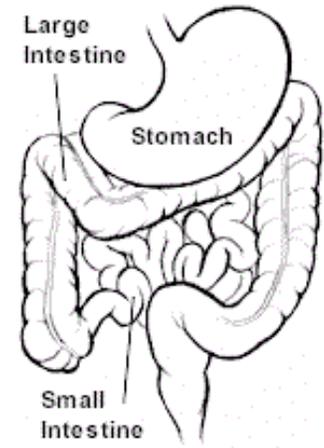




Surgery for Polyps or Colon Cancer (Updated 10.08)

Colon cancer is cancer of the large intestine, or colon. The colon is a muscular tube that forms the last part of the digestive tract. Semi-liquid food waste (stool) from the small intestine enters the colon at the cecum (the beginning of the colon). As the stool moves through the colon, the colon absorbs water and stores the waste until it is passed out at the rectum.

In the lining of the colon, small fleshy clumps of tissue, called **polyps**, can form. Most polyps are benign (not cancerous), and cause no symptoms. However, over time, a polyp can change and become cancerous. The larger a polyp becomes, the higher chance it has of becoming cancerous. Most cases of colon cancer begin as polyps.



There are several kinds of polyps that can be identified, either by a doctor or in the lab. Polyps that are *adenomatous* are considered to be pre-malignant, meaning they will most likely become cancerous over time.

When a polyp becomes cancerous, growing abnormally, it may involve more tissue of the colon or rectum. Over time, the cancer can become metastatic, meaning it has spread to nearby organs or to glands called lymph nodes.

The earlier a cancerous tumor is removed, the better chance of preventing its spread. Whether you have polyps, or if you already have cancerous growths, the best treatment is to remove them.

Symptoms and Risk Factors for Colon Cancer

Symptoms of colon cancer include changes in bowel habits, blood in the stool, and persistent cramps, gas, or abdominal pain.

Risk factors for colon cancer include:

- Obesity.
- Radiation therapy for another cancer.
- Smoking.
- Age over 50 years.
- Sedentary life style.
- Personal or family history of cancer or polyps.
- Inflammatory diseases of the colon.
- Diabetes.

There is also some evidence that a low fiber/high fat diet may increase the risk of colon cancer.

Staging Colorectal Cancer

Cancer is “staged” based on where the cancer is located and if it has spread to lymph nodes or nearby organs. Different stages of cancer require different treatment. Knowing the stage of your cancer will help you and your doctor plan your treatment.

Colorectal cancer has five stages, based on how much the cancer has spread:

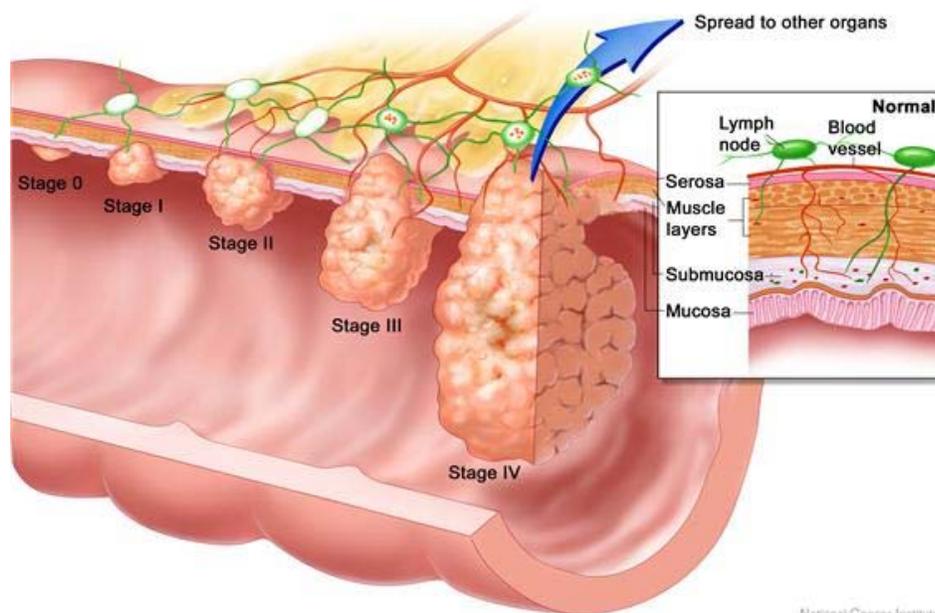
Stage 0: Abnormal cells are found in the inner layer (mucosa) of the colon. There is no growth beyond the colon. This is also called *carcinoma in situ*.

Stage I: Cancer has grown from the inner layer into the middle layers of the colon wall.

Stage II: Cancer has spread outside the colon or rectum and may extend into nearby tissue, but not to the lymph nodes.

Stage III: Cancer has spread to at least three lymph nodes.

Stage IV: Cancer cells have traveled to distant organs such as the lungs and liver.



Screening for Colorectal Polyps and Cancer

The best test doctors have for detecting abnormal growth in the colon is a colonoscopy. This test may be done at a surgery center or in the hospital on an outpatient basis. Your colon must be completely empty for this test, so you will need to perform a "bowel prep" the day before, using a laxative to clean out your colon and consuming only clear liquids. After midnight on the day of the test you must take nothing by mouth ("NPO").

Before the test, a nurse will start an IV in your hand or arm and give you a medication to relax you. You will not remember the examination. The doctor inserts a long, flexible, lighted tube called a colonoscope into your rectum. This scope allows the doctor to view the entire colon and if a polyp or abnormal growth is found, the doctor may be able to remove it right away. If the polyp cannot be removed due to size, location, or shape, then a sample will be taken for a biopsy and sent to the lab to detect cancer.

Colon Resection Surgery

A **colon resection** is surgery to remove part of your colon. During a colon resection, the surgeon removes (resects) the affected piece of colon and then sews the two new ends together in an *anastomosis*. The repair is designed to maintain your colon's normal tube-like shape, so you can regain your normal bowel movements. Colon resection may be done as open surgery, with an incision down your belly, or laparoscopically. In laparoscopic surgery, the surgeon makes 4 or 5 small incisions and inserts tiny instruments and a camera to perform the surgery while he or she watches it on a video screen. A gas is used to inflate the belly and lift the abdominal wall away from the internal organs. Your surgeon will determine which option is best for you.

Colon Resection with Colostomy: If the cancer is extensive and the surgeon cannot rejoin your colon with your rectum, the surgeon will create a colostomy, or a new opening for the colon on the outside of your abdomen for removal of waste. The colon is brought out through the opening and formed into a "stoma." When you have a bowel movement, stool passes out through the stoma and into a colostomy bag or appliance.

Risks and Possible Complications of Surgery (Colon Resection)

- Infection.
- Injury to nearby organs.
- A connection (anastomosis) that leaks or separates.
- Possible colostomy.
- Risks from anesthesia.
- Blood clots.

Colon Resection

What to expect before, during, and after your surgery

Before your surgery, you may be asked to follow a special diet to help reduce your discomfort, and should drink plenty of water (eight 8-ounce glasses of water daily).

Inform your doctor about any medications you take, including over-the-counter supplements. Some medications must be out of your system before surgery.

Preparing for Surgery

- Your colon must be completely cleaned out before the procedure. This is called a “bowel prep.” Your doctor may have you do this at home or in the hospital. A number of cleansing methods may be used, including enemas or laxatives and a clear-liquid diet.
- Clear liquid diet: For 12 to 24 hours before your surgery, you will be told not to eat any solid foods and to drink only clear liquids. These include broth, plain coffee, gelatin, and clear fruit juice.
- Take nothing by mouth (“NPO”) after midnight on the night before your surgery. This includes water and chewing gum. Your stomach must be empty. If there are any required medications that your doctor has okayed, including antibiotic pills, take them with a small sip of water.
- Arrange for a responsible adult to give you a ride home from the hospital.
- Arrange for help at home for the first few days after the surgery.
- Prior to the operation, blood tests, an electrocardiogram (EKG), or a chest x-ray might be required.

During Colon Resection Surgery

The day of surgery you will come to the hospital and the nurses will get you ready for surgery. They may clean and shave the surgical area, start an IV, and answer any last-minute questions.

You will be put to sleep by the anesthesiologist before the procedure begins.

After Surgery

You will be admitted into the hospital for at least 4 to 8 days. During your stay, you’ll be monitored carefully to make sure you’re healing well and that your colon has started working again.

A nasogastric (NG) tube, going through your nose and into your stomach, may be used to keep your stomach empty for a few days. The surgery will cause a postoperative ileus. This is a temporary paralysis of a portion of the intestines preventing food or drinks from moving forward. It is important for you to slowly start your diet to prevent complications. You’ll receive the fluids you need intravenously during that time. When you start to pass gas, it is a sign that your

colon is working again. Then the hospital will start you on a liquid diet. If you are tolerating the liquid diet with no nausea or increased abdominal pain, you will progress to a soft diet, typically in a day or so. You should continue the soft diet for 2 to 8 weeks after surgery, depending on your healing and what your doctor instructs. We will provide a list of foods to help you choose a soft diet when you have returned home.

You should be up and walking within a day or two after surgery. This will encourage your circulation and bowel function to return to normal, and may prevent complications.

Do your breathing exercises to make sure you are inflating your lungs completely. It may be painful for your abdomen at first but it is important to do these exercises to clear any fluid that may be in your lungs from surgery, and prevent pneumonia.

Radiation Therapy and Chemotherapy. Even if your surgeon has removed all the cancer from your colon, colon cancer has been found to recur in 50% of cases. Your doctor will refer you to an oncologist who will help you with the radiation and chemotherapy you need to prevent a recurrence.

Caring for Yourself after Surgery

Activity: When you return home, take it easy. Do not do any strenuous activities or heavy lifting of more than 5 to 10 pounds for at least 4 to 6 weeks after surgery. (A gallon of milk weighs just over 8 pounds.) You can begin having sex again when you feel ready, usually 2-4 weeks post surgery.

Work: You can return to work 1 to 2 weeks after laparoscopic surgery and 3 to 4 weeks after an open surgical repair, depending on the type of work and if light duty is acceptable.

Shower: You can shower 24 to 48 hours after surgery, unless otherwise instructed by your doctor. There will be sterile tape (called a "steri-strip") over the incision. Leave the tape on while showering. Do not soak in a bath or hot tub. Sometimes an incision is stapled and you won't have steri-strips. In this case you can shower without a bandage. Be sure to dry the area well afterwards.

Incision Care: Your incision will be dressed with a sterile bandage or "steri-strips." Leave this bandage on until it falls off on its own or until your doctor takes it off in the office. There may be some redness around the edges of the incision. An infection may be starting if the drainage is thick green or yellow, or if the skin around the incision is increasingly red or warm to touch. Call your doctor if these symptoms occur.

Driving: You will be able to drive when you feel capable of making a quick decision and no longer need narcotic pain medications. You must be off of narcotic pain medications such as Vicodin or Percocet. As it is considered driving "under the influence." You must also be able to put a seat belt on without pain or irritation to the incisions.

Fever: Your temperature can vary after surgery and a low-grade temperature is common. If your temperature exceeds 101.5 degrees or if it is accompanied by chills, vomiting, or flu-like symptoms, you should call the office.

Pain control is very important after surgery. Be sure to stay ahead of the pain and take your pain medication as prescribed by your doctor. The prescription medication contains a narcotic along with Tylenol (acetaminophen). If you are allowed to take ibuprofen (such as Advil), you may be able to take some between your doses of prescription pain medication. It is important for you to follow the directions on the label. If you have any questions or are not sure if you should be taking ibuprofen due to other medications or medical conditions, please check with your doctor first. You may also try ice packs and resting to alleviate the pain.

Right shoulder pain is common after laparoscopic surgery. This may be due to the gas used to inflate your abdomen. It will dissipate in a few days.

Constipation is common after surgery. Taking pain medications such as vicodin or percocet also cause the bowel to move more slowly. It is also suggested to take a stool softener, such as Colace while taking pain medications. To help with constipation try prune juice or milk of magnesium as needed.

Diarrhea is also common after a colon resection. Your colon is shortened and therefore stool may pass at a faster rate. Give it time, approximately 6 to 8 weeks, and your colon should start to function more normally. When a long piece of colon is removed, however, a faster transit time may be a permanent side effect of the surgery.

Nausea is common after surgery. Be sure to take your pain medication on a full stomach. Stick to a soft, bland diet for the first few weeks after surgery. If necessary, call your doctor for prescription medication to aid with nausea.

Diet

- You will start a liquid-to-soft diet in the hospital. Continue this diet for the first 2 to 6 weeks after surgery.
- Eat foods that are easy to swallow and digest, such as soup, bananas, gelatin, pudding, and yogurt.
- Eat frequent, small meals.
- Once you begin eating regular meals, you may feel full faster. This will go away over time.

When to Call the Office

- Fever over 101.5 degrees.
- Persistent, increasing pain.
- Increased redness or drainage from an incision.
- Pain or swelling in your calf.
- Difficulty breathing.

When to Go the Emergency Room

- Uncontrolled bleeding from the incisions
- Persistent vomiting
- Change in mental status
- Inability to breath

You are always welcome to call the office with your questions or concerns. After hours, an answering service will direct your questions to the on-call providers. However, these individuals are unable to call in prescriptions for pain medication after 5 p.m.