

BARRETT'S ESOPHAGUS

What is Barrett's Esophagus (BE)?

Barrett's Esophagus (BE) is a complication of chronic gastroesophageal reflux disease (GERD). The normal valve between the esophagus and stomach is incompetent and stomach fluid causes changes in the type of cells in the esophagus. The normal squamous epithelial cells of the esophagus become metaplastic and look like intestinal cells under the microscope. The appearance of the esophageal lining on upper endoscopy can be suggestive of BE, but the actual diagnosis of BE is made after looking at the esophageal cells under a microscope in the pathology lab.

Treatment of Barrett's Esophagus requires an interdisciplinary approach that draws on various medical specialties. At BMC, physicians in our Center for Minimally Invasive Esophageal Therapies provide comprehensive, quality care including medical oncology, radiation oncology, thoracic surgery, gastroenterology, pathology, pulmonary medicine and radiology.

BE is estimated to occur in 2 – 5.6 % of people in the United States. BE is a known risk factor for precancerous dysplasia, which can then progress to esophageal adenocarcinoma (EAC). EAC develops in about 0.5% of people with BE annually. BE increase the risk of esophageal adenocarcinoma by 11-40 times when compared to patients without BE. When patients are diagnosed with BE, they are advised to enter a surveillance program of repeat endoscopies on a regular schedule to look for precancerous dysplastic changes or early esophageal cancer. The survival rate of all patients presenting with EAC is 15% at five years, but when EAC is diagnosed early, then cure is possible.

What are the Symptoms?

Typical symptoms of GERD include heartburn and regurgitation. BE occurs in about 10% of U.S. adults with heartburn. GERD however can be silent that is without heartburn or regurgitation, and BE can result in the absence of symptoms. In addition a loss of typical GERD symptoms like heartburn can be suggestive of the development of BE.

Barrett's esophagus patients may have symptoms of:

- Heartburn and regurgitation
- Unexplained weight loss or loss of appetite

What are the Causes?

Barrett's esophagus is thought to be caused mainly by gastroesophageal reflux disease (GERD), which is persistent reflux occurring at least twice a week. Patients generally experience a feeling of heartburn or acid indigestion, and they may taste food or fluid in the back of the mouth. The use of over-the-counter or prescription acid-reducing drugs may decrease the risk of Barrett's esophagus.

How is Barrett's Esophagus Diagnosed?

Diagnosis is often difficult, because symptoms may be limited. The main diagnostic tool is upper endoscopy:

Endoscopy

You will receive an intravenous sedative and pain medication. Once comfortable, the physician will then examine the area using an endoscope—a lighted tube with a small camera at the end. The physician will be able to view any abnormalities and take a tissue samples (biopsies) if necessary.

How is Barrett's Esophagus Treated?

Barrett's esophagus may be treated in a number of ways. These include:

- **Surveillance.** Your physician may opt for watchful waiting to see if and how your cells change.
- **Mucosal Ablation**

For this procedure, a physician uses a special probe to apply heat energy to diseased cells to destroy them and encourage healthy cells to replace them.

- **Radiofrequency Ablation with Barx ablation**

Heat energy is applied to any areas of intestinal metaplasia to destroy the cells and allow replacement with normal appearing esophagus cells.

- **Cryoablation**

Cryoablation, sometimes called cryotherapy, is a minimally invasive treatment used to destroy diseased cells in the esophagus caused by esophageal cancer and/or Barrett's esophagus. For cryoablation, a physician inserts a small tube (endoscope) through your mouth and into your esophagus. Once the endoscope is in place, liquid nitrogen is sprayed through the endoscope into the esophagus. The liquid nitrogen freezes the lining of your esophagus. The frozen cells die and are replaced by healthy cells. Cryoablation is used to treat Barrett's esophagus with high-grade dysplasia, and some early stage esophageal cancers. It can also be used to improve symptoms of advanced cancers. These symptoms include difficulty swallowing and bleeding.

- **Endoscopic Mucosal Resection**

Endoscopic mucosal resection, or EMR, is one of the newer, more minimally invasive techniques we offer for our esophageal cancer patients who have small tumors that have not spread outside of the esophagus. It may also be beneficial for patients with Barrett's esophagus. In this simple procedure, we are able to locate, remove, and examine cancerous or precancerous lesions of the esophagus. The mucosa is the innermost lining of the esophagus, and it extends down into your gastrointestinal tract. Cancers in this tract often originate in the mucosa, thus making visualization and access to it essential for diagnosis and treatment.

The following lifestyle changes may be helpful in controlling reflux:

- Eating smaller, more frequent meals
- Controlling your weight and avoiding obesity
- Raising the head of your bed 30 degrees
- Avoiding lying down 3-4 hours after eating
- Quitting smoking

Taken from Boston Medical Center