Choking and Aspiration

One of the “Fatal Four” seen in the intellectually disabled community
Choking

• Choking is the mechanical obstruction of the flow of air into the lungs. It can be partial or complete. A complete blockage of air into the lungs will cause death in approximately 4 - 6 minutes. Therefore, quick action is needed.
Choking can be caused by

- Physical obstruction of the airway by a **foreign body**.
- **Respiratory diseases** that involve obstruction of the airway.
- Compression of the **laryngopharynx**, **larynx** or **vertebrate trachea** in **strangulation**.
The Throat
Most Common Items People Choke On

- Hot dogs
- Coins
- Peanut butter
- Grapes
- Marbles
- Latex balloons
- Small toys and other small items
- Large pieces of carrot or other hard foods
Signs of Choking

• The person cannot speak or cry out, or has great difficulty and limited ability to do so.
• Breathing, if possible, is labored, producing gasping or *wheezing*.
• The person has a violent and largely involuntary cough, gurgle, or vomiting noise, though more serious choking victims will have a limited (if any) ability to produce these symptoms since they require at least some air movement.
• The person desperately clutches his or her throat or mouth, or attempts to induce vomiting by putting their fingers down their throat.
• If breathing is not restored, the person's face turns blue (*cyanosis*) from lack of oxygen.
• The person does any or all of the above, and if breathing is not restored, then becomes unconscious.
Protocols

- Most modern protocols, including those of the American Heart Association and the American Red Cross, involve several stages, designed to apply increasingly more pressure.
Protocols

• The key stages in most modern protocols include:
  • Encouraging the victim to cough if they have some air flow
  • Back Slaps
  • Abdominal Thrusts
  • Finger Sweeping/Direct Vision Removal
CPR

• In most protocols, once the patient has become unconscious, the emphasis switches to performing **CPR**, involving both chest compressions and **artificial respiration**. These actions are often enough to dislodge the item sufficiently for air to pass it, allowing gaseous exchange in the lungs.
Aspiration

• Swallowing disorders are common
• The most frequent consequence seen in our population is aspiration pneumonia
• Dysphagia is usually diagnosed by history, physical exam and a radiographic swallow study
Risk Factors

• Being fed by others
• Inadequately trained caregivers assisting with eating/drinking
• Weak or absent coughing/gagging reflexes, commonly seen in persons who have cerebral palsy or muscular dystrophy
• Poor chewing or swallowing skills
• Gastroesophageal reflux disease (GERD) which can cause aspiration of stomach contents
• Food stuffing, rapid eating/drinking and pooling of food in the mouth
Risk Factors

- Inappropriate fluid consistency and/or food textures
- Medication side effects that cause drowsiness and/or relax muscles causing delayed swallowing and suppression of gag and cough reflexes
- Impaired mobility that may leave individuals unable to sit upright while eating
- Epileptic seizures that may occur during oral intake or failure to position a person on their side after a seizure, allowing oral secretions to enter the airway.
Health History Indicators

• A diagnosis, such as cerebral palsy, muscular dystrophy, epilepsy, GERD, dysphagia or hiatal hernia

• History of aspiration pneumonia

• Needing to be fed by others
Health History Indicators

• History of choking, coughing, gagging while eating
• Has unexplained weight loss or chronic dehydration
• Takes medications that may decrease voluntary muscle coordination or cause drowsiness
Health History Indicators

• The individual has unsafe eating and drinking practices, such as eating/drinking rapidly and food stuffing
• Has chronic chest congestion, COPD and/or frequent pneumonia, persistent cough or chronically uses cough/asthma medications
Mealtime Behaviors that may Indicate a problem

- Eating slowly
- Fear or reluctance to eat
- Coughing or choking during meals
- Refusing foods and/or fluids
- Eating in odd or unusual positions, such as throwing head back when swallowing or swallowing large amounts of food rapidly
- Refusing to eat except from a “favorite caregiver.”
Other Mealtime Behaviors that may Indicate Aspiration

- Gagging/choking during meals
- Persistent coughing during or after meals
- Food or fluid falling out of the person’s mouth or drooling
Signs of Aspiration Pneumonia

- Intermittent fevers
- Dehydration
- Unexplained weight loss
- Vomiting, regurgitation, rumination after meals
- Irregular breathing, turning blue, wet sounding breathing, wheezing or rapid respirations
MINIMIZING THE RISK OF ASPIRATION

• Slow the pace of eating and decrease the size of the bites
• Positioning to enhance swallowing during meal times if possible
• Keep in an upright position after meals for 45 minutes or as ordered
• Elevate the head of the bed 30 to 45 degrees
• Avoid food/fluids 2-3 hours before bedtime
Aspiration Protocol

• It is recommended that providers have an aspiration protocol once an individual has been diagnosed with a swallowing disorder.

• The protocol should be easily available to staff

• Annual training is recommended to ensure all staff can recognize a problem early before the individual develops pneumonia or worse
Aspiration Protocol

- Ensure all staff know the risk factors
- Ensure review of health history and/or changes in health status periodically
- Ensure staff know the mealtime behaviors and other signs that may signal a problem
Protocol Guidelines

• The aspiration protocol should have written instructions on how the person is to eat or be fed and provide caregiver training. Cover the following:
  • a) the assistance level needed,
  • b) any special positioning needed
  • c) eating/feeding equipment needed,
  • d) physical and verbal cueing needed,
Guidelines

• e) location of meals. Some individuals may need to eat alone as they become distracted when eating with their peers, and

• f) recognition of aspiration symptoms, what to do about it if noted and who to notify