

Diagnosis of Diverticulitis

The medical history and physical exam alone are sufficient for the physician to diagnose diverticulitis. Tenderness is present in the left lower abdomen. A barium enema x-ray or CAT scan may be necessary to help to determine the extent of the disorder. Flexible sigmoidoscopy and colonoscopy are exams performed through the rectum with a lighted, flexible endoscope. These exams view the colon from inside and provide additional information about the disease, as well as the opportunity to fix problems, such as bleeding.

Treatment of Diverticulosis

Diverticulosis is most likely preventable. Fiber, bran, and roughage are essential parts of the diet and help to maintain good colonic function. Certain types of fiber, such as wheat bran retain large quantities of water. This, in turn, provides a bulkier stool. This type of large, soft stool is felt to help decrease the pressure in the bowel over time. Bulking agents are available in drug stores and can be effective. The generic names for some of these products are psyllium and methylcellulose. Bran and fiber can be found in very palatable forms in many cereals, breads and other foods. A daily intake of 25-30 grams is recommended, beginning at a young age.

Factors such as stress or delayed defecation should be minimized so as to decrease colonic pressure and spasm. This should aid in the prevention of diverticuli formation. In some individuals, where dietary control is ineffective or impossible, it may be necessary to control stress or colonic spasm through the use of medication.

In cases when the colon has become permanently altered or damaged, elective removal of the diseased portion of the colon may become necessary to allow normal bowel function to return or to prevent recurrent attacks of diverticulitis. When necessary, this type of non-emergent surgery does not require a colostomy.

Summary

Diverticulosis is a benign disorder caused by multiple factors, including inadequate dietary fiber intake, delayed defecation, and excessive colonic irritability or spasm. It is a condition that is preventable if these causes are corrected early in life. Once diverticulosis develops, effective therapy is available. Initial treatment includes increasing dietary fiber, reduction of stress, and improvements in life style to allow for timely defecation.

Diverticulosis may be complicated by development of diverticulitis, or infection of a diverticulum, which can be readily diagnosed by the physician. In early stages, the treatment is usually antibiotics and dietary manipulation. Rarely, bleeding or open perforation may develop requiring medical or surgical intervention.

Working with your physician, prevention and treatment programs can be structured to obtain the best results for you.

SPECIAL INSTRUCTIONS:

EAT A DIET HIGH IN FIBER, INCLUDING WHOLE GRAINS, FRUITS, AND VEGETABLES.

YOU SHOULD CONSUME A MINIMUM OF 30 GRAMS OF FIBER PER DAY.

DIETARY AIDES SUCH AS PSYLLIUM OR METHYLCELLULOSE ARE PERMITTED IF NEEDED.

SEEDS OR GRAINS ARE ALLOWED, AS LONG AS HIGH DIETARY FIBER IS MAINTAINED.

CONTACT THE DOCTOR IF YOU DEVELOP BLEEDING, PAIN, OR FEVER.

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DIVERTICULOSIS & DIVERTICULITIS



Endoscopic Microsurgery Associates

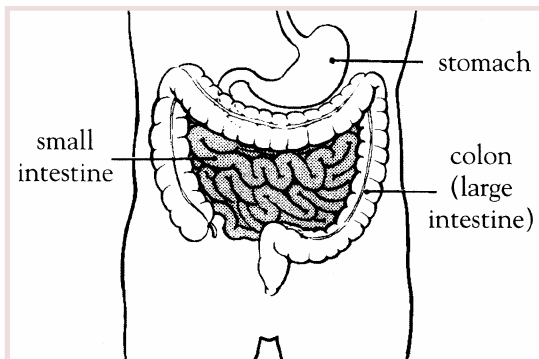
Definitions:

Diverticulosis

Diverticulosis is an acquired condition of the bowel, which develops gradually over time. Diverticuli may be small or large in size and appear as balloon-like pouches extending from the inside to the outside of the colon. They occur at weak points in the bowel wall. The pockets develop because of the pressure exerted within by the contracting colon. The development of diverticuli may be due to dietary factors, such as a diet poor in fiber, constipation, or may occur as a normal part of the aging process.

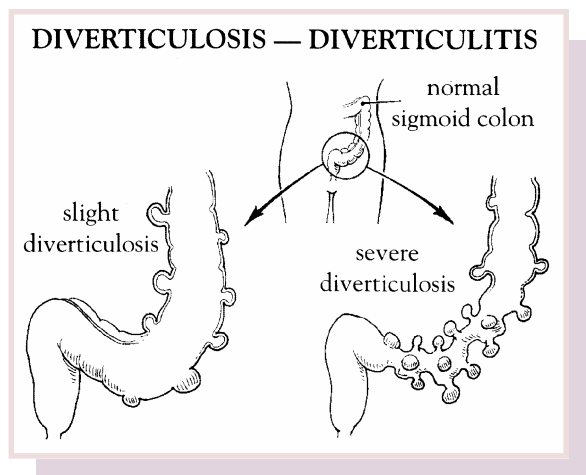
Anatomy of the Colon

In order to better understand how diverticulosis develops, it is important to know a little about the anatomy of the colon or large intestine. The colon is approximately 6-10 feet in length, and stretches from the right lower abdomen, up under the ribs, across the upper abdomen, and back down the left side until it empties into the rectum. The portion of the colon, which empties into the rectum, is called the sigmoid colon and is S-shaped. The colon wall is made up of three layers, 1) an outer covering called the serosa which contains the nerves and blood vessels, 2) a muscle layer for contraction, and 3) the inner lining called the mucosa which is responsible for absorbing water from the stool. As the blood supply of the colon is on the outside, and blood vessels must penetrate through the muscle layers of the colon to supply oxygen to the mucosa. When the blood vessels pass through the muscle layer, this creates an area of weakness in the wall. From the point of view of function, the colon is designed to remove the water from stool, and when it has reached the proper consistency, to store the stool in the rectum prior to expulsion.



The Sigmoid Colon - Colonic Pressure Valve

The sigmoid colon has a specialized function. Due to its S-shape, it controls the movement of the stool either back through the colon if it's too liquified, or into the rectum when more formed. In this role, the sigmoid colon behaves like a high pressure valve. Diverticuli form more frequently in this area due to the high pressures generated, resulting in ballooning in the area of the weaker blood vessel entry sites.



Why Do I Have Diverticulosis?

Diverticuli usually appear later in life. However, it is not uncommon to see this occur in people who are 30-40 years old. The disorder occurs mostly in Western society or populations with poor dietary fiber intake. It is uncommon in less developed areas of the world, where the diet consists of unprocessed foods and grains with a very high fiber content. In addition, conditions which cause delayed defecation, such as the stress and pressures present in the work place, school, or other highly structured situations, and medical conditions which cause constipation will predispose the individual to the development of diverticulosis.

Symptoms of Diverticulosis

Early on in the development of the condition, as diverticuli form, there are essentially no symptoms. Some people may notice some sporadic left-sided, lower abdominal discomfort, which is more likely related to bowel irregularity, a causative factor.

When diverticulosis is more advanced, the lower colon may become fixed, distorted, and even narrowed. Because of the balloon-like projections, the sigmoid colon most often becomes thickened and narrowed. When this happens, significant changes in the bowel function occurs, resulting in discomfort, diarrhea, and/or constipation. The stools may become thin or pellet-shaped, and there may be either constipation and/or the occasional rush of diarrhea. At this stage, the problem is mechanical or structural. Treatment options may become more limited.

Diverticulitis - Complications of Diverticulosis

Comparatively few people have complications of diverticulosis, when compared to the number of people who have the condition. However, complications that occur are usually serious. Diverticulitis is the most common.

When a diverticulum expands, it develops a thin wall which is prone to developing tiny cracks or holes. This usually occurs when a diverticulum is plugged with debris, allowing fluid and bacteria to become trapped, causing further expansion and pressure. The colon is home to many beneficial bacteria; however, when the bacteria seep through the cracks in the thin wall of diverticuli, infection develops. This infection around diverticuli is called diverticulitis. It can be mild with only slight discomfort in the left lower abdomen, or it may be more severe and result in acute tenderness, fever, and peritonitis. The treatment for diverticulitis is most frequently antibiotics and bowel rest. In the most severe cases, hospitalization and surgery will be necessary.

- **Bleeding**

At times, bleeding can occur from a ruptured blood vessel at the opening of the diverticuli. The bleeding is most often bright red or maroon, or occasionally, black. The bleeding usually will stop by itself. Occasionally, it may be necessary to have the bleeding treated via colonoscopy or surgery. Bleeding of any type should be immediately reported to your doctor and never ignored.

- **Perforation**

Perforation or a crack or hole in the diverticulum is by definition the cause of diverticulitis. Most of the time the perforations are microscopic. A widely open perforation is the most uncommon and most serious type. Bacteria and stool escape into the abdomen where peritonitis, or an abscess, develops. This is a life threatening emergency and abdominal surgery usually is required to correct this problem.