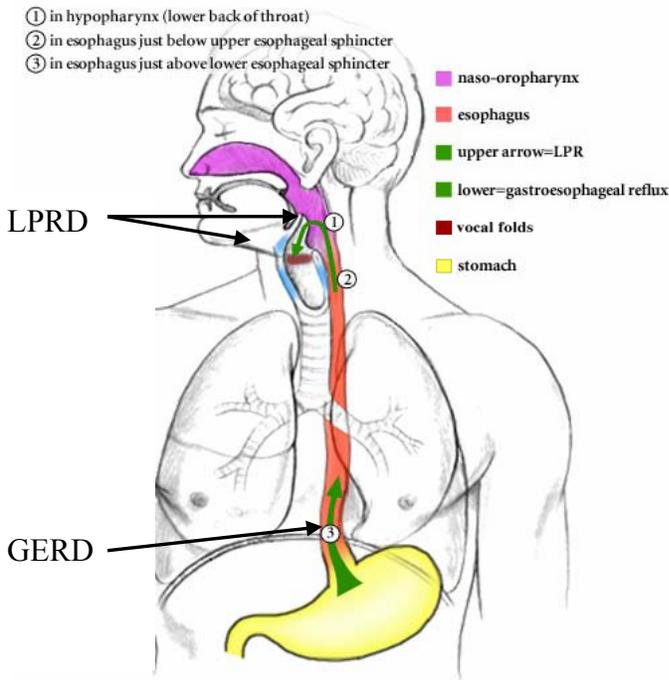


## Laryngopharyngeal Reflux Disease



Laryngopharyngeal (la-RING-go-fa-RIN-gee-al) reflux disease (**LPRD**) is the backflow of stomach contents (acid or non-acid) into the voice box (larynx) or the throat (pharynx). LPRD can occur during the day or night, in an upright position, or while lying down.

LPRD is different from gastroesophageal (GAS-tro-ee-sof-ah-GEE-al) reflux disease (GERD). With GERD, stomach acids flow back only as far as the esophagus (the swallowing tube that joins the throat to the stomach). Acid flow to the esophagus often causes heartburn (a painful, burning feeling in the chest).

## Symptoms

Saliva that is swallowed neutralizes acid in the esophagus but does not do the same for acid that gets into the voice box area. Patient with LPRD often have throat symptoms because the lining of the throat is more sensitive to irritation cause by acidic or non-acidic stomach fluids. Patients with LPRD usually have one or more of the following symptoms:

- chronic intermittent hoarseness
- frequent laryngitis
- throat clearing
- cough
- trouble swallowing
- a feeling like “something is in my throat that I can’t swallow”
- excessive throat mucus
- post-nasal drip
- spasms of the vocal cords causing noisy breathing or difficulty breathing

**LPRD can occur without classic heartburn in more than half of people and can be acidic or non-acidic** (bile, pepsin etc.). Studies have shown that 10-15% of people with isolated symptoms of LPRD can have pre-cancerous changes to the lining of the esophagus (Barrett’s esophagus) just like those with heartburn or GERD.

## Risk Factors

Certain habits and conditions can contribute to both LPRD and classic GERD:

- drinking caffeinated beverages
- eating before bedtime
- eating foods that are high in fat, tomato-based, or spicy
- lying down after eating
- obesity
- alcohol use
- smoking
- wearing tight clothing

## Diagnosis

If your doctor thinks that you may have LPRD, he or she will perform a throat exam after taking your medical history. The doctor will use a small mirror or a special camera called an endoscope to look at your voice box. If your throat and/or voice box is swollen and/or red, you may have LPRD that requires treatment.

## **Treatment**

Your doctor will offer the best treatment for you. **Generally, treatment for LPRD is most often a combination of lifestyle changes and medicine.** When indicated, testing may also include evaluating the ability of your esophagus to move food through, checking the acidity and amount of reflux in the esophagus, a screening endoscopic examination of the esophagus, and, if necessary, surgery.

## **Lifestyle Changes**

- If you use tobacco, please quit. Smoking can cause reflux.
- Maintain your ideal weight. Losing even a few extra pounds can be helpful.
- Avoid wearing tight clothing.
- Avoid lying down for 3 hours after eating.
- Avoid eating within 3 hours of bedtime.
- Limit your intake of caffeinated beverages, chocolate, mints, citrus, fruits and juices, tomato-base products, spicy and fatty foods, and alcohol, including wine.

These lifestyle changes do not have to be permanent or all-inclusive in most cases. Change the items that make the most sense to you and your lifestyle. LPRD will improve with the right treatment. Your doctor may remove some of these restrictions as your treatment progresses.

## **Medicine**

Most people with LPRD need medicine to control acid that causes the throat irritation; the amount, type and duration of medicine varies. It is important to know that the medicines prescribed may not agree with, or work for, all patients. The right medicine, the correct dosage, and the time of the day that you take the medicine can vary from person to person, but all are important for your recovery. Your doctor will decide which of the following medicines is best for you:

### **Proton Pump Inhibitors (PPIs)**

These medicines block the production of acid in the stomach. Some common PPIs are:

<b><u>Brand Name</u></b>	<b><u>Generic Name</u></b>
Aciphex	Rabeprazole
Nexium	Esomeprazole
Prevacid	Lansoprazole
Prilosec	Omeprazole
Protonix	Pantoprazole
Kapidex	Dexlansoprazole

PPIs work best when taken 30 to 60 minutes before eating your breakfast or dinner. The meal should contain protein, such as meat/fish, dairy (milk, eggs, cheese), or soy. If you do not eat breakfast or dinner, take the medicine 30 to 60 minutes before lunch. If your doctor prescribes a once a day dose of a PPI (like Omeprazole) as well as a bedtime dose of an H2 blocker (like Ranitidine, see below) then please take your once daily PPI dose before breakfast to better cover your acid production for a full 24 hours.

#### Risks of PPIs:

Some studies show decreased absorption of calcium and Vitamin B12 when taking PPIs. The studies are not perfect, but in light of these findings we encourage patients to take a calcium supplement and have their calcium and B12/homocysteine levels (and bone density for women) checked if taking PPIs long term.

#### **H2 Blockers**

These medicines reduce acid secretion.

They are:

<b><u>Brand Name</u></b>	<b><u>Generic Name</u></b>
Zantac	Ranitidine
Axid	Nizatidine
Pepcid	Famotidine
Tagamet	Cimetidine

H2 blockers are usually prescribed in addition to PPIs but may be prescribed by themselves when PPIs are not an option (**Plavix or Reyataz can interact with PPIs so please alert your doctor**). **When used with a PPI, the H2 blocker is best taken before bedtime.** Because both types of medicines are used to reduce or block acid in the stomach, they do not work immediately if you take them after your symptoms of LPRD are already bothering you. To work well, they must be taken every day on schedule. **It can take 2-3 months on medicines before symptoms of LPRD go away, so do not give up after a week or two and assume they aren't working.**

#### **Antacids**

Over the counter antacids like Tums, Roloids, and Maalox neutralize acid that is already in the stomach and work well in treating the symptoms of LPRD and GERD right away. Different brands may have different active ingredients/side effects: calcium or magnesium may cause loose stools or diarrhea while aluminum may cause constipation.

#### **Further Testing and Surgery**

If your reflux problem is severe, or the excess acid cannot be controlled by medicine over a few months, your doctor may recommend very specific testing to truly confirm that reflux is the cause of your symptoms. In some people with LPRD, the reflux coming into the throat is non-acidic and medicines alone won't fix the problem. In other cases, where medicines can't be taken at all or if the person does not want to be on medicines long term, surgery is considered to prevent stomach contents from refluxing into the esophagus and throat.

**In addition to starting the lifestyle modifications described in this brochure, you have been prescribed the following medicine(s):**

- Prilosec (Omeprazole) 40mg  
(30-60 min before breakfast or dinner)
- Aciphex (Rabeprazole) 20mg  
(30-60 min before breakfast or dinner)
- Nexium (Esomeprazole) 40mg  
(30-60 min before breakfast or dinner)
- Prevacid (Lansoprazole) 30mg  
(30-60 min before breakfast or dinner)
- Protonix (Pantoprazole) 40mg  
(30-60 min before breakfast or dinner)
- Kapidex (Dexlansoprazole) 60mg  
(taken anytime but the same time each day)
- Zantac (Ranitidine) 300mg  
(1 tablet before bedtime)
- Other: \_\_\_\_\_

**For more information or for an appointment with an ENT doctor who specializes in LPRD call:**

**The Center for Voice and Swallowing at Tufts Medical Center: (617) 636-2887**

Visit our website:

[http://www.tuftsmedicalcenter.org/OurServices/ENTOtolaryngology/Thomas\\_L\\_Carroll](http://www.tuftsmedicalcenter.org/OurServices/ENTOtolaryngology/Thomas_L_Carroll)