

## Diverticulosis and diverticulitis

Diverticulosis occurs when small defects in the muscle of the wall of the large intestine or colon allow small pockets or pouches (diverticula) to form. Diverticulitis is infection or inflammation of these abnormal pouches. Together, these conditions are called diverticular disease.

Despite having some symptoms in common, diverticular disease isn't associated with more serious conditions, such as bowel cancer. However, diverticulitis is often a medical emergency, requiring immediate medical attention and, frequently, admission to hospital. Mild attacks can be treated at home, but should always be assessed promptly.

### Causes of diverticular disease

Diverticulosis is extremely common. Old age and diet may be the most important risk factors. More than half of all adults over the age of 70 have the condition. Most of these people are unaware that they have diverticulosis.

Diverticulosis is less common in people under 50. Studies appear to show that diverticulosis became more common in the 20<sup>th</sup> century. It is also more common in 'Western' nations including North America, Europe and Australia. It is less common in Asia and very uncommon in Africa.

Discovery of these facts led to the theory that the low-fibre diet common in Western nations may be important. Animal studies show that this theory is possible. It has also been shown that vegetarians less commonly develop diverticulosis. Exactly how a low-fibre diet may cause diverticulosis is not known.

There may also be genetic causes. It is interesting that Western people develop diverticulosis in the last third of the colon, while people in Asian countries – such as Japan, Taiwan and Singapore – generally develop diverticulosis in the first section of the colon. In the Japanese population living in Hawaii, the risk of diverticulosis is higher than those living in Japan. However, when diverticulosis develops in these people, it is still in the 'Japanese' location – the first third of the colon.

Diverticulitis seems to occur when a small puncture develops in the diverticular wall. This causes a small infection to develop, often forming an abscess.

### Symptoms of diverticulosis

Diverticulosis is usually asymptomatic (has no symptoms). However, when many diverticula (pouches) are present, the normal smooth working of the bowel can be affected. This may cause a range of symptoms including:

- Abdominal pain and bloating
- Constipation and diarrhoea
- Flatulence
- Blood in the faeces – this is usually minor, but bleeding can sometimes be heavy if a diverticulum gets inflamed or is near a blood vessel
- Anaemia from repeated bleeding may occur.

Many of these symptoms are similar to those of bowel cancer. Diverticulosis is more common, so these symptoms may be more likely to be due to diverticulosis than cancer. However, a specialist will usually assess these symptoms – your doctor will refer you.

### Symptoms of diverticulitis

Symptoms of diverticulitis include:

- Sharp pain, often located at a specific point – for example, in the lower left half of the abdomen
- Fever
- Distension (bloating) of the abdomen
- Nausea and vomiting.

## Possible complications of diverticular disease

Some of the complications of diverticular disease include:

- **Abscess** – untreated, diverticulitis may lead to an abscess (a ball of pus).
- **Perforation** – a weakened pocket of bowel wall may rupture. The contents of the bowel can then seep into the abdominal cavity. Symptoms include pain, high fever and chills. A perforated bowel is a medical emergency.
- **Peritonitis** – perforation can lead to peritonitis (infection of the membranes that line the abdominal cavity and abdominal organs). This complication is potentially life threatening.
- **Haemorrhage** – diverticula can be the source of haemorrhage. When bleeding occurs, it is important to exclude other causes. A person with diverticulosis can also get cancer.

## Diagnosis of diverticular disease

Since diverticulosis is often asymptomatic (without symptoms), it tends to be discovered during examinations for other conditions such as colorectal cancer. Diverticulitis is usually diagnosed during an acute attack.

Tests to confirm the diagnosis of diverticular disease include:

- **Medical history** – including dietary habits
- **Physical examination** – including rectal examination
- **Colonoscopy** – a slender flexible tube inserted into the anus so that the doctor can look at the entire length of the large intestine
- **Barium enema** – a special contrasting dye flushed into the bowel via the anus and x-rays are taken
- **CT scan** – to detect abscesses outside the bowel lining
- **Blood tests** – to check for signs of infection
- **Stool tests** – to check for the presence of blood in the faeces or the presence of infections, which may mimic the symptoms of diverticulosis and diverticulitis.

## Treatment of diverticulosis

For a person with diverticulosis, there is no proven way to prevent the formation of new diverticula. Treatment revolves around the settling of symptoms.

- A gradual switch to a diet with increased soluble fibre (green vegetables, oat bran and fibre supplements such as psyllium) usually leads to an improvement in bowel habit and mild symptoms.
- Some foods may make symptoms worse or even lead to diverticulitis. Nuts, seeds and pips are best avoided, while some individuals find avoiding legumes (peas and beans) and sweet corn also helps.
- Short-term use of laxatives to treat and prevent constipation may be advised.
- Rarely, elective surgery is performed to remove seriously affected bowel segments when symptoms are disabling.

## Treatment for diverticulitis

Diverticulitis is often a medical emergency, requiring immediate medical attention and, frequently, admission to hospital. Mild attacks can be treated at home, but should always be assessed promptly. Treatment may include:

- No eating or drinking – intravenous fluids are given to rest the bowel

- Antibiotics
- Pain-killing medications
- Surgery – if the weakened sections of bowel wall have ruptured or become obstructed, or if the attack of infection fails to settle
- Colostomy – if it isn't possible to rejoin the healthy sections of bowel, a colostomy bag will be fitted. This is more common if the surgery is performed as an emergency. The use of a colostomy is generally temporary and the bowel can be rejoined after six to 12 months, if health permits
- The long-term use of a mild antibiotic – this is often necessary to prevent further attacks.

## Self-care suggestions

Suggestions include:

- Increase your daily intake of green vegetables. Introduce fibre gradually to avoid unpleasant symptoms such as flatulence.
- Consider using a fibre supplement (such as psyllium).
- Drink plenty of fluids to ensure your stools are soft, moist and easy to pass.
- Exercise regularly to encourage bowel function and peristalsis.

## Where to get help

- Your doctor
- Gastroenterologist or specialist surgeon

## Things to remember

- Diverticulosis is the formation of abnormal pouches in the bowel wall.
- Diverticulitis is inflammation or infection of these abnormal pouches.
- Together, these conditions are known as diverticular disease.
- Treatment options include a change of diet, antibiotics and (rarely) surgery.

**This page has been produced in consultation with, and approved by:**

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