
ALL YOU NEED TO KNOW ABOUT

BARRETT'S OESOPHAGUS



FUNDING RESEARCH
INTO DISEASES
OF THE GUT, LIVER
& PANCREAS



THIS FACTSHEET IS ABOUT BARRETT'S OESOPHAGUS

Barrett's Oesophagus is the term used for a pre-cancerous condition where the normal cells lining the oesophagus, also known as the gullet or food pipe, have been replaced with abnormal cells.

The abnormal cells start from where the oesophagus meets the stomach and spread upwards. The main concern is that, although the majority of patients with Barrett's Oesophagus do not progress to cancer, oesophageal cancer is the 6th most common cause of cancer death in the UK and 4th most common cause of cancer death in the UK in men.

Contents

CAUSES OF BARRETT'S OESOPHAGUS	Page 3
WHAT ARE THE USUAL SYMPTOMS?	Page 3
HOW IS BARRETT'S OESOPHAGUS DIAGNOSED?	Page 4
WHAT TREATMENT IS AVAILABLE FOR BARRETT'S OESOPHAGUS?	Page 4
DOES BARRETT'S OESOPHAGUS NEED TO BE MONITORED AND IF SO, HOW?	Page 7
HOW DOES BARRETT'S OESOPHAGUS AFFECT YOU OVER TIME?	Page 7
WHAT IMPACT CAN BARRETT'S OESOPHAGUS HAVE ON YOUR LIFE?	Page 7
WHAT FURTHER RESEARCH NEEDS TO BE DONE ON BARRETT'S OESOPHAGUS?	Page 8

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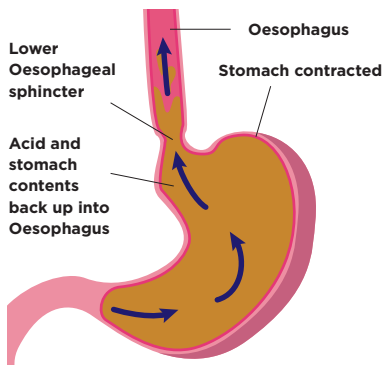
CAUSES OF BARRETT'S OESOPHAGUS

Although the exact cause remains unknown, it is strongly associated with long-term Gastro-Oesophageal Reflux Disease (GORD), which can cause the symptom of heartburn. Approximately 1 in 10 patients with GORD will develop Barrett's Oesophagus and the risk increases with length and frequency of symptoms. GORD involves reflux of acidic and non-acidic stomach (gastric) contents into the oesophagus, which irritates (inflames) and injures the lining (epithelial cells). Over time, in some patients with GORD, the lining of the oesophagus changes from the normal structure, made up of a type of cells known as "squamous epithelial" cells, to an abnormal type made up from a different type of cells, known as "columnar epithelial" cells. Often (but not always) the lining of the oesophagus starts to resemble the lining of the stomach, in a process known as intestinal metaplasia.

Other risk factors that can lead to Barrett's Oesophagus include older age, male sex, family history, obesity, smoking, high alcohol intake and a hiatus hernia (where the stomach extends abnormally from the abdomen into the chest). Barrett's Oesophagus can affect men and women, though it is significantly more common in white men, who have a three fold increased risk for the condition.

WHAT ARE THE USUAL SYMPTOMS?

The main symptom of Barrett's Oesophagus is reflux, which can cause heartburn, regurgitation of food (bringing food back up), nausea and pain in the upper abdomen. You may also experience a metallic taste in your mouth or a chronic sore throat particularly in the mornings as reflux is usually worse after a period spent lying down. Reflux symptoms that wake you at night time are a particularly strong risk factor. Often though, patients with Barrett's oesophagus do not report symptoms, or manage with over the counter antacids, and this can lead to delay in diagnosis.



HOW IS BARRETT'S OESOPHAGUS DIAGNOSED?

Barrett's Oesophagus is diagnosed by examining the oesophagus lining using a procedure called endoscopy. This is where a small tube (the width of a small finger), with a camera on the end is inserted into the oesophagus and stomach via the mouth or nose. Sedation can be used to make the procedure more comfortable. The area of interest is where the oesophagus meets the stomach (gastro-oesophageal junction). Barrett's Oesophagus is identified when, instead of a normal whitish lining, a pinker lining is seen that extends from the junction and up the oesophagus. Biopsies (a small sample of tissue) are then taken to confirm diagnosis and look for abnormal cells (dysplasia). A pathologist will grade the dysplasia into high grade or low grade. If low grade dysplasia is found then a repeat endoscopy in 6 months is ordered to reassess and consider if referral to a specialist centre for treatment is needed. Patients found to have high grade dysplasia are typically referred more quickly to a specialist centre, as the risk of progression to cancer is higher.

WHAT TREATMENT IS AVAILABLE FOR BARRETT'S OESOPHAGUS?

Barrett's Oesophagus with Dysplasia

The treatment for Barrett's Oesophagus has changed significantly over recent years. Previously patients with dysplasia were either monitored more closely (intense surveillance) until cancer was found or referred for surgery to remove the oesophagus. Removal of the oesophagus (oesophagectomy) is a major operation however and is increasingly now only used for patients who have cancer.

The introduction of minimally invasive endoscopic therapy to remove or treat the segment of oesophagus affected by Barrett's has transformed how the condition is managed particularly in the early stages. Usually performed at specialist centres with Endoscopic Therapy, a treatment procedure is actually carried out during the endoscopy. The procedure used will be selected depending on a variety of factors, most importantly the stage and location of the affected cells.

- **Endoscopic Mucosal Resection (ERM):** this is a technique for removing small polyps or growths from the lining of the oesophagus (gullet), stomach or first part of the small bowel (duodenum). This technique enables the endoscopist to remove a larger area of tissue than is possible with a simple biopsy.

EMR is able to assess the abnormal Barrett's tissue more accurately than a standard biopsy, so gives more information about the treatment that is right for you. As well as providing more information the EMR also treats the abnormal area by removing pre-cancer cells, or small areas of cancer, without the need for major surgery. When EMR is performed there is a risk (approximately 1 in 50) of bleeding. If bleeding does occur it will usually stop by itself, but observation and further treatment in hospital may be necessary. Rarely (approximately 1 in 200 cases) a small hole in the lining of the area removed can develop (perforation). If this happens it would mean a stay in hospital for antibiotics and artificial feeding and possibly an operation to repair any damage. After the procedure the removed area will form a scar and heal, and it is quite common to get some chest discomfort and pain on swallowing for the first 2-3 days. If this continues, or you find it difficult to swallow food, then the scar may have caused a narrowing of the oesophagus. This occurs in approximately 1 in 20 patients, and can be treated with an endoscopy to stretch the scar.

- **Radiofrequency Ablation (RFA):** this is a technique that enables the endoscopist to burn away the abnormal cells. It is carried out under sedation and is very safe and effective in removing abnormal cells, but can only be used in flat areas, so will often be used after EMR has removed any raised areas. The technique is often referred to as HALO® RFA, after the manufacturers of the device. There are different types of HALO® devices, the most common are HALO® 360 and HALO® 90. Your doctor will decide which is best to use depending on various factors. The HALO® 360 device treats the entire wall of the oesophagus (i.e. the full 360° circumference of the oesophagus wall). The HALO® 90 device is similar but treats a smaller area (i.e. a surface of the oesophagus wall equivalent to a 90° angle). Patients are usually treated with the HALO® 360 device initially and if, at the next endoscopy, there is any abnormal lining left, they are treated with either the HALO® 360 or HALO® 90 device, depending on how large the affected area is. It is not unusual for patients to need several treatments to remove the Barrett's entirely. HALO® RFA has been widely used for years in the UK, America and Europe for Barrett's oesophagus, and is now recommended as the first line (preferred) technique in the UK for high grade dysplasia and has recently been approved by NICE for low grade dysplasia as well.
- **Photodynamic Therapy:** this has mainly been replaced by HALO® RFA and is seldom used.

Barrett's Oesophagus without Dysplasia

A patient without dysplasia would be considered low risk, and as endoscopic therapy has some side effects, the risks outweigh the benefits. There are certain exceptions that may warrant treatment (very long segment of Barrett's or strong family history of cancer) but these need to be discussed with a specialist. Patients without dysplasia may be treated as follows although it must be noted that these non-surgical and surgical treatments do not remove the Barrett's oesophagus and therefore, do not eradicate the risk of developing oesophageal cancer.

- **Medications:** the most commonly used medications in the treatment of Barrett's Oesophagus are Proton Pump Inhibitors (PPI). Omeprazole and lansoprazole belong to this group (though there are others). They work by reducing acid production in the stomach, which naturally reduces the acid refluxing into the oesophagus. Clinical research into other medication to reduce risk of cancer progression (chemoprevention), such as aspirin and statins, is ongoing.
- **Avoiding medications:** there are certain medications that can make reflux worse, and are best avoided. These include anti-inflammatory medications (e.g. ibuprofen, naproxen, diclofenac), medications that affect the oesophageal movement (nitrates) and certain antidepressants (tricyclic agents).
- **Lifestyle changes:** these all focussed on reducing acid reflux and include weight loss, reduction in alcohol intake, stopping smoking, reducing portion sizes and avoiding eating within three hours of going to bed.
- **Surgical options:** if the cause of the GORD is a hiatus hernia and if medication and lifestyle intervention do not help, a surgical procedure called a Nissen Fundoplication may be carried out. This is where the upper part of the stomach is wrapped and stapled around the lower oesophagus. Another option is a procedure known as LINX, where a bracelet of magnetic beads is wrapped around the lower oesophagus, to narrow it.

DOES BARRETT'S OESOPHAGUS NEED TO BE MONITORED AND, IF SO, HOW?

Monitoring Barrett's Oesophagus is a vital and lifelong part of treatment. This is because even if no dysplasia is found on biopsy at one endoscopy, this does not mean the patient will never get dysplasia or cancer in the future. Patients are usually entered into a surveillance programme which ensures regular and appropriate monitoring, usually by endoscopy, although this does depend on fitness and other medical risk factors. The frequency of surveillance endoscopy varies from person to person and is based upon the type and length of the abnormal lining seen. In cases where no dysplasia cells are seen endoscopy may only be needed every 2-5 years. Those with very long segments of Barrett's (over 10cm) are also often referred to specialist centres as this means an increased risk of the development of oesophageal cancer.

HOW DOES BARRETT'S OESOPHAGUS AFFECT YOU OVER TIME?

Some patients with Barrett's Oesophagus may have good control of symptoms, but some patients may experience worsening symptoms, and may need surgical treatment despite medications. Overall, 1 in every 10-20 patients with Barrett's oesophagus will develop cancer over 10-20 years

WHAT IMPACT CAN BARRETT'S OESOPHAGUS HAVE ON YOUR LIFE?

The diagnosis of Barrett's Oesophagus can affect a person in many ways. These include the complications of the condition and its overall impact on general wellbeing due to the symptoms and fear of cancer. Complications include:

- **Development of cancer of the oesophagus:** symptoms to watch out for include persistence of reflux, difficulty swallowing, unexplained weight loss, bringing up blood or change in voice. If any of these are experienced, then a doctor should be consulted. Further tests may be carried out and if cancer is detected, it may be treated endoscopically, with surgery or with chemotherapy, depending on the stage of the cancer (the stage of a cancer describes how big the tumour is and how far it has grown).

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- **Narrowing of the oesophagus (strictures):** these can create difficulty swallowing and sometimes weight loss due to decrease food intake. Strictures can be treated by dilating them during endoscopy, but this can result in inflammation and ulceration of the oesophagus leading to bleeding. This can cause patients to vomit up blood or pass black, tarry, offensive stools. If these symptoms occur, medical attention must be sought immediately.

Barrett's Oesophagus can affect your life in the short and long term via day to day symptoms (see above) and treatment side effects, added to which there is also the ongoing fear of developing cancer. All of these things can cause major upset, frustration and feelings of hopelessness. If you are experiencing any of these feeling, it is important to let the doctor know so that appropriate support can be offered. In addition, many specialist centres run nurse-led patient groups where you can exchange information, advice and support one another.

WHAT FURTHER RESEARCH NEEDS TO BE DONE ON BARRETT'S OESOPHAGUS?

Several research areas are needed to improve the treatment of Barrett's Oesophagus. Early diagnosis is a key strategy in cancer research, and work using non-endoscopic methods to find Barrett's include saliva biomarkers and breath testing as well as the Cytosponge. This is a sponge on a string that is swallowed as a capsule and opens up in the stomach. The sponge then collects cells from the oesophagus when drawn back up the oesophagus. There is also work needed to assess more accurately which patients are likely to progress to cancer, improving the quality of surveillance endoscopy and the improving access to specialist centres for treatment.



WHAT TO ASK YOUR DOCTOR?

- May I be referred to a dietitian to see if there are any changes to my diet that may help with my symptoms?
- Are there any other medications I can try? If not, am I suitable for surgery?
- How often do I need an endoscopy?
- Is my ongoing surveillance appropriate?
- Is there a Barrett's Oesophagus patient support group or specialist nurse in my area?

For more information about research in this area please contact Guts UK.

gutscharity.org.uk | 020 7486 0341 | info@gutscharity.org.uk

About Guts UK

Guts UK's vision is of a world where digestive disorders are better understood, better treated and everyone who lives with one gets the support they need.

Our mission as Guts UK is to provide expert information, raise public awareness of digestive health and transform the landscape for research into our digestive system to help people affected by diseases of the gut, liver and pancreas.

WE ARE PASSIONATE ABOUT OUR GUTS. COME ON BOARD AND JOIN US.

This charity was set up to change something – to increase the levels of research into diseases of the gut, liver and pancreas so no one suffers in silence or alone. Since 1971 we have funded almost 300 projects and invested £14 million into medical research that leads to better diagnoses and treatments for the millions of people who are affected by digestive diseases and conditions.

But we still have much more to do.

Will you support Guts UK?

Give a donation today and play your part in the next vital research that will change things for future generations of people affected by the frustration and misery of digestive disease.

Together we can make more important change happen. Vital answers, new treatments and hope.



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