

LAPAROSCOPIC APPENDECTOMY

AT CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC, we believe parents and guardians can contribute to the success of this surgery and invite you to participate. Please read the following information to learn about this surgery and how you can help.

Fast Facts about Laparoscopic Appendectomy

- Appendectomy is an operation to remove the appendix when it has become inflamed; an inflamed appendix is called appendicitis (*uh-pen-di-SIGH-tus*).
- Appendicitis must be treated with surgery right away; if left untreated, the appendix could rupture (burst) and cause a life-threatening or fatal infection.
- Your child's surgery will be done under general anesthesia (*an-es-THEEZ-ya*), which means that he or she will be asleep during the surgery.
- The surgery will take about 1 hour.
- Your child will most likely go home within 24 to 36 hours after the surgery. If there is infection from the appendix bursting, he or she will be in the hospital from 5 to 7 days.

What is Laparoscopic Appendectomy?

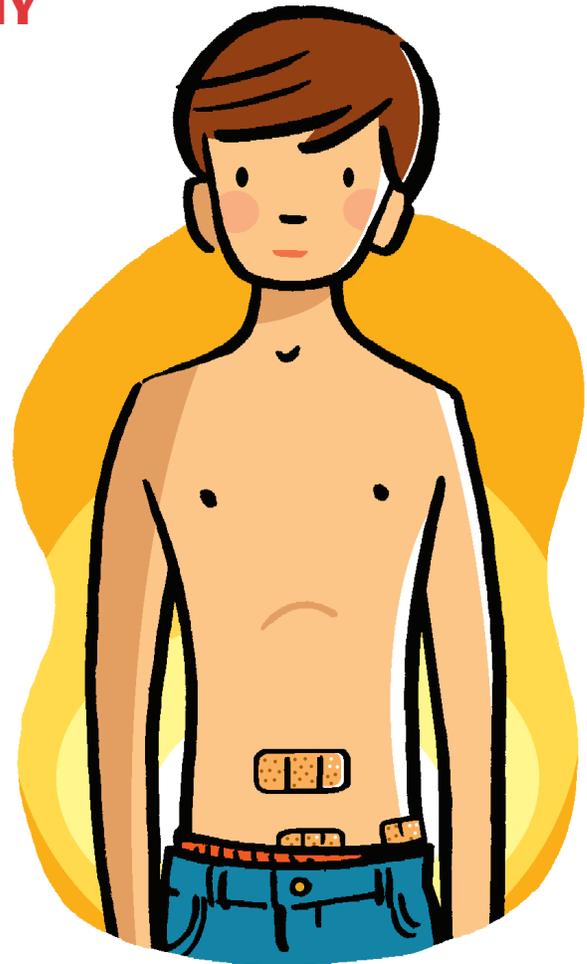
The appendix (*uh-PEN-dix*) is a narrow, finger-shaped organ located in the lower right side of the belly. It is connected to the large intestine, and has no function in humans.

Appendectomy (*app-pen-DECK-toe-me*) is done as an emergency surgery for appendicitis because the appendix has become inflamed (swollen) and needs to be removed. If it is not removed, it could burst and cause infection called peritonitis (*per-i-toe-NY-tus*) in the abdomen. A laparoscopic (*lap-a-ro-SKOPP-ik*) or "lap" appendectomy is a minimally invasive surgery to remove the appendix through several small incisions, rather than through one large one. Recovery time from the lap appendectomy is short.

Preparing for the Surgery

Most patients who need a lap appendectomy enter the hospital through the Emergency Department and are taken to surgery within a few hours. Your child will be given antibiotics first and then be taken to surgery.

A pediatric anesthesiologist — a doctor who specializes in anesthesia for children — will meet with you before the surgery to ask questions about your child's health and about when your child last ate. This information is important because many patients with appendicitis appear to have a full stomach because of irritation from the inflamed appendix. Because your child may have eaten more recently than is usually advised for



surgery, the anesthesiologist may make adjustments to your child's anesthesia so that he or she does not vomit during the operation. Once admitted, your child will not be able to have anything to eat or drink until after the operation.

Going to Sleep

As the parent or legal guardian, you will be asked to sign a consent form before the anesthesia is given.

- If your child is very scared or upset, the doctor may give a special medication to help him or her relax. This medication is flavored and takes effect in about 10 to 15 minutes.
- If you wish, you may be allowed to go with your child to the room where the surgery will be done and stay as the sleep medication is given.
- Younger children will get their sleep medication through a "space mask" that will carry air mixed with medication. Your child may choose a favorite scent to flavor the air flowing through the mask. There are no shots or needles used while your child is still awake.
- Older children may choose between getting their medication

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through the mask or directly into a vein through an intravenous (IV) line.

- When your child has fallen asleep, you will be taken to the waiting room. If it has not already been done, an IV will be started so that medication can be given to keep your child sleeping throughout the surgery.

The Surgery

When your child is asleep, the surgery will begin.

- Your child's surgeon will make 2 or 3 small incisions near your child's belly button and above the pubic area near the hip bone.
- The surgeon will insert a thin tube with a camera through one of the incisions to see the appendix. He or she also will insert a tube to start a flow of carbon dioxide, a harmless gas, into the abdominal space; the gas will puff up the abdomen to make more room to work.
- He or she will insert surgical instruments into the other incision(s).
- Your child's surgeon will use the instruments to find the appendix and clip and remove it from the large intestine. The surgeon also will remove the appendix through one of the incisions.
- If your child's appendix has burst, the surgeon will clean out his or her abdomen so that the infection does not spread.
- Once the area is clean, the surgeon will release air from the abdomen.
- Once the appendix is removed, your surgeon will close the incisions with a stapling device or a few sutures (*SOO-chers*) or stitches. These sutures will dissolve on their own and do not need to be removed.
- The surgeon will cover the incisions with liquid skin glue or use Steri-strips™. Steri-strips are thin adhesive strips that are sometimes used to close shallow cuts in the skin instead of stitches. Both the glue and the Steri-strips will fall off on their own as the incision heals.
- If your child's surgeon used Steri-strips, he or she will cover them with gauze, which should stay on for 48 hours.

Children's Hospital takes every precaution to make sure your child is safe. Although appendectomy is the most common pediatric emergency surgical procedure, there are some risks. Risks involved in the lap appendectomy include:

- Infection
- Bleeding

Your child's surgeon will discuss these risks with you before the surgery.

While Asleep

While your child is asleep, his or her heart rate, blood pressure, temperature, and blood oxygen level will be checked continuously. Your child might have a breathing tube placed while he or she is asleep. If a breathing tube is used, your child might have a sore throat after the surgery.

To keep your child asleep during the surgery, he or she might be given anesthetic medication by mask, through the IV tube, or both. When the surgery is over, the medications will be stopped and your child will begin to wake up.



Waking Up

After surgery, your child will be moved to the recovery room to allow the anesthetic to wear off. You will be called so that you can be there as he or she wakes up.

- Children coming out of anesthesia react in different ways. Your child might cry, be fussy or confused, feel sick to his or her stomach, or vomit. These reactions are normal and will go away as the anesthesia wears off.

- While your child is in recovery, your surgeon will talk to you about the surgery. This is a good time to ask questions about pain medications, diet, and activity.

- When your child is awake enough, he or she might be given a Popsicle® or "slushy" to drink in the recovery room. Once the anesthesiologist sees your child is recovering and his or her pain is controlled, he or she will be moved to his or her hospital room. This usually takes about an hour, but every child is different so times may vary.

A Parent's/Guardian's Role During the Surgery

The most important role of a parent or guardian is to help your child stay calm and relaxed before the surgery. The best way to help your child stay calm is for you to stay calm.

- You are encouraged to talk to your child or hold his or her hand before the surgery, while sleep medication is given, and while in recovery.
- You may bring along a "comfort" item — such as a favorite stuffed animal or "blankie" — for your child to hold before and after the surgery.

Pain Medication

- Before the surgery, many patients are also given a regional block, a pain medication that is injected to the outside of the spine to numb the area.
- During the surgery, your child will be given a numbing medication directly into the incision to relieve discomfort after the surgery.

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- After the surgery, your child will most likely have abdominal pain. Your child may take Tylenol® or Motrin®. If your child is still having pain, your child's doctor may prescribe a stronger medication or a narcotic.

Before you go home, your doctor will prescribe pain medication for your child.

Recovery if the Appendix Has Burst

If your child's appendix has burst, he or she will be treated for infection with antibiotics that will be given through an intravenous (IV) tube. Your child may be sent home with antibiotics and a special IV tube called a PICC (*pick*) line. A PICC (peripherally inserted central catheter) line is a longer IV, usually placed in the upper arm.

You will be told how to care for your child's incisions and/or PICC line before leaving the hospital.

At Home After the Surgery

After your child is discharged and goes home, he or she should take it easy for the next 1 to 2 weeks.

- If your child goes home within 1 or 2 days of the surgery, his or her diet should be restricted to liquids, such as water, Gatorade®, Popsicles®, Kool-aid®, broth, or clear juices. Within 2 days your child may slowly return to his or her regular diet.
- If your child had a lap appendectomy without a ruptured appendix, no follow-up visit with the surgeon is needed.
- If your child's appendix had ruptured, the surgeon will want to see your child for a follow-up visit within 2 to 3 weeks of the surgery.

Bathing

Your child may take a shower 2 days after the surgery; baths are allowed 5 days after surgery.

Activity

Following the surgery, activity needs to be somewhat restricted.

- Your surgeon will determine when your child may resume normal activities.
- Your child may return to school when he or she no longer requires narcotic pain medicine.
- Participation in contact sports and gym class is not permitted until the follow-up appointment with the surgeon, about 2 to 3 weeks after the surgery.
- Swimming is permitted 1 to 2 weeks after surgery.
- Walking and stair climbing are encouraged.



When To Call the Doctor

If your child has a fever higher than 101.5 F, bleeding, or foul smelling drainage from the area around the incisions, call your surgeon right away. Also call the doctor if your child has:

- increased tenderness near the incision
- increased swelling or redness at the incision site
- nausea, vomiting, diarrhea, or constipation that is not improving
- increased pain that is unexplained

Questions

If you have any specific questions about your child's surgery, you should discuss them with the surgeon before the surgery. After the surgery, you may call the Division of Pediatric General and Thoracic Surgery at Children's Hospital and ask to speak with your child's surgeon, or speak with him or her during the follow-up visit, if needed.

Special Needs

If your child has any special needs or health issues you feel the doctor needs to know about, please call the Division of Pediatric General and Thoracic Surgery at Children's Hospital of Pittsburgh of UPMC before the follow-up visit and ask to speak with a nurse. It is important to notify us in advance about any special needs your child might have.

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To see the list of all available patient procedures descriptions, please visit www.chp.edu/procedures.