
APPENDECTOMY



Enhanced Recovery After Surgery (ERAS) Program

A guide on how to achieve a
better, faster recovery following
surgery for appendicitis



UNIVERSITY of
ROCHESTER
MEDICAL CENTER



What is the Enhanced Recovery After Surgery (ERAS) program?

Enhanced Recovery After Surgery is based on scientific evidence about surgical recovery. Our goal is to work with you to provide an improved surgical experience and to get you back to normal as soon as possible after your surgery.

How do we do this?

By changing the way we manage your care before and after surgery and including you as a very important part of the team.

This booklet will:

- Help you prepare for your surgery.
- Outline what to expect after leaving the operating room.
- Explain ways to improve your recovery

Research shows that you will recover faster if you do the things explained in this booklet. There are instructions about eating and drinking, physical activity, and controlling your pain. These things will help you to feel better faster and to go home safer and sooner.

Please hold onto this booklet for information regarding your surgery. Use it as a guide during your hospital stay. We may refer to it as you recover, and review it with you when you are ready to go home.

Having surgery can be stressful for you and your family. The good news is that you are not alone. We will support you each step of the way. Please ask us if you have questions about your care. We want to be sure to answer all your questions!

The Surgical Team

You will see many different people from your team during your hospital stay. One surgeon is assigned to patients during the daytime from 7:00am-4:00pm. This surgeon will be taking care of our patients for an entire week. Beginning at 4:00pm each day, a different surgeon takes night call from 4:00pm until 7:00am the next day. The daytime surgeon for the week will then come back the next day to take care of you along with the residents, nurse practitioners and physician assistants. We work together to check your condition and plan the best steps towards returning your body to its normal state. Please see photos of your care team on the following page.

Meet Your Surgical Care Team



Dr. Paul
Bankey



Dr. Julius
Cheng



Dr. Mark
Gestring



Dr. Michael
Nabozny



Dr. Yanjie
Qi



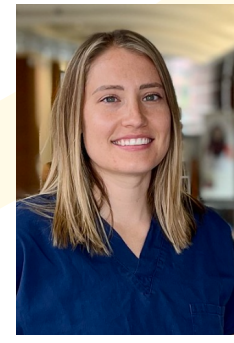
Dr. Ayodele
Sangosanya



Dr. Nicole
Stassen



Dr. Michael
Vella



Nichole Coleman
Nurse Practitioner



Leah Green
Nurse Practitioner



Andrea Masiello
Nurse Practitioner



Kelsey Potter
Nurse Practitioner



Jacob Privitera
Physician Assistant



Caitlin Randall
Nurse Practitioner



Zachary Woughter
Physician Assistant



Tammy Cullen, RN
Outpatient Care Coordinator

Office Staff

Laura Borate
Stephanie Fitzgerald
Emily Julian

Appendicitis

The Condition

The appendix is a small tube-like pouch located in the lower right abdomen. It hangs off the large intestine where the small and large intestine meet. When the appendix becomes blocked, it begins to swell and bacteria can grow inside; leading to an infection. This blockage can be caused by an illness, thick mucus, hard stool or a tumor.

Appendicitis is the medical term for an infected appendix. Most often, pain caused by appendicitis starts around the navel and then moves to the lower right abdomen. During pregnancy, the appendix sits higher in the abdomen and the pain may be in the upper right abdomen instead.

The pain can become worse with activity or talking. The infection and swelling can lead to decreased blood supply to the appendix, causing tissue to die and become weak. The weakened tissue can burst or rupture, causing the bacteria and stool to release into the abdomen. This is called ruptured appendicitis and it can lead to peritonitis, an infection of the entire abdomen. In order to treat the infection, an appendectomy is performed, which is the surgical removal of the appendix.

Symptoms

Common symptoms of appendicitis include:

- Stomach pain that started around the navel then moved to the lower right abdomen
- Not feeling hungry
- Fever
- Nausea and/or vomiting
- Diarrhea or constipation



Common Diagnostic Tests

There is no single test to confirm the diagnosis. A history and physical exam will help check your abdominal pain.

Abdominal ultrasound or CT scan: Checks for an enlarged appendix.

Complete Blood Count (CBC): A blood test to check for infection.

Pelvic Exam: May be done in young women to check for pain from gynecological sources such as pelvic inflammation or infection.

Urinalysis: Checks for an infection in your urine.

Appendectomy: An Overview

Definition

Appendectomy is the surgical removal of the appendix, which is located in the lower right abdomen. When the appendix becomes infected, it is known as appendicitis. Surgery is often needed to remove the infected appendix to prevent it from bursting and releasing bacteria and stool into the abdomen.

Surgical Management

Laparoscopic appendectomy

The appendix is removed through small abdominal incisions (surgical cuts) with the use of a camera and surgical instruments.

Open appendectomy

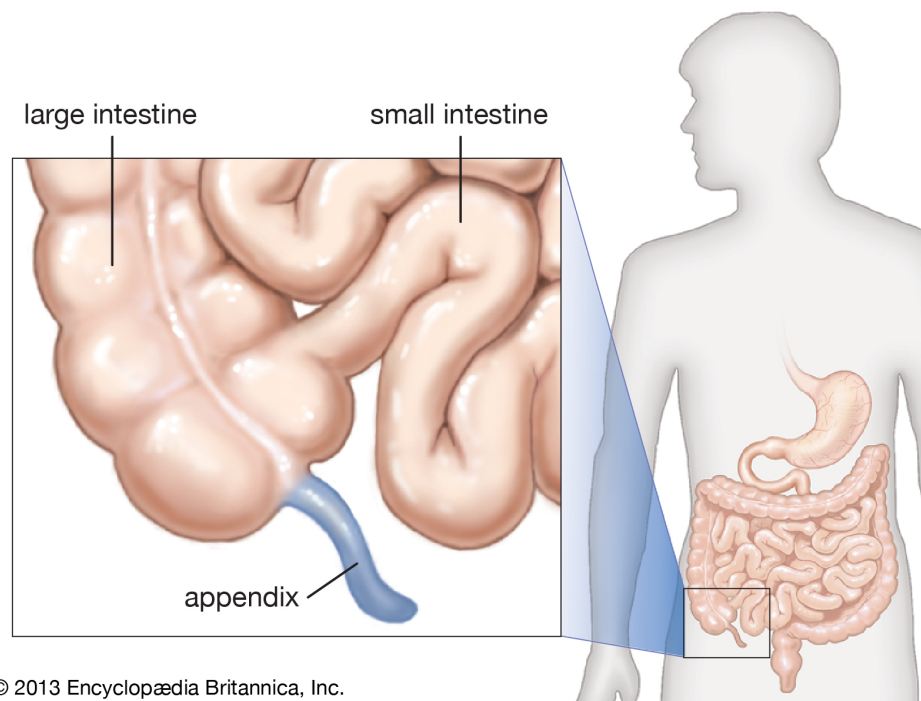
The appendix is removed through a larger abdominal incision made in the lower right abdomen.

Non- Surgical Management

Surgery is the gold standard for treatment of appendicitis. In certain patients, antibiotics (medicine to treat bacterial infections) can be used instead.

Risks and Benefits

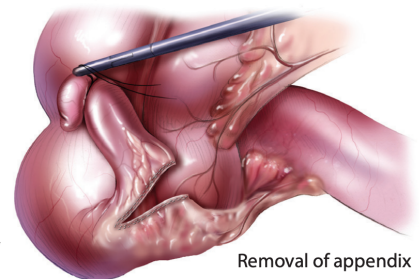
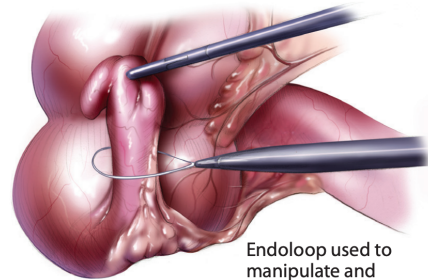
Appendectomy removes the infected appendix and relieves pain. Once removed, appendicitis should not occur again. Not having surgery can lead to the appendix bursting causing an abdominal infection, called peritonitis. Your surgeon will review complications that may arise from surgery before the surgery.



Surgical Treatment

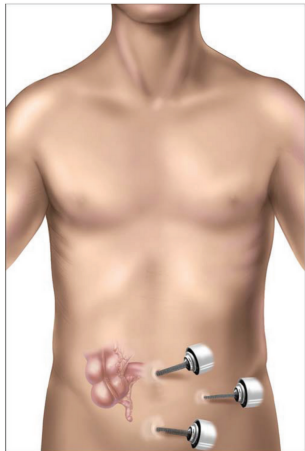
Laparoscopic Appendectomy

This is the most common way to remove the appendix. The surgeon will make 3 small abdominal incisions to place surgical instruments into your abdomen. Carbon dioxide gas is used to inflate the abdomen to view the appendix more easily. The appendix is then removed using a laparoscope (camera) and the surgical instrument through the small incisions.

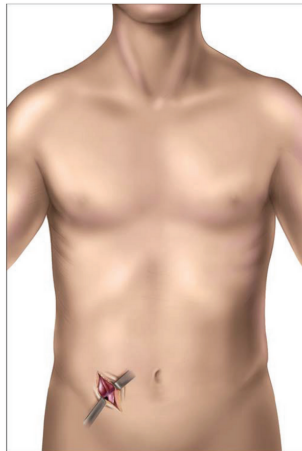


Laparoscopic versus Open Appendectomy

Laparoscopic Appendectomy



Open Appendectomy



Open Appendectomy

The appendix is removed through a larger abdominal incision about 2-4 inches long. The appendix is removed from the intestine and the area washed clean to prevent further infection. A drain (tube used to remove fluids) may be placed during this procedure and is usually removed in the hospital. Incisions are closed with absorbable sutures or staples.

Non-Surgical Management

If you have ruptured appendicitis or other medical conditions that make surgery difficult, your surgeon may treat you with antibiotics and watch for improvement. Sometimes, you will need a procedure to have a drain placed as well to remove any infected collections. Since the appendix is not removed, there is a risk of appendicitis coming back.

Pain Control

⚡ While you are in the hospital we will ask you to rate your level of pain on a scale of 0 to 10

⚡ For most people ibuprofen (Advil™) and acetaminophen (Tylenol™) are strong enough to control their pain

⚡ Sometimes your surgeon will give you narcotic pain medicine for a short period of time

Narcotics should only be taken if you really need them

- They have side effects like constipation, nausea, itching, and sleepiness
- They can be addictive if not used correctly

For your safety, please do not drive, operate machinery, drink alcohol, swim, or watch children while you are taking narcotic pain medicine

Alternative Pain Control

Distraction

Keep your mind occupied with engaging activities to distract you from the pain. Music, gaming or puzzles can be effective.

Splinting your stomach

Using a pillow to apply firm pressure before a cough, sneeze or activity can help reduce pain. This can be especially helpful in children.

Meditation

Meditation or guided imagery can help redirect your focus and control your emotions. Control your breathing with slow inhales and exhales while picturing a peaceful setting. Maintain your focus on the image to help calm the mind.

Before The Operating Room



When you have appendicitis you have an infected appendix. You will be started on antibiotics to help treat this infection.



When you have an operation, you are at risk of getting blood clots because of not moving during anesthesia. This is decreased by walking 5-6 times per day, wearing special support stockings, and by taking medicine that thins your blood which you will receive before surgery.



An intravenous line (IV) will be started to give you fluids and medicine.



The amount of pain experienced by each person is different. We will start with non-narcotic medicine to control pain, but stronger medicine is available if needed.



Our skilled nurses will monitor you before surgery and be able to help you with your needs. They will check your blood sugar before going to the operating room.



Our nurses will help you to the bathroom so you may empty your bladder before surgery.

After The Operating Room



As long as your appendix was not perforated (or burst) we will stop your antibiotics.



When you wake up, you will be able to drink small amounts of liquid. If you do not feel sick, you will begin eating regular foods.



Once you are eating we will discontinue your fluids through your intravenous line (IV).



We will continue to treat your pain with a combination of non-narcotic and narcotic pain medicine as needed. You will change from getting medicine in your IV to getting medicine you can swallow.



Our nurses will evaluate you frequently and help you with walking soon after your surgery. They will be able to tell your surgical team if you are meeting all of your recovery milestones.



Our goal is to have you safely recover from surgery and be able to leave the hospital a few hours later.

Once You Are Home



DIET

Once you are home, please resume your regular diet. It is normal to have less energy and not feel hungry as you recover. Continue to drink several (4-6) glasses of water daily to stay hydrated. Use stool softeners and/or laxatives for easier bowel movements.

Walking and stairs are encouraged! You should slowly increase your activity without overdoing it and should not lift anything heavier than 20 pounds for 14 days. Avoid intense activity for 3 to 5 days after a laparoscopic procedure and 10 to 14 days after an open procedure. Please ask your surgeon when it is safe to resume sexual activity.



ACTIVITY



RETURN TO WORK/SCHOOL

You may return to work once you feel well enough. Timing will be discussed with your surgeon. Most children return to school before 1 week and sports / gym within 2 weeks.

You may shower after the surgery. Do not soak in a bathtub, pool, etc. until your incisions are healed. You have absorbable sutures under your skin and either skin glue or Steri-Strips over the incisions. If you have skin glue, allow it to flake off. Steri-Strips will begin to peel in the corners and can be removed at that time. If you have any gauze over your belly button incision, remove this on the 2nd day after your surgery.



WOUND CARE



DRIVING

Do not drive while you are taking narcotic pain medicine. You may drive after your surgery after you have stopped taking narcotic pain medicine and you feel that you can react safely while driving.



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When to Call Your Doctor

- Fever greater than 101°F
- Pain that will not go away or worsens
- Nausea or vomiting
- Swelling, redness, bleeding or drainage from your wound
- No bowel movement or unable to pass gas for 3 days after your procedure
- Watery diarrhea lasting longer than 3 days

Call **911** anytime you think you may need emergency care:

- If you have chest pain
- Lose consciousness
- Experience uncontrolled bleeding
- Have shortness of breath

Other Instructions / Notes:



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