Colectomy
Surgical treatment for Ulcerative Colitis (UC) and Familial Adenomatous Polyposis (FAP)

What is a colectomy?

A colectomy is a surgery that removes the colon, or large intestine. The colectomy and reconstruction of your child’s digestive system may take one, two or three surgeries. The colectomy and reconstruction will be done under general anesthesia. This means that your child will be given medicine to make them sleep without pain during the surgery. The colectomy can be done laparoscopically or using an “open” surgery. In laparoscopic surgery, the surgeon makes a few small incisions and inserts a thin, lighted tube with a camera and the surgical tools. An open surgery uses one larger incision. Your child’s surgeon will discuss with you the benefits of each type of surgery.

![Diagram of the digestive system](Image)

**Picture 1. The digestive system. The shaded areas are removed during the colectomy.**

Why does my child need a colectomy?

Your child may need a colectomy for Ulcerative Colitis (UC) or Crohns disease if medicines and changes in what they eat and drink don’t control the symptoms. Children with Familial Adenomatous Polyposis (FAP) need a colectomy to remove the chance of getting colon cancer. Children with UC may also have a greater chance of getting cancer later on in life. The rest of this handout will describe surgeries usually used for UC and FAP but not commonly for Crohns.
How many surgeries does my child need?

Your child may need one, two or three surgeries to complete the colectomy and reconstruction. The number of surgeries will depend on your child’s health.

One-stage procedure

Your child will have one surgery to remove the colon and rectum, and connect the small intestine to the anus. This is not often done in children and teens because it may have greater risks.

Two-stage procedure

This is the most common procedure and is done in two stages.

• During the **first surgery** the colon and the lining of the rectum are removed. This is called a colectomy and rectal mucosectomy.

• A pouch is made from the small intestine. It is usually shaped like a “J” and is attached to the anus in place of the rectum (see picture 2). The pouch stores stool like a rectum.

![Picture 2. The digestive system after the colectomy and rectal mucosectomy.](Diagram)

• A temporary ostomy is made to connect the end of the small intestine to the surface of the abdomen. Stool drains into a disposable bag attached to the outside of the body. The ostomy keeps stool from passing through the new J-pouch and gives it a chance to heal. Please see our Ostomy handout at [www.seattlechildrens.org/pdf/PE745.pdf](http://www.seattlechildrens.org/pdf/PE745.pdf) for more information.

• Your child will have a contrast study done 4 to 6 weeks after the surgery. In a contrast study your child’s doctor will put a liquid dye in through a small tube in their rectum. Then an X-ray is taken to see if the J-pouch has healed.
Colectomy: Surgical treatment for Ulcerative Colitis (UC) and Familial Adenomatous Polyposis (FAP)

- The **second surgery** is done about 6 to 8 weeks after the first surgery and the sutures (stitches) in the J-pouch have time to heal. In this surgery the ostomy will be closed and the small intestine will be reconnected to the J-pouch (see picture 4). Stool will then pass through the anus. At that time your child’s surgeon will check for an anal stricture where the J-pouch was attached. An anal stricture is when the anal opening shrinks in size. The stricture is caused because scars shrink when they heal. It can usually be dilated open during the ostomy closure surgery. Rarely, a surgery is needed to fix the stricture and ostomy closure is delayed.

![Picture 4. The digestive system after the final surgery.](image)

### Two-stage procedure

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<thead>
<tr>
<th></th>
<th>First Surgery</th>
<th>Hospital stay</th>
<th>Follow-up</th>
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<th>Second Surgery</th>
<th>Hospital stay</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Colectomy</td>
<td>7 to 10 days</td>
<td>Return to clinic in 2 to 4 weeks</td>
<td></td>
<td>Ostomy closed</td>
<td>2 to 5 days</td>
<td>Return to clinic in 2 to 4 weeks</td>
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<td></td>
<td>Rectal Mucusectomy</td>
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<td>In 4 to 6 weeks have contrast study of J-pouch</td>
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<td>Return to clinic 1 month later, then yearly or more often as needed</td>
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<td></td>
<td>J-pouch made</td>
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Colectomy: Surgical treatment for Ulcerative Colitis (UC) and Familial Adenomatous Polyposis (FAP)

Three-stage procedure

The three-stage procedure is used when the colon is so diseased that the rectal lining cannot be safely and fully removed during the first surgery. It is also used when the patient has been on steroids or other medicines that may inhibit healing. (Examples are Remicaide, Humira)

• During the **first surgery** the colon is removed (colectomy). An ostomy is made to connect the end of the small intestine and the surface of the abdomen (see picture 3). Stool drains into a disposable bag attached to the outside of the body. The remaining rectum will still produce mucus. This will come out of the anus even with an ostomy in place. Read our Ostomy handout at www.seattlechildrens.org/pdf/PE745.pdf for more information.

![Picture 3. The digestive system after the first surgery in the three-stage procedure.](image)

• After 6 to 8 weeks, a **second surgery** is done to remove the lining of the rectum (rectal mucosectomy) and a J-pouch is made from the small intestine (see picture 2). The pouch is sutured (attached) to the anus in place of the rectum. The pouch stores stool like a rectum. Your child will still have an ostomy to keep the stool from passing through the new J-pouch so that it has a chance to heal.

![Picture 2. The digestive system after the colectomy and rectal mucosectomy.](image)
Colectomy: Surgical treatment for Ulcerative Colitis (UC) and Familial Adenomatous Polyposis (FAP)

- Your child will have a contrast study done 4 to 6 weeks after the surgery. In a contrast study your child’s doctor will put a liquid dye in through a small tube in the rectum. Then an X-ray is taken to see if the J-pouch has healed.
- After the contrast study, a third surgery will be done to close the ostomy and reconnect the small intestine to the J-pouch (see picture 4). Stool will then pass through the rectum. At that time your child’s surgeon will check for an anal stricture. An anal stricture is when the anal opening shrinks in size. The stricture is caused because scars shrink when they heal. It can usually be dilated open during the ostomy closure surgery. Rarely, a surgery is needed to fix a stricture and ostomy closure is delayed.

Three-stage procedure

1. First Surgery
   - Colectomy
   - Ostomy made
   - Hospital stay: 7 to 10 days
   - Follow-up: Return to clinic in 2 to 4 weeks
     - Wean off any steroids

2. Second Surgery
   - (6 to 8 weeks later):
     - Rectal mucosectomy
     - J-pouch made
   - Hospital stay: 7 to 10 days
   - Follow-up: Return to clinic in 2 to 4 weeks
     - In 4 to 6 weeks have contrast study of J-pouch

3. Third Surgery
   - (After the contrast study):
     - Ostomy closed
   - Hospital stay: 2 to 5 days
   - Follow-up: Return to clinic in 2 to 4 weeks
     - Return to clinic 1 month later, then yearly or more often as needed

Picture 4. The digestive system after the final surgery.
**How do I prepare my child for surgery?**

Review and follow the instructions on the “Before Procedure Checklist” www.seattlechildrens.org/pdf/PE459.pdf. Seattle Children’s has resources to help you talk to your child about their surgery and hospital stay. Call your community doctor or the Children’s specialty clinic that referred your child for surgery to get all the information you need. Visit the Patients and Families section of the Seattle Children’s website at www.seattlechildrens.org for tips to help your child prepare for their surgery and hospital stay.

**What will happen before the surgery?**

Your child may be admitted to the hospital the day before surgery to make sure their bowel is cleaned out for surgery. Golytely may be used to do this. Golytely cleans all of the stool out of the colon. In some cases you may be asked to give your child only clear liquids, a laxative and antibiotics 24 hours before the surgery. This is also to clean the stool out of the colon. The antibiotics help clean the gut.

If your child has to take Golytely and cannot drink as much as is needed, a nasogastric (NG) tube can be placed. An NG tube is a small, flexible tube that goes through the nose into the stomach.

Sometimes this bowel prep can be done with your child in our clinic as an outpatient. Your surgeon will talk with you about what type of bowel prep is best for your child and give you specific instructions if the prep can be done as an outpatient. This usually involves giving your child a clear liquid diet and then giving them a laxative such as Miralax and oral antibiotics the day before surgery.

**What happens after the surgery?**

Your child will stay in the hospital after surgery to wait for their gut (intestine) to “wake up.” During the surgery your child may have an NG tube in their nose to remove fluid from the stomach so they don’t vomit. The tube will be removed and your child can start eating once the gut is working again. Your child may also have a bladder catheter to drain urine.

There will be two drains in place after the J pouch surgery. One is placed through the anus to drain the J pouch and the other is placed through the abdominal wall and drains beside the J pouch. These drains usually come out the 5th day after surgery. Your child’s surgeon will describe these to you.

Your child will be in the hospital for less time after the final ostomy closure and will likely not need an NG tube, bladder catheter, drain or epidural (used to control pain).

**Will my child be in pain?**

After a surgery your child is likely to have some pain and discomfort. We partner with you and your child to prevent and relieve pain as completely as possible. You know your child best. We encourage you to take an active part in your child’s recovery by talking with your care team about options for them.
An epidural catheter may be used for pain after the J Pouch surgery. Epidural catheters are one way of giving pain relief without injections (shots). The catheter is a thin tube that is put through the skin and threaded into the epidural space (a space just outside of the spinal cord) and numbs the lower part of the body. Your child will need a bladder catheter to drain urine. Both the epidural and bladder catheters are placed when your child is under anesthesia. The bladder catheter and epidural will be taken out when your child’s gut starts working again and they tolerate food and oral pain medicine.

In addition to medicine prescribed for pain, we will work with you to create a plan that encourages coping activities to treat pain and provide support. No matter the level of your child’s pain, we join you to assess and respond right away. Help your child get better, faster with good pain management.

**What can my child expect at home?**

After a colectomy and the ostomy has been closed, you can expect your child to have:

- Frequent liquid bowel movements at first. Some children will have a bowel movement up to 15 times a day. Extra fiber can thicken up the stool, or your child may take anti-diarrheal medicine. Your doctor will discuss this with you.
- Accidents at first, especially at night.
- A sense of urgency and not being able to hold it when they have to go to the bathroom.

As your child’s body adapts to the changes after surgery, you will notice that:

- The number of bowel movements will decrease. Most children will eventually have about 4 to 6 bowel movements a day. Often this happens the first month after surgery.
- Accidents and sense of urgency will improve. Your child will likely be able to hold it for 30 minutes or more and no longer have day time accidents.
- Your child should eventually be continent (not have accidents) at night.

The improvement in these symptoms will take different amounts of time depending on the child. Some children may take up to a year to reach full bowel control while others may take only a few weeks.

**When should I call the doctor?**

You should call the doctor if your child has symptoms of bowel obstruction, pouchitis or dehydration.

**Bowel obstruction** - is possible after any abdominal surgery. It is caused by scar tissue on the inside of the abdomen. The symptoms are:

- Failure to pass gas or stool
- Swelling in the stomach (abdominal distension)
- Vomiting, especially green vomit
Pouchitis - occurs at least once in many children who have had a colectomy. It can usually be treated with antibiotics. The symptoms are:

- An increase in bowel movements
- Pain with bowel movements
- Blood in the stool
- Fever greater than 101.5 degrees Fahrenheit
- Generally feeling sick

Dehydration – encourage your child to drink lots of liquids to prevent them from getting dehydrated. The symptoms of dehydration are:

- Headache or dizziness
- Very tired (lethargy or fatigue)
- Peeing (urinating) less than usual
- Dark pee (urine)