



8400 Esters Boulevard, Suite 190, Irving, Texas 75063
CarisDx.com 800.979.8292

This material is intended for patient education and information only. It does not constitute advice, nor should it be taken to suggest or replace professional medical care from your physician. Your treatment options may vary, depending upon medical history and current condition. Only your physician and you can determine your best option. Provided to you as a service by Caris Diagnostics, Inc. ©2008 Caris Diagnostics, Inc. All rights reserved. (01.08)

Caris Diagnostics provides academic-caliber GI and Dermatology anatomic pathology testing services to physicians who treat patients in an ambulatory setting. Its industry-leading team of fellowship and subspecialty trained pathologists provide the highest levels of service to its clinician customers and their patients through its state-of-the-art laboratories, ongoing educational activities, proprietary advanced clinical practice solutions, and rigorous quality assurance programs. In addition, CarisMPI provides advanced analysis of patient samples through prognostic testing services, genomic and proteomic profiling to help guide physicians in the treatment of cancer and other complex diseases. More than 1,500 physicians nationally send their patient's biopsies to Caris Diagnostics at our four laboratories: Irving, Texas; Phoenix, Arizona(2); and Newton, Massachusetts. Additional information is available at www.carisdx.com.

Diverticular Disease



C A R I S D I A G N O S T I C S H E A L T H I M P R O V E M E N T S E R I E S

What is diverticular disease? Diverticular disease affects the colon. The colon is part of the large intestine that removes waste from your body. Diverticular disease is made up of two conditions: diverticulosis and diverticulitis. Diverticulosis occurs when pouches, called diverticula, form in the colon. These pouches bulge out like weak spots in a tire. Diverticulitis occurs if the pouches become inflamed.

What causes diverticular disease? Doctors are not sure what causes diverticular disease. Many think a diet low in fiber is the main cause. Fiber is a part of food that your body cannot digest. It is found in many fruits and vegetables. Fiber stays in the colon and absorbs water, which makes bowel movements easier to pass. Diets low in fiber may cause constipation, which occurs when stools are hard and difficult to pass. Constipation causes your muscles to strain when you pass stool. Straining may cause diverticula to form in the colon. If stool or bacteria get caught in the pouches, diverticulitis can occur.

Is diverticular disease serious? Most people with the disease do not have serious problems, but some people have severe symptoms. Diverticulitis can be sudden and cause:

- bleeding
- serious infections
- rips in the pouches
- fistula, which is a connection or passage between tissues or organs in the body that normally do not connect
- blockage in your digestive system
- an infection in which the colon ruptures causing stool to empty from the colon into the abdomen

What are the symptoms of diverticular disease? The symptoms for diverticulosis and diverticulitis are different.

Diverticulosis. Many people don't have symptoms, but some people have cramping, bloating, and constipation. Some people also have bleeding, inflammation, and fistulas. If you are bleeding, bright red blood will pass through your rectum. The rectum is the end of the colon that connects to the anus. The rectum and anus are part of the gastrointestinal tract, which is the passage that food goes through. Rectal bleeding is usually painless, but it can be dangerous. You should see a doctor right away.

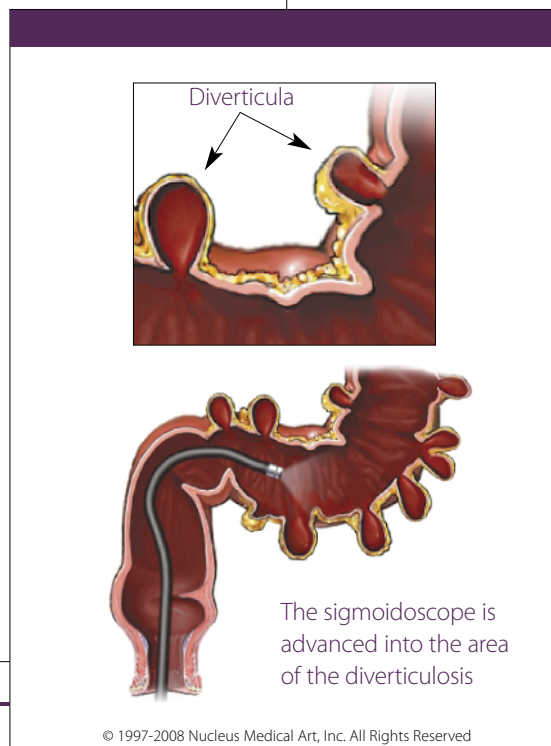
Diverticulitis. People with diverticulitis can have many symptoms. Often pain is felt in the lower part of the abdomen. If you have diverticulitis, you may have fevers, feel sick to your stomach, vomit, or have a change in your bowel habits.

Who gets diverticular disease?

Many people get diverticular disease. Starting at age 40, the chance of getting it increases about every 10 years. About half of people between the ages of 60 and 80 have diverticular disease. Almost everyone over 80 has it.

How does the doctor test for diverticular disease?

The doctor can test for diverticular disease many ways. A CT scan is



the most common test used. The doctor will inject a liquid in a vein in your arm that better highlights your organs on x-rays. You may be asked to drink liquid called barium instead of getting an injection. You are then placed in a large doughnut-shaped machine that takes x-rays.

Other tests include:

- **Medical history** The doctor will ask about your health and symptoms such as pain. You will be asked about your bowel habits, diet, and any medications you take.
- **Blood test** This test can help detect infections.
- **Stool sample** This test may show bleeding in the digestive tract.
- **Digital rectal exam** The doctor will insert a gloved finger into your rectum to check for pain, bleeding, or a blockage.
- **X-ray and barium enema** The doctor will insert liquid called barium in the large intestine through your anus. The anus is the opening where stool leaves the body. The barium makes the diverticula show up on an x-ray.
- **Colonoscopy** The doctor will insert a small tube through your anus. A tiny video camera is in the tube and will show if there are any pouches.

How is diverticular disease treated? Treatment for diverticular disease depends on how serious the problem is and whether you are suffering from diverticulosis or diverticulitis. Most people get better by changing their diet. If you have rectal bleeding, you need to go to the hospital so a doctor can find the part of your colon that is bleeding. The doctor may use a special drug that makes the bleeding stop. The doctor may also decide to operate and remove the part of the colon that is bleeding.

How is diverticulosis treated? Eating high-fiber foods can help relieve symptoms. Sometimes mild pain medications also help.

How is diverticulitis treated? A doctor may prescribe antibiotics and recommend following a liquid diet. Most people get better with this treatment. Some people may need surgery and other treatments.

- **Surgery.** Serious problems from diverticulitis are treated with surgery. Surgeons can clean the abdomen after infections and remove bleeding pouches and fistulas.
- **Colon resection.** If you get diverticulitis many times, your doctor might suggest taking out the part of the colon with diverticula. The healthy sections can be joined together. With the diverticula gone, you may avoid other infections.
- **Emergency surgery.** If you have severe problems, you may need emergency surgery to clear the infection and remove part of the colon. Later, a second surgery rejoins the healthy sections of the colon.

The colon is separated for a brief time between surgeries, because rejoining the colon during the first surgery is not always safe. A temporary colostomy is needed between the two surgeries. A colostomy is an opening made on the abdomen where a plastic bag is connected to collect stool after food is digested. The surgeon makes the opening, called a stoma, and connects it to the end of the colon.

What can I do about diverticular disease? Eat a high-fiber diet to help prevent problems. Talk to your doctor about using fiber products like Benefiber, Citrucel, or Metamucil. Daily use can help you get the fiber you need if you do not get it through your diet.

Eating foods high in fiber is simple and can help reduce diverticular disease symptoms and problems.

Try eating more of the following:

- **Fruit.** Raw apples, peaches, pears, and tangerines.
- **Vegetables.** Fresh broccoli, squash, carrots, and brussels sprouts.

- Starchy vegetables. Potatoes, baked beans, kidney beans, and lima beans.
- Grains. Whole-wheat bread, brown rice, bran flake cereal, and oatmeal.

Talk with your doctor about making diet changes. Learn what to eat and how to put more of these high-fiber foods in your diet.

Points to Remember

- Diverticular disease is more common in people as they grow older.
- A low-fiber diet is the most likely cause of the disease.
- Most people are treated with a high-fiber diet and pain medication.
- Add whole grain foods, high-fiber fruits, and vegetables to your diet.
- Contact a doctor if you notice symptoms such as fever, chills, nausea, vomiting, abdominal pain, rectal bleeding, or change in bowel habits.

ADDITIONAL RESOURCES:

International Foundation for Functional
Gastrointestinal Disorders:

email: iffgd@iffgd.org

www.iffgd.org

American Society of Colon and Rectal Surgeons

email: ascrs@fascrs.org

www.fascrs.org