

Choking & Coughing at Mealtimes

When we swallow our airway closes to prevent foreign material (eg food, fluids, saliva) going down the wrong way into our lungs. This can cause us to cough, aspirate or choke.

Coughing

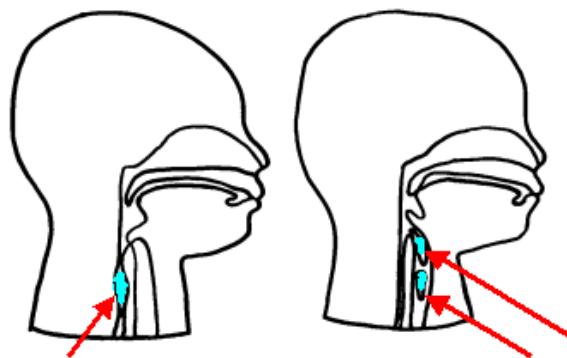
Coughing, spluttering and gagging are part of the body's defence mechanism to prevent foreign material from entering the airway. These defences however rely on very good sensation and strong muscular action. These defences may not work effectively in people who have physical and or sensory impairments to the muscles involved in swallowing.

By coughing the body moves the foreign material up out of the airway back into the throat where it can be swallowed or spat out. Coughing, spluttering, gurgleness, gagging and choking rarely occur during the normal swallowing process and when they occur often at mealtimes can be signs of swallowing difficulties.

Aspiration

Aspiration occurs when any foreign material enters the airway (lungs) beyond the level of the vocal folds (voice box). Aspiration is the feeling that 'something' has 'gone the wrong way', as though you have 'inhaled' rather than swallowed. This can result in the airway becoming partially obstructed. The body's normal reaction to this is to immediately attempt to clear this by throat clearing, coughing, gagging or even vomiting.

Some people may have poor sensation or weak muscle action and may not notice food or fluid entering the airway or be unable to cough or clear their airway effectively so are at much greater risk of aspiration and choking. Aspiration, partial airway obstruction and choking can be very significant safety issues for people with swallowing disorders.



SAFE
Food goes down the food pipe

DANGEROUS
Food goes down the air pipe into the lungs (=aspiration)

Silent aspiration

Silent aspiration occurs when food or fluid enters the airway below the level of the vocal folds with no observable outward signs such as coughing or throat clearing. So to an observer, the person has simply swallowed, when in fact food or fluid has entered the airway.

Silent aspiration is of concern if the amount and or type of food or fluid entering the airway and lungs leads to distress at mealtimes, respiratory illness and over time possibly lung damage.

Airway obstruction

Partial or total airway obstructions or blockages can occur due to foreign objects becoming lodged in the airway (eg solid food), inflammation of the airway itself causing it to swell up and close off (eg anaphylaxis due to food allergy such as peanuts or shellfish) or compression on the airway.

Mealtime factors that can contribute to *partial or total airway obstruction* placing a person, particularly children, at risk of choking to death include:

- Poor positioning
- Inappropriate foods (eg giving solid foods to a person who cannot chew)
- Inadequate chewing of food
- Breathing in while eating
- Sudden laughing or crying with an object or food in the mouth
- Running and falling with an object or food in the mouth
- Placing small objects in the mouth (eg toddlers and young children)
- Food allergies (eg peanut, shellfish, egg)
- Medications (eg that may affect the ability to swallow)
- Level of consciousness (eg seizures)
- Swallowing disorders.

Partial airway obstruction

Partial airway obstruction occurs when part of the airway is blocked, but some air can still move in and out. The blockage could be due to food (eg partially chewed or whole pieces) or objects or inflammation of the airway itself (eg anaphylaxis, asthma).

Coughing is the body's natural and most effective way of clearing a partial obstruction from the airway. If a child is able to cough, then he or she is not in a life-threatening choking situation. If a child is coughing because of a partial obstruction:

- Do not leave the person
- Offer reassurance
- Encourage the person to cough, clear their throat, vocalise
- If the person is wheezing or breathing is noisy and laboured, call an ambulance
- Continue to reassure the person
- DO NOT give back blows as this may cause total obstruction as the person may suddenly inhale.



Choking

Choking is *total blockage* of the airway. This is usually due to foreign objects or hard, dry, stringy or fibrous foods or foods that have not been effectively chewed and swallowed and become stuck which obstructs the passage of air. It can also be due to an allergic reaction.

When air cannot flow in and out of the lungs freely, breathing will stop, which means that a person is without oxygen unless the airway can be rapidly cleared. Total lack of oxygen can be very dangerous and result in death.

First aid for partial and total airway obstruction is taught in standard First Aid courses (eg Red Cross, St Johns). Any carers or support workers assisting children and students at mealtimes should ensure they have up to date first aid training including CPR (cardio-pulmonary resuscitation), EAR (expired air resuscitation) and choking management. In South Australia, teachers and caregivers can request additional training in first aid for choking, including situations involving students and children with poor upper body control.

Children and students with physical disabilities may require a modified choking management plan if they are in supported seating (eg wheelchair) at mealtimes. Staff and carers may need to be familiar and ready to remove the student from equipment quickly if the student requires first aid and know how to administer this.

