems can occur after the operation?" describes these, and we would particularly ask you to read this. The headings from this section will also be included in the consent form you will be asked to sign before your operation.

What is the appendix and what is appendicitis?

Your appendix is roughly the same size as your little finger, and is attached to the bowel in the lower right hand side of your abdomen (below and to your right of the umbilicus). The appendix has no important function and there are no significant side effects or disadvantages to having it removed.

Appendicitis means that the appendix becomes inflamed. There is usually no particular cause for this, although in some people small hard pieces of poo (faecoliths) can form in the appendix, obstructing its base and leading to inflammation.

Typically, appendicitis causes pain and tenderness in the lower abdomen, and the pain is worse on moving about. Because of the inflammation most patients feel unwell, usually losing their appetite and often vomiting. If appendicitis is left untreated then inflammation can spread and the

appendix may burst causing peritonitis. Untreated peritonitis is generally fatal, and this is why people can still occasionally die from appendicitis.

Untreated, appendicitis does not always lead to peritonitis. Other parts of the bowel, and the fat within the abdomen, can gather round the inflamed appendix to seal it off forming a "mass" which can be felt on examination and which may then gradually settle down. Sometimes an abscess can form in the middle of this mass which then has to be drained. Occasionally the appendix lies protected behind part of the bowel and appendicitis can then occur without causing dramatic symptoms.

How do doctors diagnose appendicitis?

In a patient with typical symptoms (see above) the diagnosis of appendicitis can be easy. However, the diagnosis is often not straightforward because appendicitis can mimic many other conditions, and other conditions can mimic appendicitis. There is no single test which proves the diagnosis of appendicitis and it often is necessary to keep patients under observation and to perform a number of different tests before finally deciding to remove the appendix.

About one in five of the appendices removed turn out to be normal, but when there is real uncertainty it is often safer to remove a normal appendix than to take the risk of the appendix bursting.

Occasionally, the appendix is removed in patients who have persistent abdominal pains, when no other cause has been found: the appendix usually turns out to be normal.

How is appendicectomy done?

Removal of the appendix (appendicectomy) is done under a general anaesthetic. Most older children and adults can now safely have their appendix removed via 'key hole' (laparoscopic) surgery. In some situations it is safer to perform the operation through the traditional incision. This is made in the lower right part of the abdomen (between the umbilicus and the hip bone) which is about three to ten centimetres long. The length of the incision depends on the thickness of the abdominal wall and the complexity of the operation. Occasionally, a long vertical incision is used, if there is doubt about the diagnosis of appendicitis (this would allow more extensive surgery for other problems, if necessary).

For the keyhole appendicectomy several smaller cuts are made in the tummy wall to allow a camera and surgical instruments to be inserted into the abdomen. The same operation can then be done without having to create too much trauma to the muscles of the abdominal wall.

The appendix is removed by cauterising or tying the blood vessels at its base, and tying the base of the appendix firmly where it joins the bowel before cutting it off. If there is any amount of pus in the abdomen as a result of the appendicitis, then the abdomen may be "washed out" with saline or antiseptic to remove as much of the infection as possible.

Most of the description in this booklet relates to the keyhole operation to remove the appendix; the recovery after the traditional appendicectomy is similar but can take a day or two longer to recover and go home

AFTER THE OPERATION

Will I have stitches?

Occasionally. Often all the stitches are placed under the skin so they do not need to be removed. When infection has been more severe and the traditional incision is used stitches or clips may be used in the skin which need to be removed after a week or so. You should be told clearly about this before leaving hospital.

What else can I expect immediately after the operation?

In most situations you will be able to drink freely and then eat a light diet soon after the operation. If the infection is more severe then you will receive fluids by an intravenous drip for the first 24 hours after the operation, and sometimes longer, until you are able to drink normally. The drip is also used to give medicines including antibiotics. In this situation drinks will be introduced more slowly, depending on how you feel. Occasionally it can take several days for the bowels to start working properly.

What about the recovery?

Going home:

You will need to stay in hospital until signs of infection have settled; until you are eating and drinking reasonably; and until you are sufficiently comfortable. Time in hospital also depends on how fit you are and who is at home to look after you. Most people are in hospital for one or two days after appendicectomy, but if there has been severe infection or if the operation was complex then a longer stay may be necessary.

Pain and painkillers:

People vary a lot in the amount of pain that they feel after appendicectomy. It is common to experience pain during the first three or four days particularly when moving, and especially when getting up from lying or sitting, or when returning to a bed or chair. The muscles which have been stitched together are active and pulling at those times. Use painkillers during the first few days to help you to become active and to sleep with comfort.

You are likely to get aching and "pulling" as you become more active during the first month. If you need mild painkillers, then paracetamol is a reasonable choice (for example paracetamol for adults and Calpol for children).

Bathing and showering:

You can wash normally the day after the operation (using soap, shower gel or shampoo and water). Avoid the use of talc for about a week. Some surgeons use a transparent dressing, which can be left on for several days, even when washing or bathing: you will be advised about this. Often glue is used to close the skin and this is waterproof within hours.

It is probably wise to avoid swimming until the wound is sound and dry - about ten days after operation. If stitches or clips need to be removed, then you should not swim this has been done (ask when).

Walking:

You can start to walk about as soon and as much as you want, although you will be quite stiff at first, and you will probably not feel like walking long distances during the first week after the operation.

Driving:

You can start to drive the car when you feel confident to control it in an emergency, often about ten days after the operation.

Work, sport, and heavy lifting:

You can return to work as soon as you feel comfortable enough to manage your job, but many people feel rather weary for two or three weeks after appendicectomy and it is not unusual to take about two weeks off work. If your job involves heavy manual work you should probably not return for about one month.

For children, tiredness after a long day is the main problem. In general they need to be off school for about two weeks.

You can get back to sport and other physical activity as soon as your discomfort allows. It is sensible to start these activities gradually, and work your way back to full fitness. Violent or contact sports are perhaps best avoided for about one month. Avoid very heavy lifting for a month.

What problems can occur after the operation?

Infection

Appendicectomy can be followed by infection of the wound, or continuing infection within the abdomen, despite the fact that antibiotics are used at the time of appendicectomy to try to prevent this. Wound infection causes redness, and sometimes discharge of pus. Further antibiotics may settle a red wound, but if pus starts to come out then the wound may need to be opened to release the infection. Infection in the abdomen causes a temperature, which usually settles on antibiotics, but rarely an abscess may form which requires further surgery to drain the pus.

Bruising and hardness

Hardness and tenderness of the wound are common after appendicectomy and sometimes the wound can be bruised or swollen. All this will settle with time. Occasionally bleeding from a small blood vessel under the skin can cause leakage of blood, or a collection of blood under the wound. This will usually settle on its own.

Continuing symptoms

If appendicectomy has been done for abdominal pain, which was not caused by appendicitis (for example caused by a general viral infection), then recovery may be delayed by the effects of the original illness.

Deep vein thrombosis (DVT)

Deep vein thrombosis is a possible problem after appendicectomy, but is rare. If you are at particular risk then special precautions will be taken to reduce the risk. Moving your legs and feet as soon as you can after operation, and then early walking about, all help to stop thrombosis occurring. If you experience pain in your calves or sharp chest pains after the operation you should get this checked out by a doctor.

Infertility

Appendicitis in girls or young women can be a cause of infertility, particularly when there has been severe infection.

Damage to other organs

There is a small risk to other organs during insertion of the telescopes used for laparoscopic appendicectomy.

The risks of a general anaesthetic

General anaesthetics have some risks, which may be increased if you have chronic medical conditions, but in general they are as follows:

- **Common temporary side-effects** (risk of 1 in 10 to 1 in 100) include bruising or pain in the area of injections, blurred vision and sickness (these can usually be treated and pass off quickly).
- **Infrequent complications** (risk of 1 in 100 to 1 in 10,000) include temporary breathing difficulties, muscle pains, headaches, damage to teeth, lip or tongue, sore throat and temporary difficulty speaking.
- **Extremely rare and serious complications** (risk of less than 1 in 10,000). These include severe allergic reactions and death, brain damage, kidney and liver failure, lung damage, permanent nerve or blood vessel damage, eye injury, and damage to the voice-box. These are very rare and may depend on your whether you have other serious medical conditions.

There are risks to any general anaesthetic including chest problems, heart problems and death, but precautions are taken to keep all these risks as low as possible.

Do I need to return to hospital for a check?

No. As a rule we would only bring you back to an outpatient clinic after appendicectomy if there were a special reason.

What should I do if there is a problem?

If there is an acute problem such as fever or an inflamed or discharging wound it is best to contact your own family doctor first. Your doctor may suggest that you see the surgeons at the hospital, and if this is necessary, he/she will make the arrangements.

Should you be unable to get urgent medical help from a General Practitioner, then come to the Emergency Department of the Royal Devon and Exeter Hospital.

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