

# BARRETT'S ESOPHAGUS, GASTROESOPHAGEAL REFLUX DISEASE (GERD) AND ESOPHAGEAL CANCER

**B**arrett's Esophagus is a serious complication of chronic, severe gastroesophageal reflux disease (GERD), which is sometimes called acid reflux. Named for the thoracic surgeon who first described the condition in 1950, Barrett's Esophagus can lead to the development of cancer of the esophagus.

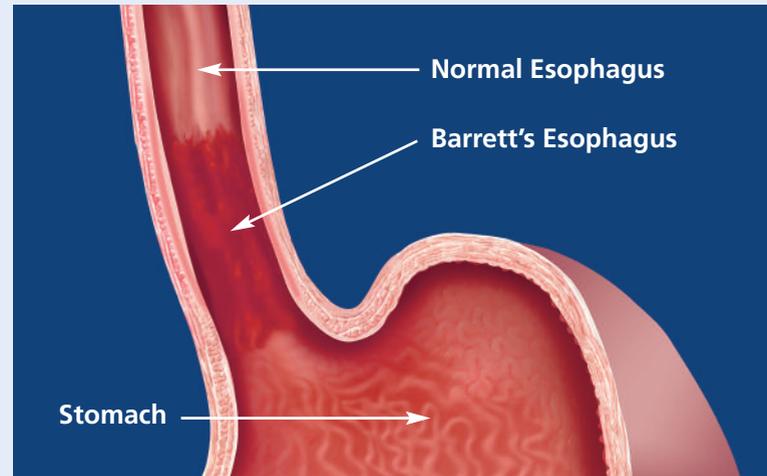
The Valley Hospital Center for Barrett's Esophagus and GERD provides cutting-edge diagnostic, treatment, and management services for patients with Barrett's Esophagus, and GERD. Through our research studies, we aim to understand how Barrett's Esophagus occurs, how we can enhance the treatments we offer, and how we can provide our patients with improved clinical outcomes.

Our Center is one of most comprehensive on the East Coast and unique to northern New Jersey. Our gastroenterologists and thoracic surgeons are highly skilled and experienced in using the most advanced minimally invasive procedures and state-of-the-art technology to treat patients with GERD and Barrett's Esophagus so these conditions do not lead to esophageal cancer.

**O**ver the past several decades, the surgical removal of polyps in the colon before they progress into colon cancer has saved countless lives. Similarly, the development of esophageal cancer may be able to be stopped with the removal of pre-cancerous cells and lesions in the lining of the esophagus – a condition called Barrett's Esophagus.

## WHAT IS BARRETT'S ESOPHAGUS?

Barrett's Esophagus is a serious complication of GERD and is recognized as a major risk factor for developing cancer of the esophagus. The esophagus is part of the gastrointestinal (digestive) system. It is a long tube in the chest that carries



food from the mouth into the stomach. The cells lining the esophagus differ from those lining the stomach or intestines. When stomach acid backs up from the stomach into the esophagus, this acid reflux can stimulate growth of stomach or intestinal-type cells in the esophageal lining. Once these abnormal cells are found in the esophagus, the condition is known as Barrett's Esophagus. These cells can continue to change and eventually alter the lining, causing a pre-malignant condition called dysplasia, which can lead to cancer of the esophagus.

## WHY IS IT IMPORTANT TO DETECT ESOPHAGEAL CANCER EARLY?

The incidence of a certain type of esophageal cancer called esophageal adenocarcinoma is rising faster than that of any other cancer in the United States, according to research studies performed at the National Institutes of Health. Once diagnosed, the prognosis for esophageal adenocarcinoma is poor, with only approximately 13 percent of patients surviving five years from the time of diagnosis. One reason is that the cancer is usually diagnosed at an advanced stage. Unless a patient is monitored regularly by endoscopy, esophageal cancer may not be detected unless a tumor has grown large enough to obstruct the esophagus. That's why regular monitoring for patients with Barrett's Esophagus is so important because steps can be taken to prevent the progression into cancer.

## WHAT RESEARCH IS BEING PERFORMED?

While current treatments are aimed at both getting rid of the abnormal esophageal lining of Barrett's Esophagus as well as reducing acid reflux, future efforts are needed to determine which precise abnormalities in the esophageal lining cells predispose patients to the development of esophageal cancer. Physicians at the Center for Barrett's Esophagus and GERD are actively investigating these abnormalities using sophisticated laboratory techniques. It is hoped that this knowledge will provide insights for the development of future therapies for patients with Barrett's Esophagus.

## FACTS AND FIGURES

- Approximately one in 10 patients with gastroesophageal reflux disease (GERD) will develop Barrett's Esophagus.
- Some 2 million Americans have Barrett's Esophagus, which strikes about 10,000 people a year.
- Barrett's Esophagus is most prevalent in middle-aged and elderly white men.
- Barrett's Esophagus has been shown to be a precursor to esophageal cancer.
- Barrett's Esophagus progresses to cancer at approximately the same rate that colon polyps progress to colon cancer.

## FOR MORE INFORMATION

To learn more about Barrett's Esophagus, or to take advantage of the programs and new technologies offered at The Valley Hospital Center for Barrett's Esophagus and GERD, call 201-634-5789.

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## WHAT ARE THE SYMPTOMS OF BARRETT'S ESOPHAGUS?

The most common is severe heartburn associated with GERD. But some patients with Barrett's Esophagus notice a reduction in symptoms of acid reflux because the new cells that formed in the esophageal lining resemble those of the stomach or intestines. These abnormal cells are accustomed to contact with acid and may act as a defense mechanism against the acid.

## HOW IS BARRETT'S ESOPHAGUS DIAGNOSED?

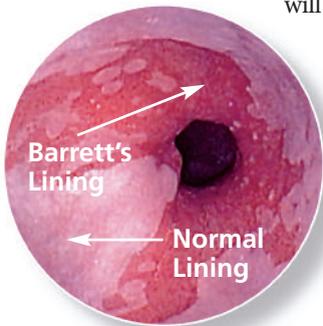
If you suffer from severe heartburn and acid reflux, you should be evaluated by a gastroenterologist, a physician who specializes in diagnosing and treating illnesses of the gastrointestinal system. At the Center for Barrett's Esophagus and GERD, we can recommend a Valley Hospital gastroenterologist from our schedule of physicians who are affiliated with our Center.

Your gastroenterologist will recommend an endoscopic examination of your esophagus. While you are sedated, he/she will place a thin, fiberoptic flexible scope that contains a tiny camera down your throat and into your esophagus. He/she

will be able to view your esophagus using the endoscope. If the lining is red instead of light pink, Barrett's Esophagus might be present.

To confirm the diagnosis, your gastroenterologist will remove several samples of abnormal tissue during the endoscopy using special instru-

ments. These samples will be examined under a microscope by a Valley pathologist to check for abnormal cellular changes, which would indicate Barrett's Esophagus, or dysplasia, if the condition has advanced.



## WHAT TREATMENTS ARE AVAILABLE?

If you are diagnosed with Barrett's Esophagus, you will need to be monitored regularly with endoscopies and biopsies according to a schedule set by your gastroenterologist.

Alternatively, technology has evolved so that your doctor may be able to actually remove the abnormal lining, so that the normal lining grows back. What approach is best depends on the individual patient.

The Valley Hospital Center for Barrett's Esophagus and GERD offers a full spectrum of treatments for both acid reflux and Barrett's Esophagus. Treating reflux does not cause the Barrett's Esophagus to go away so therapies must be aimed at both the acid reflux and the abnormal esophageal lining.

### Lifestyle Changes

There are steps you can take to avoid acid reflux:

- Avoid eating within three hours of bedtime.
- Avoid smoking and tobacco products.
- Avoid fatty foods, milk, chocolate, mints, caffeine, carbonated drinks, citrus fruits and juices, tomato products, pepper seasoning, and alcohol (especially red wine).
- Eat smaller meals. Do not bend over after meals.
- Avoid tight clothing.
- Have your physician check your medications. Certain ones can weaken the muscular ring of the lower end of the esophagus, which prevents acid reflux.
- Elevate the head of your bed or mattress 6 to 8 inches to help keep acid in the stomach by gravity when sleeping. Extra pillows by themselves are not very helpful.
- If overweight, lose weight to help relieve upward pressure on the stomach.

### Medications

Your doctor may prescribe medication to reduce acid. These include Zantac, Pepcid, Axid, Prevacid, Prilosec, Aciphex, Protonix, and Nexium. These medications reduce exposing the esophagus to acid, thereby eliminating or reducing symptoms of heartburn and regurgitation. However, no scientific evidence suggests that taking these medications will prevent the development of esophageal dysplasia or cancer.

### Fundoplication Surgery

If lifestyle changes or medications do not reduce GERD, you may benefit from a procedure called fundoplication to strengthen the lower esophageal sphincter and prevent acid reflux. Thoracic surgeons at The Center for Barrett's Esophagus and GERD are highly skilled in performing this minimally invasive laparoscopic procedure through several small keyhole incisions in the abdomen. Fundoplication requires only a one-night stay in the hospital. Patients recuperate faster with minimally invasive surgery and are back to their normal activities within one week or so. Long-term medication to control GERD is usually not needed after fundoplication.

### Radiofrequency Ablation

Radiofrequency ablation (RFA) is a new, safe procedure that destroys the abnormal esophageal lining in Barrett's Esophagus with heat energy. Gastroenterologists at the Center for Barrett's Esophagus and GERD are experienced in using the state-of-the-art HALO 360 system to remove the abnormal lining.

RFA is performed during a standard endoscopy. A special catheter with a balloon tip is inserted into the Barrett's segment and fired. RFA is completely effective in eliminating the abnormal esophageal lining in 85 percent of patients, with minimal side effects. Following RFA, you will need to continue to control GERD so that normal cells can grow back in the lining of your esophagus. If not controlled, the abnormal lining may grow back.



Radiofrequency Ablation

Researchers at the Center for Barrett's Esophagus and GERD are conducting ongoing studies to determine if RFA will prevent the development of esophageal cancer. These studies will contribute to the medical knowledge of the technique and its long-term effectiveness.

### Endoscopic Mucosal Resection

If during your endoscopy, your gastroenterologist notices a nodule within the Barrett's Esophagus, he/she will remove it using a technique called endoscopic mucosal resection (EMR). Using special instruments, the physician suctions the nodule and then removes it with a small snare. A pathologist will examine the nodule to determine if cancer is present.

### Photodynamic Therapy

Photodynamic therapy is a technique that is sometimes recommended to remove abnormal esophageal lining, but it is not used at the Center for Barrett's Esophagus and GERD. Our physicians have determined that radiofrequency ablation is much safer, more effective, and results in fewer side effects than photodynamic therapy.

### Cancer Surgery

If cancerous cells or high-grade dysplasia is found within the Barrett's Esophagus, your physician will most likely recommend that the lower portion of your esophagus be removed in a procedure called an esophagectomy. Our Medical Director and Director of the Department of Thoracic Surgery, Robert J. Korst, M.D., specializes in the surgical treatment of esophageal cancer. The extent of the surgery depends on where the cancer is located. If it is very early cancer, the procedure may be performed laparoscopically through keyhole incisions in the abdomen. If it has spread to nearby tissue, lymph nodes may also need to be removed during a traditional "open" surgery. Dr. Korst is highly skilled in performing both types of surgery and will tailor the procedure to what will be best for you.



Robert J. Korst, M.D.