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**LARYNGOPHARYNGEAL REFLUX**

**What is laryngopharyngeal reflux or LPR?**

LPR is a condition in which stomach contents including acid and digestive enzymes leak from the stomach up the esophagus and cause irritation of the larynx, trachea, and upper airway tissues. These tissues are approximately 100 times more sensitive to acid irritation than the esophagus, thus many people with this condition do not experience the classic symptoms of reflux such as heartburn.

LPR is characterized by symptoms of chronic cough, atypical wheezing or asthma, throat clearing, the feeling of "something stuck" in the throat, hoarseness or voice changes, difficulty swallowing, and postnasal drip. LPR is also significantly different from classic GERD or gastroesophageal reflux disease. In LPR, patients will reflux while upright whereas GERD patients typically reflux while laying flat. GERD patients classically experience heartburn, whereas most LPR patients do not. Most LPR patients experience upper airway symptoms such as those described above and in many cases they may have only one or two symptoms.

Most patients with LPR have been diagnosed with other maladies such as chronic sinusitis, allergies, or asthma. These conditions do co-exist with LPR, however if LPR is unrecognized and untreated, these other entities are difficult to treat medically. Many people who are professional voice users such as singers, teachers, lawyers, and salespeople experience LPR.

The diagnosis is made by careful history, and a physical examination of the larynx using videostroboscopy. This diagnostic study readily reveals characteristic findings of LPR.

Once the diagnosis is established, treatment involves dietary modifications, medications, and sometimes speech and swallowing therapy. For patients that are poorly responsive to initial medical therapy which involves treatment with proton pump inhibitor medications at least twice a day, we may obtain additional diagnostic studies which may consist of 24 hour ph monitoring of the esophagus, esophageal motility and manometry ( pressure testing of the esophagus) and esophagogastroduodenoscopy (EGD) performed by a gastroenterologist. There is a strong association between LPR and other conditions such as allergic rhinitis, chronic sinusitis, asthma, and obstructive sleep apnea.

These conditions need to be addressed and treated at the same time.

**Treatment**

It is important to realize that treatment takes months to see results. We believe that you must be treated for at least 4 months to notice significant improvement, and most people take 8 to 12 months before we can begin to taper off the medications. The primary dietary modifications include avoidance of CAFFEINE, CHOCOLATE, CARBONATED BEVERAGES, MILK PRODUCTS, and occasionally spicy foods. It is important to remember to not eat late into the evening. At least 4 hours between your last meal and bedtime. Also strict avoidance of smoking and alcohol use is paramount to controlling LPR.

*Certain medications will also cause reflux. These include: nonsteroidal anti-inflammatory medications, oral steroids, inhaled steroids, and muscle relaxants.*

The medications prescribed for reflux consist of a proton pump inhibitor drug. There are many of these on the market (Prilosec, Prevacid, Nexium, Aciphex, Protonix, etc.) These medications are pro-drugs-which means they need to be activated by food to be effective. They **must be taken** 30 to 45 minutes before breakfast (which should include some protein, not just coffee and toast), **and** 30 to 45 minutes before dinner. Additionally, some patients are treated with an additional antacid, an H-2 blocker (Zantac, Pepcid) before bedtime to control breakthrough acid production in the early hours of the morning.

We will typically treat patients for 8 weeks before a checkup. At that follow-up, we will determine the progress that has occurred and adjust the treatment accordingly. It is important to be cautious about your diet especially with consumption of caffeine and chocolate, and to take the medicines as closely prescribed with your diet as possible. It is possible to control LPR but it may take 8 to 10 months before full resolution occurs. As we learn more about this entity we will better be able to serve our patients. Currently research is underway to help us understand how LPR actually occurs, and certainly we will have more information in the coming years.