Chronic obstructive pulmonary disease and swallowing

This chapter will help you to understand:
- How swallowing and breathing are related.
- How breathing and swallowing are affected by chronic obstructive pulmonary disease (COPD).
- What the consequences of swallowing problems are.
- How you can tell if you are experiencing swallowing problems.
- How a speech pathologist can help you with swallowing problems.
- What strategies you can use to help manage swallowing problems.

How are swallowing and breathing related?
Swallowing is a highly complex process involving the coordination of more than 26 muscles and six nerves. For this process to occur smoothly, the body must also co-ordinate the breathing cycle during the swallow. Swallowing interrupts breathing. At the exact moment you swallow, you must momentarily hold your breath to close the airway. Closing the airway prevents any food or fluid from entering the lungs. The normal swallow-breathing cycle (shown in steps 1 to 4 in the following diagram) should only take a few seconds to complete.

1. Before the swallow, breathe in and hold breath
2. During the swallow, the airways remain closed for about one second (to prevent food or fluid getting into the lungs)
3. After the swallow, breathe out to clear any remaining food or fluid from the throat
4. Return to normal breathing

How are breathing and swallowing affected by COPD?

How does COPD affect your breathing?
Details of how COPD can affect your breathing are provided in other sections of this Patient Guide (see chapter 12 ‘Breathlessness, breathing control and energy conservation’ on pages 52 to 57). Basically, COPD can cause you to breathe faster, which means that your breathing muscles can become tired and weak. Your coughing reflex can also become weak. As breathing and swallowing are related, a weak cough reflex can cause problems with swallowing.

How does COPD affect your swallowing?
Swallowing and breathing are related. Many people with breathing problems also experience difficulty co-ordinating breathing and swallowing while eating and drinking.

During mealtimes, you may use the swallow-breathing cycle more than 100 times. People who have COPD often become short of breath during mealtimes because of the breath-holding that occurs during the swallowing-breathing cycle. The more short of breath you become, the more likely you will find it difficult to co-ordinate your breathing and swallowing.
Swallowing problems (called dysphagia) can occur because the need for oxygen will always overrule the need to protect the lungs from food or fluids.

What are the consequences of a swallowing problem?

Swallowing problems and aspiration
If breathing timing is even slightly changed during swallowing, the airway may not be fully closed and food or fluid may be breathed into the lungs. This is called aspiration and may lead to chest infections or pneumonia.

Normally, when food or fluid ‘goes down the wrong way’ (aspirated), you automatically cough up the food or drink. As people who have COPD often have a weakened cough reflex, they may not be able to clear all the food or fluid out of their breathing tubes or airways.

Aspiration is a symptom of swallowing problems. The extent of the swallowing problems can change over time, and may depend on how bad your breathing problems are at the time (and other medical factors).

As many as 20% to 40% of people who have COPD experience aspiration (particularly during a flare up).

Swallowing problems are often under-diagnosed in people who have COPD because silent aspiration can be difficult to detect.

Swallowing problems and nutrition
As you are using more energy to maintain your breathing during chewing and swallowing, eating and drinking can become more tiring. As a result, you may take longer to complete your meals and you may eat and drink less. Eating and drinking less could cause you to miss out on important nutrients and lose weight.

How can you tell if you are experiencing swallowing problems?

Read the following two lists of the common signs of swallowing problems. Tick the box next to any sign that you experience when eating and drinking:

List 1
- Coughing or choking after swallowing food or drinks.
- Increased shortness of breath during meals.
- Wet or ‘gurgly’ voice after swallowing.
- Feeling like food is getting stuck in the throat.
- Difficulty chewing foods.
- Taking longer to start a swallow.

List 2
- Food or drink going into your nose.
- Food or drink remaining in the mouth after swallowing.
- Reflux or regurgitation.
- Taking much longer to finish meals.
- Getting more fatigued after eating and drinking.
- Unexplained weight loss.
- Unexplained temperatures or changes in sputum colour.

If you ticked two to three items (particularly those in List 1), or are concerned about your swallowing, ask your GP (or respiratory specialist) to refer you to a speech pathologist who can assess your swallowing.
How can speech pathologists help you with swallowing problems?

Speech pathologists are trained to assess, diagnose and treat swallowing and communication problems. They can:

- Assess your current swallowing function and determine the cause of your swallowing problem.
- Recommend appropriate foods and fluids, as well as strategies to improve swallowing safety.
- Start you on swallowing therapy, if appropriate.
- Identify the need for further investigations.
- Liaise with other health care professionals.

If you are experiencing swallowing problems, a speech pathologist can give you specific advice to help you eat and drink safely.

Managing swallowing problems due to dry mouth

People who have COPD often experience dry mouth. Dry mouth can be related to oxygen use (via a mask or nasal prongs), mouth breathing or medications. Having a dry mouth is uncomfortable, can increase the risk of dental problems and can cause swallowing problems. To reduce dry mouth symptoms:

- Sip fluids frequently throughout the day.
- Always rinse and gargle after taking your medication or inhalers.
- Use artificial saliva products (for example, Biotene® or Oralube®), available at your local pharmacy, or other oral lubricants (for example, grape seed oil flavoured with peppermint essence).
- Suck sugar free lollies or chew gum.
- Avoid medicated lozenges or alcohol-based mouthwashes.
- Reduce your intake of caffeine, alcohol and spicy foods, and avoid smoking.
- Regularly brush your teeth and gums (or clean your dentures) to reduce bacteria build up in your mouth.
- Have regular dental check-ups.
- Talk to your GP about reviewing the medications you are taking.

What strategies can you use to help manage swallowing problems?

Even if you are not experiencing swallowing problems, you should be aware that there are a number of strategies that can be used to protect the lungs. This knowledge could help you if you do encounter swallowing problems (for example, if you have a flare up). These strategies include:

- Try not to eat or drink when you are breathless.
- Always sit upright in a supported chair when you are eating and drinking.
- Eat slowly and take small mouthfuls.
- Select foods that are soft and easy to chew, or add sauce or gravy to moisten foods.
- If worn at home, oxygen prongs should not be removed during meals.
- Have smaller, more frequent meals, and take a break during your meal if you become too short of breath.
- Try to breathe out immediately after you swallow to help clear any food or fluid left in your throat.
- Alternate between sips of fluids and solids.
- Try swallowing twice per mouthful.

Try to minimise talking during mealtimes to reduce the exertion on your breathing.
- Remain upright for 30 minutes after your meal.
- If you experience reflux or heartburn, discuss anti-reflux medication with your GP.

To overcome difficulties with swallowing medications, try cutting or crushing your medications and mixing them with yoghurt, custard or jam before swallowing them. However, as not all medications can be cut or crushed, you should always check with your GP or pharmacist first.