



Dysphagia

This page describes the physiology of swallowing and then disease that can cause problems with swallowing - dysphagia.

Normal swallowing

Swallowing is a complex but orderly sequence of events that enables a suitably prepared bolus to be delivered to the stomach. It involves muscles in the mouth, pharynx and oesophagus.

The swallowing centres are in the reticular formation of the medulla. Afferent information is carried by the trigeminal nerve, the glossopharyngeal and the vagus. Efferent information is via the glossopharyngeal, vagus and hypoglossal nerves.

Swallowing is described as being in three stages:

1. Oral
2. Pharyngeal
3. Oesophageal

Oral

The oral stage is under voluntary control. The mouth is closed and respiration ceases. The tongue elevates and pushes the prepared bolus upwards against the hard palate and then backwards into the oropharynx.

Pharyngeal

Once past the oropharyngeal isthmus (the pillars of the tonsil) swallowing enters the pharyngeal phase. This is a reflex phase and its aim is to get the bolus from the mouth, past the larynx and into the upper oesophagus.

First the nasopharynx is closed off by elevation of the soft palate. This stops food regurgitating into the nose. The pillars close to prevent food re-entering the mouth. The larynx is pulled up under the tongue and this action flops the epiglottis closed. Food is thus diverted into the lower pharynx and can't enter the nose, mouth or larynx. The constrictor muscles push the food through the relaxed cricopharyngeus. This muscle closes behind the bolus as it enters the oesophagus.

Oesophageal

This is also a reflex phase and the food is carried down the oesophagus by peristalsis.

Causes of dysphagia

The important diseases that cause dysphagia are listed here.

Inflammatory diseases

Acute dysphagia is usually caused by an inflammatory condition such as tonsillitis (with or without quinsy) but can also be due to a foreign body, chemical burn or aphthous ulcers.

Neoplasia

Tumours of the oropharynx, larynx and hypopharynx can all cause difficulty with swallowing once they have reached a certain size. Dysphagia is one of the **red flag** symptoms in head and neck malignancy.

Pharyngeal pouch

This is a herniation of pharyngeal mucosa through a weakness in the inferior constrictor muscle. It is slowly progressive and causes dysphagia, weight loss, halitosis, gurgling in the neck, aspiration and cough.

Oesophageal stricture

Strictures in the oesophagus will cause dysphagia. They may be idiopathic, due to chronic acid reflux (strictures usually in the lower third) or be malignant in nature. Treatment depends on the underlying cause.

Globus pharyngeus

Patients describe this condition in a number of ways. For example: "a feeling of something stuck in the throat", "a lump in the throat", and "a feeling of pressure in the throat". Classically, the symptom is worse between meals and eased by eating and drinking. Typically, the patient is middle-aged and female but this is not universal.

Investigation is performed when there is doubt about the diagnosis and a flexible oesophagoscopy or barium swallow are performed.

Neuromuscular disease

Being a highly coordinated muscular activity it is not surprising that neuromuscular disease may cause dysphagia. Motor neurone disease, stroke, multiple sclerosis and myasthenia gravis can all cause difficulty with swallowing.

In these situations the airway is often under threat from food and fluid in the pharynx. Remember that the innervation of the larynx and pharynx may be affected by the same diseases and the primary function of the larynx (protection of the airway) may be lost.