

Ulcerative Colitis

National Digestive Diseases Information Clearinghouse



National
Institute of
Diabetes and
Digestive
and Kidney
Diseases

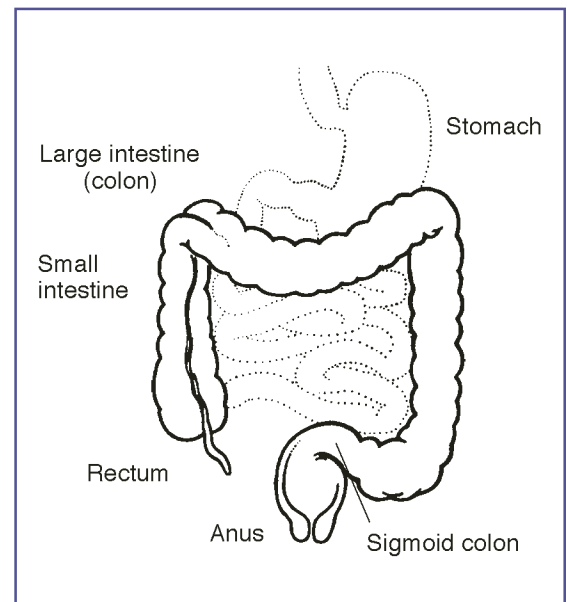
NATIONAL
INSTITUTES
OF HEALTH

Ulcerative colitis is a disease that causes inflammation and sores, called ulcers, in the top layers of the lining of the large intestine. The inflammation usually occurs in the rectum and lower part of the colon, but it may affect the entire colon. Ulcerative colitis rarely affects the small intestine except for the lower section, called the ileum. Ulcerative colitis may also be called colitis, ileitis, or proctitis.

The inflammation makes the colon empty frequently, causing diarrhea. Ulcers form in places where the inflammation has killed colon lining cells; the ulcers bleed and produce pus and mucus.

Ulcerative colitis is an inflammatory bowel disease (IBD), the general name for diseases that cause inflammation in the intestines. Ulcerative colitis can be difficult to diagnose because its symptoms are similar to other intestinal disorders such as irritable bowel syndrome and to another type of IBD called Crohn's disease. Crohn's disease differs from ulcerative colitis because it causes inflammation deeper within the intestinal wall. Crohn's disease usually occurs in the small intestine, but it can also occur in the mouth, esophagus, stomach, duodenum, large intestine, appendix, and anus.

Ulcerative colitis occurs most often in people ages 15 to 40, although children and older people sometimes develop the disease. Ulcerative colitis affects men and women equally and appears to run in some families.



What Causes Ulcerative Colitis?

Theories about what causes ulcerative colitis abound, but none have been proven. The most popular theory is that the body's immune system reacts to a virus or a bacterium by causing ongoing inflammation in the intestinal wall.

People with ulcerative colitis have abnormalities of the immune system, but doctors do not know whether these abnormalities are a cause or a result of the disease. Ulcerative colitis is not caused by emotional distress or sensitivity to certain foods or food products, but these factors may trigger symptoms in some people.

What Are the Symptoms of Ulcerative Colitis?

The most common symptoms of ulcerative colitis are abdominal pain and bloody diarrhea. Patients also may experience

- Fatigue.
- Weight loss.
- Loss of appetite.
- Rectal bleeding.
- Loss of body fluids and nutrients.

About half of patients have mild symptoms. Others suffer frequent fever, bloody diarrhea, nausea, and severe abdominal cramps. Ulcerative colitis may also cause problems such as arthritis, inflammation of the eye, liver disease (fatty liver, hepatitis, cirrhosis, and primary sclerosing cholangitis), osteoporosis, skin rashes, anemia, and kidney stones. No one knows for sure why problems occur outside the colon. Scientists think these complications may occur when the immune system triggers inflammation in other parts of the body. These problems are usually mild and go away when the colitis is treated.

How Is Ulcerative Colitis Diagnosed?

A thorough physical exam and a series of tests may be required to diagnose ulcerative colitis.

Blood tests may be done to check for anemia, which could indicate bleeding in the colon or rectum. Blood tests may also uncover a high white blood cell count, which is a sign of inflammation somewhere in the body. By testing a stool sample, the doctor can tell if there is bleeding or infection in the colon or rectum.

The doctor may do a colonoscopy. For this test, the doctor inserts an endoscope—a long, flexible, lighted tube connected to a computer and TV monitor—into the anus to see the inside of the colon and rectum. The doctor will be able to see any inflammation, bleeding, or ulcers on the colon wall. During the exam, the doctor may do a biopsy, which involves taking a sample of tissue from the lining of the colon to view with a microscope. A barium enema x-ray of the colon may also be required. This procedure involves filling the colon with barium, a chalky white solution. The barium shows up white on x-ray film, allowing the doctor a clear view of the colon, including any ulcers or other abnormalities that might be there.

What Is the Treatment for Ulcerative Colitis?

Treatment for ulcerative colitis depends on the seriousness of the disease. Most people are treated with medication. In severe cases, a patient may need surgery to remove the diseased colon. Surgery is the only cure for ulcerative colitis.

Some people whose symptoms are triggered by certain foods are able to control the symptoms by avoiding foods that upset their intestines, like highly seasoned foods or milk sugar (lactose). Each person may experience ulcerative colitis differently, so treatment is adjusted for each individual. Emotional and psychological support is important.

Some people have remissions—periods when the symptoms go away—that last for months or even years. However, most patients' symptoms eventually return. This changing pattern of the disease means one cannot always tell when a treatment has helped.

Someone with ulcerative colitis may need medical care for some time, with regular doctor visits to monitor the condition.

Drug Therapy

Most patients with mild or moderate disease are first treated with 5-ASA agents, a combination of the drugs sulfonamide, sulfapyridine, and salicylate that helps control inflammation. Sulfasalazine is the most commonly used of these drugs. Sulfasalazine can be used for as long as needed and can be given along with other drugs. Patients who do not do well on sulfasalazine may respond to newer 5-ASA agents. Possible side effects of 5-ASA preparations include nausea, vomiting, heartburn, diarrhea, and headache.

People with severe disease and those who do not respond to mesalamine preparations may be treated with corticosteroids. Prednisone and hydrocortisone are two corticosteroids used to reduce inflammation. They can be given orally, intravenously, through an enema, or in a suppository, depending on the location of the inflammation. Corticosteroids can cause side effects such as weight gain, acne, facial hair, hypertension, mood swings, and increased risk of infection, so doctors carefully watch patients taking these drugs.

Other drugs may be given to relax the patient or to relieve pain, diarrhea, or infection.

Occasionally, symptoms are severe enough that the person must be hospitalized. For example, a person may have severe bleeding or severe diarrhea that causes dehydration. In such cases the doctor will try to stop diarrhea and loss of blood, fluids, and mineral salts. The patient may need a special diet, feeding through a vein, medications, or sometimes surgery.

Surgery

About 25 percent to 40 percent of ulcerative colitis patients must eventually have their colons removed because of massive bleeding, severe illness, rupture of the colon, or risk of cancer. Sometimes the doctor will recommend removing the colon if medical treatment fails or if the side effects of corticosteroids or other drugs threaten the patient's health.

One of several surgeries may be done. The most common surgery is a proctocolectomy with ileostomy, which is done in two stages. In the proctocolectomy, the surgeon removes the colon and rectum. In the ileostomy, the surgeon creates a small opening in the abdomen, called a stoma, and attaches the end of the small intestine, called the ileum, to it. This type of ileostomy is called a Brooke ileostomy. Waste will travel through the small intestine and exit the body through the stoma. The stoma is about the size of a quarter and is usually located in the lower right part of the abdomen near the beltline. A pouch is worn over the opening to collect waste, and the patient empties the pouch as needed.

An alternative to the Brooke ileostomy is the continent ileostomy. In this operation, the surgeon uses the ileum to create a pouch inside the lower abdomen. Waste empties into this pouch, and the patient drains the pouch by inserting a tube into it through a small, leakproof opening in his or her side. The patient must wear an external pouch for only the first few months after the operation. Possible complications of the continent ileostomy include malfunction of the leakproof opening, which requires surgical repair, and inflammation of the pouch (pouchitis), which is treated with antibiotics.

An ileoanal anastomosis, or pull-through operation, allows the patient to have normal bowel movements because it preserves part of the rectum. This procedure is becoming increasingly common for ulcerative colitis. In this operation, the surgeon removes the diseased part of the colon and the inside of the rectum, leaving the outer muscles of the rectum. The surgeon then attaches the ileum to the inside of the rectum and the anus, creating a pouch. Waste is stored in the pouch and passed through the anus in the usual manner. Bowel movements may be more frequent and watery than usual. Pouchitis is a possible complication of this procedure.

Not every operation is appropriate for every person. Which surgery to have depends on the severity of the disease and the patient's needs, expectations, and lifestyle. People faced with this decision should get as much information as possible by talking to their doctors, to nurses who work with colon surgery patients (enterostomal therapists), and to other colon surgery patients. Patient advocacy organizations can direct people to support groups and other information resources. (See page 5 for the names of such organizations.)

Most people with ulcerative colitis will never need to have surgery. If surgery ever does become necessary, however, some people find comfort in knowing that after the surgery, the colitis is cured and most people go on to live normal, active lives.

Research

Researchers are always looking for new treatments for ulcerative colitis. Several drugs are being tested to see whether they might be useful in treating the disease:

- **Budesonide.** A corticosteroid called budesonide may be nearly as effective as prednisone in treating mild ulcerative colitis, and it has fewer side effects.
- **Cyclosporine.** Cyclosporine, a drug that suppresses the immune system, may be a promising treatment for people who do not respond to 5-ASA preparations or corticosteroids.
- **Nicotine.** In an early study, symptoms improved in some patients who were given nicotine through a patch or an enema. (Using nicotine as treatment is still experimental—the findings do not mean that people should go out and buy nicotine patches or start smoking.)
- **Heparin.** Researchers overseas are examining whether the anticoagulant heparin can help control colitis by preventing blood clots.

Is Colon Cancer a Concern?

About 5 percent of people with ulcerative colitis develop colon cancer. The risk of cancer increases with the duration and the extent of involvement of the colon. For example, if only the lower colon and rectum are involved, the risk of cancer is not higher than normal. However, if the entire colon is involved, the risk of cancer may be as great as 32 times the normal rate.

Sometimes precancerous changes occur in the cells lining the colon. These changes are called “dysplasia.” People who have dysplasia are more likely to develop cancer than those who do not. (Doctors look for signs of dysplasia when doing a colonoscopy and when examining tissue removed during the test.)

According to 1997 guidelines on screening for colon cancer, people who have had IBD throughout their colon for at least 8 years and those who have had IBD in only the left colon for at least 15 years should have a colonoscopy every 1 to 2 years to check for dysplasia. Such screening has not been proven to reduce the risk of colon cancer, but it may help identify cancer early should it develop. (These guidelines were produced by an independent expert panel and endorsed by numerous organizations, including the American Cancer Society, American College of Gastroenterology, American Society of Colon and Rectal Surgeons, and the Crohn's & Colitis Foundation of America Inc., among others.)

Resources

Crohn's & Colitis Foundation
of America Inc.
386 Park Avenue South, 17th floor
New York, NY 10016-8804
Tel: (800) 932-2423 or (212) 685-3440
E-mail: info@ccfa.org
Home page: [<http://www.ccfa.org>](http://www.ccfa.org)

Pediatric Crohn's &
Colitis Association Inc.
P.O. Box 188
Newton, MA 02168
Tel: (617) 489-5854

Pull-thru Network
4 Woody Lane
Westport, CT 06880
Tel: (203) 221-7530
E-mail: pullthrunw@aol.com
Home page: [<http://members.aol.com/pullthrunw/Pullthru.html>](http://members.aol.com/pullthrunw/Pullthru.html)

Reach Out for Youth with Ileitis
and Colitis Inc.
15 Chemung Place
Jericho, NY 11753
Tel: (516) 822-8010

United Ostomy Association
36 Executive Park, Suite 120
Irvine, CA 92714
Tel: (800) 826-0826 or (714) 660-8624
E-mail: uoa@deltanet.com
Home page: [<http://www.uoa.org>](http://www.uoa.org)

National Digestive Diseases Information Clearinghouse

2 Information Way
Bethesda, MD 20892-3570
Tel: (301) 654-3810
Fax: (301) 907-8906
E-mail: nddic@info.niddk.nih.gov

The National Digestive Diseases Information Clearinghouse (NDDIC) is a service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The NIDDK is part of the National Institutes of Health under the U.S. Department of Health and Human Services. Established in 1980, the clearinghouse provides information about digestive diseases to people with digestive disorders and to their families, health care professionals, and the public. NDDIC answers inquiries; develops, reviews, and distributes publications; and works closely with professional and patient organizations and Government agencies to coordinate resources about digestive diseases.

Publications produced by the clearinghouse are carefully reviewed for scientific accuracy, content, and readability.

This publication is not copyrighted. The clearinghouse encourages users of this fact sheet to duplicate and distribute as many copies as desired.

This publication is also available under "Health Information" at <http://www.niddk.nih.gov>.



U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES
Public Health Service
National Institutes of Health

NIH Publication No. 98-1597
April 1998