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## Diverticular Disease

*What Causes Diverticular Disease?*

*What Are the Symptoms?*

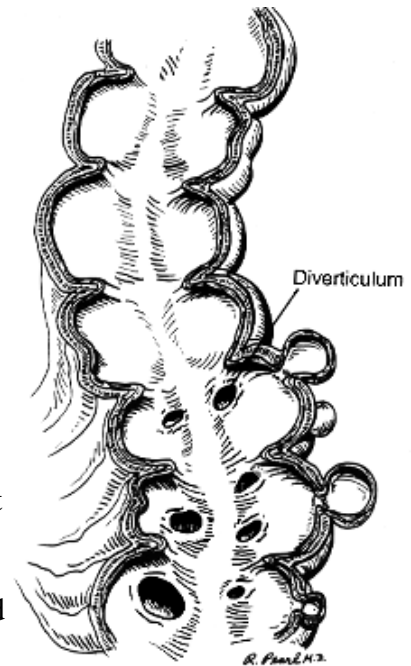
*What Are The Complications?*

*How is it Diagnosed?*

*What Is the Treatment for Diverticular Disease?*

*When Is Surgery Necessary?*

*Points to Remember*



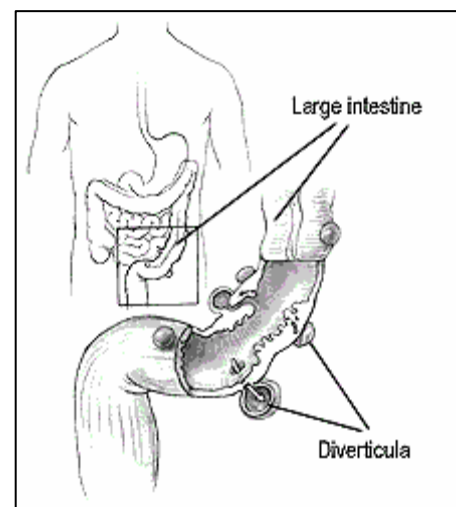
**Diverticulosis** of the colon is a common condition that afflicts about 50 percent of Australians by age 60 and nearly all by age 80.

Diverticula are pockets that develop in the colon wall. Each pocket is called a diverticulum. The condition of having diverticula is called diverticulosis. When the pouches become infected or inflamed, the condition is called **Diverticulitis**. This happens in 10 to 25 percent of people with diverticulosis. Diverticulosis and diverticulitis are also called diverticular disease.

### What Causes Diverticular Disease?

Doctors believe a low-fibre diet is the main cause of diverticular disease. Diverticular disease is common in developed or industrialized countries--particularly Australia, the United States, and England --where low-fibre diets are common. The disease is rare in countries of Asia and Africa, where people eat high-fibre vegetable diets.

Fibre is the part of fruits, vegetables, and grains that the body cannot digest. Some fibre dissolves easily in water (soluble fibre). It takes on a soft, jelly-like texture in the intestines. Some fibre passes almost unchanged through the intestines (insoluble fibre). Both kinds of fibre help make stools soft and easy to pass. Fibre also prevents constipation.



Constipation makes the muscles strain to move stool that is too hard. It is the main cause of increased pressure in the colon. The excess pressure causes the weak spots in the colon to bulge out and become diverticula.

Diverticulitis occurs when diverticula become infected or inflamed. An attack of diverticulitis can develop suddenly and without warning.

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## What Are the Symptoms?

### Diverticulosis

Most people with diverticulosis do not have any discomfort or symptoms. However, symptoms may include mild cramps, bloating, and constipation. Other diseases such as irritable bowel syndrome (IBS) and stomach ulcers cause similar problems.

### Diverticulitis

The most common symptom of diverticulitis is abdominal pain. The most common sign is tenderness around the left side of the lower abdomen. Infection may also cause, fever, nausea, vomiting, chills, cramping, and constipation. The severity of symptoms depends on the extent of the infection and complications. Most people will need admission to hospital for intravenous antibiotics.

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## What Are The Complications?

Diverticulitis can lead to severe complications requiring emergency surgery.

### *Bleeding*

A large amount of bleeding can occur, and although transfusion is often necessary, surgery is usually not.

### *Abscess, Perforation, and Peritonitis*

If the infection causing diverticulitis doesn't respond to treatment with antibiotics an abscess may develop next to the colon. These will often require drainage.

A large abscess can become a serious problem if the infection spreads and contaminates areas outside the colon. Infection that spreads into the abdominal cavity is called peritonitis. Peritonitis requires immediate surgery to clean the abdominal cavity and remove the damaged part of the colon. Without surgery, peritonitis can be fatal.

### *Fistula*

A fistula is an abnormal connection of tissue between two organs. When damaged tissues come into contact with each other during infection, they sometimes stick together. If they heal that way, a fistula forms. The most common type of fistula occurs between the bladder and the colon. It affects men more than women. In women a fistula can form to the uterus or vagina.

### *Intestinal Obstruction*

The scarring caused by infection may cause partial or total blockage of the large intestine. When the obstruction totally blocks the intestine, emergency surgery is necessary. Partial blockage is not an emergency, so the surgery to correct it can be planned.

## How is it Diagnosed?

This is usually diagnosed at colonoscopy but is often an incidental finding during investigation for other symptoms. When you are unwell it is usually found at CT scan.

## What Is the Treatment for Diverticular Disease?

A high-fibre diet is the most important place to start.



### Diverticulosis

Increasing the amount of fibre in the diet may reduce symptoms of diverticulosis and prevent complications such as diverticulitis. Fibre keeps stool soft and lowers pressure inside the colon. It is recommended that you eat 20 to 35 grams of fibre each day. Table 1 shows the amount of fibre in several foods that you can easily add to your diet. It is also recommended taking a fibre supplement such as Metamucil or Psyllium Husk. These products are mixed with orange juice or sprinkled on your breakfast cereal and provide about 4 to 6 grams of fibre.

Until recently, many people suggested avoiding foods with small seeds such as tomatoes or strawberries because they believed that particles could lodge in the diverticula and cause inflammation. However, this is now a controversial point and no evidence supports this recommendation.

If cramps, bloating, and constipation are problems, there are some medications that will help.



**Table 1. Amount of Fibre in Some Foods**

#### Fruits

raspberries	1 cup	= 6 grams of fibre
apple	1	= 3 grams
tangerine	1	= 2 grams
peach	1	= 1 gram

#### Vegetables

squash	3/4 cup	= 4 grams
Brussels sprouts	1/2 cup	= 3 grams
cabbage	1/2 cup	= 2 grams
carrot	1	= 2 grams
potato, peeled	1	= 2 grams
tomato	1	= 2 grams
asparagus	1/2 cup	= 1 gram
broccoli	1/2 cup	= 1 gram

cauliflower	1/2 cup = 1 gram
romaine lettuce	1 cup = 1 gram
spinach	1/2 cup = 1 gram
zucchini	1 cup = 1 gram

### Starchy Vegetables

black-eyed peas	1/2 cup = 4 grams
lima beans	1/2 cup = 4 grams
kidney beans	1/2 cup = 3 grams

### Grains

brown rice	1 cup = 3 grams
oatmeal	2/3 cup = 3 grams
whole-wheat cereal	1 cup = 3 grams
whole-wheat bread	1 slice = 2 grams
white rice	1 cup = 1 gram



### Diverticulitis

Treatment for diverticulitis focuses on clearing up the infection and inflammation, resting the colon, and preventing or minimising complications. An attack of diverticulitis without complications may respond to antibiotics within a few days if treated early.

An acute attack with severe pain or severe infection may require a hospital stay. Most acute cases of diverticulitis are treated with antibiotics and a liquid diet. In some cases, however, surgery may be necessary.

### When Is Surgery Necessary?

Elective surgery is usually advised for recurrent episodes of diverticulitis. In most cases this can be performed as a laparoscopic or keyhole operation. The operation is called a **Laparoscopic High Anterior Resection**. Elective surgery is also need for all cases of fistula and partial obstruction.

Emergency surgery is needed if an attack fails to respond to intravenous antibiotics. Other reasons for emergency surgery include a large abscess, perforation, peritonitis, or continued bleeding.

Emergency surgery usually involves two operations. The first surgery will clear the infected abdominal cavity and remove the affected part of the colon. Because of infection and sometimes obstruction, it is not safe to rejoin the colon during the first operation. A colostomy, or stoma, is required. The stool goes into a bag attached to the opening in the abdomen. In the second operation, the bowel is rejoined. This is usually 3 to 6 months later.

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## Points to Remember

1. Diverticulosis occurs when small pouches, called diverticula, bulge outward through weak spots in the colon (large intestine).
2. The pouches or pockets form when pressure inside the colon builds, usually because of constipation.
3. The main cause of diverticulosis is a low-fibre diet because it increases constipation and pressure inside the colon.
4. Most people with diverticulosis never have any discomfort or symptoms.
5. Diverticulitis occurs when the pouches get infected or inflamed and cause pain and tenderness around the left side of the lower abdomen.
6. For most people with diverticulosis, eating a high-fibre diet is the only treatment needed.
7. You can increase your fibre intake by eating these foods: whole grain breads, cereals, and other products; fruit such as berries, apples, and peaches; and vegetables such as broccoli, cabbage, spinach, carrots, asparagus, and squash; and beans.
8. If elective surgery is advised then it can usually be achieved as keyhole surgery

### Laparoscopic Surgery

State of the art operating theatre at  
The Holy Spirit Northside

