

Appendicitis in Children

A Guide for Patients & Parents

What is appendicitis?

Appendicitis is inflammation or infection of the appendix. The appendix is a small finger-shaped pouch attached to the large intestine and is usually found on the lower right side of the abdomen. The appendix has no known purpose or function.

What causes appendicitis?

Appendicitis is thought to occur when bacteria become trapped within the appendix. This happens if the opening of the appendix becomes blocked and the contents of the appendix become trapped. Blockage of the appendix may be caused by a hard ball of stool or by compression from a large lymph node. Trapped bacteria can cause inflammation and irritation of the appendix and, if left untreated, can lead to infection, or appendicitis. Once the appendix is infected, it can rupture or perforate. This is called perforated appendicitis. With either type of appendicitis, children might have symptoms of abdominal pain, fever, nausea, vomiting or a poor appetite. Unfortunately, there is no way to predict who will get appendicitis and when it will occur.

How is appendicitis diagnosed?

The diagnosis of appendicitis is made based on the child's symptoms and the doctor's examination. The examination usually includes an ultrasound study and occasionally, a special X-ray called a CT scan.

How is appendicitis treated?

Appendicitis (not ruptured): When appendicitis is diagnosed, your child will be admitted to the hospital for intravenous fluids, intravenous antibiotics and an operation to remove the appendix. This operation is done through Band-Aid-sized incisions on the child's right lower abdomen. For some children, laparoscopy, which uses small telescopes and instruments, is the method of choice for removing the appendix. The pediatric surgeon will talk with you about the best operation for your child.

Ruptured appendicitis: If your child has a ruptured appendix, he or she will be admitted to the hospital to receive intravenous antibiotics. Surgery is necessary but does not need to be done immediately. However, treatment with antibiotics is very important and must be done right away. Getting the infection under control before the operation is very important for your child's health. After antibiotic treatment is begun, the surgeon may perform an appendectomy or may wait until the infection is healed. The waiting time can vary from days to weeks.

Ruptured appendicitis can cause two complications that require treatment, 1) a wound infection where the operation was done and 2) an abscess, a collection of pus in the abdomen. If the wound becomes infected, it may need to be cleaned, under general anesthesia, in the operating room. After this cleaning the nurses and doctors will keep it covered with moist gauze. You will be taught to care for the wound when your child goes home. If an abscess forms, it may require drainage. Draining can be done by either the pediatric surgeon in the operating room, or by the interventional radiologist in the radiology center. An interventional radiologist

is a doctor who does specialized procedures with the help of X-ray studies. Both specialists require a child have general anesthesia to drain the abscess.

How long will my child be in the hospital?

Appendicitis (not ruptured): Children with appendicitis usually stay in the hospital two days after the operation. Children are discharged when they are able to drink, are comfortable on pain medication by mouth and don't have a fever.

Ruptured appendicitis: Children with a ruptured appendix usually need to stay in the hospital for several days or weeks while receiving antibiotics. Before going home, a child must be able to drink, stay comfortable on pain medication by mouth, have a normal white blood cell count (a high white count indicates continued infection) and be without a fever. These are all signs the infection has healed.

Interval appendectomy: Treating with antibiotics and delaying the operation until the appendix has healed is called an interval appendectomy. The operation is scheduled four to six weeks after antibiotics are begun. Every case of appendicitis is different and the needs of each child vary. Your child's pediatric surgeon will talk with you about the best treatment for your child.

How do I take care of my child after leaving the hospital?

Pain: Prescription pain medication is not routinely required after hospital discharge. Most children are comfortable using Tylenol® or Motrin® once they are at home. Follow the dosage directions on the label. If your child is still uncomfortable, call our office and we may prescribe something stronger.

Dressings: If your child had an appendectomy there will be pieces of white tape called Steri-strips® over the incision. There may be a small amount of blood on the Steri-strips® but this is normal. There may or may not be a gauze and clear plastic dressing over the Steri-strips®. The gauze, if present, can be removed two days after surgery. Your child can bathe after the gauze is off with the Steri-strips® in place. These strips fall off on their own or can be removed one week after the operation. The skin surrounding the incision(s) may be red and bruised, and the incision may be slightly swollen. This is normal and can last many days. There will be no visible stitches to remove because they are under the skin. The stitches will dissolve after several weeks. If your child's wound is left open by the surgeon because of an infection, it must be dressed in a special way. You will be instructed on how to care for the wound before leaving the hospital.

Healing ridge: After the incisions are healed, you will be able to feel a firm ridge just underneath the cut. This is called a healing ridge and it is normal after an operation. The healing ridge usually lasts for several months before it softens and disappears.

Bathing: Your child may bathe, shower or swim in a pool as soon as two days after the appendectomy or once he or she is feeling better. Bathing may be done without restriction. Children who have an open wound also can bathe once they are sent home from the hospital.

Activity: There are no specific activity restrictions following surgery. Your child can return to school as soon as he or she feels well enough. If you need a letter sent to your child's school regarding the operation and recovery, please contact our office.

Intravenous antibiotics at home: If your child requires long-term antibiotics, it may be possible to continue treatment while your child is at home. Before leaving the hospital, you will be taught to care for the IV catheter and to give your child the antibiotics. A medical supply company will deliver the antibiotics and equipment to your home. A nurse will visit your home frequently to check on your child and answer any questions about caring for the IV catheter and giving antibiotics at home.

Do I see the surgeon again after the operation?

If your child had appendicitis without rupture and all is going well, a visit to our office is not required. Our pediatric nurse practitioner will call you to check on your child's recovery. If your child had a ruptured appendix, or is scheduled for an interval appendectomy, we recommend a visit at two weeks or sooner if you are worried about your child's recovery.

When do I call the surgeon's office?

Call our office at (415) 476-2538 if:

- You have any concerns you have about your child's recovery
- Your child's temperature is 101 degrees or higher
- Your child's incision is red
- There is increasing pain and tenderness at the incision
- Any liquid is coming out of the incision

This information is for educational purposes only and is not intended to replace the advice of your physician or health care provider. We encourage you to discuss with your physician any questions and concerns you may have.