

colon disease

Diverticular Disease

Ulcerative Colitis

Crohn's Disease

Colon Polyps

**Your guide
to treatment
options**

www.colonsurgeryinfo.com

YOU NEED TREATMENT FOR COLON DISEASE

You're not alone. In fact, 60 to 70 million Americans are affected by digestive diseases, including cancer, inflammatory bowel disease, and diverticular disease. In 2002, about 6 million people underwent a diagnostic or therapeutic procedure for colon disease.¹ Many people, just like you, need surgical treatment.

You have effective treatment options

Just spending a little time now to learn more about colon disease and available treatment options can make a big difference. You need to know that there are effective treatment options, including minimally invasive surgery.

When you understand your disease, how to treat it, and what options are available, you can take an active role in making decisions about your care.

Take an active role in your surgical treatment

In the past, most patients being treated surgically for colon disease underwent what is known as “open” surgery. This entails the surgeon making a single incision—up to 12 inches in length—along the abdomen. Clinical studies have shown that minimally invasive colon surgery is an effective and beneficial alternative to traditional open surgery for treating colon diseases. Minimally invasive colon surgery offers many important benefits over open procedures, including fewer complications, less pain, shorter hospital stay, and faster recovery.²

Make the right decision, together

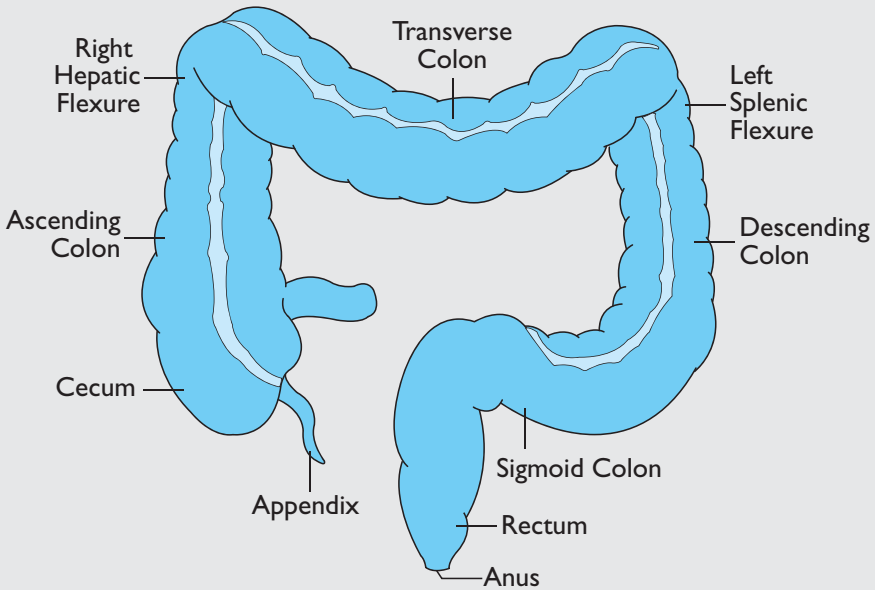
Ask your doctor to refer you to a surgeon who has experience in both minimally invasive colon surgery as well as open procedures, so together you can choose the option that's best for you.



THE COLON

The colon is a long tubelike structure surrounded by muscles. It begins where the small intestine ends and extends down to the anus. In adults, the colon measures about 5 feet long and 2.5 inches in diameter.³

Partially digested food enters the colon from the small intestine. The colon removes water and nutrients from the food and stores the rest as waste. The waste passes from the colon into the rectum and then out of the body through the anus.⁴



DISEASES OF THE COLON

Diverticular disease⁵

Many people have small pockets in their colons that bulge outward through weak spots. These pockets are called diverticula. Having diverticula is a condition called diverticulosis. About 10% of Americans over the age of 40 have diverticulosis. When the pockets become infected or inflamed, the condition is called diverticulitis. This happens in 10% to 25% of people with diverticulosis.

The most common symptom of diverticular disease is abdominal pain. The most common sign is tenderness around the left side of the lower abdomen. If infection is the cause, fever, nausea, vomiting, chills, cramping, and constipation may occur as well. The severity of symptoms depends on the extent of the infection and complications.

Treatment for diverticular disease may include a high-fiber diet and mild pain medications, which will help to relieve symptoms in most cases. Sometimes an attack of diverticulitis is serious enough to require a hospital stay and possibly surgery.

Ulcerative colitis⁶

Ulcerative colitis is a disease that causes inflammation and sores, called ulcers, in the lining of the colon. Ulcers form where inflammation has killed the cells that line the colon; the ulcers can then bleed and produce pus.

Ulcerative colitis can be difficult to diagnose because its symptoms are similar to Crohn's disease, which causes inflammation deeper within the intestinal wall and can develop in other parts of the digestive system. Ulcerative colitis can occur in people of any age, but it usually starts between the ages of 15 and 30, and secondarily, between the ages of 50 and 70. The most common symptoms of ulcerative colitis are abdominal pain and bloody diarrhea.

Treatment for ulcerative colitis depends on the severity of the disease. Each person experiences ulcerative colitis differently; so treatment may involve only drug therapy or, in about 25% to 40% of ulcerative colitis patients, also surgery.



Crohn's disease⁷

Crohn's disease can occur in people of all ages, but it is more often diagnosed in people between the ages of 20 and 30. It is an ongoing disorder that can cause inflammation in any area of the digestive tract, but Crohn's disease most commonly affects the lower part of the small intestine. The inflammation and ulceration extend deep into the intestinal lining.

Because the symptoms of Crohn's disease are similar to ulcerative colitis, it can be hard to diagnose. The most common symptoms of Crohn's disease are abdominal pain, often in the lower right abdomen, and diarrhea.

Treatment depends on the location and severity of disease, complications, and the patient's response to such treatments as drug therapy and nutrition supplements. Two thirds to three quarters of patients with Crohn's disease will require surgery at some point in their lives.

Colon polyps⁸

A polyp is an abnormal protruding growth that develops in certain parts of the body. Colon polyps grow in the large intestine. While most polyps are benign (not cancerous), some types of polyps can grow and turn cancerous over time. Often, people don't know they have colon polyps until the doctor finds them during a regular checkup or while testing them for something else. When symptoms do occur, they commonly include bleeding from the anus or blood on stool.

Types of polyps⁹

Hyperplastic polyps occur more often in the left (descending) colon and rectum and are usually less than 1/4 inch in diameter. ("Hyperplastic" refers to an increase in cells.) **Adenomatous polyps** (sometimes referred to as adenomas) are divided into three subtypes based on their microscopic features: villous (hairy), tubular, and tubulovillous. Villous adenomas tend to be larger than the other types and are more likely to become cancerous. In general, the larger the polyp, the more likely it is to become cancerous.

A person may have just a few polyps or, in the case of **familial adenomatous polyposis** (FAP), a hereditary polyp disorder, the number of polyps can run into the hundreds or even thousands.

Usually, the surgeon can remove a polyp with a wire loop during a simple colonoscopy. But in cases of larger or multiple polyps, more extensive surgery is required.



WHAT HAPPENS DURING SURGERY?¹⁰

During surgery, the affected section of colon is removed through an incision in the abdomen, along with a small length of healthy colon on either side. The two open ends of the colon are then reconnected.

Sometimes, the surgeon cannot immediately or permanently reconnect the colon. In this case, a new opening, or stoma, to the outside of the abdomen is created. The intestine is then connected to the opening, where a bag is attached to collect body waste. This is called a colostomy, and in most cases, a colostomy is only temporary. For most people, a temporary colostomy is needed only until the colon or rectum heals from surgery. After healing takes place, the surgeon reconnects the colon and closes the opening.

Advancing technology and research have transformed surgery for the treatment of colon diseases in recent years. In the past, most patients underwent open surgery for colon diseases. However, patients now have another option: minimally invasive colon surgery.



Colon Surgery—myth vs truth

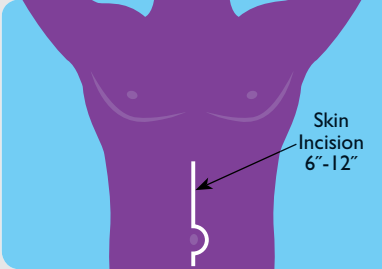
Myth: Colon surgery means wearing a colostomy bag for the rest of my life.

Truth: There are cases when a surgeon cannot reconnect the colon and a permanent colostomy is required, but this occurs rarely. For most, a colostomy is temporary, needed for only 6 to 8 weeks, until the colon heals from surgery.



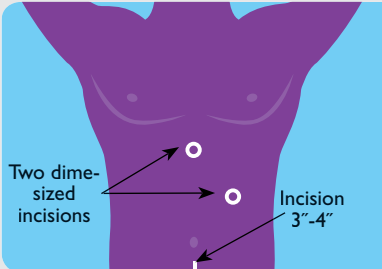
SURGERY OPTIONS¹¹

During traditional open surgery, the surgeon makes an incision up to 12 inches long, from the upper to lower abdomen, to view the colon and remove the diseased portions. With this procedure, hospital stay is generally a week, and recovery time ranges from 6 to 8 weeks.

Open Surgery	 A diagram of a human torso showing a long, vertical incision on the abdomen. An arrow points to the incision with the text "Skin Incision 6'-12'".	Hospital Stay	6 days
		Pain Medication	4 days
		Scar	Up to 12 inches
		Recovery Time	6 to 8 weeks

An effective alternative to open surgery: minimally invasive colon surgery¹¹

During minimally invasive colon surgery, the surgeon makes small abdominal incisions, each from 1/4 inch to 4 inches long. A small video camera is placed in one of the incisions, providing the surgeon with a magnified view of the patient's internal organs on a monitor. Surgical instruments are placed in the other incisions, allowing the surgeon to work inside and remove the diseased portions of the colon.

Minimally Invasive Surgery	 A diagram of a human torso showing three small incisions on the abdomen. Two are labeled "Two dime-sized incisions" and one is labeled "Incision 3'-4'".	Hospital Stay	5 days
		Pain Medication	3 days
		Scar	1/4 to 4 inches
		Recovery Time	4 weeks

Minimally invasive colon surgery has been shown to be as effective as open surgery, while offering many benefits over the open procedure, including quicker recovery time, shorter hospital stay, less pain, less scarring.²



BEFORE YOUR SURGERY

Before considering minimally invasive colon surgery, you should consult with a surgeon who is experienced in both minimally invasive and open techniques and has performed at least 20 minimally invasive colon surgeries for benign disease or metastatic cancer.¹² Factors that could preclude a patient from undergoing minimally invasive surgery include obesity, prior abdominal surgery, dense scar tissue, bleeding problems during the procedure, and the surgeon's inability to effectively visualize the affected area.



WHAT CAN YOU EXPECT AFTER SURGERY?

With both open and minimally invasive colon surgery, you will need time to heal. You will be on intravenous fluids and pain medication and not be able to eat for the first few days.

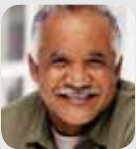
Side effects of colon surgery typically include short-term pain and tenderness and temporary constipation or diarrhea. If you have a colostomy, you may develop an irritation on the skin around the opening (stoma). Your healthcare team will monitor your progress and will work to get you back to normal as quickly as possible.



Colon Surgery—myth vs truth

Myth: Surgery means having a long scar down my belly.

Truth: Patients who undergo minimally invasive surgery will require a few small incisions, the longest being about 4 inches directly below the belly button.



RISKS AND COMPLICATIONS¹¹

Talk to your surgeon about possible risks that accompany open and minimally invasive colon surgery. It is very important to weigh the benefits of the surgery against the risks. Complications are unplanned adverse events, such as infection, excessive bleeding, or reaction to anesthesia. Some of these risks can be seen in any type of surgery. Infection, deep or at skin level, can occur and may involve the abdominal incision. Deep infections, known as peritonitis, involve the abdominal cavity. These deep infections may require long-term antibiotics and even additional surgery. Bleeding during or after the operation may require a blood transfusion or additional surgery. And, painful or ugly skin scars are always a possibility.

Colon surgery problems that can occur include the following: damage to the spleen; perforation of the stomach and/or intestines; injury to the urinary bladder and the connecting tubes; injury to the internal female reproductive organs, including the uterus and ovaries; unexpected difficulties resulting in a temporary or permanent colostomy; hernias through the incision; and abdominal wall disruption or breakdown that would require an additional surgery. Complications of traditional open surgery may also include muscle stripping, organ failure, blood clots, and injury to blood vessels.

Conversion from minimally invasive to open colon surgery

It is a possibility that your surgeon might need to convert from a minimally invasive procedure to an open procedure during surgery. This decision is made by the surgeon and is based on what is best for your health.



WHAT QUESTIONS SHOULD YOU ASK?

The time following a diagnosis of disease can often be stressful. Bring a friend or family member with you to take part in the discussion with your doctor and to help take notes and ask questions. Use the list of questions below when talking to your surgeon about which surgery option is best for you and whether the surgeon is experienced in minimally invasive colon surgery.

1. Do you perform minimally invasive colon surgery?
2. Are you board certified? Which board? Which state?
(Surgeons should be certified by a national surgical board approved by the American Board of Medical Specialties.)
3. Have you received advanced training in minimally invasive surgical techniques?
4. How many minimally invasive colon surgeries have you performed overall?
5. What have you seen in terms of patient outcomes with this procedure?
6. Who assists you with minimally invasive colon surgery (residents, surgical physician assistants, surgeons)?
7. What is the most common complication you have encountered with minimally invasive colon surgery?
8. Am I a candidate for minimally invasive colon surgery?
9. What are the benefits of minimally invasive colon surgery?
10. What are the risks associated with minimally invasive colon surgery?
11. What will my recovery time be like following minimally invasive colon surgery?



ADDITIONAL RESOURCES

American Society of Colon and Rectal Surgeons
www.fascrs.org

National Institute of Diabetes and Digestive and Kidney Diseases
digestive.niddk.nih.gov



REFERENCES:

1. National Digestive Diseases Information Clearinghouse. "Digestive disease statistics." [Online] December 2005. <<http://digestive.niddk.nih.gov/statistics/statistics.htm>>.
2. Noel JK, Fahrbach K, Estok R, et al. Minimally invasive colorectal resection outcomes: short-term comparison with open procedures. *J Am Coll Surg*. 2007;204:291-307.
3. Laparoscopic Colon Surgery. "About Colon Cancer." [Online] 22 February 2007. <<http://www.lapcolonsurgery.com/coloncancer.htm>>.
4. National Cancer Institute. "What you need to know about cancer of the colon and rectum." [Online] 22 February 2007. <<http://www.cancer.gov/cancertopics/wyntk/colon-and-rectum/page2>>.
5. National Institute of Diabetes and Digestive and Kidney Diseases. "Diverticulosis and Diverticulitis." [Online] October 2006. <<http://digestive.niddk.nih.gov/ddiseases/pubs/diverticulosis/index.htm>>.
6. National Institute of Diabetes and Digestive and Kidney Diseases. "Ulcerative Colitis." [Online] February 2006. <<http://digestive.niddk.nih.gov/ddiseases/pubs/colitis/>>.
7. National Institute of Diabetes and Digestive and Kidney Diseases. "Crohn's Disease." [Online] February 2006. <<http://digestive.niddk.nih.gov/ddiseases/pubs/crohns/#what>>.
8. National Institute of Diabetes and Digestive and Kidney Diseases. "What I need to know about colon polyps." [Online] April 2003. <http://digestive.niddk.nih.gov/ddiseases/pubs/colonpolyps_ez/index.htm>.
9. Mayo Clinic. "Polyp Types." [Online] 24 February 2007. <<http://www.mayoclinic.org/colon-polyps/polyp-types.html>>.
10. National Cancer Institute. "What you need to know about cancer of the colon and rectum." [Online] 22 February 2007. <<http://www.cancer.gov/cancertopics/wyntk/colon-and-rectum/page9>>.
11. The Patient Education Institute, Inc. "X-Plain surgery for colon cancer: reference summary." [Online] 22 February 2007. <<http://www.nlm.nih.gov/medlineplus/tutorials/coloncancersurgery/g039102.pdf>>.
12. Clinical Outcomes of Surgical Therapy Study Group. A comparison of laparoscopically assisted and open colectomy for colon cancer. *N Engl J Med*. 2004;350:2050-2059.





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