Cough and Swallowing Problems

Definition:

- ***A cough*** is a sudden, forceful hacking sound to expel air from the lungs, to clear an irritation in the throat, lungs or oesophagus. It can be voluntary or involuntary (a reflex). It is produced differently to clearing of the throat, created by striking the vocal cords together. A cough can be acute or chronic depending whether it is below or above 8 weeks duration.
- ***Swallowing*** is a complicated sequence of both voluntary and reflex movements, which needs your brain to coordinate many muscles and nerves.
- ***Dysphagia*** is the medical term for a sensation of difficulty or abnormality of swallowing. It can happen rapidly, or slowly and has many causes.

Causes:

There are 3 main ways in which your swallowing problem can make you cough.

- The first mechanism is direct, where liquids or solids may enter the airway (larynx, trachea or lungs) and directly trigger a cough reflex. This is an innate protective mechanism present in humans, to clear any contents from the airway to minimise choking or chest infections.
- The second mechanism is indirect, whereby irritation of the upper airway or oesophagus can stimulate the cough mechanism indirectly, even if nothing passes into the airway. This is commonly related to reflux disease, where stomach juices (? enzymes) can irritate the lining of the upper airway or oesophagus and promote the cough reflex to occur more easily. Other common irritant causes include: viruses, allergic rhinitis & sinusitis, asthma, and some medications. Subtle weaknesses of the nerves providing sensation to the throat can also be a common background factor to trigger a cough.
- The third mechanism is voluntary coughing or throat clearing after eating, where you may feel food in your throat or food pipe that has not passed through properly, but also has not entered the airway. This happens more commonly in patients with a weak swallowing mechanism, but also in patients with a hypersensitive throat or 'irritable larynx'.

With time, a repetitive cough can become chronic (?habitual), even when the initial cause has resolved.

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Symptoms:

When food, fluid or saliva enters the airway during swallowing, this is called 'aspiration'. Aspiration should trigger the cough reflex to clear the airway. Patients who continually aspirate may have other symptoms such as recurrent chest infections (pneumonia), weight loss and wet/gurlgly voice changes.

Patients whose cough is related to reflux of stomach enzymes/ juices may get typical symptoms of gastro-oesophageal reflux disease (Link to GORD/LPR page) including;

- Burping
- Indigestion
- Burning in the neck/chest area
- Regurgitation
- Nausea
- Pain in the upper abdomen

Others may have symptoms of 'silent reflux' which are similar to 'irritable larynx syndrome' including

- Feeling of a lump in the throat
- Voice change/hoarseness
- Excess mucus in the throat
- Small food particles or pills 'sticking' in the throat
- Sore or dry/sensitive throat
- Acidic taste in the mouth or bad breath (halitosis)
- Spasms in the throat, often at nighttime

With time, patients with a chronic cough may find that all manner of benign inhaled 'irritants' and other sensory stimuli can trigger their cough, for example;

- Fumes, strong odours
- Perfumes, deodorants
- Air temperature or humidity changes
- Talking, laughing, head movements

Diagnosis:

Aspiration can be diagnosed in two ways – Videofluoroscopy Swallowing Study (x-ray) or a Flexible Endoscopic Evaluation of Swallowing (FEES). During a FEES, a small camera is passed through the nose to examine the throat while eating a range of food and fluids to test the swallowing function. If reflux is suspected, a diagnosis can be suggested based on symptoms and the appearance of the throat lining on endoscopy. However, to confirm a GORD/LPRD diagnosis the best test is 24 hour pH Impendence monitoring.

All of these tests can be arranged through your treating team at the Melbourne Swallow Analysis Centre.

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Irritable larynx syndrome is largely a diagnosis of exclusion based on a careful case history evaluation.

Management:

If you are diagnosed with aspiration, there is a risk that you will develop further chest infections and your treating team will advise you of dietary modifications (Link to Treatment Sheet Texture Modified Diet and Fluids and swallowing exercises (Link to Treatment Sheets - Swallowing Exercises) that can improve your swallow safety and reduce your coughing episodes. Occasionally there are procedures that can be performed to minimise aspiration risk as well.

If reflux (GORD/LPR) is contributing to your cough, there are several diet and lifestyle modifications, as well as medications, that can help. These include but are not limited to:

- Sleeping with an extra pillow to elevate your head/neck
- Minimising exercise after eating
- Not eating just before bed so there is time for food to digest
- Reducing stress
- Dietary changes
  - Not eating too fast
  - Having less caffeine, alcohol and carbonated drinks/fruit juices
  - Having less fatty and acidic foods
- Medications
  - Ant-acids – commonly 'Proton-pump inhibitors' such as omeprazole and specialised 'Anti-histamines' like nizatidine
  - Anti-reflux agents – Gaviscon is an alginate liquid that stops stomach juices of any kind refluxing up the food pipe to the throat
- Surgery is a last resort but sometimes necessary

If you are suffering from 'Irritable Larynx Syndrome' and food is triggering your symptoms, management involves minimising other irritants such as reflux or allergies, but also working with a Speech Pathologist to suppress your urge to cough, and decrease your throat's overall sensitivity.

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