



Understanding Barrett's Esophagus

IMPROVING DIGESTIVE
HEALTH THROUGH
EXCELLENCE IN
ENDOSCOPY



What is Barrett's Esophagus?

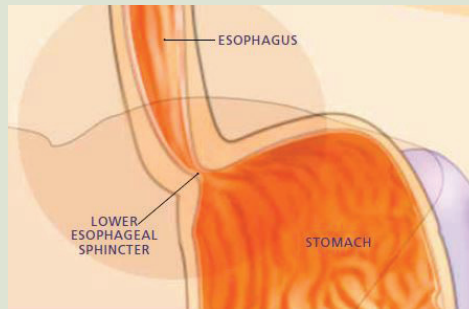
Barrett's esophagus is when the lining of the **esophagus** changes and becomes more like the lining of the **small intestine**. This change occurs just above the area where the esophagus is joined to the stomach.

Experts believe that Barrett's esophagus is caused by chronic inflammation related to Gastroesophageal Reflux Disease (GERD). Barrett's esophagus is more common in people who have had GERD for a long period of time or who developed it at a young age. The frequency or intensity of GERD symptoms, such as heartburn, does not affect the likelihood that someone will develop Barrett's esophagus.

Most patients with Barrett's esophagus will not develop cancer. But in some patients, a precancerous change in the tissue, called **dysplasia**, will develop. This precancerous change is more likely to develop into esophageal cancer.

In order to diagnose Barrett's esophagus, **biopsies** (tissue samples) must be taken during an endoscopy to find out if there has been a change in the lining of the esophagus.

Barrett's Esophagus occurs in the area where the esophagus is joined to the stomach.



Am I at risk for esophageal cancer?

The esophagus is the muscular tube that carries food and liquids from the mouth to the stomach. There are two main types of cancers that can occur in the esophagus:

- adenocarcinoma
- squamous cell cancer

Adenocarcinoma of the esophagus is increasing in the United States. This form of cancer occurs most often in people with Gastroesophageal Reflux Disease (GERD) and Barrett's esophagus. It is also more common in white males with increased body weight. The most common symptom of GERD is heartburn. Heartburn occurs at least twice a week in 20 percent of American adults. People who have GERD are at increased risk of developing esophageal cancer, but most of them will never develop it. In about 10-15 percent of patients with GERD, a change in the

lining of the esophagus occurs near the area where the esophagus and stomach join. When this happens, the condition is called Barrett's esophagus. Doctors believe that adenocarcinoma of the esophagus begins as Barrett's esophagus.

Squamous cell carcinoma is another cancer of the esophagus that occurs most commonly in individuals who smoke cigarettes, use tobacco products or drink alcohol. Squamous cell carcinoma is not related to GERD or Barrett's esophagus.

Who should be tested for Barrett's Esophagus?

Barrett's esophagus is twice as common in men as women. It tends to occur in middle-aged white men who have had heartburn for many years. In general, patients should be tested if they are older than 50 years of age and have had significant heartburn or have had to take medications regularly for a long

time to control heartburn.

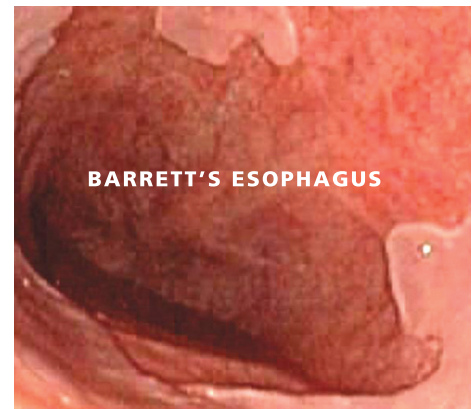
If the first screening test does not find Barrett's esophagus tissue, then there is no need to repeat the test. There is a lot of ongoing research in this area. Check with your doctor on the latest recommendations for testing.

How does my doctor test for Barrett's Esophagus?

Your doctor will first perform an upper endoscopy to see if Barrett's esophagus is present. During an upper endoscopy, the physician passes a thin, flexible tube called an endoscope through your mouth and into the esophagus, stomach and duodenum (the first part of the small intestine). The tip of the endoscope has a camera and a light that displays images onto a video monitor. This allows the physician to see if there are any abnormal changes in the lining of the esophagus.

Barrett's esophagus looks different than the normal lining of the esophagus. It can be seen during endoscopy. If your doctor suspects that Barrett's esophagus tissue is present, then biopsies (tissue samples) will be taken to confirm the diagnosis. These tissue samples will also be examined for abnormal cells, called dysplasia, which cannot be determined by endoscopy alone.

Taking biopsies from the esophagus makes the procedure a little longer, but it does not hurt and it rarely causes complications. Your doctor generally can tell you the preliminary results of



the endoscopy after the procedure, but you will have to wait a few days for the biopsy results.

What is dysplasia?

When abnormal changes in the cells from the biopsies are seen under a microscope, it is called dysplasia. In Barrett's esophagus, dysplasia is diagnosed by biopsies done during upper endoscopy. Dysplasia increases the risk of developing esophageal cancer.

Dysplasia is usually described as "high-grade," "low-grade" or "indefinite (or indeterminate) for dysplasia."

- In **high-grade dysplasia**, abnormal changes and growth patterns are seen in many of the cells.
- **Low-grade dysplasia** means that there are some abnormal changes in a few of the cells seen, but that their growth pattern is still normal.
- **Indefinite (or indeterminate) for dysplasia** means that the abnormal changes seen in the tissue may be caused by dysplasia, inflammation or swelling.

In Barrett's esophagus without dysplasia, the risk for cancer is very low. Only about 1 out of 500 people per year (or 0.2 percent) will develop cancer.

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Barrett's Esophagus may be related to GERD (Gastroesophageal Reflux Disease), which occurs when contents in the stomach flow back up into the esophagus due to the valve between the stomach and the esophagus (called the lower esophageal sphincter) not closing properly.



Since its founding in 1941, ASGE has been dedicated to advancing patient care and digestive health by promoting excellence in gastrointestinal endoscopy. This information is the opinion of and provided by the American Society for Gastrointestinal Endoscopy.

Gastrointestinal endoscopy helps patients through screening, diagnosis and treatment of digestive diseases. Visit www.asge.org to learn how you can support GI endoscopic research, education and public outreach through a donation to the ASGE Foundation.

For more information, visit www.asge.org or www.screen4coloncancer.org

This risk increases for patients with low-grade dysplasia (2 out of 500 persons per year) or high-grade dysplasia (25 out of 500 persons per year).

If dysplasia is found, your doctor might recommend one of the following:

- a) more frequent endoscopies;
- b) a procedure that attempts to destroy or remove the Barrett's tissue or;
- c) surgery for the esophagus.

Your doctor will recommend an option based on how advanced the dysplasia is and your overall medical condition.

If I have Barrett's Esophagus without dysplasia, how often should I have an endoscopy?

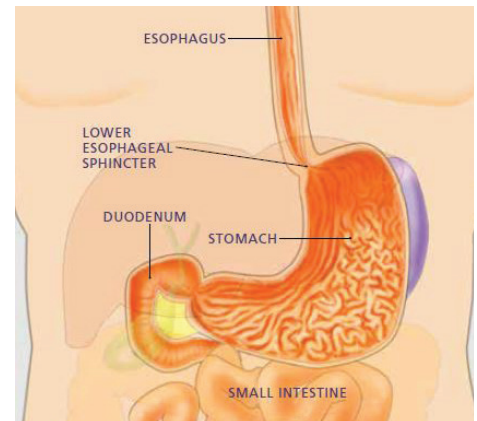
The risk of esophageal cancer developing in patients with Barrett's esophagus depends on whether any dysplasia is present in tissue samples that are taken. The diagnosis of Barrett's esophagus should not be a reason for alarm, but it may be a reason to have periodic upper endoscopy with biopsy of the Barrett's tissue.

If you have Barrett's esophagus and your first two upper endoscopies with biopsies (performed about one year apart) do not show dysplasia, then upper endoscopy with biopsy should be repeated every three to five years.

If your biopsy shows dysplasia, then your doctor will make further recommendations regarding the next steps.

How is Barrett's Esophagus with dysplasia treated?

Medications can effectively control the symptoms of GERD, but cannot reverse the presence of Barrett's esophagus or eliminate the risk of cancer. There are some endoscopic and surgical treatments available for Barrett's esophagus with dysplasia. Endoscopic



In an upper endoscopy, the physician passes a thin, flexible tube called an endoscope through your mouth and into the esophagus, stomach and duodenum (the first part of the small intestine).

treatments include destroying tissue by applying heat (such as radiofrequency ablation, or RFA) or cold energy (cryotherapy), or removing abnormal Barrett's tissue (endoscopic mucosal resection or EMR). Although rare, there are potential risks from these treatments such as narrowing of the esophagus, bleeding and perforation (a hole or tear in the lining of the esophagus).

Discuss these treatments with your gastroenterologist to see if you are a candidate. There is a lot of research being done on this subject. Talk with your doctor about the latest recommendations and guidelines.

Important Reminder: This information is intended only to provide general guidance. It does not provide definitive medical advice. It is very important that you consult your doctor about your specific condition.

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