Everyone needs acid in their system to help digest food, but when there is too much acid or if the acid travels out of the stomach and into the esophagus, harmful consequences may occur. Pain and a burning sensation in the chest caused by stomach acid is called heartburn.

Millions of people in the U.S. suffer from heartburn every year, including more than 44 percent of adults. In fact, acid reflux or gastro-esophageal reflux disease (GERD) is one of the most common causes of gastrointestinal complaints in the United States. At Atlanta Gastroenterology Associates (AGA), more than 23,000 new cases of reflux are diagnosed every year.

While heartburn is common, when the symptoms last for more than a few days or months, we diagnose this as GERD. This is a chronic, but treatable condition where too much acid is entering the lower esophagus causing inflammation, ulcerations, and even cancerous changes. Treatment typically includes acid reducers and lifestyle changes, such as eliminating caffeine, chocolate and spicy foods from the diet and not eating before bed to help reduce reflux symptoms. For patients who have had reflux for more than five years, an upper endoscopy is recommended to assess severity and to uncover any pre-cancerous changes, such as Barrett’s esophagus.

Diagnosing Barrett’s Esophagus

Barrett’s esophagus is diagnosed in as many as 10 to 20 percent of patients with chronic reflux. The cause of Barrett’s is not completely understood, but may be due to a combination of genetic predisposition and GERD. Years of acid reflux can lead to an alteration in the normal esophageal lining and can significantly raise the risk of developing esophageal cancer. Patients most at risk are white males over the age of 50 who have had reflux for more than five years. Not surprisingly, these patients report symptoms dating back to their teenage years.

Barrett’s affects an estimated 3.3 million adults and is associated with a 30 to 125 times increased risk of esophageal cancer (adenocarcinoma). Research has shown that about 20 percent of heartburn patients will develop Barrett’s and perhaps 40 percent of those patients go undiagnosed.

Ironically, patients with Barrett’s esophagus may report an improvement in reflux symptoms because the Barrett’s lining is more resistant to the irritating effects of GERD. Barrett’s esophagus may cause the reflux symptoms to disappear, thus becoming a silent disease. Unfortunately, many Barrett’s patients do not seek medical evaluation until developing symptoms of esophageal cancer: trouble swallowing, chest pain, anemia, and weight loss.

A diagnosis of Barrett’s esophagus can only be done using upper endoscopy with direct biopsy of the esophageal lining. Microscopic analysis of the esophageal biopsies by a pathologist can confirm the diagnosis and estimate the severity of the condition.

There are no X-rays or other screening tests to detect Barrett’s esophagus. When a pathologist examines the Barrett’s tissue under the microscope, he or she will also decide if dysplasia is present. Dysplasia indicates there may be some increased risk of cancer and helps guide the physician in choosing appropriate management. A diagnosis of low-grade dysplasia indicates that less than 50 percent of the Barrett’s is dysplastic, while high-grade dysplasia indicates more than 50 percent of cells are abnormal. Finally, adenocarcinoma or esophageal cancer is diagnosed when the abnormal cells have begun to spread and multiply throughout the esophageal lining. Patients diagnosed with Barrett’s esophagus are usually placed into a surveillance program to

Using a special endoscope, a trained gastroenterologist removes abnormal tissue using radio frequency ablation or thermal energy without damaging nearby areas.

By William Lyday, M.D.
see if their condition worsens. Patients may also elect for early treatment to remove Barrett’s before cancerous changes can occur.

**Tracking and Treatment**

The traditional management of Barrett’s esophagus has included regular check-ups with endoscopy and biopsy of the esophageal lining. In the event of aggressive or cancerous changes on a biopsy, the patient may be referred to surgery for an esophagectomy. The “watch and wait” strategy attempts to catch changes before they become cancerous and has been the preferred approach to managing Barrett’s for many years.

However, an alternative strategy to Barrett’s management is emerging which aims to eliminate Barrett’s long before it becomes cancerous. Atlanta Gastroenterology Associates now offers a new treatment for Barrett’s called the HALO procedure. This therapy utilizes radio frequency ablation or thermal energy to remove abnormal Barrett’s tissue during an endoscopic procedure. The procedure is done using the endoscope along with a catheter that inflates a balloon inside the esophagus. The balloon has electrodes on the tip that send short bursts of energy into targeted tissue, allowing physicians to ablate diseased tissue without damage to nearby areas.

As a result of this new HALO technology, many patients are opting for early therapy in the hope of eliminating their Barrett’s and lowering their chances of esophageal cancer. While the technology is fairly new, the national results for eradicating Barrett’s with this procedure have been remarkable. At AGA, the HALO device has been used since its inception. Just as colonoscopy and polyp removal is now the standard for preventing colon cancer, the HALO procedure and endoscopic removal of Barrett’s may also become the standard approach to preventing esophageal cancer.

**What the Future Holds**

Genomic changes within Barrett’s occur long before the development of cancer. Research is showing that certain mutations carry a significantly higher risk for the development of dysplasia and esophageal cancer. Our ability to understand these early mutational patterns will help us determine which medications are most effective in preventing cancer, which patients should undergo early treatment to remove Barrett’s and which may need only minimal surveillance.

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**Board Certified**

**Internal Medicine and Gastroenterology**

Dr. Lyday is the Director of the Center for GI Health, a division of Atlanta Gastroenterology Associates specializing in cancer prevention, management and nutritional therapy. He is also the principle investigator for The Atlanta Barrett’s Registry, a multi-center national project which utilizes an online database to track patient outcomes and response to therapy over a period of years. The project will incorporate the latest technologies in treating Barrett’s using endoscopic ablation and other therapies along with molecular pathology as a means of ensuring eradication of Barrett’s.

After graduating from the University of Georgia in Athens, Dr. Lyday attended the University of North Carolina in Chapel Hill, where he received his medical degree. He completed his internship and residency in internal medicine at Carolinas Medical Center at the University of North Carolina in Charlotte, and completed his fellowship in gastroenterology and hepatology at the University of Nebraska in Omaha.

He is a member of the American College of Gastroenterology, the American Gastroenterological Association and the John B. Graham Research Society at the University of North Carolina. He serves as an assistant clinical professor of medicine at Emory University School of Medicine.

Dr. Lyday joined Atlanta Gastroenterology Associates in 2001 and sees patients at the Woodstock location.