



2961 Summit Street • Oakland, CA 94609
T: 510-465-0941 F: 510-271-4135

Stomach Acid and Throat Problems

Been hoarse lately? Or perhaps you've had a chronic cough despite having given up smoking years ago. Then again, maybe you're a singer and the high notes you used to hit have become unreachable for no apparent reason. If so, you might have laryngopharyngeal reflux disease (LPRD). Gastro-esophageal reflux disease, or GERD, gets most of the attention because it is so common, but there's another condition associated with acid reflux – LPRD – that can also have dire consequences, including those listed above. The stomach produces both acid and pepsin, a digestive enzyme that helps break down food.

Director of the Voice Institute of New York, Jamie Koufman, M.D., is working on a simple saliva test which is still in the experimental stages. She started this work while she was a professor of otolaryngology at Wake Forest University School of Medicine in Winston-Salem, N.C., where she headed the Center for Voice Disorders. Her system looks for the presence of what's known as human pepsin 3b in saliva, and the test is **potentially** something physicians can do in their offices to help diagnose both GERD and LPRD.

"Most people associate heartburn with excess stomach acid, but it is the digestive enzyme pepsin, and not acid, bathing the lower area of the esophagus that causes the damage," Koufman told the United Press International (UPI) in July 2006. She added that, "Laryngopharyngeal reflux disease is even more difficult to diagnose than GERD."

Laryngopharyngeal Reflux Disease (LPRD) Can Appear With No Symptoms

GERD is a more common consequence of acid reflux since the damaging reflux only has to back up through the lower sphincter of the esophagus, which is at the junction of the stomach. For a patient to have LPRD, pepsin and stomach acid has to not only find its way past the lower sphincter, it has to travel clear back up the esophagus and get through the second esophageal sphincter that protects the throat.

What's surprising is that while patients with GERD often have distressing symptoms of heartburn that alert them to a problem, those with LPRD will generally feel nothing.

"Heartburn occurs when the tissue in the esophagus becomes irritated," according to University Hospital of Columbia and Cornell University literature. "Most of the reflux events that can damage the throat happen without the patient ever knowing that they are occurring." That's a problem because "the structures in the throat (pharynx, larynx, and lungs) are much more sensitive to stomach acid and digestive enzymes, so smaller amounts of the reflux into this area can result in more damage."

Indeed, the idea of juices capable of breaking down food in the stomach percolating up into the throat and back of the mouth, not to mention the lungs, is not a pretty one.

LPRD Symptoms

As Koufman observed, "For patients with severe esophagitis, the tissue in the esophagus is literally being self-digested." More, she noted to UPI that, "Scientific evidence points to

aerosolized pepsin being drawn into the respiratory system as a common culprit of chronic cough, asthma and even sinusitis.”

Clearly the plot thickens. In other words, what happens is that once pepsin gets up into the upper airway and its associated compartments, all manner of problems ensue as experts from Columbia and Cornell detail: “hoarseness, chronic cough, frequent throat clearing, pain or sensation in the throat, feeling of lump in throat, problems while swallowing, bad/bitter taste in mouth (especially in the morning), asthma-like symptoms, referred ear pain, post-nasal drip, singing: Difficulty with high notes.”

LPRD Diagnosis and Treatment

Although LPRD has been documented in medical literature since 1618, only as late as 1989 were researchers “really able to show that there are separate episodes of reflux that go up to the laryngopharynx,” observed Scott M. Kaszuba, M.D., in a 2004 conference presentation at the Baylor College of Medicine in Houston. More, Kaszuba explained that, “There are prolonged periods of acid exposure in GERD, but not in LPRD. It is really a short exposure, but high damage phenomenon... The laryngopharyngeal epithelium [cells that line the surfaces of the anatomical structures] is far more susceptible to reflux related tissue injury than the esophageal epithelium.”

LPRD patients “are hoarse and have dysphagia [difficulty swallowing] and globus [lump in the throat], they do not have heartburn, they have laryngeal inflammation, and they do not have esophagitis.” More he said, “chronic dysphonia [involuntary muscle movements that may interfere with speech] and vocal complaints are at the top of the list and then swallowing and globus sensation type complaints are in the middle of the list and then near the bottom of the list are pulmonary manifestations.”

The gold standard for diagnosing LPRD has been what’s called the ambulatory 24-hour double pH probed monitoring in which a tube inserted through the nasal passage is used to determine the presence of reflux in the throat and back of the mouth. Before resorting to this test, Kaszuba noted that physicians will take a patient history and do a laryngeal examination either by video stroboscopy or flexible scope.

Once identified, LRPD has a three-phase treatment approach according to Kaszuba. First are behavioral modification interventions such as diet and sleeping positions. Second is the use of antacids. These non-prescription tablets are taken two or three times a day. Finally are the class of drugs known as the proton pump inhibitors taken prior to meals that help decrease reflux.

Kaszuba concludes by observing that LRPD “is very common among pharyngeal disorders and airway disorders.” He also points out that “it is a chronic intermittent disease.”