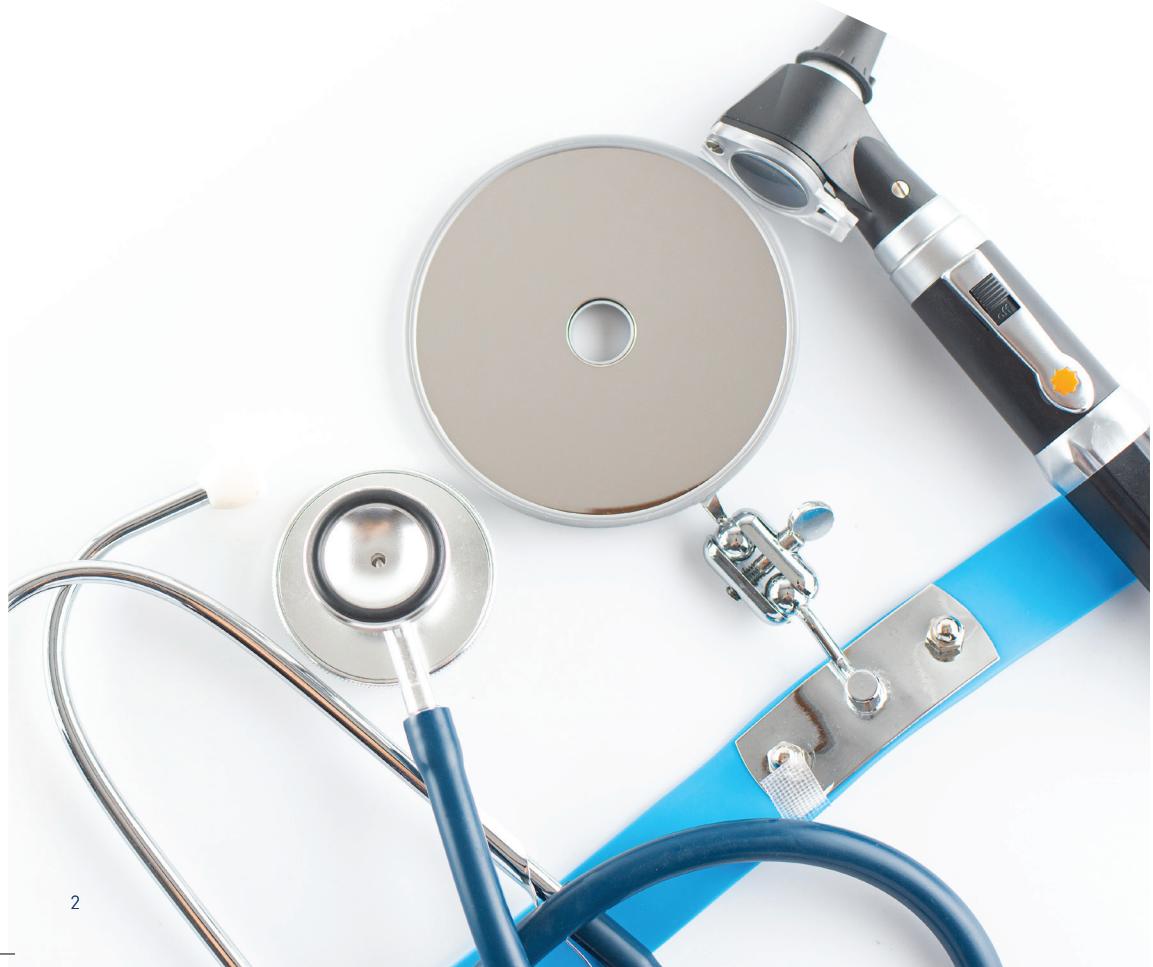


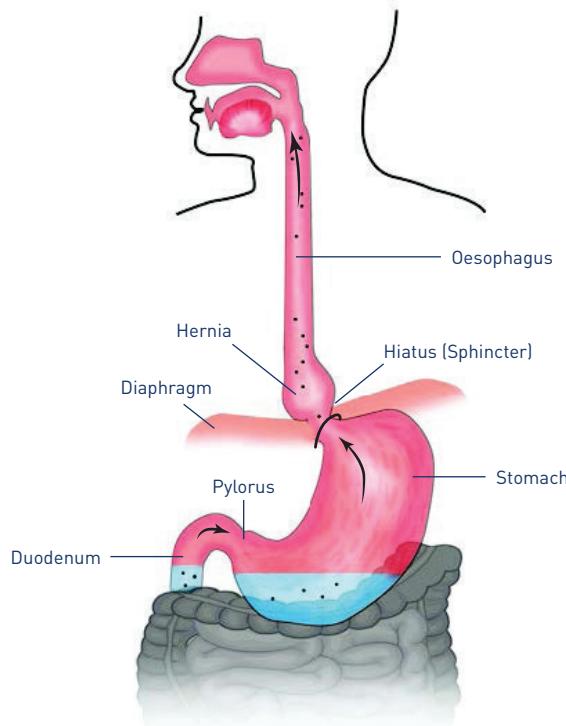
Laryngopharyngeal Reflux (LPR)

The Department of Ear, Nose & Throat (ENT) - Head & Neck Surgery provides a wide range of surgical services for adult patients with ENT, head and neck diseases. Patients are referred from polyclinics, general practitioners, emergency services or transferred from other departments within the Ng Teng Fong General Hospital or other healthcare facilities, including nursing homes, community and other hospitals. Our team of highly-trained ENT-Head & Neck surgeons and allied healthcare professionals aim to provide the best possible care to our patients.



What is laryngopharyngeal reflux (LPR)?

LPR is a disease in which stomach contents flow back (reflux) up to the voice box/throat to cause irritation and damage to the lining of these organs. If the reflux also causes damage to the lining of the oesophagus, then a diagnosis of gastroesophageal reflux disease (GERD) is made. The lining of the throat and voice box is more easily damaged by acid reflux than the oesophagus, hence LPR exists commonly without GERD. LPR affects both children and adults.



What is the cause of LPR?

The cause is largely unknown, but it is assumed that LPR is due to a malfunction in the “natural valve” or sphincter in the upper part of the oesophagus. This valve, which should open only when we swallow, malfunctions and allows acid from the stomach to flow up into the throat/voice box.

What are the symptoms of LPR?

- Sensation of lump in the throat
- Frequent throat clearing
- Excess phlegm in the throat
- A hoarse voice
- Persistent sore throat
- Chronic cough
- Experience pain while swallowing
- Experience difficulty in swallowing

*Patients with LPR rarely have heartburn, which is the most common symptom of Gastroesophageal Reflux Disease (GERD).



What are the complications of LPR?

LPR mainly causes organ inflammation which brings about the symptoms mentioned on the previous page. Severe LPR can cause life-threatening spasms, cancer or narrowing of the voice box.

How is a diagnosis made?

LPR is diagnosed by recognising the symptoms, performing an endoscopic examination and assessing response to treatment.

Flexible nasoendoscopy

Under a local anaesthetic, a small flexible tube with a light source is passed through the nostrils and down the throat and voice box so that the lining of these structures can be seen. LPR causes typical changes that can be seen in the voice box.

*Occasionally, the damage to the voice box/throat is too minor for a nasoendoscopic examination to detect. In such instances, if clinical suspicion is high, a course of medication is prescribed and the response to treatment is used to confirm the diagnosis of LPR.



What are the treatment options?

Patients receiving treatment for LPR may take several months to recover.

Medication

The refluxate is usually stomach acid, hence proton-pump inhibitors form the cornerstone of treatment for LPR. This medication is most effective for decreasing stomach acid production. The treatment duration is for at least three to six months, and the medication must be taken about an hour before meals. Some patients require life-long treatment. Certain dietary and lifestyle modifications should be put in place to reduce acid reflux.

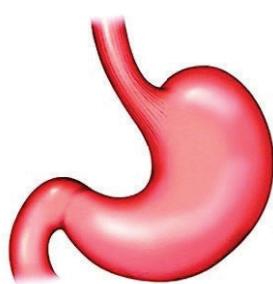
Diet and lifestyle modifications

- Avoid reflux-inducing food such as excessive alcohol, caffeine, chocolate, fatty food and peppermint.
- Avoid having your meals late. Lying down with a full stomach makes reflux more likely. You should not lie down for two to three hours after eating.
- Eat small but frequent meals.
- Elevate your head a few inches when you sleep. You can place bricks, blocks or anything sturdy under the legs of your bed. As gravity can help to reduce reflux, you can also use a wedge-shaped pillow to elevate your head.
- Do not wear belts or clothes that are too tight-fitting around the waist. Tight clothes squeeze your abdomen and cause the stomach contents to flow upwards.
- Do not smoke as this relaxes the oesophageal sphincter.
- Losing weight may help reduce reflux in people who are significantly overweight.

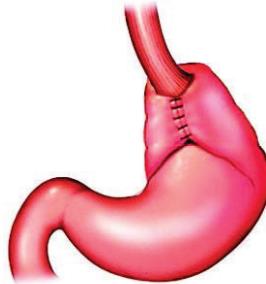


Surgery

A surgical operation called fundoplication can be performed to prevent reflux in patients who do not respond to medication, or in patients with severe life-threatening LPR.



Normal stomach



After surgery

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