



EAR, NOSE, & THROAT CENTER OF THE OZARKS

Laryngopharyngeal Reflux (LPR)

What is Laryngopharyngeal Reflux (LPR)?

When you eat something, it reaches the stomach by traveling down a muscular tube called the esophagus. Once food reaches the stomach, acid and pepsin (a digestive enzyme) are added so that digestion can occur. The esophagus has two sphincters (bands of muscle fibers that act as valves to close the tube). These sphincters help keep the contents of the stomach where they belong in the stomach. One sphincter is at the top of the esophagus (at the junction with the upper throat) and one is at the bottom of the esophagus (at the junction with the stomach). When these sphincters are not working properly, a phenomenon termed “reflux” can occur. The term reflux, meaning “backwards flow,” usually refers to the regurgitation of stomach contents up through the esophagus and/or into throat (pharynx) and voice box (larynx).

What is the difference between GERD and LPR?

Some people have an abnormal amount of reflux of stomach contents through the lower sphincter, which then pools in the esophagus. This is referred to as GERD, or Gastroesophageal Reflux Disease. If this occurs excessively, irritation and damage to the esophagus can occur—often resulting in prominent heartburn. If the refluxed stomach contents are not held in the esophagus by the upper sphincter, they can leak and cause irritation of the voice box (larynx) and throat (pharynx). This is referred to as LPR, or Laryngopharyngeal reflux. The structures in the throat are much more sensitive to stomach acid and digestive enzymes than the esophagus, so even small amounts of reflux into these areas can result in significant damage or irritation. It is important to understand that GERD and LPR are related, but distinctly different conditions in regards to cause, symptoms, and treatment. A person can have symptoms of GERD or LPR with or without the other.

Why don't I have heartburn or stomach problems?

This question is often asked by patients with LPR. Heartburn is generally associated with GERD but may or may not be present with LPR. The fact is that most patients with LPR do not experience significant heartburn. Heartburn occurs when the tissue in the esophagus becomes irritated. More than half the patients with LPR do not experience heartburn because the stomach acid does not stay in the esophagus long enough to irritate the esophagus and cause heartburn symptoms. The threshold for

irritating the sensitive tissues of the voice box and throat is much lower than that of the esophagus, so it is possible for these tissues to be irritated while the esophagus is not. Only irritation of the esophagus causes heartburn; irritation of the throat and voice box causes different symptoms. Most of the reflux events of LPR that can damage the throat happen without the patient ever knowing that they are occurring.

Common Symptoms of LPR:

- Hoarseness
- Frequent throat clearing
- Pain or irritation in the throat
- Feeling of lump in throat
- Problems while swallowing
- Bad/bitter taste in mouth (especially in morning)
- Chronic (ongoing) cough
- Asthma-like symptoms
- Excessive post-nasal drip or throat mucous

Some of the symptoms of LPR are related to direct contact of stomach contents with the tissues of the throat and voice box, while other symptoms are indirectly related to LPR such as the adverse consequences of frequent throat clearing and cough. The body's own attempts at protection from LPR can also cause symptoms. Examples of this are increased production of throat mucous or frequent spasm of the muscle of the upper esophageal sphincter (resulting in "lump" in throat or swallowing difficulty).

When does LPR occur?

Most prominently, LPR will occur during the daytime within 2 hours after meals--yet, it is known to occur throughout the day and night. GERD, if also present, seems to be more pronounced in the evening or at night (particularly while sleeping). LPR will take place independent of body position (very common while sitting or standing upright); however, it might be made worse by lying down flat soon after meals.

Diagnosis of LPR:

Your physician can identify various signs of LPR while examining your throat and voice box in the office. The following signs seen by the physician are strong indicators of LPR:

- Redness, irritation, and swelling of the larynx at particular locations
- Small ulcers or growths in larynx (granuloma, polyp, or nodule)
- Swelling of the vocal cords

In some cases, reflux symptoms may prompt the need for further visualization of the esophagus and/or voice box with a scope during a separate procedure performed with sedation or general anesthesia.

If the diagnosis of GERD or LPR is in question, a formal test to evaluate changes in acidity throughout the esophagus may be required. The 24-hour pH monitoring test is the gold standard for monitoring reflux events associated with LPR. This test requires a small tube to be positioned through the nose into the esophagus over 24 hours to monitor the amount and type of reflux during a typical day. If LPR is a concern, it is very important that this test be slightly modified from the usual routine used to test for GERD—specifically a “dual-probe” must be used so that acidity near the throat and voice box can be measured.

Treatment for LPRD:

Foods

You should pay close attention to how your system reacts to various foods. Each person may discover which foods cause an increase in reflux symptoms. The following foods have been shown to cause reflux in many people.

- Spicy, acidic, and tomato-based foods like Mexican or Italian food
- Acidic fruit juices such as orange juice, grapefruit juice, cranberry juice, etc
- Alcoholic beverages (including wine)
- Fast foods and other fatty foods
- Caffeinated beverages (coffee, tea, soft drinks)
- Chocolate
- Mint

Mealtime

- Do not gorge yourself at mealtime
- Eat meals several hours before bedtime
- Avoid bedtime snacks
- Do not exercise immediately after eating

Stress

Make time in your schedule to do activities that lower your stress level. It has been shown that even moderate stress can dramatically increase the amount of reflux.

Body Weight

Excessive body weight is one of the most important factors associated with reflux. If overweight, consider a realistic, healthy program to reduce body weight over the long term. Your primary care physician can assist with this.

Nighttime Reflux

If are having notable symptoms at night, elevate the head of your bed 4-6 inches with books, bricks, or a block of wood to achieve a 10 degree slant. Do not simply prop the body up with extra pillows.

Tight Clothing

Avoid tight belts and other restrictive clothing.

Smoking

If you smoke, stop! This dramatically worsens reflux and otherwise harms your throat and voice box.

Medications for LPR:

Most standard over-the-counter antacid medications (Rolaids®, Tums®, Gaviscon®, Mylanta®, etc) work by neutralizing acid in the stomach. These medications will not provide any lasting relief of reflux symptoms or reverse chronic irritation in the throat. If needed for immediate symptom relief of heartburn or indigestion, take one dose (as recommended on the label) at meals or at bedtime.

Other types of medications (Prilosec®, Prevacid®, Nexium®, Zantac®, Pepcid®) work by long-term (several hours) reduction of stomach acid production. In most cases, these medications, if properly administered, will successfully reverse many of the symptoms of LPR, yet they do not have an immediate effect. Some of these medications are available over-the-counter, but generally the most effective medications (called proton-pump inhibitors) and doses require a prescription.

If started on a medication for LPR, your physician may prescribe a treatment regimen that is relatively more aggressive or frequent at first, and then taper the treatment back after several weeks. **It is essential that you strictly adhere to your prescribed medication regimen for at least 4-6 weeks before any determination can be made about whether or not your medication is beneficial.**

Most proton-pump inhibitor medications (Prilosec®, Prevacid®, Nexium®, Protonix®) should be taken in the morning and/or afternoon at least 30 minutes before eating a meal. H₂-blocker acid reducing medications (Zantac®, Pepcid®, Tagamet®) are generally taken before bedtime. Be certain to pay close attention to the timing of your medications as prescribed by your physician.