Overview

Airway obstruction, which includes choking, suffocation, and strangulation, prevents oxygen from entering the lungs and brain. Lack of oxygen to the brain for more than four minutes may result in brain damage or death. Airway obstruction can occur when children choke on an object that is blocking the airway, suffocate on items that block or cover the airways, or strangle themselves with items that become wrapped around their necks.

Infants and children under age 4 are particularly at risk for choking on food or small objects because their upper airways are smaller, they are less experienced in chewing food properly, and they tend to explore things with their mouths. In fact, airway obstruction is the leading cause of unintentional injury-related death among children under age 1. In addition, infants are at increased risk of suffocation and strangulation, because they may be unable to lift their heads or get out of tight places.

To protect your child from choking, suffocating, or strangulation, familiarize yourself with the dangers associated with each age group. Consider the following safety recommendations:

- Infants should sleep on their backs on firm, flat, crib mattresses in cribs that meet national safety standards.
- Do not put pillows, comforters, soft toys, and other items in an infant's crib.
- Keep certain foods that are choking hazards away from children under age 4.
- Never let children run, play, or walk with food in their mouths.
- Cut food into small pieces for young children and teach them to chew properly.
- Supervise your child closely when he/she is eating.
- Keep small toys, parts, and other small items that can be choking hazards, away from young children.
- Remove drawstrings from the outerwear of clothing for young children.
- Tie up or cut all window blind and drapery cords.
- Make sure the spaces between guardrails and bed frames, and between the head- and foot-board of beds, are less than 3.5 inches.
- A small parts tester can help you determine whether an object is a choking hazard. A small parts tester allows for small objects to be inserted - if the object fits, it is a choking hazard.
Prevention

Since most accidental child strangulations, choking, and suffocations occur in the home, parents are well-advised to carefully childproof their homes. Another preventive step to take is to learn cardiopulmonary resuscitation (CPR) and infant and child first-aid before an accident occurs. Other prevention tips include the following:

- Always supervise young children when they are eating, and make sure they sit down when they have food in their mouths.
- Keep small items that are a choking hazard out of children's reach. Check under your furniture and between seat cushions for choking hazards, such as coins, marbles, watch batteries, buttons, and/or pen or marker caps.
- You may want to purchase a small parts tester to help determine which items are choking hazards.
- Make sure your child plays with age-appropriate toys.
- Check toys regularly for damage.
- Remove hood and neck drawstrings from young children's outerwear.
- Do not allow children to wear necklaces, purses, scarves, or clothing with drawstrings on playground equipment.
- Tie up or cut all window blind and drapery cords.
- Avoid hanging anything over the crib that has cords or ribbons longer than seven inches.
- Do not let children under age 6 sleep on the top bunk of bunk beds (they may strangle or suffocate themselves if they fall).
- Make sure the spacing between bed guardrails, frames, and all spaces in the head- and foot-boards do not exceed 3.5 inches.
- Avoid letting your child play on bean bag chairs that contain small foam pellets - if the bean bag chair rips, your child can inhale and choke on the pellets.
- Do not allow young children to play with shooting toys. An arrow, dart, or pellet can be a choking hazard if shot into a child's mouth.
- Remember to discard any plastic wrapping the toy came in - plastic wrapping can suffocate a small child.

Infants and sleeping:
The medical community recommends placing infants on their backs in their cribs to reduce the risk of sudden infant death syndrome (SIDS). Placing infants on their backs may also reduce the chance of choking, as infants may have a difficult time lifting their heads at first, if they are face down. The crib should adhere to national safety standards, with a firm, flat mattress. Parents should avoid putting soft bedding, toys, and other soft products, pillows, and comforters in the crib with an infant.
Identifying High-Risk Situations

Most incidences of accidental child strangulation, suffocation, and choking occur in the home. As a parent, extra care should be taken to childproof the house for young children, keeping in mind that the airways of young children are much smaller and easier to obstruct.

Foods:
The American Academy of Pediatrics (AAP) recommends that children younger than 4 years old should not be fed any round, firm food unless they are cut into small, non-round pieces. Young children may not chew food properly before swallowing, increasing the risk of swallowing the food whole and choking. Food to avoid or cut into small pieces for children under age 4 includes the following:

- hot dogs
- nuts
- meat chunks
- grapes
- hard candy
- popcorn
- chunks of peanut butter
- raisins
- raw carrots

In addition, always supervise your young children when they are eating. Sometimes, choking can occur when an older child feeds his/her younger sibling unsafe food. Young children should also sit while eating, and never walk, play, or run with food in their mouths.

Special Note: Hot dogs and grapes can be eaten by young children as long as the skins are taken off and the food is cut into small, non-round pieces.

Other choking hazards:
Nonfood items that are small, round, or conforming can be a choking hazard to young children. Examples include:

- coins
- small balls
- balloons (inflated and deflated)
- marbles
- small game parts
- small toy parts
- safety pins
- jewelry
- buttons
- pen caps
- small button-like batteries (i.e., watch batteries)
Strangulation and suffocation hazards:
- Infants can suffocate in soft bedding, or when a person rolls over onto them in an adult bed.
- Plastic bags that cover the nose and mouth of infants are another common cause of suffocation.
- Children can also suffocate or otherwise injure themselves when they become trapped in household appliances, such as dryers, and toy chests.
- Children can strangle themselves with consumer products that wrap around the neck, such as clothing drawstrings, ribbons, necklaces, pacifier strings, and window blind and drapery cords.
- Small passages through which a child’s body, but not the head, fit can strangle a child, including spaces in bunk beds, cribs, playground equipment, baby strollers, carriages, and high chairs.

Injury Statistics and Incidence Rates

The following statistics are from the National SAFE KIDS Campaign:

Injury and death rates:
- In the most recent statistics, 88 percent of children who died from airway obstruction injuries were children ages 4 and under.
- In 2006, there were over 14,000 emergency room visits for airway obstruction.

Where and when:
- Most airway obstructions in children occur at home.
- Children most often choke on food items.
- Balloons are the most common cause of toy-related choking death among children of all ages.
- Strangulation by window blind or drapery cords most often occurs when the cord hangs near the floor or crib. The majority of children who strangle by window covering cords are ages 3 or under.
- More than half of drawstring strangulations (i.e., on the hood or neck of a jacket) occur when they become entangled on playground slides.

Who:
- The age group that is most at risk for all forms of airway obstruction is ages 4 and under.
- Children who sleep in adult beds are at increased risk for airway obstruction.

Available online at www.musckids.com

This handout was developed to help individuals understand more about injury prevention measures. It is meant to be used as a guide. Please consult the manufacturer’s instructions and/or your healthcare provider if you have any questions.