Patient Information for Consent

Mid and South Essex NHS Foundation Trust

PS04 Appendicectomy (child)

Expires end of September 2025

Local Information

For further information locally you can contact the Patient Advice & Liaison Service (PALS) Team who will be able to put you in contact with the relevant department.

Basildon: Tel 01268 394440
Email mse.pals.btuh@nhs.net

Broomfield: Tel 01245 514130
Email mse.public.response@nhs.net

Southend: Tel 01702 385333
Email mse.pals.suhft@nhs.net

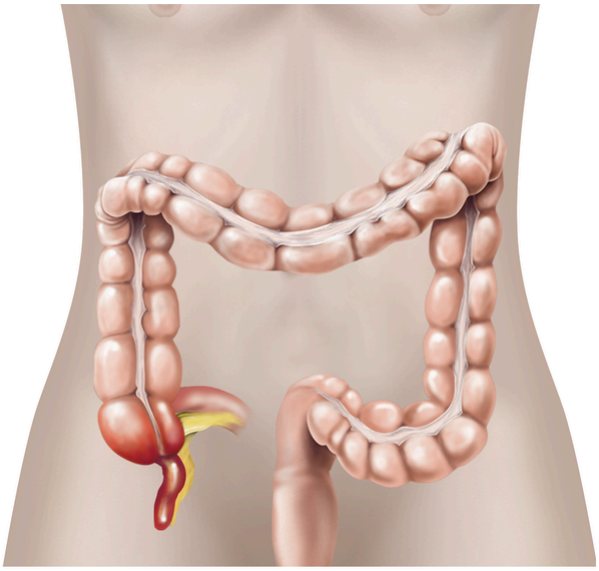
Their opening times are Monday to Friday 11:00am-2.00pm

What is an appendicectomy?

An appendicectomy is a procedure to remove your child's appendix because it is inflamed (appendicitis). The appendix is part of the large bowel and has no function in humans. When it is inflamed it causes pain and makes your child feel unwell. As the inflammation gets worse, it can cause an abscess (a collection of pus) to form in the tissues and the appendix may burst. This causes peritonitis (inflammation of the lining of the abdomen), which is life-threatening.

It is not clear what causes appendicitis. If the appendix becomes blocked where it joins the bowel, bacteria can get trapped, making appendicitis more likely.

An inflamed appendix



 Illustrator: www.medical-artist.com

Shared decision making and informed consent

The healthcare team have suggested an appendicectomy. However, it is up to you to decide whether your child has the procedure. If you think your child is mature enough, it is best to discuss the procedure with them so they can be involved in the decision too. This document will give you information about the benefits and risks to help you make an informed decision.

Shared decision making happens when you decide on your child's treatment together with the healthcare team. Giving your 'informed consent' means deciding that your child will have the procedure having understood the benefits, risks, alternatives and what will happen if you decide your child will not have it. If you have any questions that this document does not answer, it is important to ask your healthcare team.

Once all your questions have been answered and you feel ready to give consent for your child to have 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. You will be asked to confirm your consent on the day of the procedure.

What are the benefits?

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

Are there any alternatives?

If your child has severe appendicitis, surgery is usually the best option. However, there may be other options in some cases.

If your child has had appendicitis for a few days, they may get an appendicular mass (where the surrounding bowel and fat attaches to the inflamed appendix). Your surgeon may recommend a course of antibiotics to help the inflammation to settle. When your surgeon is satisfied that the inflammation has settled, you will be able to take your child home. Your child may still need an appendicectomy and this will usually be arranged up to 6 months later.

If the course of antibiotics does not work to settle the inflammation, your child may have an abscess. Your surgeon may perform an ultrasound scan to find out if there is an abscess and where it is. If your child does have an abscess, your surgeon may need to perform a procedure to remove the pus, or drain the pus using a small tube. Your child may still need an appendicectomy and this will usually be arranged up to 6 months later. Sometimes your surgeon will perform the appendicectomy at the same time as removing the pus.

What will happen if I decide that my child will not have the procedure?

Surgery is strongly recommended for most cases of appendicitis as it is the only dependable cure. If appendicitis is left untreated, the appendix may burst, causing peritonitis. This is life-threatening and needs a larger procedure with a higher risk of developing serious complications.

Many people who have their appendicitis cured by antibiotics will have another episode of appendicitis. Most surgeons recommend an appendicectomy to stop this from happening. However, in some cases, antibiotics are the best first course of treatment. Your healthcare team will talk to you about this.

What does the procedure involve?

The healthcare team will carry out a number of checks to make sure your child has the procedure they came in for. You can help by confirming your child's name and the procedure they are having with the healthcare team.

Your surgeon will make sure that your child is as fit as possible for an anaesthetic. They will be given fluid and antibiotics through a drip (small tube) in a vein.

The procedure is performed under a general anaesthetic and usually takes 1 to 2 hours. Your child may also have injections of local anaesthetic to help with the pain after the procedure.

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

In the event the appendix is not inflamed, it will be removed anyway as it may still be why your child is in pain. Your surgeon will examine other parts of the bowel and nearby organs to find a cause for the pain. If your surgeon finds a different cause and your child needs further surgery, your surgeon may perform it at the same time.

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

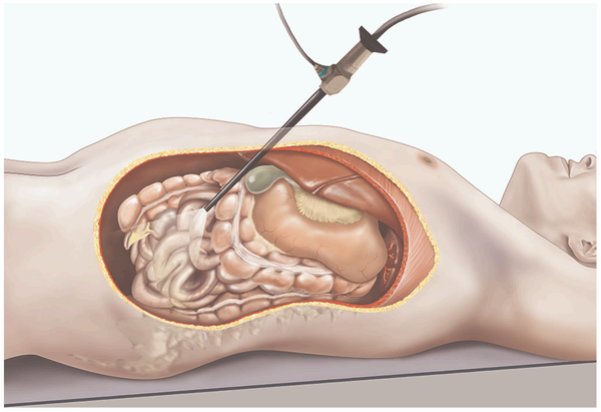
For a few children your surgeon will perform the procedure through a single cut near the belly button.

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

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

Your surgeon will remove the instruments and close the cuts.

Laparoscopic surgery



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Open surgery

Your surgeon may change (convert) laparoscopic surgery to open surgery if it would be too difficult to safely perform the procedure using keyhole surgery.

The procedure is the same but it is performed through a larger cut on the lower abdomen.

Open surgery can often be a better technique for children who have peritonitis and in small children where your surgeon only needs to make a small cut. If your surgeon can feel an

appendicular mass, which they will usually be able to feel while your child is under anaesthesia, your surgeon may use open surgery.

What should I do about my child's medication?

Make sure your healthcare team know about all the medication your child takes 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 complications can happen?

The healthcare team are trained to reduce the risk of complications.

Possible complications of this procedure are shown below. Some can be serious and may even cause death.

Any risk rates given are taken from studies of people who have had this procedure. Your doctor may be able to tell you if the risk of a complication is higher or lower for your child.

You should ask your doctor if there is anything you do not understand.

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

General complications of any procedure

- Bleeding during or after the procedure. If bleeding happens within the abdomen, your child may need another procedure.
- Infection of the surgical site (wound) (risk: 1 in 10). It is usually safe for your child to shower after 2 days but you should check with the healthcare team. Let the healthcare team know if your child gets a high temperature, you notice pus in their wound, or if their wound becomes red, sore or painful. An infection usually settles with antibiotics but your child may need special dressings and their wound may take some time to heal. In some cases another procedure may be needed. Do not give your child antibiotics unless you are told they need them.
- Allergic reaction to the equipment, materials or medication. The healthcare team are trained to detect and treat any reactions that may happen. Let the doctor know if your child has any allergies or if they have reacted to any medication, tests or dressings in the past.

Specific complications of this procedure

Keyhole surgery complications

- Damage to structures such as the bowel, bladder or blood vessels (risk: less than 3 in 1,000). The risk is higher if your child has had previous surgery to their abdomen. If an injury does happen, your child may need open surgery. About 1 in 3 of these injuries is not obvious until after the procedure.
- 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 once the port has been removed.
- Surgical emphysema (a crackling sensation in the 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.
- Conversion to open surgery (risk: 1 in 10). The procedure may be too difficult for your surgeon to perform using keyhole surgery. If this is the case, they may need to do the procedure through a larger cut on your child's abdomen so they can complete it safely.

Appendicectomy complications

- Incorrect diagnosis (risk: 3 in 20). It is sometimes difficult to confirm appendicitis during the procedure, especially if the inflammation is mild. Sometimes appendicitis can definitely be diagnosed only when the tissue is examined under a

microscope. It is safer to remove a normal appendix than to leave an inflamed appendix alone, which may cause peritonitis.

- Developing an abscess within the abdomen (risk: less than 7 in 100). If this does not improve with antibiotics, the pus will need to be drained.
- Continued bowel paralysis (ileus), where your child's bowel stops working for more than a few days, causing them to become bloated, feel and be sick. Your child may need a tube (nasogastric or NG tube) placed in their nostrils and down into their stomach to keep their stomach empty until their bowel starts to work again.
- Developing a leak where the appendix has been cut off from the bowel. This may lead to an abnormal connection (fistula) from the bowel to the cut on the skin. This is very rare and usually heals but your child may need another procedure.
- Developing a leak into the abdominal cavity. This can cause peritonitis and your child will need surgery straight away.
- Bowel obstruction caused by scar tissue (adhesions) at the site of surgery (risk: 5 in 100). This can happen at any time.
- Pylephlebitis, where infection spreads to the liver. This is very rare.
- Stump appendicitis, where part of the appendix is left behind. This may lead to the appendicitis coming back. If this happens your child will need another procedure to remove the rest of their appendix.

Consequences of this procedure

- Pain. The pain from the procedure should be less severe than the pain from the appendicitis. The healthcare team will give your child medication to control the pain and it is important that they take it as you are told so they can move about and cough freely. After keyhole surgery, it is common to have some pain in the shoulders because a small amount of carbon dioxide gas may be left under the diaphragm. The body will usually absorb the gas naturally over the next 24 hours, which will ease the symptoms.
- Scarring of the skin, which can be unsightly.

What happens after the procedure?

In hospital

After the procedure your child will be transferred to the recovery area and then to the ward. Your surgeon will tell you how inflamed the appendix was and will decide how long treatment with antibiotics will need to continue. It may be some time before your child can eat and drink properly, especially if they have had peritonitis, so they may need to be fed using a small tube in a vein (total parenteral nutrition – TPN).

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

Your child should be able to go home 1 to 4 days after a procedure for simple appendicitis or about a week after a procedure for a burst appendix. However, your doctor may recommend that your child stays a little longer.

You need to be aware of the following symptoms as they may show that your child has a serious complication:

- Pain that gets worse over time or is severe when they move, breathe or cough.
- Pain when your child’s abdomen is touched only lightly and they avoid any movement that affects their abdomen.
- A high temperature or fever.
- Dizziness, feeling faint or shortness of breath.
- Seeming sick or not having any appetite (that gets worse after the first 1 to 2 days).
- Not opening their bowels and not passing wind.
- Swelling of the abdomen.
- Difficulty passing urine.
- Vomiting, especially if it is yellow or green in colour.

If your child does not continue to improve over the first few days, or if they have any of these symptoms, let the healthcare team know straight away. If your child is 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

Your child should be able to return to school after about a week, depending on how severe the appendicitis was and when they feel comfortable again. Some children may need to stay off school longer. Your child can return to normal activities as soon as they feel comfortable. This may take up to 6 weeks.

The future

Most children make a full recovery.

Summary

Appendicitis is a common condition where the appendix becomes inflamed. In most cases, surgery is the only dependable way to stop the life-threatening risk of the appendix bursting and spreading infection.

Surgery is usually safe and effective but complications can happen. Being aware of them will help you make an informed decision about surgery for your child. This will also help you and the healthcare team to identify 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.

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Illustrator

