CONDITION

Diverticulosis

Diverticulosis is the presence of small pouches in the colon wall, usually without symptoms.

WHAT IT IS
Small pouches in the wall of the colon

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Usually none, sometimes bloating, constipation, abdominal discomfort

WHAT CAUSES IT
Unknown; age, genes, bowel structure, and lifestyle contribute

HOW IT IS DIAGNOSED
Colonoscopy or CT scan

MAIN TREATMENT
Often none; fibre-rich diet and symptom management

CAN IT BE CURED?
No - existing pouches usually remain

IS IT AN EMERGENCY?
Sometimes - heavy bleeding or severe, worsening abdominal pain

LONG-TERM OUTLOOK
Generally good; most people never develop complications

Overview

Diverticulosis means that small pouches have formed in the wall of your colon, also called the large bowel. Each pouch is called a diverticulum. More than one are called diverticula.

The pouches usually form where the inner lining of the colon pushes through weak areas in its muscular wall. They are most common in the lower part of the colon, although they can occur elsewhere.

Diverticulosis usually causes no symptoms. It is often found by chance during a colonoscopy or scan performed for another reason. The pouches generally remain once they have formed, but many people live with them without needing treatment.

Diverticulosis is different from diverticulitis. Diverticulitis happens when one or more pouches

become inflamed. Sometimes infection is also present. The broader term "diverticular disease" is often used when diverticula are linked to ongoing symptoms or complications.

Knowing about diverticulosis matters because it can sometimes lead to bleeding or diverticulitis. However, having diverticulosis does not mean that either problem will happen.

Symptoms

Most people with diverticulosis have no symptoms. The pouches themselves do not usually hurt.

Some people with diverticula report:

These symptoms are not specific to diverticulosis. Irritable bowel syndrome, medication effects and several other bowel conditions can cause similar problems. For this reason, new or persistent symptoms should not automatically be blamed on diverticula.

Sudden or steadily worsening pain is not typical of uncomplicated diverticulosis. Pain that stays in one area, especially with fever, nausea or a change in bowel habits, may indicate diverticulitis or another condition.

Diverticular bleeding can cause bright red or dark red blood from the rectum. It is often painless and can begin suddenly. Blood in your stool needs medical assessment, even if you already know that you have diverticulosis.

- Intermittent discomfort, often in the lower abdomen
- Bloating
- Constipation or diarrhoea
- A change in usual bowel habits

Causes and risk factors

The exact cause of diverticulosis is not fully understood. The pouches form at weaker points in the colon wall, often where small blood vessels pass through the muscle.

Changes in the strength and movement of the colon with age may contribute. Pressure inside the colon may also push its inner lining outward through these weak areas.

Genes appear to play a part, so some people may be more likely to develop diverticula because of inherited features of their bowel. Diet and other aspects of health may also influence risk, but no single food or behaviour explains every case.

Factors associated with diverticulosis or its complications include:

Examples of NSAIDs include ibuprofen and naproxen. These medicines have been linked more clearly to diverticular bleeding and diverticulitis than to the original formation of pouches. Do not stop prescribed aspirin or another medicine without discussing why you take it with a healthcare professional.

Nuts, seeds and popcorn were once thought to become trapped in diverticula. Research has not shown that people with diverticulosis need to avoid these foods.

- Increasing age
- A family or genetic tendency
- Low physical activity
- Smoking
- Obesity
- A diet low in fibre or high in red meat
- Regular use of some pain medicines, especially nonsteroidal anti-inflammatory drugs like ibuprofen or naproxen , or NSAIDs

Diagnosis

Diverticulosis is commonly discovered during a colonoscopy. During this procedure, a flexible tube with a camera is passed through the rectum so the lining of the colon can be examined.

Diverticula can also be seen on imaging such as a CT scan. They may be mentioned in a scan report even when they are unrelated to the reason for the scan.

If you have bowel symptoms, testing may be needed to look for other explanations. Depending on your symptoms, this can include blood tests, stool tests, imaging or colonoscopy. Blood and stool tests do not confirm diverticulosis, but they can identify anaemia, inflammation, infection or another source of symptoms.

A CT scan is usually more useful when acute diverticulitis is suspected. Colonoscopy is generally not performed during severe, active inflammation because the bowel may be more vulnerable. If colonoscopy is needed afterward, its timing is based on the illness, previous test results and your usual colorectal cancer screening needs.

Diverticulosis does not by itself mean that you need colonoscopies more often. Screening usually follows the schedule appropriate for your age, previous polyps, family history and other risk factors.

Treatment and management

Diverticulosis without symptoms usually needs no medical treatment. There is no routine medicine or procedure that removes the pouches.

A balanced eating pattern with enough fibre can support regular, softer bowel movements. Fibre is found in vegetables, fruit, beans, lentils, whole grains, nuts and seeds. It is often more comfortable to increase fibre gradually, since a sudden increase can cause gas or bloating.

Some people use a fibre supplement if they cannot get enough from food. The right product may be affected by your other conditions, medicines and swallowing ability, so it is reasonable to discuss this with a pharmacist or healthcare professional.

Drinking enough fluid can help fibre work effectively, but fluid needs are not the same for everyone. People with heart or kidney conditions may have specific advice about fluid intake.

Treatment for ongoing abdominal or bowel symptoms should be based on their cause. Diverticula seen on a scan do not prove that they are responsible. Medicines sometimes discussed for bowel symptoms, including antibiotics like amoxicillin or doxycycline , anti-inflammatory medicines or probiotics, are not routine treatments for symptom-free diverticulosis.

Surgery is not normally used for uncomplicated diverticulosis. It may be considered for particular complications, such as uncontrolled bleeding, a perforation or some cases of recurrent or complicated diverticulitis.

Complications

Diverticulosis can occasionally lead to diverticular bleeding. A small blood vessel beside a pouch may break, causing painless rectal bleeding. The blood can be bright red, maroon or mixed with stool. Although some episodes stop without a procedure, the amount can be significant and the source needs assessment.

Diverticulitis occurs when a pouch becomes inflamed. It commonly causes new, persistent abdominal pain, often on the lower left side. Fever, nausea, constipation or diarrhoea may also occur.

Most episodes can be treated without surgery, but diverticulitis can sometimes cause:

These are complications of diverticulitis, not the expected course of ordinary diverticulosis.

- An abscess, which is a pocket of infection

- A perforation, or hole in the colon
- Peritonitis, which is inflammation or infection inside the abdomen
- A fistula, or abnormal connection to another organ
- Narrowing that blocks the movement of stool

Prevention

There is no proven way to prevent all diverticula from forming. Age-related and inherited factors cannot be changed, and existing pouches do not usually disappear.

Healthy habits may support bowel health and may reduce the likelihood of diverticulitis or other complications, although they cannot provide a guarantee. These include eating a fibre-rich, varied diet, staying physically active, not smoking and working toward a weight that is healthy for you.

You do not need to avoid nuts, seeds, corn or popcorn simply because you have diverticulosis. Avoiding these foods has not been shown to prevent diverticulitis.

If you regularly use an NSAID, ask whether it remains the best option for you, particularly if you have had diverticular bleeding. Do not stop aspirin prescribed for heart or circulation problems without medical advice.

Living with it and what to expect

Diverticulosis is generally a long-term finding. The pouches usually remain, but they may never cause symptoms or interfere with daily life.

You can normally continue working, exercising, travelling and eating a varied diet. No special monitoring is usually required when diverticulosis is found by chance and you feel well. Keep up with routine colorectal cancer screening, but remember that diverticulosis is not cancer and does not turn into cancer.

Bowel habits can change for reasons unrelated to the pouches. If constipation, diarrhoea, bloating or discomfort becomes frequent, a review can help determine whether diverticulosis, irritable bowel syndrome, diet, medicine or another condition may be involved.

If you have had diverticulitis or diverticular bleeding, follow-up is more individual. You may need further testing, changes to medicines or a discussion about reducing the risk of another episode. Most people do not need surgery simply because diverticula are present.

When to get medical help

Arrange routine medical assessment if you develop a persistent change in bowel habits, recurring abdominal discomfort or ongoing bloating. Also seek an appointment for unexplained tiredness, unintended weight loss or a small amount of blood in the stool. These symptoms have several possible causes and should not be assumed to come from diverticulosis.

Seek urgent medical help for:

Seek emergency care for heavy or continuing rectal bleeding, severe abdominal pain, a hard or rigid abdomen, fainting, confusion, severe weakness, shortness of breath or a rapid heartbeat. These can indicate major blood loss, a perforation or another serious abdominal problem.

- New, constant or worsening abdominal pain
- Abdominal pain with fever, chills, vomiting or marked tenderness
- Blood in the stool or rectal bleeding
- Inability to keep fluids down
- Increasing abdominal swelling or inability to pass stool or gas

Common questions

Is diverticulosis the same as diverticulitis?

No. Diverticulosis means that pouches are present in the colon. Diverticulitis means that one or more of those pouches have become inflamed. Diverticulitis usually causes new, persistent abdominal pain and may also cause fever or nausea.

Can diverticulosis go away?

Existing diverticula usually remain. They do not need to be removed if they are not causing problems. Management focuses on general bowel health, evaluating symptoms and treating complications if they occur.

What foods should I avoid with diverticulosis?

There is no standard list of foods that everyone with diverticulosis must avoid. Nuts, seeds and popcorn are not known to increase the risk of diverticulitis. A varied diet containing fibre is generally encouraged, but personal symptoms and other medical conditions may affect what is comfortable for you.

Is diverticulosis cancerous?

No. Diverticulosis is not cancer and does not become colorectal cancer. However, bleeding and

changes in bowel habits can also occur with colorectal cancer, so these symptoms still need assessment. Continue screening recommended for your age and personal risk.

Why can diverticulosis cause bleeding without pain?

A small artery runs beside each diverticulum. If it is damaged, bleeding can begin even when there is no inflammation to cause pain. Diverticular bleeding may be bright red or maroon and should be assessed promptly.

Can I take a fibre supplement?

A fibre supplement can help some people reach an appropriate fibre intake or manage constipation. It is usually introduced gradually with suitable fluid intake. A pharmacist or healthcare professional can help you choose one that fits your health conditions and medicines.

Sources

- National Institute of Diabetes and Digestive and Kidney Diseases: Definition and Facts for Diverticular Disease
- National Institute of Diabetes and Digestive and Kidney Diseases: Symptoms and Causes of Diverticular Disease
- National Institute of Diabetes and Digestive and Kidney Diseases: Diagnosis of Diverticular Disease
- National Institute of Diabetes and Digestive and Kidney Diseases: Treatment for Diverticular Disease
- National Institute for Health and Care Excellence: Diverticular disease-diagnosis and management, guideline NG147
- Peery AF, Shaukat A, Strate LL. AGA Clinical Practice Update on Medical Management of Colonic Diverticulitis. Gastroenterology. 2021;160(3):906-911.e1