

## Ulcerative Colitis

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**Ulcerative Colitis (UC)** is a disease in which the lining of the colon (the large intestine) becomes inflamed. The immune system mistakenly targets the lining of the colon, causing inflammation, ulceration, bleeding and diarrhea. The inflammation almost always affects the rectum and lower part of the colon, but it can also effect the entire colon

Although ulcerative colitis cannot be cured, it can usually be controlled. Most people are able to live active and productive lives. Control of the disease includes long-term medical treatment and regular monitoring for complications.

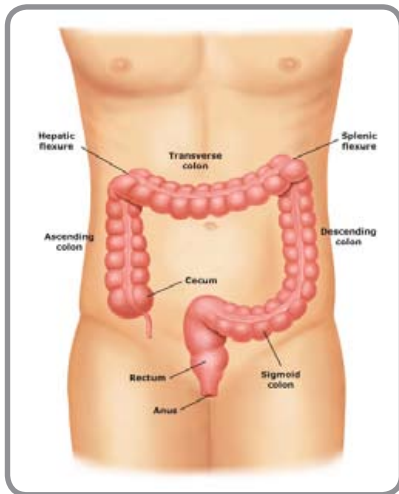


Diagram of the  
colon and rectum

### Ulcerative Colitis Causes

The development of ulcerative colitis appears to be influenced by two factors: genetic susceptibility and environmental triggers.

**Genetics** — Ulcerative colitis tends to run in families, suggesting that genetics have a role in this disease.

**Environment** — Several environmental factors, such as infections, are suspected of triggering UC in people who have a genetic susceptibility. However, no single factor has been consistently proven to be the primary trigger.

For unknown reasons, ulcerative colitis is more common in people who live in northern climates and in developed countries, such as North America, Great Britain, and Scandinavia, compared to those who live in southern climates or developing countries.

### Common Vocabulary With Ulcerative Colitis

- Ulcerative proctitis refers to disease limited to the rectum.
- Distal colitis or proctosigmoiditis is used when the inflammatory process extends into the mid-sigmoid colon.
- Left sided colitis refers to disease that extends to but not beyond the splenic flexure (the sharp bend in the intestines where the transverse colon joins the descending colon, located under the spleen).
- Extensive colitis is defined as disease that extends beyond the splenic flexure but not as far as the cecum (the beginning of the colon).
- Pancolitis is used when the inflammatory process extends to the cecum.

### Ulcerative Colitis Symptoms

The symptoms of ulcerative colitis can be mild, moderate, or severe and can fluctuate over time. The term “flare” is used to describe periods in which the disease becomes more active. The term “remission” is used to describe periods of quiescence, or inactivity.

**Mild disease** — Symptoms include intermittent rectal bleeding, mucus discharge, and mild diarrhea (defined as fewer than four stools per day). Symptoms may also include mild, crampy abdominal pain; painful straining with bowel movements; and bouts of constipation.

**Moderate disease** — Symptoms of moderate ulcerative colitis include frequent, loose bloody stools (up to 10 per day), mild anemia, mild to moderate abdominal pain, and a low-grade fever.

**Severe disease** — Patients with severe ulcerative colitis usually have a large region of the colon involved, often the entire colon. Symptoms of severe ulcerative colitis include

frequent loose stools (more than 10 per day), severe abdominal cramps, fever, dehydration, and significant bleeding, frequently leading to anemia. Severe ulcerative colitis can lead to rapid weight loss.

**Fulminant disease** — Fulminant ulcerative colitis is a worsening of severe ulcerative colitis that causes a high white blood cell count, loss of appetite, and severe abdominal pain.

**Extraintestinal disease** — For poorly understood reasons, patients with UC can develop inflammation outside of the colon.

Affected areas include:

- the large joints (arthritis, and sacroiliitis)
- the eye (episcleritis and anterior uveitis)
- the skin (pyoderma gangrenosum and erythema nodosum)
- less commonly, the lung and liver (Primary Sclerosing Cholangitis, PSC)

## Ulcerative Colitis Diagnosis

Ulcerative colitis is usually diagnosed based upon the signs and symptoms noted during a thorough medical history and physical examination. In addition, the results of certain diagnostic tests, including blood and stool tests and a sigmoidoscopy or colonoscopy are important to consider.

## Ulcerative Colitis Treatment

Treatment of UC is tailored to the region of the colon that is involved, the severity of inflammation and symptoms, and other individual factors. For most patients ulcerative colitis is characterized by a frustrating pattern of flares and remissions. As a result, the two main goals of treatment are to achieve and maintain remission, which usually requires long-term medications.

**Proctitis and proctosigmoiditis** — Proctitis or proctosigmoiditis are usually treated with one or more medications that are given as an enema (for proctitis or proctosigmoiditis) or a suppository or foam for proctitis. Suppositories and foam only reach the rectum or lower sigmoid colon, while enemas can reach as high as the splenic flexure.

Some patients also require treatment with oral medications such as sulfasalazine (Azulfidine) and an 5-aminosalicylate (5-ASA) or related drugs (eg, Pentasa, Asacol, Colazal, Lialda, and Dipentum). In some cases, a steroid treatment (eg, Cortenema) is required.

These treatments usually produce improvement after three weeks, lead to remission in up to 90 percent of people, and provide prolonged remission in up to 70 percent of people.

**Extensive and pancolitis** — Most patients require an oral medication if their inflammation extends above the sigmoid

colon. Some patients may also benefit from combined treatment with oral and topical preparations. Patients with moderate to severe symptoms may require temporary treatment with a steroid drug (usually prednisone), either as an outpatient or given intravenously in the hospital. Remission can be achieved in most patients. Once remission is achieved, patients usually continue to take one of the oral 5-ASA drugs.

**Sulfasalazine** — Sulfasalazine is one of the oldest drugs used to treat UC. Common side effects associated with its use include headaches, skin rash, nausea, and reversible infertility in men; these side effects occur in over 10 percent of patients. Less common side-effects include hives, itching, pancreatitis, hepatitis and a low white or red blood cell count.

**5-Aminosalicylates** — 5-aminosalicylate medications are generally tolerated better than sulfasalazine. As a result, they can be given in higher doses, which is often more effective. The most common side effects are headache, malaise, gas, and cramps. Hair loss and skin rash are less common. Rare side-effects include pericarditis, myocarditis, hypersensitivity pneumonitis, allergic reactions, pancreatitis, kidney problems, decreased blood counts, and hepatitis.

**Glucocorticoids (steroids)** — Steroids may be the most difficult medication to tolerate since there are many side-effects. Increased appetite, weight gain, acne, fluid retention, trembling, mood swings, and difficulty sleeping are common. Other side effects occur in patients who take steroids for long periods of time, particularly if high doses are used. These include diabetes, thinning of the skin, easy bruising, a “cushingoid” appearance (widening of the face and a hump in the back), thinning of the bones, body hair growth, cataracts, high blood pressure, stomach ulcers, avascular necrosis (a serious joint problem), and infections. Because of the risk of these side effects, most patients are tapered off of steroids as soon as possible.

## Treatment Of Refractory Ulcerative Colitis

Refractory ulcerative colitis occurs when a person’s disease does not respond or responds poorly to the medical treatments used to treat the disease. Patients who depend upon steroids to control their symptoms are usually referred to as having refractory disease.

Most patients are treated with drugs that suppress the immune system. The most commonly used drugs are 6-mercaptopurine and azathioprine, and more recently infliximab. Colectomy (surgical removal of the colon) may be required if medical treatments are unsuccessful or if complications develop. Patients who cannot tolerate the constant battle with their disease sometimes prefer to have their colon removed.

**6-mercaptopurine and azathioprine** — Azathioprine and its metabolite (6-mercaptopurine) have been used to treat refractory ulcerative colitis for many years. These drugs lessen

symptoms in 60 to 70 percent of people and help to maintain remission and decrease the need for steroids. These treatments may require three to six months to produce their maximal effect. Patients taking these drugs need to be closely monitored for side effects, which can include a decrease in the white blood cell count, inflammation of the pancreas, and, less commonly, hepatitis (inflammation of the liver). Long-term use of these drugs has been associated with an increased risk of infections and possibly certain types of tumors.

**Infliximab** — Infliximab (Remicade®) is a powerful medication that has been used to treat Crohn's disease and rheumatoid arthritis, and is now used to treat refractory ulcerative colitis.

Infliximab works differently than other treatments for UC. It is in a class of medications known as biologic response modifiers, which work by interfering with pathways involved in inflammation. Infliximab must be given into a vein in a doctor's office or clinic, which takes one to three hours to complete.

Infliximab may be used alone or in combination with other treatments. Because of their cost (generally more than \$15,000 per year in the United States) and the potential risk of side effects, biologic response agents are generally reserved for patients with severe ulcerative colitis who have not responded to steroids, who prefer to avoid surgical removal of the colon.

### Surgery For Ulcerative Colitis

The most common reason a person with UC will require surgery is because medical therapy is not effective or poorly effective.

### Diet And Ulcerative Colitis

There are no specific foods that cause ulcerative colitis or help to maintain remission. A well balanced, nutritious diet can help maintain health and a normal body weight. However, many people can identify foods that worsen symptoms, and it is reasonable to avoid these foods. Table 2 lists foods and beverages that may worsen symptoms in some people. People who restrict their diet for any reason should take a daily multivitamin.

**Vitamins and medications** — It is reasonable to take a multivitamin daily. As mentioned above, people who take sulfasalazine should take a folic acid supplement.

Pain medications that contain nonsteroidal antiinflammatory drugs (NSAIDs), such as ibuprofen (Advil®, Motrin®) and naproxen (Aleve®), are not usually recommended since they can worsen symptoms or cause a flare. Acetaminophen (Tylenol®) should not cause a problem.

**Lactose intolerance** — Lactose intolerance occurs when a person is not able to digest the sugar (lactose) contained in milk products. Symptoms of lactose intolerance occur after eating or drinking something that contains lactose, which may include diarrhea, cramps, or gas. Lactose intolerance is very common

in the general population and is common in people with ulcerative colitis.).

**Reduce cramps and diarrhea** — People with UC who have abdominal cramps and diarrhea may notice relief when they reduce their intake of fresh fruit and vegetables, caffeine, carbonated drinks, and sorbitol-containing products (sorbitol is an artificial sugar commonly used in sugar-free candies and gum).

### Psychosocial Therapies For Ulcerative Colitis

Stress can worsen ulcerative colitis. Counseling or psychotherapy can be helpful in dealing with the frustration, depression, or anxiety that some people with UC experience..

### Complications Of Ulcerative Colitis

Long-standing and/or severe ulcerative colitis can be associated with serious and sometimes life-threatening complications.

**Stricture** — A stricture is a narrowing of the colon or rectum.

**Bleeding** — Some degree of bleeding occurs in most patients with ulcerative colitis. In some patients, the colitis is severe enough that it affects a small artery in the colon, leading to heavy bleeding. Such patients may require a blood transfusion or surgery.

**Toxic megacolon** — Toxic megacolon is one of the most serious complications of patients with severe colitis. It occurs when inflammation in the colon causes it to dilate, causing the walls to become thin and fragile. This can eventually lead to rupture (called a perforation). Surgery is usually advised if this condition does not respond to medical treatment within about 72 hours.

### Colorectal Cancer And Ulcerative Colitis

Overall, people with ulcerative colitis have an increased risk of colorectal cancer, although the degree of risk varies from one person to another. The risk of colorectal cancer is related to the duration and extent of ulcerative colitis.

- **Pancolitis** — This group has the greatest risk. The risk begins to increase about 8 to 10 years after the symptoms of ulcerative colitis first appear. There is a 5 to 10 percent risk of cancer after 20 years and a 12 to 20 percent risk after 30 years of ulcerative colitis.
- **Left-sided colitis** — In people with left-sided colitis, the risk of colorectal cancer begins to increase about 15 to 20 years after the symptoms of ulcerative colitis first appear.
- **Proctitis and proctosigmoiditis** — The risk of colorectal cancer is not significantly increased in people with proctitis and proctosigmoiditis.

The risk of colon cancer is also increased in patients with coexisting primary sclerosing cholangitis (PSC).

**Surveillance recommendations** — Colorectal cancer usually develops from precancerous changes (dysplasia) of the colonic lining, which can be detected with regular screening tests such as colonoscopy.

In general, colonoscopy is recommended 8 to 10 years after symptoms appear in people with pancolitis, and starting 12 years after symptoms appear in people with left-sided colitis. Thereafter, colonoscopy should be repeated every year thereafter. If advanced precancerous changes or cancer are discovered, surgical removal of the colon (colectomy) is usually recommended.