



Colon Ischemia

Colon Ischemia Overview

Colonic ischemia, also referred to as ischemic colitis, is a condition characterized by a reduction of blood flow to the colon (i.e., large bowel or large intestine). Symptoms can range from mild to severe, depending on the cause.

Signs and Symptoms

If you have sudden abdominal pain and develop loose stools with or without bleeding, you may have colonic ischemia and should call your doctor. These are the most common symptoms and if they are severe or persistent, require urgent medical attention and treatment to achieve the best possible outcomes to restore digestive function.

- [What is colonic ischemia?](#)

Colonic ischemia describes a disorder that develops when blood flow to the colon is partially or completely blocked. The blockage usually occurs in one or more arteries that supply the large intestine with blood.

Colonic ischemia can be acute (start suddenly) or chronic (develop over time). Symptoms, such as abdominal pain, diarrhea, rectal bleeding, and bloating, can be mild or severe; however, the majority are mild in nature.

- [When should I see/contact a doctor about colonic ischemia?](#)

Colonic ischemia can be a medical emergency, especially if it is acute. Seek immediate medical attention if you experience sudden, severe abdominal pain with or without non-bloody diarrhea. You should also contact your health care provider if you have sudden abdominal pains associated with bloody diarrhea.

- [What are the signs and symptoms of colonic ischemia?](#)

Colonic ischemia produces a wide variety of symptoms. Signs and symptoms of colonic ischemia may include:

- Abdominal tenderness or pain (may be severe)
- Bloating
- Blood in the stool
- Diarrhea
- Fever
- Nausea or vomiting
- Urgent need to have a bowel movement or sudden, forceful bowel movements
- Lightheadedness

- [What is the outlook for people with colonic ischemia?](#)

The majority of colonic ischemia is self-limited. In more severe cases, surgery may be necessary.

- [What causes colonic ischemia?](#)

Colonic ischemia occurs when there is a decrease in the blood flowing through the arteries to the large intestine. There are several possible causes:

- **Atherosclerosis:** Cholesterol builds up in the arteries leading to the colon, reducing blood flow.
- **Blood clots:** Blood clots can partially or completely block arteries that supply blood to the intestines or, less commonly, the veins that carry blood from the intestines back to the heart.
- **Low blood pressure:** Extremely low blood pressure, which can result from trauma, heart failure (weakening of the heart's ability to push blood forward), or medications, can reduce blood flow to the colon, especially if arteries are already narrowed.

- [What are the risk factors for colonic ischemia?](#)

Certain factors can increase your risk of intestinal ischemia, such as:

- **Abnormal blood pressure:** Blood pressure that is too high or too low increases your risk of colonic ischemia.
- **Atherosclerosis:** Other conditions caused by atherosclerosis (clogging of your arteries), such as decreased blood flow to your heart (coronary artery disease) or legs (peripheral vascular disease), can increase your risk of developing colonic ischemia. Factors that increase the risk of atherosclerosis include:
 - Age 50 or older
 - Smoking
 - Conditions such as high blood pressure, diabetes, or high cholesterol
 - Blood-clotting conditions: Disorders, such as sickle-cell anemia, that increase your risk of blood clots may also increase your risk of colonic ischemia.
- **Heart and vascular (blood vessel) conditions:** Your risk of colonic ischemia is higher if you have congestive heart failure or an abnormal heartbeat, or if you have had a heart attack or stroke. This occurs since the ability of the heart to push blood forward with appropriate pressure is limited by some of these factors. Therefore, the force of the blood reaching the colon is less able to provide the oxygen and nutrients needed to keep it healthy.
- **Irritable Bowel Syndrome (IBS):** Your risk for colonic ischemia is increased if you have irritable bowel syndrome. It is unclear if this is a result of the changes in bowel habits (e.g., constipation or diarrhea), the medications used to treat the condition, or a combination of those factors.
- **Medications:** Medications that control blood pressure or alleviate constipation, as well as illicit drugs (e.g., cocaine, methamphetamines), are most commonly associated with colonic ischemia. Multiple other classes of drugs are associated with this disease as well, such as chemotherapies, nasal decongestants, oral contraceptive pills, and psychotropic medications.

- [Who should be evaluated for colonic ischemia?](#)

People who have any of the risk factors for colonic ischemia and are experiencing any of the possible symptoms should see their doctor for a thorough examination and testing. Those with severe symptoms should report directly to the hospital for urgent attention.

- [How is colonic ischemia diagnosed?](#)

Diagnosis of colonic ischemia is made through a combination of history, imaging, bloodwork, and/or endoscopic visualization of the colon.

Your doctor will begin with a thorough evaluation that includes:

- **Medical history:** Your doctor will ask you about symptoms you are experiencing and discuss possible risk factors.
- **Physical exam:** The doctor will examine you for abdominal pain or tenderness or other signs.
- **Lab tests:** There is no specific blood test for colonic ischemia, but a blood test can check for high white blood cell counts, a sign of infection. Your doctor may also test your stool for blood.

Other tests your doctor may order include:

Endoscopy for colon ischemia

Within this procedure, your doctor uses an endoscope (a thin, flexible tube with a lighted camera at its tip) to see inside your colon. This procedure looks for characteristics of colonic ischemia such as inflammation, ulcerations (wearing of the lining of the colon) and swelling. The doctor can perform different types of endoscopy such as:

- **Sigmoidoscopy:** The doctor inserts the endoscope through the rectum to examine the lower half of your colon.
- **Colonoscopy:** Similar to a sigmoidoscopy, a [colonoscopy](#) also begins at the rectum but examines the entire colon.

Imaging tests for colonic ischemia

Your doctor can view the arteries supplying blood to the colon, and the veins bringing blood back from the colon, to check for narrowed or blocked vessels. Imaging can also help rule out other causes that have similar symptoms.

For some imaging tests, you lie on a table while a technician uses sophisticated equipment to take detailed images of your abdomen and pelvis. Other tests involve inserting a thin tube into your artery to view the inside of your body and the blood vessels within your body more clearly. Your doctor will make sure you are comfortable and provide a sedative or anesthesia as necessary, depending on your procedure.

Possible tests include:

- **CT scan:** This imaging test uses special X-ray equipment to take cross-sectional images of your abdomen and pelvis, which are compiled into 3D images of the organs, including the small intestine, colon, and blood vessels.
- **MRI scan:** A large magnet and radio waves produce images of the intestines and other abdominal organs.
- **Angiogram:** Only used in severe cases, the doctor inserts a catheter (a long, thin tube) into an artery in your groin and carefully guides it to the aorta to inject a dye. The dye flows into the intestinal arteries, and then a technician takes X-rays to show blood flow. In many cases, the doctor can treat artery blockages during the same procedure (known as angioplasty) with or without stenting (insertion of a tiny metal mesh tube).
- **CT angiogram:** Only needed in severe cases, this test uses a CT scan and appropriate timing of contrast injection into your blood vessel to view the dye in your intestinal arteries.

Endoscopy is usually used when the diagnosis is unclear and biopsies are commonly taken. A biopsy is a small sample of the inner lining your large bowel that is removed during the sigmoidoscopy or colonoscopy that is assessed under the microscope for findings consistent with colonic ischemia. Biopsies can also identify other causes of your symptoms.

- [What are the treatments for colonic ischemia?](#)

The goals of treatment are to restore blood supply to the colon and maintain proper function in the digestive tract. Treatment options for colonic ischemia vary depending on the cause and the severity of damage.

Intravenous fluids

If you have colonic ischemia, but no significant damage to the large bowel tissue, then fluids can be given to you via an intravenous line. An intravenous line is a short tube that is placed through your skin into your vein. These fluids are given over hours to days and increase the amount of liquid circulating within your blood vessels. This will help provide more pressure to the blood providing nutrients to your large bowel.

Antibiotics

If you have colon ischemia that is moderate or severe your doctor may recommend antibiotics to treat or prevent infections.

Angioplasty and stenting

In those with severe colonic ischemia, angioplasty and stenting may be required. Within this procedure, a minimally invasive catheter is placed into a vessel and used to open narrowed areas. In many cases, doctors can perform angioplasty (opening the narrowing in the vessel) at the same time as an angiogram (technique for visualization of the blood vessels from contrast injection through the catheter). If necessary, the doctor can place a stent (tiny metal mesh tube) inside the artery or vein to keep it open.

Surgery

For those with severe colonic ischemia, surgery might be the best treatment option. This is rarely required. Typical surgical procedures include:

- **Laparoscopy:** The surgeon makes a few tiny incisions and uses small instruments to restore blood flow to the intestines. Laparoscopy can remove blockages in blood vessels or create bypasses for blood to flow around blockages. This minimally-invasive procedure can result in less pain and a quicker recovery compared to open surgery.
 - **Laparotomy:** In some cases, open abdominal surgery may be the best option to repair severely damaged intestinal tissue and restore proper blood flow. The surgeon typically makes one long incision to access the area to be treated. The goal of laparotomy is to remove sections of the intestine that have dead tissue and reconnect the healthy portions of the intestines.
- [Am I at risk of developing other conditions?](#)

The most severe forms of colonic ischemia can lead to complications such as:

- **Rupture:** A hole in the colonic wall can form, causing the contents of the colon to leak into the abdominal cavity.
- **Peritonitis:** A rupture can lead to peritonitis, a serious infection and inflammation of the abdominal cavity lining.

- **Scarring or narrowing of your colon:** Even if the colon recovers from ischemia, scar tissue that narrows the colon can form during the healing process.
- **Tissue death:** Sudden, complete blockage of blood flow to your colon can cause gangrene (tissue death) of the colon tissue.

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