

GASTROESOPHAGEAL REFLUX (GERD); **LARYNGOPHARYNGEAL REFLUX (LPR)**

In order to understand the conditions of GERD and LPR, we must first look at some of the architecture of the body. Between the abdomen and the chest there is a domed layer of muscle and tendons known as the *diaphragm*. This might be thought of as both the ceiling of the abdominal cavity and the floor of the chest. The esophagus, the passage between the throat and the stomach, is in the chest above the diaphragm. The stomach lies below the diaphragm. There is a teardrop shaped opening, called a "hiatus", in the diaphragm where the esophagus and the stomach join. At this junction there is a marvelously complex system that keeps stomach acid out of the esophagus within the stomach where it belongs.

"GERD" is the general term for the symptom complex that occurs when acid escapes the protective mechanisms of the stomach and ascends into the esophagus. "LPR" is a more specific term describing the symptoms that occur as the acid affects the *larynx* or "voice box" and the *pharynx* or throat. LPR symptoms include hoarseness, dry cough, problems swallowing, and foreign-body sensation ("lump in the throat"). Whereas GERD can be treated by a primary care physician or gastroenterologist, LPR is often best-handled by an otolaryngologist (ENT).

To relieve the symptoms of LPR, we will often prescribe medicine that decreases the acid production. Many of these medications **must** be taken first thing in the morning on an **empty** stomach, or they are fairly ineffective due to decreased absorption into the bloodstream. Raising the pH of the stomach contents that might be refluxing into the esophagus (making it *more* neutral and *less* acidic) results in reducing the inflammation of the esophagus, larynx, and pharynx. It is not an overnight treatment, often taking weeks or months for complete resolution of symptoms. Be patient and consistently take your medicine as prescribed.

Lifestyle Modifications

- Raise the head of your bed. Gravity can help to hold stomach contents in the stomach, not in the esophagus. Use 6-inch cement blocks to elevate the head of your bed or use a foam wedge or extra pillows under your head and shoulders.
- Don't eat for at least 3 hours before going to bed, allowing food to pass out of the stomach into the intestines.
- Eat more frequent small meals instead of a few large meals.
- Lose weight if you are overweight. (Being overweight increases intra-abdominal pressure, which can aggravate reflux.)
- Stop smoking (or at least cut down). Nicotine stimulates acid production.

- Limit alcohol to 1 or 2 drinks per day. Avoid alcohol for 3 hours before bed, as this relaxes the sphincter muscle at the diaphragm which holds the stomach closed.
- Limit caffeinated beverages to 1 or 2 cups per day, preferably in the morning. Caffeine, like nicotine, stimulates acid production.
- Drink at least 8 “8-ounce” glasses of water each day.
- Don’t exercise too soon after eating.
- Limit highly-spiced foods, chocolate, peppermint, and high-fat foods. All have been shown to exacerbate reflux.
- **REMEMBER TO TAKE YOUR MEDICINE CONSISTENTLY.**

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