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RIVIERA **ENT**

This information handout is provided for general medical knowledge only. It may or may not relate to your specific medical condition and it does not constitute individualized medical advice.

GERD and LPR

Acid reflux occurs when acidic stomach contents flow back into the esophagus, the swallowing tube that leads from the back of the throat to the stomach. When acid repeatedly "refluxes" from the stomach into the esophagus alone, it is known as gastroesophageal reflux disease (GERD). However, if the stomach acid travels up the esophagus and spills into the throat or voice box (called the pharynx/larynx), it is known as laryngopharyngeal reflux (LPR).

While GERD and LPR can occur together, people sometimes have symptoms from GERD or LPR alone. Having symptoms twice a week or more means that GERD or LPR may be a problem that could be helped by seeing a doctor.

What Are the Symptoms of GERD and LPR?

Many patients with LPR do not experience classic symptoms of heartburn related to GERD. And sometimes, *adult* patients may experience symptoms related to either GERD or LPR like:

- Heartburn
- Belching
- Regurgitation (a surge or rush back) of stomach contents
- Frequent throat clearing or coughing
- Excess mucus
- A bitter taste
- A sensation of burning or throat soreness
- Something "stuck" or a "lump" in the back of the throat

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- Hoarseness or change in voice
- Difficulty swallowing
- Drainage down the back of the nose (post-nasal drip)
- Choking episodes (can sometimes awaken from sleep)
- Difficulty breathing, if the voice box is affected

Why don't I have heartburn?

Many with LPR do not have heartburn. The esophagus has a protective lining that prevents occasional acid from causing significant damage. In GERD patients, when there is excessive acid reflux, this protective barrier wears thin and symptoms then occur.

Unlike the esophagus, the throat does not have this protective lining. Therefore, even one single episode of LPR could cause symptoms.

Signs in *infants and children* are different from adults and may include:

- Breathing problems such as a cough, hoarseness, noisy breathing, or asthma
- Pauses in breathing (apnea) or snoring when sleeping
- Feeding difficulty (spitting up)
- Turning blue (cyanosis)
- Choking
- Apparent life-threatening event where there is arching of the back while in distress
- Trouble gaining weight or growing

What Causes GERD and LPR?

GERD and LPR can result from physical causes and/or lifestyle factors.

Anatomy

The stomach lives below the diaphragm. When you swallow a bolus of food, it passes from your throat (Pharynx) to your esophagus and eventually to your stomach. The bolus of food passes through two gateways called "sphincters," one at the junction of the esophagus and the stomach ("lower esophageal sphincter") and one at the junction of the esophagus and the throat ("upper esophageal sphincter"). Reflux occurs when these sphincters or valves fail.

Reflux of either gastric acid or digestive enzymes and other secretions can occur, and one can occur without the other. LPR is different from GERD: GERD occurs when the stomach acid remains in the chest unable to get past the upper sphincter. LPR is when the stomach acid or enzymes get past both

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sphincters and reach the throat, mouth, and even to the back of the nose. Other physical causes include hiatal hernia, abnormal esophageal spasms, and slow stomach emptying.

Changes like pregnancy and dietary choices we all make daily can cause reflux as well. These choices include eating foods like chocolate, citrus, fatty foods, spicy foods or habits like overeating, eating late, lying down right after eating, and alcohol/tobacco use (see below).

GERD and LPR in infants and children may be related to causes mentioned above, or to growth and development issues.

What Are the Treatment Options?

Your primary care provider or pediatrician will often refer you to an ENT (ear, nose, and throat) specialist, or otolaryngologist, for evaluation, diagnosis, and treatment if you are having related symptoms.

GERD and LPR are usually suspected based on symptoms, and can be further evaluated with tests such as an endoscopic examination (a tube with a camera inserted through the nose), biopsy, special X-ray exams, a 24-hour test that checks the flow and acidity of liquid from your stomach into your esophagus, esophageal motility testing (manometry) that measures muscle contractions in your esophagus when you swallow, and emptying of the stomach studies. Some of these tests can be performed in an office.

Options for treatment include lifestyle and dietary modifications (see below), medications, and rarely surgery. Medications that can be prescribed include antacids, ulcer medications, proton pump inhibitors, and foam barrier medications. To be effective, these medications are usually prescribed for at least one month, and may be tapered off later after symptoms are controlled. For some patients, it can take two to three months of taking medication(s) to see effects.

Commonly prescribed medications for GERD and LPR:

- Histamine blockers lower your stomach acid by blocking the signals that tell your stomach to make acid:
    - Pepcid (famotidine)
    - Tagamet (cimetidine)
- Proton pump inhibitors stop your stomach acid from forming:
    - Aciphex (rabeprazole)
    - Nexium (esomeprazole)
    - Prevacid (lansoprazole)
    - Prilosec (omeprazole)

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  - Dexilant (dexlansoprazole)
  - Protonix (pantoprazole)
- Barrier Medications create a physical barrier to prevent stomach contents from upward reflux:
  - Gaviscon Advance
  - Esophageal Guardian
  - Sodium Alginate

It is important to take your medicine on an empty stomach about 30 to 60 minutes before you eat a meal. Always eat something within 60 minutes after you take the medicine.

Talk with your doctor or pharmacist about all the medicines you take, including prescription or over-the-counter medicines, supplements, vitamins, and herbal remedies. Some medicines can increase the acid levels in your stomach and cause more symptoms of LPR. Do not stop any medicines without talking to the doctor that ordered them.

Children and adults who do not improve with medical treatment may require surgical intervention. Surgical treatment includes "fundoplication," a procedure that tightens the lower esophageal muscle gateway (lower esophageal sphincter, or LES). Newer techniques allow this to be done in an endoscopic or minimally invasive manner. Another surgical option uses magnetic beads to tighten the LES.

What Changes Can I Make to Prevent GERD and LPR?

For adults, you can take certain steps to reduce or prevent occurrences of GERD and LPR, including:

- Lose weight.
- Cut down or stop smoking tobacco products.
- Reduce or eliminate caffeine and alcohol.
- Limit or avoid alcohol.
- Wear clothing that is looser around the waist.
- Eat three to four small meals a day, instead of two to three large ones, and eat slowly.
- Avoid eating and drinking within two to three hours of bedtime.
- Limit problem foods, such as carbonated drinks, chocolate, peppermint, tomatoes, citrus fruits, fatty and fried foods, and/or spicy foods.
- Prop your head up when you sleep. It may help to use bed blocks or extra pillows.

Medicines that may increase your stomach acid include:

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- Non-steroidal anti-inflammatory drugs (NSAIDs) such as aspirin, ibuprofen (Advil, Motrin) and naproxen (Aleve)
- Vitamin C
- Alpha blockers
- Asthma medicines (Theophylline)
- Anticholinergic medicines
- Blood pressure medicines (Beta Blockers or Calcium Channel Blockers)
- Progesterone: Provera; Birth control pills

What Questions Should I Ask My Doctor?

1. Can I take over-the-counter medications to help control my acid reflux?
2. What other steps can you recommend that I take to reduce or limit acid reflux?
3. Is acid reflux an indication of a larger problem?