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Prevent Your Child From Choking

By Linda Bren

Peanuts and popcorn, hot dogs, candy, carrots, and sunflower seeds. Ayal Willner, M.D., has seen them all stuck in children's throats--and sometimes their lungs. The pediatric ear, nose, and throat specialist in Long Beach, Calif., spends a lot of time in emergency rooms removing food and small objects from children's air passages. "I see about 20 to 30 kids a year from all over southern California because of choking," he says.

In 2001, more than 17,000 children ages 14 years or younger were treated for choking episodes in U.S. emergency departments, according to the Centers for Disease Control and Prevention (CDC). About 60 percent of these episodes were related to food items.

"Almost all solid foods can pose some risk of choking," says Martin Stutsman, a consumer safety officer in the Food and Drug Administration's Center for Food Safety and Applied Nutrition (CFSAN). "This is particularly true of foods that are of a size and shape that can obstruct breathing if they become lodged in the airway."

The FDA takes action when a food poses an unusual risk of choking. But most foods, while posing some choking risk, do not pose an unusual risk, says Stutsman, and the agency cannot eliminate all the potential risks. "We know a lot of choking incidents occur on grapes, for example, but it's impossible to control the size of grapes."

"But there are things that people can do to reduce the risk of choking," says Stutsman. Safety experts agree that parental supervision and keeping potential choking hazards out of children's reach are key to choking prevention. "Parents need to be cognizant of where their children are playing at all times and they should withhold foods of the size that are likely to cause choking in very young children," says Stutsman.

The Dangers of Choking

Food or small objects can cause choking when they get caught in the throat and block the airway, preventing oxygen from getting to the lungs and the brain. According to the

American Academy of Pediatrics (AAP), when the brain goes without oxygen for more than four minutes, brain damage or even death may occur.

In May 2005, two young girls in New York City died after choking on hard candy. The girls, ages 4 and 5, choked on jumbo mint balls, round peppermint candies measuring a little more than three-quarters of an inch in diameter.

Every child is at risk for choking, says the CDC. Younger children are particularly at risk because of their tendency to place objects in their mouths, poor chewing ability, and narrow airways compared with those of older children and adults.

A peanut, for example, is going to affect a child's airway more than an adult's, says Willner. Children younger than 6 years do not have all their molars, the grinding teeth at the back of the mouth. "Food can get to the back of the jaw and without being crushed by the teeth, the food is pushed to the back of the throat and the body instantly swallows it," says Willner. "If it happens quickly, it may not lead to a coordinated swallow. Or if a child laughs or takes a deep breath, the food can be inhaled."

Inhaled food is drawn into the windpipe (trachea) and travels into one of two bronchial tubes (bronchi), where it can block the flow of air into the lungs. "Depending on the size and shape of the food particle, it can go further to a point where it actually plugs up one of the smaller branches of a bronchial tube and can cause part of the lung to collapse," says Mary Purucker, M.D., Ph.D., an FDA pulmonary specialist. "Even if the particle doesn't entirely clog the airway, it has picked up bacteria from the mouth or elsewhere and can cause respiratory infection, such as pneumonia."

When food is inhaled, coughing and choking spasms occur. "But within minutes, the choking experience will stop," says Willner. "The initial reflex is tired out and you're left with a low-grade irritation. You may think everything is fine." However, pneumonia or other serious conditions may show up weeks later. "I've taken out foreign bodies that have been there for six weeks," says Willner.

FDA and Food Safety

Under the Federal Food, Drug, and Cosmetic (FD&C) Act, the FDA regulates the safety of most food products. The exceptions are meat, poultry, and certain egg products, which fall under the jurisdiction of the U.S. Department of Agriculture. Nonfood products that may pose a danger are regulated by another federal government agency, the Consumer Product Safety Commission (CPSC).

Food items marketed with toys in them, such as Cracker Jack and some cereals, are regulated by both the FDA and the CPSC. The FDA regulates the safety of the food, and the CPSC is responsible for the safety of the toy.

The FDA encourages manufacturers to consider potential choking risks when designing their products, says Stutsman. And the agency investigates any foods that may potentially pose an unusual risk.

After the recent choking deaths in New York City involving peppermint candy, FDA investigators in the agency's New York district collected samples of the candy at a local store and submitted them to an FDA laboratory for measurement and analysis. After examining the products, the FDA determined that the candy did not pose an unusual choking risk.

"Whether a particular food poses an unusual risk that would warrant further FDA follow-up is determined on a case-by-case basis in consultation with our Health Hazard Evaluation Board," says Stutsman. The board is made up of FDA scientists and medical and health experts who review evidence, scientific literature, and other data to render an opinion on a product's safety. First established in 1970, the board has since been called upon to review hundreds of food and cosmetic product issues to help the FDA determine whether a product should be seized or recalled.

The board was convened in 2001 after several children choked to death on mini-cup gel candy. The candy contained konjac, an ingredient made from a fibrous root found in Asia. Konjac candies were imported from Asia and packaged in individual servings about the size of a coffee creamer. Unlike gelatin products commonly found in the United States, the candy did not readily dissolve in the mouth. "The gelatinous material conformed to the airway, and the Heimlich maneuver didn't seem to dislodge it," says Stutsman.

In August 2001, the Health Hazard Evaluation Board concluded that the packaging, shape, slipperiness, and consistency of the mini-gel products made them inherently hazardous. The FDA immediately issued a warning to consumers of the potential choking hazard. The agency also sought the expertise of the CPSC, which confirmed that the candies posed a serious choking risk, particularly to infants, children, and older people. In October 2001, the FDA issued a second warning to consumers and an import alert to prevent the candy from entering the United States. By the end of January 2002, more than a dozen companies that produced and marketed the konjac candy had recalled their products.

The FDA requires certain products to carry labels warning of choking risks. For example, some cereals and dietary supplements contain a fiber, known as psyllium husk seed (PHS), which has health benefits but can potentially swell and block the throat or esophagus when not taken with liquid. An FDA regulation allows the use of the health claim in labeling, but also requires that any product that bears the health claim also carry a statement on the label informing consumers about the risk of choking when adequate liquid is not consumed with the product. In addition, the label must advise people who have difficulty swallowing not to use the product.

Choking Prevention

Parents and caregivers can take steps to reduce the risk of choking in children. The CDC recommends the following:

- Keep a watchful eye on children who are eating and playing
- Keep dangerous toys, foods, and household items out of reach
- Learn how to provide early treatment for children who are choking.

Parents should supervise young children during mealtime, says the AAP, and should teach children to chew their food well. Children should be sitting--not lying down or in motion--while eating. Eating "on the run" increases the risk of choking.

The AAP recommends that children younger than 4 not be fed any round, firm food unless it is cut into small pieces no larger than one-half inch. Children under 4 do not have a full set of teeth and cannot chew as well as older children, so large chunks of foods may lodge in the throat and cause choking. And caregivers should be aware of older children's actions. Many choking incidents occur when older brothers or sisters give dangerous foods, toys, or small objects to a younger child.

Although food items are the cause of most choking injuries in children, toys and household items can also be hazardous. Balloons, when uninflated or broken, can choke or suffocate young children who try to swallow them. According to the CPSC, more children have suffocated on uninflated balloons and pieces of broken balloons than on any other type of toy.

The AAP advises parents to follow the age recommendations on toy packages and to keep small household items away from young children.

Medications in the form of pills can present a potential choking risk for small children. "Make sure that a child is old enough to comfortably swallow a pill," says Shirley Murphy, M.D., acting deputy director of the FDA's Office of Counter-Terrorism and Pediatric Drug Development. "Parents with children who have trouble swallowing pills should ask their doctor to prescribe a liquid or other form," says Murphy. Some medications come in liquid, syrup, or effervescent form. The agency encourages pharmaceutical companies to develop age-appropriate formulations for all medications, says Murphy.

By being alert to potential choking hazards, parents can make their environment safer for children. But sometimes, despite all precautions, a child may choke. "Parents who know basic choking rescue procedures may be able to save their child's life," says Stutsman.

The American Heart Association (AHA) recommends using abdominal thrusts (the Heimlich maneuver) to clear a blocked airway in conscious adults and children ages 1 year and older. And knowing how to perform CPR procedures on a child or adult who has stopped breathing can also mean the difference between life and death.

The AAP advises parents to take classes in basic first aid, CPR, and emergency prevention from either the AHA or the American Red Cross.

Unsafe Foods for Young Children

The American Academy of Pediatrics recommends keeping the following foods away from children younger than 4:

- hot dogs
 - nuts and seeds
 - chunks of meat or cheese
 - whole grapes
 - hard, gooey, or sticky candy
 - popcorn
 - chunks of peanut butter
 - raw vegetables
 - raisins
 - chewing gum.
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Dangerous Objects for Young Children

The American Academy of Pediatrics advises keeping the following items away from infants and young children to reduce the risk of choking:

- latex balloons
 - coins
 - marbles
 - toys with small parts
 - toys that can be compressed to fit entirely into a child's mouth
 - small balls
 - pen or marker caps
 - small button-type batteries
 - medicine syringes.
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For More Information

American Heart Association
(877) AHA-4-CPR (242-4277)

American Red Cross

National Center for Injury Prevention and Control

American Academy of Pediatrics