Silent Reflux

OPA Cancer Charity

Oesophageal and Gastric Cancer Support

What is LPR?

Laryngo-Pharyngeal Reflux is also known as LPR and Silent Reflux. The terms are interchangeable and you'll see all three used. They have the same meaning.

There remains dispute among doctors as to what exactly LPR is and some even doubt its existence. There is no accepted scientific definition and it can be very difficult to both diagnose and treat. Symptoms associated with LPR are however probably just as common as the heartburn/indigestion types and can be severe enough to blight some patients' lives. Because so much remains unknown about LPR and the tests required to make the right diagnosis are not generally available, people often find themselves in what we call a "Cycle of Frustration". However, since we see so many patients with LPR, as well as other reflux type symptoms, we have enormous experience and by using the RefluxUK MDT approach, as well as the most up to date tests and treatment technologies we can achieve a good outcome for most people.

LPR Symptoms?

There are many symptoms of Silent Reflux and patients may have several or just one. Symptoms include:

- **Sore throat;** sometimes persistent, sometimes worse in the morning.
- **Voice problems;** people can report huskiness or weakness of the voice and singers difficulty hitting the right notes.
- **Cough;** can occur at night or after eating. Sometimes can respond to anti-acids but if it doesn't that doesn't mean it's not caused by reflux as it may be non-acidic reflux.
- **Throat clearing/mucous and post-nasal drip.** Can often be the most troubling and patients often report that their partners complain about this. They describe a constant feeling of mucous in the throat and having to clear this. Can then proceed to a sore throat.
- **Globus;** a feeling of a lump in the throat.
- **Sinus problems;** often patients will have been diagnosed with sinus problems and even have undergone surgery in the past.
- **Bad breath.**
- **Nasty taste/tingling lips.**

Get your LPR score

Measure the strength of your LPR symptoms by using our **Reflux Symptom Checker.** You'll be able to see your LPR 'score' using a scientifically validated questionnaire. We'll also send you a personalised report based on your results.

SCAN QR CODE TO START SYMPTOM CHECKER

What Causes LPR?

It's likely that LPR can be caused by different problems and may well be more complex than simple acid reflux.

- **Poorly functioning Lower Oesophageal Sphincter (LOS);** it's failure, often but not always associated with a hiatus hernia, will allow reflux of stomach contents up to the throat. This can be in either liquid or aerosol/gaseous form and will cause local irritation or cause a nervous reflex for instance causing a cough and is probably the most common cause of all types of reflux symptoms.
- **Gastroparesis / poor gastric emptying;** if the stomach doesn't empty properly either because of poor motility or a functional blockage then the pressure inside the stomach will exceed the LOS pressure causing reflux symptoms. Its literally like a damn across a river causing upstream pressure. In the case of gastroparesis in which the stomach nervous and muscular activity decreases symptoms can have a very sudden onset as it's thought that viral infections particularly in young people are a common cause. Research also suggests that in some people there is a failure of the valve at the bottom of the stomach, the pylorus, to relax properly. In this case the stomach can't empty properly as there is a functional blockage rather than poor muscular contraction.
- **Small Intestinal Bacterial Overgrowth (SIBO);** Overgrowth of the small bowel by organisms that digest carbohydrates and produce gas can cause excessive belching/burping which in turn will cause reflux of gaseous reflux to the throat. Since (SIBO) can develop rapidly, LPR symptoms caused by SIBO can also be of rapid onset. When treated with Proton Pump Inhibitors (PPIs) LPR symptoms caused by SIBO may well get even worse as PPIs are associated with this condition.
- **Low stomach acid;** There are some authors that blame reflux on low stomach acid and suggest taking additional acid as a treatment. However, there is currently no scientific evidence to support this theory.

- **Oesophageal Inlet patch;** there is evidence that in some patients a small patch of acid secreting tissue at the top of the oesophagus can cause irritation of the adjacent larynx and pharynx. In these patients this is probably an embryological remnant. Research of this condition is on-going.
- Upper oesophageal sphincter (UOS) dysfunction; the valve at the top of the oesophagus can become over-active in response to a failing LOS in an attempt to protect the airway. This may be responsible for LPR symptoms such as Globus. However, the role of the UOS in LPR remains unclear.

Diagnosing LPR

Getting an accurate diagnosis of your LPR is essential. The tests we use will enable us to do this for you and will also inform your treatment plan.

Treatment Options

Treatment of LPR can be one of the most difficult challenges we face. In the first instance it's imperative to make the correct diagnosis and identify the underlying cause. In general, we would escalate treatment from simple towards more complex dependent upon response and patient preference.

LPR Diet

The first step in your treatment usually involves making changes to your diet. This can involve adopting an LPR diet or losing weight. Here we describe some of the dietary changes that may be needed depending on your symptoms.

- **Losing weight;** all reflux symptoms can be worsened by excessive weight and a diet designed to reduce this can reduce symptoms. However, many people with LPR are of normal weight.
- **SIBO;** if (SIBO) is diagnosed, a low FODMAP diet may be advised as part of an eradication programme usually in combination with specific antibiotics, probiotics and sometimes drugs that improve gastro-intestinal motility.

- **Pepsin;** pepsin is a powerful enzyme released in the stomach and in addition to acid is thought to be a major contributor to all reflux symptoms but particularly LPR. It has been found in the throat, lungs and even ears of patients! It is biologically active in relatively mild acidic environments but because more so as the pH drops (indicating more acid). Therefore, some patients may find benefit from a low acid diet, avoiding for instance citrus fruit and fizzy drinks. Similarly since alcohol is generally acidic, avoiding drinking may also help. There is also some evidence that the use of alkaline water can help as above a pH of more than 8.5 pepsin becomes deactivated.
- **Low residue;** if gastroparesis is diagnosed a diet low in fibre can help and this should be dietician supervised.

Medications

- **PPIs;** The Proton Pump Inhibitors including Omeprazole, Esomeprazole, Lansoprazole. This class of powerful acid suppressants can be very helpful in patients with heartburn, but generally they are much less so in LPR. At most half will find some benefit. If Pepsin is the primary cause anti-acid drugs are likely to be of marginal help, if SIBO is responsible they may exacerbate the problem and the difficulty of rebound hyper-acidity following their prolonged can also pose a problem. Consequently, its essential that the right diagnosis is made before committing to taking PPIs long term.
- **H2 Blockers;** Including Ranitidine (Zantac) are a class of drug suppressing acid secretion by the stomach but were introduced before the PPIs and are generally less effective. They have also been associated with some safety issues and while they can work short term their effect tends to diminish significantly when taken regularly. However, some of the side effects associated with PPIs tend not to occur.
- **Gaviscon Advance;** especially in liquid form coats the oesophagus and sits on top of the stomach contents. It can help to bind Pepsin and stop acid irritation and tends to be helpful in LPR.
- **Ziverel;** in addition to helping to protect the lining of the oesophagus this can also help repair of its lining. It is currently undergoing evaluation in LPR.

- **Pro-kinetics;** drugs that improve gastric motility have been known to help improve symptoms in some patients. Its possible that this is because in this particular group gastroparesis is the underlying problem. However, these drugs generally can't be taken long term and diagnosing this accurately is obviously essential.

Interventions

If there is clear evidence of reflux, then strengthening the lower oesophageal sphincter is likely to improve or remove LPR symptoms. However, it is imperative that alternative explanations for symptoms have been excluded and preferable that the reflux studies have shown strong relationships between symptoms and reflux.

- **LINX®;** studies have shown that LINX is effective at resolving LPR as well as more typical heartburn symptoms.
- **Fundoplication;** studies have shown that Nissen's and other fundoplication procedures can be effective at resolving LPR as well as more typical heartburn symptoms. However, its handicaps remain the same whatever the indication for surgery.
- **TIF®;** this may be appropriate for patients without a hiatus hernia or who don't want to undergo laparoscopic surgery.
- **Pyloric dilatation;** in some people with delayed gastric emptying the cause is a dysfunctional pyloric sphincter.
- **Inlet patch ablation;** there is some evidence that if present, endoscopic destruction of an inlet patch using radiofrequency ablation (RFA) can improve symptoms.

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