Surgical Procedures: Small Bowel Resection

What is a small bowel resection and how is it done?

A small bowel resection is a surgery that is done to remove the small intestine. It may take out all or part of the small intestine. The small intestine is a long tube with three sections:

- The duodenum is the first part of the small intestine. It joins the stomach to the small intestine and is the entry point for the body’s digestive enzymes.
- The jejunum is the middle section of the small intestine. Its job is to absorb nutrients and move food through the bowel.
- The ileum is the last part, which joins the small and large intestines.

An ileostomy (an opening to the outside of the body) may be needed for stool to exit the body after a small bowel resection. If an ileostomy is not needed, the parts of the bowel that are cut are reattached so that bowel movements can happen.

A small bowel resection may be used to treat certain cancer and precancerous diagnoses, such as polyps. It may also be used in non-cancerous cases like: bleeding, infections or severe ulcers, conditions like Crohn’s disease, regional ileitis and regional enteritis, bowel obstruction, certain birth defects and small intestine injury.

There are three types of small bowel resection:

- Duodenectomy: the duodenum is removed
- Jejunectomy: the jejunum is removed
- Ileectomy: the ileum is removed

There are different ways of doing a small bowel resection, such as laparoscopic and open procedures. During a laparoscopic small bowel resection, a probe with a lighted camera and other surgical tools are put into the belly through many small cuts. An open small bowel resection, exposes the small bowel through a large belly incision.

The need for an ileostomy depends on if the surgeon can join the severed ends of the small bowel. If the ends can be reconnected, stitches or staples will be used to form an anastomosis (connection). At times this can't be done. In these cases, a temporary or permanent ileostomy is needed.

What are the risks of a small bowel resection?

There are risks and side effects related to having a small bowel resection. Risks and side effects may be:

- Reaction to anesthesia. (Anesthesia is the medication you are given to help you sleep through the surgery, not remember it and to manage pain. Reactions can include wheezing, rash, swelling and low blood pressure.)
- Harm to nearby organs
- Bleeding
- Infection
- Blood clots
- Trouble breathing
- Heart attack/stroke
- Diarrhea
- Abdominal abscess (collection of pus) and/or abdominal bleeding
- Incisional hernia (This is when tissue in the belly pushes through the muscle. It can look like a lump, and can be painful or
tender when touched.)
- Adhesion/scar tissue formation (An adhesion is scar tissue that joins 2 pieces of tissue that should not be joined. They are often painless and do not need treatment. Serious cases can cause a blockage in the bowel or limit blood flow.)
- Bowel obstruction (This is a blockage in the bowel that can limit digestion or the removal of stool.)
- Short bowel syndrome, which may lead to vitamin and nutrient absorption issues.
- Anastomotic leaks (This is a leak in the area reconnecting the bowel and fluid leaks into the body.)
- Issues with the stoma, if an ileostomy was used (The stoma is the hole that the surgeon makes on your belly that stool comes out of and into a bag.)
- Incision re-opening

What is recovery like?

Recovery from a small bowel resection will depend on the extent of the procedure. At times, a week long hospital stay is needed. After surgery, a urinary catheter and a nasogastric (NG) tube will be in place. The urinary catheter will drain urine into an external collection bag and the nasogastric tube will drain the contents of the stomach. You will not be able to eat in order to allow the bowel to heal. At times, IV nutrition may also be needed.

You will be told how to care for your incisions and stoma (if you have one) and any other instructions before leaving the hospital. Full instructions on caring for your stoma will be given to you by a trained stoma nurse/therapist. Your medical team will talk to you about the medications you will be taking, such as those to prevent pain, blood clots, infection, constipation or other conditions.

Your provider will tell you what you should and should not do when you go home. This will often include:

- Avoid lifting anything over 10 pounds for 4 weeks, or until told that you can.
- No climbing and/or strenuous activity for 4-6 weeks, or until told that you can.
- Do not submerge your incision in a tub or other body of water until told that you can.
- Change your diet as instructed; you may be asked to eat a low-residue diet for 4 weeks after surgery.
- Drink 8 to 10 glasses of water per day unless you are told not to.
- Don't strain trying to have a bowel movement.
- Don’t drive while taking narcotic pain medication.
- You may be able to return to work in 2-3 weeks, based on the type of surgery and your type of job.
- Speak with your provider about showering, getting your surgical incisions wet, diet recommendations, and sexual activity.

What will I need at home?

- Thermometer to check for infection.
- Loose clothes and underwear.
- Incision and stoma care supplies, typically supplied by the hospital, your healthcare team or the stoma nurse/therapist.

When to call your doctor?

- Fever of ≥101 degrees F.
- Drainage, bleeding, pain, redness, swelling or warmth at your incision.
- Abdominal swelling, nausea or vomiting.
- Lack of bowel movement for 4 days following hospital discharge or you stop having bowel movements.
- Passing bowel movements which are bloody, black or tarry.
- Problems with ileostomy and/or if your ileostomy is not passing stool.
- Shortness of breath and/or chest pain.
- Leg swelling and/or calf pain.
How can I care for myself?

You may need a family member or friend to help you with your daily tasks until you are feeling better. It may take some time before your team tells you that it is ok to go back to your normal activity.

Be sure to take your prescribed medications as directed to prevent pain, infection and/or constipation. Call your team with any new or worsening symptoms.

There are ways to manage constipation after your surgery. You can change your diet, drink more fluids, and take over-the-counter medications. Talk with your care team before taking any medications for constipation.

Taking deep breaths and resting can help manage pain, keep your lungs healthy after anesthesia, and promote good drainage of lymphatic fluid. Try to do deep breathing and relaxation exercises a few times a day in the first week, or when you notice you are extra tense.

- Example of a relaxation exercise: While sitting, close your eyes and take 5-10 slow deep breaths. Relax your muscles. Slowly roll your head and shoulders.

This article contains general information. Please be sure to talk to your care team about your specific plan and recovery.