# Barrett's Esophagus

# Definition & Facts

## What is Barrett's Esophagus?

Barrett's esophagus is a condition in which tissue that is similar to the lining of your intestine replaces the tissue lining your esophagus. Doctors call this process intestinal metaplasia .

## Are people with Barrett's esophagus more likely to develop cancer?

People with Barrett's esophagus are more likely to develop a rare type of cancer called esophageal adenocarcinoma .

The risk of esophageal adenocarcinoma in people with Barrett's esophagus is about 0.5 percent per year.[1] Typically, before this cancer develops, precancerous cells appear in the Barrett's tissue. Doctors call this condition dysplasia and classify the dysplasia as low grade or high grade.

You may have Barrett's esophagus for many years before cancer develops. Visit the National Cancer Institute to learn more about esophageal adenocarcinoma .

## How common is Barrett's esophagus?

Experts are not sure how common Barrett's esophagus is. Researchers estimate that it affects 1.6 to 6.8 percent of people.[2]

## Who is more likely to develop Barrett's esophagus?

Men develop Barrett's esophagus twice as often as women, and Caucasian men develop this condition more often than men of other races.[1] The average age at diagnosis is 55.[3] Barrett's esophagus is uncommon in children.[3]

## References

[1] Johnston MH. Barrett esophagus. Medscape website. http://emedicine.medscape.com . Updated April 7, 2014. Accessed July 22, 2014.

[2] Gilbert EW, Luna RA, Harrison VL, Hunter JG. Barrett's esophagus: a review of the literature. *Journal of Gastrointestinal Surgery*. 2011;15:708–718.

[3] Spechler SJ, Souza RF. Barrett esophagus and esophageal adenocarcinoma. In: Yamada T, ed. *Textbook of Gastroenterology*. Vol. 1. West Sussex, UK: Wiley-Blackwell; 2009: 826–848.

# Symptoms & Causes

## What are the symptoms of Barrett's esophagus?

While Barrett's esophagus itself doesn't cause symptoms, many people with Barrett's esophagus have gastroesophageal reflux disease (GERD), which does cause symptoms.

## What causes Barrett's esophagus?

Experts don't know the exact cause of Barrett's esophagus. However, some factors can increase or decrease your chance of developing Barrett's esophagus.

## What factors increase a person's chances of developing Barrett's esophagus?

Having GERD increases your chances of developing Barrett's esophagus. GERD is a more serious, chronic form of gastroesophageal reflux, a condition in which stomach contents flow back up into your esophagus. Refluxed stomach acid that touches the lining of your esophagus can cause heartburn and damage the cells in your esophagus.

Between 10 and 15 percent of people with GERD develop Barrett's esophagus.[4]

Obesity—specifically high levels of belly fat—and smoking also increase your chances of developing Barrett's esophagus. Some studies suggest that your genetics, or inherited genes, may play a role in whether or not you develop Barrett's esophagus.

## What factors decrease a person's chances of developing Barrett's esophagus?

Having a *Helicobacter pylori* (*H. pylori*) infection may decrease your chances of developing Barrett's esophagus. Doctors are not sure how *H. pylori* protects against Barrett's esophagus. While the bacteria damage your stomach and the tissue in your duodenum, some researchers believe the bacteria make your stomach contents less damaging to your esophagus if you have GERD.

Researchers have found that other factors may decrease the chance of developing Barrett's esophagus, including

- frequent use of aspirin or other nonsteroidal anti-inflammatory drugs

- a diet high in fruits, vegetables, and certain vitamins

## References

[4] Phillips WA, Lord RV, Nancarrow DJ, Watson DI, Whiteman DC. Barrett's esophagus. *Journal of Gastroenterology and Hepatology.* 2011;26:639–648.

# Diagnosis

## How do doctors diagnose Barrett's esophagus?

Doctors diagnose Barrett's esophagus with an upper gastrointestinal (GI) endoscopy and a biopsy. Doctors may diagnose Barrett's esophagus while performing tests to find the cause of a patient's gastroesophageal reflux disease (GERD) symptoms.

### Upper GI endoscopy and biopsy

In an upper GI endoscopy, a gastroenterologist, surgeon, or other trained health care provider uses an endoscope to see inside your upper GI tract, most often while you receive light sedation. The doctor carefully feeds the endoscope down your esophagus and into your stomach and duodenum. The procedure may show changes in the lining of your esophagus.

The doctor performs a biopsy with the endoscope by taking a small piece of tissue from the lining of your esophagus. You won't feel the biopsy. A pathologist examines the tissue in a lab to determine whether Barrett's esophagus cells are present. A pathologist who has expertise in diagnosing Barrett's esophagus may need to confirm the results.

Barrett's esophagus can be difficult to diagnose because this condition does not affect all the tissue in your esophagus. The doctor takes biopsy samples from at least eight different areas of the lining of your esophagus.

## Who should be screened for Barrett's esophagus?

Your doctor may recommend screening for Barrett's esophagus if you are a man with chronic—lasting more than 5 years—and/or frequent—happening weekly or more—symptoms of GERD and two or more risk factors for Barrett's esophagus. These risk factors include

- being age 50 and older
- being Caucasian
- having high levels of belly fat
- being a smoker or having smoked in the past
- having a family history of Barrett's esophagus or esophageal adenocarcinoma

# Treatment

## How do doctors treat Barrett's esophagus?

Your doctor will talk about the best treatment options for you based on your overall health, whether you have dysplasia , and its severity. Treatment options include medicines for GERD, endoscopic ablative therapies, endoscopic mucosal resection, and surgery.

### Periodic surveillance endoscopy

Your doctor may use upper gastrointestinal endoscopy with a biopsy periodically to watch for signs of cancer development. Doctors call this approach surveillance.

Experts aren't sure how often doctors should perform surveillance endoscopies. Talk with your doctor about what level of surveillance is best for you. Your doctor may recommend endoscopies more frequently if you have high-grade dysplasia rather than low-grade or no dysplasia. Read whether people with Barrett's esophagus are more likely to develop cancer.

### Medicines

If you have Barrett's esophagus and gastroesophageal reflux disease (GERD), your doctor will treat you with acid-suppressing medicines called proton pump inhibitors (PPIs). These medicines can prevent further damage to your esophagus and, in some cases, heal existing damage.

PPIs include

- omeprazole (Prilosec, Zegerid)
- lansoprazole (Prevacid)
- pantoprazole (Protonix)
- rabeprazole (AcipHex)
- esomeprazole (Nexium)
- dexlansoprazole (Dexilant)

All of these medicines are available by prescription. Omeprazole and lansoprazole are also available in over-the-counter strength.

Your doctor may consider anti-reflux surgery if you have GERD symptoms and don't respond to medicines. However, research has not shown that medicines or surgery for GERD and Barrett's esophagus lower your chances of developing dysplasia or esophageal adenocarcinoma .

### Endoscopic ablative therapies

Endoscopic ablative therapies use different techniques to destroy the dysplasia in your esophagus. After the therapies, your body should begin making normal esophageal cells.

A doctor, usually a gastroenterologist or surgeon, performs these procedures at certain hospitals and outpatient centers. You will receive local anesthesia and a sedative. The most common procedures are the following:

- **Photodynamic therapy.** Photodynamic therapy uses a light-activated chemical called porfimer (Photofrin), an endoscope, and a laser to kill precancerous cells in your esophagus. A doctor injects porfimer into a vein in your arm, and you return 24 to 72 hours later to complete the procedure.

Complications of photodynamic therapy may include

- sensitivity of your skin and eyes to light for about 6 weeks after the procedure
- burns, swelling, pain, and scarring in nearby healthy tissue
- coughing, trouble swallowing, stomach pain, painful breathing, and shortness of breath.
- **Radiofrequency ablation.** Radiofrequency ablation uses radio waves to kill precancerous and cancerous cells in the Barrett's tissue. An electrode mounted on a balloon or an endoscope creates heat to destroy the Barrett's tissue and precancerous and cancerous cells.

Complications of radiation ablation may include

- chest pain
- cuts in the lining of your esophagus
- strictures

Clinical trials have shown that complications are less common with radiofrequency ablation compared with photodynamic therapy.

## Endoscopic mucosal resection

In endoscopic mucosal resection, your doctor lifts the Barrett's tissue, injects a solution underneath or applies suction to the tissue, and then cuts the tissue off. The doctor then removes the tissue with an endoscope. Gastroenterologists perform this procedure at certain hospitals and outpatient centers. You will receive local anesthesia to numb your throat and a sedative to help you relax and stay comfortable.

Before performing an endoscopic mucosal resection for cancer, your doctor will do an endoscopic ultrasound.

Complications can include bleeding or tearing of your esophagus. Doctors sometimes combine endoscopic mucosal resection with photodynamic therapy.

### Surgery

Surgery called esophagectomy is an alternative to endoscopic therapies. Many doctors prefer endoscopic therapies because these procedures have fewer complications.

Esophagectomy is the surgical removal of the affected sections of your esophagus. After removing sections of your esophagus, a surgeon rebuilds your esophagus from part of your stomach or large intestine. The surgery is performed at a hospital. You'll receive general anesthesia, and you'll stay in the hospital for 7 to 14 days after the surgery to recover.

Surgery may not be an option if you have other medical problems. Your doctor may consider the less-invasive endoscopic treatments or continued frequent surveillance instead.

# Eating, Diet, & Nutrition

## How can your diet help prevent Barrett's esophagus?

Researchers have not found that diet and nutrition play an important role in causing or preventing Barrett's esophagus.

If you have gastroesophageal reflux (GER) or gastroesophageal reflux disease (GERD), you can prevent or relieve your symptoms by changing your diet. Dietary changes that can help reduce your symptoms include

- decreasing fatty foods
- eating small, frequent meals instead of three large meals

Avoid eating or drinking the following items that may make GER or GERD worse:

- chocolate
- coffee
- peppermint
- greasy or spicy foods
- tomatoes and tomato products
- alcoholic drinks

**March 2017**