



Bladder and Bowel Community

Factsheet: Diverticular Disease

What is Diverticular Disease?

Diverticular Disease (DD) is the name given to small pouches (sacs) known as diverticula, that protrude outwards from the wall of the large intestine. Each diverticulum consists of a small part of the inner lining of the intestine that has been forced through the muscular layer of the intestine forming a small hernia. The number of protrusions will differ from person to person. The protrusions are generally the size of small grapes.

Diverticula can appear in any part of the colon. Among people in Westernised countries, diverticula are most commonly found in the sigmoid part of the colon. Diverticular Disease is common predominately among middle aged to older people.

There are some other terms that are used to refer to this condition:

- Diverticulosis - the condition in which small sacs appear but cause no symptoms
- Diverticular Disease - used to describe all forms of the presence of diverticula
- Symptomatic diverticulosis - the condition in which some symptoms are present but there is no infection in the sacs
- Diverticulitis (classed as a complication) - the inflammation of the sacs usually caused by an infection can cause complications such as abscesses, phlegmon, fistula, obstruction, perforation, and haemorrhage (bleeding)

What are the symptoms?

The most common symptoms of DD are abdominal pain, bleeding from the back passage and a change in bowel habits. If you are experiencing any of these symptoms it is important to visit your doctor.

Many people with diverticula will not suffer from any symptoms, and may have diverticula discovered during a routine medical examination. Some patient's experience;

- A change in bowel habit (either more constipated or more loose than usual)
- Discomfort, especially on the left side of the abdomen
- Pain, which arises because the diverticula become inflamed (diverticulitis)
- Blood in the motions. If this occurs for the first time it is important to tell your doctor

What causes Diverticular Disease?

It has not yet been confirmed what exactly causes diverticular disease but researchers and scientists do have a number of theories.

1. Low fibre intake - Dietary fibre contained in vegetables and fruits helps to keep food bulky as it travels along the digestive tract. A diet low in fibre is less bulky and the muscles of the large intestine struggle to move the intestinal content. The extra strain involved is the likely cause of thickening of the intestinal muscles. The large intestine with thickened

muscles takes on a corrugated shape. When the muscles contract the intestine forms compartments and the compartments increase, which in turn forces out a diverticulum. This is the most widely held view of how low levels of fibre in the diet lead to the formation of diverticula.

2. Race / Genetics - This explanation looks at the almost complete absence of DD in black Africans. It argues that DD could be explained by a racial/genetic factor rather than the theories we have detailed above.

However this theory now comes into dispute as DD among black Africans is on the increase. DD in African populations does appear to be increasing in line with the adoption of Western diet and lifestyle which therefore makes the racial/genetic factor argument less convincing.

DD was absent in black African's in the 1960's compared with higher rates in black Americans. Similarly, DD was rare in Japan but not in the Japanese living in Hawaii. This suggests an environmental cause of DD rather than racial differences. DD occurrence does not follow that of a genetically inherited disease but can be familial, i.e. it is sometimes found in 2 - 3 generations of a family.

3. Dietary factors other than fibre - This explanation argues that DD can be caused by other dietary factors other than fibre. There is an idea that suggests that increased red meat and fat consumption could cause DD. Studies have shown that people eating more red meat were more likely to develop DD than people who don't eat red meat. It is not yet known how red meat may increase the possibility of developing DD.
4. Leading an inactive lifestyle - Diet may not be a cause of DD, but rather exercise or the lack of exercise could be a contributing factor. Research has shown that DD is more common among people that lead an inactive lifestyle than it is among people leading a more active lifestyle. This would lead us to think that taking regular exercise and leading a more generally energetic lifestyle may reduce the risk of developing DD. However, while it may be the case that a lack of exercise could increase the possibility of developing DD, this factor is not as important as a low fibre diet.
5. Associated with aging - DD is more common in people from 40 and above, it is rare to develop DD at a younger age. This could be because it takes 40 years of a low fibre diet to weaken the colonic wall before diverticula are identified. Another reason could be that the colonic wall ages with a person and that the natural aging process can encourage the development of DD. Following a low fibre diet may also accelerate the aging of the colon. The aging of the colon is a factor in the development of DD but it is not yet clear whether it is the natural aging process which is more important or that following a low fibre diet ages the colon.

Of the various possible explanations for the cause of diverticula, the evidence is strongest for a low fibre diet. However, the jury is still out on whether bran and fibre can be effective in treatment for uncomplicated DD or even prevent complications.

Dietary fibre contained in vegetables and fruits help to keep food bulky as it travels along the digestive tract. A diet low in fibre is less bulky and the muscles of the large intestine struggle to move the intestinal content. The extra strain involved is the likely cause of thickening of the intestinal muscles. The large intestine with thickened muscles takes on a corrugated shape. When the muscles contract, the intestine forms compartments and the compartments increase, this in turn forces out a

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Diagnosing Diverticular Disease

When you visit the doctor, you will be asked about your symptoms. It is important that you are honest with your doctor about your problems.

The doctor may then ask to examine you which might start with an examination of your abdomen, looking for tenderness or any lumps. The doctor may also want to make a digital examination of your rectum. The doctor will insert a finger into the anus and will look for any irregular shape.

You may also be required to have a blood test in an attempt to rule out other possible conditions such as IBS and Coeliac Disease.

If further tests are required your GP will refer you to your local hospital.

Tests

Normally before further tests can be carried out a bowel cleansing will be required. Bowel cleansing will clear the colon of all faeces which will make it easier to assess the colon in tests.

Most cleansing preparations will be taken a few days before a test is carried out and usually consist of a powder which you add to water and drink - causing diarrhoea which will empty the contents of your bowel.

After the bowel is empty you may undergo one of the following tests;

Contrast Enema - A contrast enema consists of the use of x-rays and an enema. A lubricated tube is inserted into the anus through which the liquid contrast enema flows into the rectum and colon. The lubricated tube is removed.

The contrast enema will contain barium sulphate which when captured in an x-ray will present a clear image of the shape of the large intestine. If there are diverticula present in the patient, they will appear within the x-ray image.

Endoscopy - An endoscope is an instrument that lets the doctor see the interior of the digestive tract. The instrument is a flexible tube with a light and camera at one end and an eyepiece at the other end.

To investigate a possible case of DD, the tube is inserted into the anus to the large intestine. The endoscope can help a doctor identify any diverticula and also allows the doctor to take small samples from the bowel wall for further inspection and examination.

Computerised tomography (CT scan) - A CT scan may be undertaken if diverticula appear extensive or if symptoms of a patient are severe because it is less invasive than an enema or endoscopy. The CT scan will produce a series of images of cross sections of tissue which can provide a more detailed 3D image of the colon.

There are other tests that may also be carried out when diagnosing DD. These include blood tests; blood is taken to find evidence of infection which would suggest that the colon is infected.

Another test is an Ultrasound Sonograph. This procedure is carried out in some cases because it is non invasive and can help identify any possible abscesses.

An MRI scan is not commonly used to examine the abdomen, but when used it can help identify diverticula and the presence of complications, such as abscesses or fistulae.

Depending on the severity of diverticula identified and the severity of a patient's symptoms, once DD is diagnosed, your condition can be monitored intermittently. It is important to provide an update of your condition to your doctor to ensure that the condition does not worsen and further complications do not arise.

How to treat uncomplicated DD treated? (Not Diverticulitis)

Most doctors will advise DD patients to increase their fibre intake; this is not recommended if there is inflammation in the diverticula or if a patient is recovering from an infection or has diarrhoea. A high fibre diet will include:

- wholemeal bread, pasta
- brown rice
- Fruit and vegetables – avocado, apricots, unpeeled apples and pears. Vegetables – cabbage, broccoli, Brussels sprouts, cauliflower, carrots, celery, pumpkin, sweet corn, spinach, asparagus stems, baked potato. Legumes (peas and beans) – most types of legume, including garden peas, French beans, kidney beans and baked beans
- Nuts – all nuts, in particular, almonds and peanuts
- Grain (cereal) foods – whole grain wheat, rice and corn products such as bran flakes, shredded wheat, brown rice and wholemeal bread. Other grains include oats, millet, barley, sorghum and rye.
- Bran - It is advised to increase the amount of bran in your day to day diet gradually; this will control the amount of extra gas that is produced within the large intestine. It is very important to make sure that the amount of fluids that you drink is in line with the increase in fibre that you are consuming

When you start to increase the amount of fibre that you consume, you need to be aware that the rest of your diet should also become healthier. To follow a healthier diet, you should generally cut down on the amount of sugar and fat you eat and increase the amount of vegetables, fruit and protein that you eat. To increase fibre, you will need to increase the grain foods that you consume as these types of food will supply a large proportion of the required dietary fibre.

For many patients simply increasing vegetables in the diet will relieve their symptoms and return their bowel activity to normal. Fibre intake can be supplemented by adding coarse bran to food (e.g. to yoghurt, soups, gravy, mashed potatoes, cereals etc). The doctor may prescribe dried fibre bulking agents:

- Ispagula husk
- Sterculia
- Methycellulose

A few patients who still experience colicky pain and distension need treatment with drugs called antispasmodics or peppermint oil. These reduce the spasm in the colon which is often the cause of these symptoms.

If you find it difficult to make any changes to your diet or would like more guidance then a referral to a dietician may be helpful. They are trained to assist patients with making changes to their diet and also identifying trigger foods that may make symptoms worse.

Living with Diverticular Disease

Diverticular Disease can be something that affects your day to day life, depending on the severity of your condition and your DD symptoms. The way in which you cope with your DD will depend on the type of DD that you suffer from.

If you have diverticulosis, which has been discovered as part of a medical examination for another condition, you do not need to be overly worried about the diverticula present. Most people with diverticulosis do not ever have symptoms and live a life that is not affected by DD. However it would be useful to follow a healthy diet with increased fibre and also increase the exercise that you undertake.

If you have suffered from a single bout of diverticulitis, and all your symptoms are under control, you may also not need to concentrate too much on your condition. It is likely that you will not suffer from further attacks if you have not suffered a second attack of diverticulitis 5 years after your first attack.

If you have suffered with continuous DD symptoms but they have not been serious enough for you to be admitted to hospital, you will find it more difficult to deal with your symptoms and your day to day life.

You will have likely been prescribed some antibiotics to counter your DD symptoms along with a high fibre diet with supplements and advice to undertake some gentle exercise. Following these precautions, there is not much else that your doctor can advise you to do. It will be up to you to manage your condition and symptoms as best as you can to suit your own lifestyle.

Coping with continuous problems

Some people may decide to learn as much as they can about DD while others may decide to try and ignore DD and get on with life as best as possible.

It is important, whichever way you choose to deal with your DD that you do not underestimate your symptoms and that you do not try and hide symptoms from family and friends so as not to be a burden. It is always helpful to talk to someone about any problem especially a problem that can potentially affect your day to day life. Discuss your symptoms with your family and friends, help them to understand DD. If they are more knowledgeable about DD and your condition they are better equipped to provide support and help when you need it.

Try and keep abreast of any new developments relating to the disease which could be extremely helpful.

Exercise has been previously mentioned and there is some evidence that exercise may help to reduce the risk of developing DD. It has not been determined whether exercise is beneficial once you have developed DD but is reasonable to assume that it does. Starting an exercise regime should be undertaken with careful consideration and awareness of your own fitness levels and abilities. Your age, weight and general health will dictate what sort of exercise you can do. Try and take up gentle exercise to begin with and increase gradually.

Hospital admittance

Without surgery

If you have been admitted to hospital for your DD, your condition will be relatively severe. You will probably have had diverticulitis but also associated complications; possibly an abscess or inflamed tissue.

If during your hospital stay you have not had any surgery, it is likely that surgery will be something that you will need to consider in the future. Most surgeons would advise surgery following two bouts of diverticulitis. If you avoid surgery the complications associated with your DD may increase in severity.

Your surgeon will advise you of the possible surgery to be undertaken and the factors that surgery will depend on will be the gravity of your symptoms and the discomfort and pain that you suffer as a result of your symptoms. This is called 'elective surgery' - surgery takes place after careful consideration between you and your surgeon. However, not all surgery is elective. Sometimes symptoms and the condition of a patient can be so bad that surgery is conducted via an emergency operation.

With surgery

If you have had surgery that has removed a section of your large intestine, you might have a stoma opening onto your abdomen.

A stoma is formed by the intestine being brought to the surface of the body through a surgically made hole in the skin. The contents of the intestine are excreted through the stoma opening, rather than through the anus and the faeces are collected in a bag.

With regards to DD, the stoma is a temporary measure which is intended to allow healing of the intestine after the damaged part has been cut away. For many, the removal of the damaged intestine also removes the symptoms of DD.

Further Information

If you are experiencing any of the problems mentioned in this factsheet, you may wish to seek advice from your GP. You can also contact us on 01926 357220

Some other useful websites available are:

[NHS Choices](#)

[Patient](#)

'The Bladder and Bowel Community provides information and support for people with bladder and bowel issues. We publish a wide range of user friendly booklets and factsheets.

For more information please call us on 01926 357220, email help@bladderandbowelfoundation.org or write to us at The Bladder and Bowel Community, 7 The Court, Holywell Business Park, Northfield Road, Southam, CV47 0FS.

www.bladderandbowelfoundation.org

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