

Crohn's Disease

Definition & Facts

What is Crohn's disease?

Crohn's disease is a [chronic](#) disease that causes [inflammation](#) and irritation in your [digestive tract](#). Most commonly, Crohn's affects your [small intestine](#) and the beginning of your [large intestine](#). However, the disease can affect any part of your digestive tract, from your mouth to your [anus](#). Learn more about [your digestive system and how it works](#).

Crohn's disease is an [inflammatory bowel disease \(IBD\)](#). [Ulcerative colitis](#) and [microscopic colitis](#) are other common types of IBD.

Crohn's disease most often begins gradually and can become worse over time. You may have periods of [remission](#) that can last for weeks or years.

How common is Crohn's disease?

Researchers estimate that more than half a million people in the United States have Crohn's disease.¹ Studies show that, over time, Crohn's disease has become more common in the United States and other parts of the world.^{1,2} Experts do not know the reason for this increase.

Who is more likely to develop Crohn's disease?

Crohn's disease can develop in people of any age and is more likely to develop in people

- between the ages of 20 and 29²
- who have a family member, most often a sibling or parent, with IBD
- who smoke cigarettes

What are the complications of Crohn's disease?

Complications of Crohn's disease can include the following:

- **Intestinal obstruction.** Crohn's disease can thicken the wall of your [intestines](#). Over time, the thickened areas of your intestines can narrow, which can block your intestines. A partial or complete intestinal obstruction, also called a [bowel](#) blockage, can block the movement of food or [stool](#) through your intestines.

- **Fistulas.** In Crohn's disease, inflammation can go through the wall of your intestines and create tunnels, or fistulas. Fistulas are abnormal passages between two organs, or between an organ and the outside of your body. Fistulas may become infected.
- **Abscesses.** Inflammation that goes through the wall of your intestines can also lead to abscesses. Abscesses are painful, swollen, pus-filled pockets of infection.
- **Anal fissures.** Anal fissures are small tears in your anus that may cause itching, pain, or bleeding.
- **Ulcers.** Inflammation anywhere along your digestive tract can lead to ulcers or open sores in your mouth, intestines, anus, or [perineum](#).
- **Malnutrition.** Malnutrition develops when your body does not get the right amount of vitamins, minerals, and nutrients it needs to maintain healthy tissues and organ function.
- **Inflammation in other areas of your body.** You may have inflammation in your joints, eyes, and skin.

What other health problems do people with Crohn's disease have?

If you have Crohn's disease in your large intestine, you may be more likely to develop [colon cancer](#). If you receive ongoing treatment for Crohn's disease and stay in remission, you may reduce your chances of developing colon cancer.³

Talk with your doctor about how often you should get screened for colon cancer. Screening is testing for diseases when you have no symptoms. Screening for colon cancer can include [colonoscopy](#) with [biopsies](#). Although screening does not reduce your chances of developing colon cancer, it may help to find cancer at an early stage and improve the chance of curing the cancer.

References

[1] Kappelman MD, Moore KR, Allen JK, Cook SF. Recent trends in the prevalence of Crohn's disease and ulcerative colitis in a commercially insured U.S. population. *Digestive Diseases and Sciences*. 2013;58:519–525.

[2] Molodecky NA, Soon IS, Rabi DM, et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. *Gastroenterology*. 2012;142(1):46–54.

[3] Burisch J, Munkholm P. Inflammatory bowel disease epidemiology. *Current Opinion in Gastroenterology*. 2013;29(4):357–362.

Symptoms & Causes

What are the symptoms of Crohn's Disease?

The most common symptoms of Crohn's disease are

- [diarrhea](#)
- cramping and pain in your [abdomen](#)
- weight loss

Other symptoms include

- [anemia](#)
- eye redness or pain
- feeling tired
- fever
- joint pain or soreness
- [nausea](#) or loss of appetite
- skin changes that involve red, tender bumps under the skin

Your symptoms may vary depending on the location and severity of your [inflammation](#).

Some research suggests that stress, including the stress of living with Crohn's disease, can make symptoms worse. Also, some people may find that [certain foods](#) can trigger or worsen their symptoms.

What causes Crohn's disease?

Doctors aren't sure what causes Crohn's disease. Experts think the following factors may play a role in causing Crohn's disease.

Autoimmune reaction

One cause of Crohn's disease may be an autoimmune reaction—when your [immune system](#) attacks healthy cells in your body. Experts think [bacteria](#) in your [digestive tract](#) can mistakenly trigger your immune system. This immune system response causes inflammation, leading to symptoms of Crohn's disease.

Genes

Crohn's disease sometimes runs in families. Research has shown that if you have a parent or sibling with Crohn's disease, you may be more likely to develop the disease. Experts continue to study the link between [genes](#) and Crohn's disease.

Other factors

Some studies suggest that other factors may increase your chance of developing Crohn's disease:

- Smoking may double your chance of developing Crohn's disease.⁴
- Nonsteroidal anti-inflammatory drugs (NSAIDs) such as [aspirin](#) or [ibuprofen](#),⁵ [antibiotics](#),⁶ and [birth-control pills](#)⁶ may slightly increase the chance of developing Crohn's disease.
- A high-fat diet may also slightly increase your chance of getting Crohn's disease.⁷

Stress and eating certain foods do not cause Crohn's disease.

References

[4] Ghazi LJ. Crohn's Disease. Medscape website. <http://emedicine.medscape.com> . Updated February 26, 2015. Accessed May 6, 2016.

[5] Ananthakrishnan AN, Higuchi LM, Huang ES, et al. Aspirin, nonsteroidal anti-inflammatory drug use, and risk for Crohn's disease and ulcerative colitis: a cohort study. *Annals of Internal Medicine*. 2012;156(5):350–359.

[6] Ko Y, Butcher R, Leong RW. Epidemiological studies of migration and environmental risk factors in the inflammatory bowel diseases. *World Journal of Gastroenterology*. 2014;20(5):1238–1247.

[7] Hou JK, Abraham B, El-Serag H. Dietary intake and risk of developing inflammatory bowel disease: a systematic review of the literature. *American Journal of Gastroenterology*. 2011;106(4):563–573.

Diagnosis

How do doctors diagnose Crohn's disease?

Doctors typically use a combination of tests to diagnose Crohn's disease. Your doctor will also ask you about your medical history—including medicines you are taking—and your family history and will perform a physical exam.

Diagnostic tests

Your doctor may use the following tests to help diagnose Crohn's disease:

- lab tests
- intestinal endoscopy
- upper gastrointestinal (GI) series
- computed tomography (CT) scan

Your doctor may also perform tests to rule out other diseases, such as [ulcerative colitis](#), [diverticular disease](#), or cancer, that cause symptoms similar to those of Crohn's disease.

What tests do doctors use to diagnose Crohn's disease?

Your doctor may perform the following tests to help diagnose Crohn's disease.

Lab tests

Lab tests to help diagnose Crohn's disease include:

Blood tests. A health care professional may take a blood sample from you and send the sample to a lab to test for changes in

- red blood cells. If your red blood cells are fewer or smaller than normal, you may have [anemia](#).
- white blood cells. When your white blood cell count is higher than normal, you may have [inflammation](#) or infection somewhere in your body.

Blood test

Stool tests. A [stool](#) test is the analysis of a sample of stool. Your doctor will give you a container for catching and storing the stool. You will receive instructions on where to send or take the kit for analysis. Doctors use stool tests to rule out other causes of digestive diseases.

Intestinal endoscopy

Intestinal endoscopies are the most accurate methods for diagnosing Crohn's disease and ruling out other possible conditions, such as ulcerative colitis, diverticular disease, or cancer. Intestinal endoscopies include the following:

Colonoscopy. [Colonoscopy](#) is a procedure in which a doctor uses a long, flexible, narrow tube with a light and tiny camera on one end, called a [colonoscope](#) or endoscope, to look inside your [rectum](#) and [colon](#). The doctor may also examine your [ileum](#) to look for signs of Crohn's disease.

A trained specialist performs a colonoscopy in a hospital or an outpatient center. A health care professional will give you written [bowel prep](#) instructions to follow at home before the procedure. You will receive sedatives, [anesthesia](#), or pain medicine during the procedure.

During a colonoscopy, you'll be asked to lie on a table while the doctor inserts a colonoscope into your [anus](#) and slowly guides it through your rectum and colon and into the lower part of your ileum. If your doctor suspects that you have Crohn's disease, the colonoscopy will include [biopsies](#) of your ileum, colon, and rectum. You won't feel the biopsies.

Upper GI endoscopy and enteroscopy. In an [upper GI endoscopy](#), your doctor uses an [endoscope](#) to see inside your upper digestive tract, also called your [upper GI tract](#).

A trained specialist performs the procedure at a hospital or an outpatient center. You should not eat or drink before the procedure. A health care professional will tell you how to prepare for an upper GI endoscopy. You most often receive a liquid anesthetic to numb your throat and a light sedative to help you stay relaxed and comfortable during the procedure.

During the procedure, the doctor carefully feeds the endoscope down your [esophagus](#) and into your [stomach](#) and [duodenum](#).

During an enteroscopy, a doctor examines your [small intestine](#) with a special, longer endoscope using one of the following procedures:

- push enteroscopy, which uses a long endoscope to examine the upper portion of your small intestine
- single- or double-balloon enteroscopy, which uses small balloons to help move the endoscope into your small intestine
- spiral enteroscopy, which uses a tube attached to an endoscope that acts as a corkscrew to move the instrument into your small intestine

Capsule endoscopy. In capsule endoscopy, you swallow a capsule containing a tiny camera that allows your doctor to see inside your [digestive tract](#). You should not eat or drink before the procedure. A health care professional will tell you how to prepare for a capsule endoscopy. You don't need anesthesia for this procedure.

The test begins in a doctor's office, where you swallow the capsule. You can leave the doctor's office during the test. As the capsule passes through your digestive tract, the camera will record and transmit images to a small receiver device that you wear. When the recording is done, your doctor downloads and reviews the images. The camera capsule leaves your body during a [bowel movement](#), and you can safely flush it down the toilet.

Upper GI series

An [upper GI series](#) is a procedure in which a doctor uses [x-rays](#), [fluoroscopy](#), and a chalky liquid called [barium](#) to view your upper GI tract.

CT scan

A [CT scan](#) uses a combination of x-rays and computer technology to create images of your digestive tract.

Treatment

How do doctors treat Crohn's disease?

Doctors treat Crohn's disease with medicines, [bowel](#) rest, and surgery.

No single treatment works for everyone with Crohn's disease. The goals of treatment are to decrease the [inflammation](#) in your [intestines](#), to prevent flare-ups of your symptoms, and to keep you in [remission](#).

Medicines

Many people with Crohn's disease need medicines. Which medicines your doctor prescribes will depend on your symptoms.

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Although no medicine cures Crohn's disease, many can reduce symptoms.

Aminosalicylates. These medicines contain 5-aminosalicylic acid (5-ASA), which helps control inflammation. Doctors use aminosalicylates to treat people newly diagnosed with Crohn's disease who have mild symptoms. Aminosalicylates include

- [balsalazide](#)
- [mesalamine](#)
- [olsalazine](#)
- [sulfasalazine](#)

Some of the common side effects of aminosalicylates include

- [diarrhea](#)
- headaches
- [heartburn](#)
- [nausea](#) and [vomiting](#)
- pain in your [abdomen](#)

Corticosteroids. Corticosteroids, also known as steroids, help reduce the activity of your [immune system](#) and decrease inflammation. Doctors prescribe corticosteroids for people with moderate to severe symptoms. Corticosteroids include

- [budesonide](#)
- [hydrocortisone](#)
- [methylprednisolone](#)
- [prednisone](#)

Side effects of corticosteroids include

- acne
- bone mass loss
- high [blood glucose](#)
- high [blood pressure](#)
- a higher chance of developing infections
- mood swings
- weight gain

In most cases, doctors do not prescribe corticosteroids for long-term use.

Immunomodulators. These medicines reduce immune system activity, resulting in less inflammation in your [digestive tract](#). Immunomodulators can take several weeks to 3 months to start working. Immunomodulators include

- [6-mercaptopurine](#) , or 6-MP
- [azathioprine](#)
- [cyclosporine](#)
- [methotrexate](#)

Doctors prescribe these medicines to help you go into remission or help you if you do not respond to other treatments. You may have the following side effects:

- a low white blood cell count, which can lead to a higher chance of infection
- feeling tired
- nausea and vomiting
- [pancreatitis](#)

Doctors most often prescribe cyclosporine only if you have severe Crohn's disease because of the medicine's serious side effects. Talk with your doctor about the risks and benefits of cyclosporine.

Biologic therapies. These medicines target proteins made by the immune system. Neutralizing these proteins decreases inflammation in the intestines. Biologic therapies work to help you go into remission, especially if you do not respond to other medicines. Biologic therapies include

- anti-tumor necrosis factor-alpha therapies, such as [adalimumab](#) , [certolizumab](#) , and [infliximab](#)
- anti-integrin therapies, such as [natalizumab](#) and [vedolizumab](#)
- anti-interleukin-12 and interleukin-23 therapy, such as [ustekinumab](#)

Doctors most often give patients infliximab every 6 to 8 weeks at a hospital or an outpatient center. Side effects may include a toxic reaction to the medicine and a higher chance of developing infections, particularly [tuberculosis](#).

Other medicines. Other medicines doctors prescribe for symptoms or complications may include

- [acetaminophen](#) for mild pain. You should avoid using [ibuprofen](#), [naproxen](#), and [aspirin](#) because these medicines can make your symptoms worse.
- [antibiotics](#) to prevent or treat complications that involve infection, such as [abscesses](#) and [fistulas](#).
- [loperamide](#) to help slow or stop severe diarrhea. In most cases, people only take this medicine for short periods of time because it can increase the chance of developing [megacolon](#).

Bowel rest

If your Crohn's disease symptoms are severe, you may need to rest your bowel for a few days to several weeks. Bowel rest involves drinking only certain liquids or not eating or drinking anything. During bowel rest, your doctor may

- ask you to drink a liquid that contains nutrients
- give you a liquid that contains nutrients through a feeding tube inserted into your [stomach](#) or [small intestine](#)
- give you intravenous (IV) nutrition through a special tube inserted into a [vein](#) in your arm

You may stay in the hospital, or you may be able to receive the treatment at home. In most cases, your intestines will heal during bowel rest.

Surgery

Even with medicines, many people will need surgery to treat their Crohn's disease. One study found that nearly 60 percent of people had surgery within 20 years of having Crohn's disease.⁸ Although surgery will not cure Crohn's disease, it can treat complications and improve symptoms. Doctors most often recommend surgery to treat

- fistulas
- bleeding that is life threatening
- [intestinal obstructions](#)
- side effects from medicines when they threaten your health
- symptoms when medicines do not improve your condition

A surgeon can perform different types of operations to treat Crohn's disease.

For any surgery, you will receive general [anesthesia](#) . You will most likely stay in the hospital for 3 to 7 days following the surgery. Full recovery may take 4 to 6 weeks.

Small bowel resection. Small bowel resection is surgery to remove part of your [small intestine](#). When you have an intestinal obstruction or severe Crohn’s disease in your small intestine, a surgeon may need to remove that section of your intestine. The two types of small bowel resection are

- laparoscopic—when a surgeon makes several small, half-inch incisions in your abdomen. The surgeon inserts a [laparoscope](#)—a thin tube with a tiny light and video camera on the end—through the small incisions. The camera sends a magnified image from inside your body to a video monitor, giving the surgeon a close-up view of your small intestine. While watching the monitor, the surgeon inserts tools through the small incisions and removes the diseased or blocked section of small intestine. The surgeon will reconnect the ends of your intestine.
- open surgery—when a surgeon makes one incision about 6 inches long in your abdomen. The surgeon will locate the diseased or blocked section of small intestine and remove or repair that section. The surgeon will reconnect the ends of your intestine.

Subtotal colectomy. A subtotal colectomy, also called a large bowel resection, is surgery to remove part of your [large intestine](#). When you have an intestinal obstruction, a fistula, or severe Crohn’s disease in your large intestine, a surgeon may need to remove that section of intestine. A surgeon can perform a subtotal colectomy by

- laparoscopic colectomy—when a surgeon makes several small, half-inch incisions in your abdomen. While watching the monitor, the surgeon removes the diseased or blocked section of your large intestine. The surgeon will reconnect the ends of your intestine.
- open surgery—when a surgeon makes one incision about 6 to 8 inches long in your abdomen. The surgeon will locate the diseased or blocked section of large intestine and remove that section. The surgeon will reconnect the ends of your intestine.

Proctocolectomy and ileostomy. A proctocolectomy is surgery to remove your entire colon and rectum. An ileostomy is a [stoma](#), or opening in your abdomen, that a surgeon creates from a part of your [ileum](#). The surgeon brings the end of your ileum through an opening in your abdomen and attaches it to your skin, creating an opening outside your body. The stoma is about three-quarters of an inch to a little less than 2 inches wide and is most often located in the lower part of your abdomen, just below the beltline.

A removable external collection pouch, called an ostomy pouch or ostomy appliance, connects to the stoma and collects [stool](#) outside your body. Stool passes through the stoma instead of passing through your [anus](#). The stoma has no muscle, so it cannot control the flow of stool, and the flow occurs whenever occurs.

If you have this type of surgery, you will have the ileostomy for the rest of your life.

How do doctors treat the complications of Crohn's disease?

Your doctor may recommend treatments for the following complications of Crohn's disease:

- **Intestinal obstruction.** A complete intestinal obstruction is life threatening. If you have a complete obstruction, you will need medical attention right away. Doctors often treat complete intestinal obstruction with surgery.
- **Fistulas.** How your doctor treats fistulas will depend on what type of fistulas you have and how severe they are. For some people, fistulas heal with medicine and diet changes, whereas other people will need to have surgery.
- **Abscesses.** Doctors prescribe antibiotics and drain abscesses. A doctor may drain an abscess with a needle inserted through your skin or with surgery.
- **Anal fissures.** Most [anal fissures](#) heal with medical treatment, including ointments, warm baths, and diet changes.
- **Ulcers.** In most cases, the treatment for Crohn's disease will also treat your [ulcers](#).
- **Malnutrition.** You may need IV fluids or feeding tubes to replace lost nutrients and fluids.
- **Inflammation in other areas of your body.** Your doctor can treat inflammation by changing your medicines or prescribing new medicines.

References

[8] Peyrin-Biroulet L, Harmsen WS, Tremaine WJ, Zinsmeister AR, Sandborn WJ, Loftus EV. Surgery in a population-based cohort of Crohn's disease from Olmsted County, Minnesota (1970–2004). *American Journal of Gastroenterology*. 2012;107(11):1639–1701.

Eating, Diet, & Nutrition

How can my diet help the symptoms of Crohn's disease?

Changing your diet can help reduce symptoms. Your doctor may recommend that you make changes to your diet such as

- avoiding carbonated, or “fizzy,” drinks
- avoiding popcorn, vegetable skins, nuts, and other high-[fiber](#) foods
- drinking more liquids
- eating smaller meals more often
- keeping a food diary to help identify foods that cause problems

Depending on your symptoms or medicines, your doctor may recommend a specific diet, such as a diet that is

- high [calorie](#)
- [lactose](#) free
- low [fat](#)
- low fiber
- low salt

Talk with your doctor about specific dietary recommendations and changes.

Your doctor may recommend nutritional supplements and vitamins if you do not absorb enough nutrients. For safety reasons, talk with your doctor before using [dietary supplements](#) , such as vitamins, or any [complementary or alternative](#) medicines or medical practices.

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