



FACTS ABOUT UNINTENTIONAL INJURIES BY TYPE

1. Airway Obstruction

- ◆ Airway obstruction injury is the leading cause of unintentional injury death among infants under age 1.
- ◆ These injuries occur when children are unable to breathe normally because:
 - Food or objects block the internal airways (choking).
 - Materials block or cover their external airways (suffocation).
 - Items become wrapped around their necks and interfere with breathing (strangulation).
- ◆ Children, especially those under age 3, are particularly vulnerable to obstruction death and injury.
 - They have small upper airways.
 - They are inexperienced with chewing.
 - They tend to put objects into their mouths.
 - They are unable to lift their heads or extricate themselves from tight places.
- ◆ In 2000, 794 children ages 14 and under died from airway obstruction injuries.
 - 85% of the deaths were in infants ages 4 and under.
- ◆ In 2000, 634 children ages 14 and under died from suffocation, strangulation, and entrapment.
- ◆ The majority of childhood suffocations, strangulations, and chokings occur in the home.

2. Suffocation

- ◆ 60% of infant suffocation occurs in the sleeping environment.
- ◆ Infants can suffocate when:
 - Their faces become wedged against or buried in a mattress, pillow, infant cushion or other soft bedding.

- When someone in the same bed rolls over onto them.
- Their mouths and noses are covered by or pressed against a plastic bag.
- ◆ As many as 900 infants whose deaths are attributed to SIDS each year are found in potentially suffocating environments:
 - Frequently on their stomachs, with their noses and mouths covered by soft bedding.
- ◆ Soft bedding may also be a factor in deaths to children in playpens.
 - Since 1988, at least 100 babies have died of suffocation or SIDS while in playpens with soft bedding or improper or extra mattresses.
- ◆ Children can suffocate when they become trapped in household appliances, such as refrigerators or dryers, and toy chests.
- ◆ Each year, cribs and play yards are involved in nearly 53% of all nursery product-related deaths among children ages 5 and under.
- ◆ Cribs (primarily older, used cribs) are responsible for about 26 strangulation and suffocation deaths each year.
- ◆ Children ages 4 and under, especially under age 1, are at greatest risk for all forms of airway obstruction injury.
- ◆ Children placed in adult beds are at increased risk for airway injury.
 - Since 1990, at least 296 children ages 2 and under have died in adult beds as a result of entrapment in the bed structure.
 - 209 children in this age group died in adult beds from smothering as a result of being overlain by another person.

3. Choking

- ◆ In 2000, 160 children ages 14 and under died from choking.
 - 41% choked on food and 59% nonfood.
- ◆ In 2001, more than 17,500 children were treated in hospital emergency departments for choking-related episodes.
- ◆ In 2001, nine children ages 8 and under died from choking on a toy or toy part; four of these deaths involved balloons.
 - Choking and suffocation/asphyxia deaths account for 40% of all toy-related fatalities.
- ◆ In 2001, an estimated 240 children ages 14 and under choked to death in the home. Of these children, nearly 80 percent were ages 4 and under.
- ◆ The majority of childhood choking injuries and deaths are associated with food items.
- ◆ Children are at risk from choking on small, round foods such as hot dogs, candies, nuts, grapes, carrots, and popcorn.
- ◆ Nonfood items causing choking tend to be round or conforming objects, including coins, small balls, and balloons.
 - More than 110 children, most of them ages 5 and under, have died from balloon-related suffocation since 1973.

4. Strangulation

- ◆ Strangulation occurs among children when consumer products become wrapped around their necks.
- ◆ Common items include clothing drawstrings, ribbons or other decorations, necklaces, pacifier strings, and window blind and drapery cords.
- ◆ Since 1991, at least 130 children have strangled on window covering cords.
- ◆ The majority of deaths involved outer blind cords and occurred when:
 - The cord was hanging near the floor or crib.
 - When furniture was placed near the cord.
- ◆ Other deaths occurred when children, ages 9 months to 17 months, strangled by loops formed by inner blind cords.
- ◆ Since 1985, at least 22 children have died from entangled clothing drawstrings; most often hood/neck drawstrings.
 - More than half of drawstring entanglement incidents involved playground slides.
- ◆ Children strangle in openings that permit the passage of their bodies, yet are too small for, and entrap, their heads.
- ◆ These include spaces in bunk beds, cribs, playground equipment, baby strollers, carriages, and high chairs.
 - Since 1990, at least 53 children, nearly all 3 years and under, have died due to entrapment in bunk beds alone.

5. Airway Obstruction Prevention Laws and Regulations

- ◆ The Child Safety Protection Act bans any toy intended for use by children under age 3 that may pose a choking, aspiration, or ingestion hazard and requires choking hazard warning labels on packaging for these items when intended for use by children ages 3 to 6.
- ◆ The US Consumer Product Safety Commission (CPSC) has issued voluntary guidelines for drawstrings on children's clothing to prevent children from strangling in the neck and waist drawstrings of upper outerwear garments, such as jackets and sweatshirts.
- ◆ In 1999, the CPSC voted to issue a mandatory standard for bunk beds to address entrapment hazards. The new standard restricts opening sizes and requires company identification and age-specific warning labeling on all new bunk beds.
- ◆ In addition the CPSC has published standards for crib design. A CPSC Crib Safety Tips sheet is included in this section.

6. Falls

- ◆ Falls are the leading cause of unintentional injury for children.

- ◆ Children ages 14 and under account for one-third of all fall-related visits to hospital emergency rooms.
- ◆ More than half of all nonfatal injuries to children are associated with falls, and falls are the leading cause of nursery product-related injuries.
- ◆ The severity of a fall injury is determined by:
 - The distance of the fall.
 - The landing surface.
- ◆ Because falls are associated with a child's curiosity and development of motor skills, children ages 10 and under are at greatest risk of fall-related death and injury.
- ◆ In 2000, 81 children ages 14 and under died from unintentional falls.
 - Children ages 4 and under accounted for more than half of these deaths.
- ◆ In 2001, an estimated 70 children ages 14 and under died as the result of falls in the home. Of these deaths, 40 were to children ages 4 and under.
- ◆ In 2001, more than 2.5 million children ages 14 and under were treated in hospital emergency rooms for fall-related injuries.
- ◆ 9% of fall-related injuries associated with products (e.g., baby walkers, windows, playground equipment) result in hospitalization.
 - This is more than two times the hospitalization rate of all other product-related injuries.
- ◆ Infants are at greater risk from falls associated with furniture, stairs, and baby walkers.
- ◆ Toddlers are at risk from window-related falls.
- ◆ Older children tend to suffer from playground equipment-related falls.
- ◆ More than 80% of fall-related injuries among children ages 4 and under occur in the home.
- ◆ Among children ages 5 to 14:
 - 45% of fall-related injuries occur in the home.
 - 23% occur at school.

7. Baby Walker Falls

- ◆ On average, two children die annually as a result of baby walker-related injuries.
- ◆ In 2001, more than 6,400 children were treated in hospital emergency rooms for baby walker-related injuries.
- ◆ Of children aged less than 15 months who sustain baby walker-related injuries:
 - 76% fall down stairs.
 - 12% tip over.
 - Injuries associated with falls down stairs are the most severe and are more likely to resulting head injury and hospitalization.

8. Window Falls

- ◆ Children are more likely to die or be severely injured from window-related falls than from falls associated with any other product.
- ◆ Approximately 18 children ages 10 and under die each year from window fall-related injuries.
- ◆ An estimated 4,700 children ages 14 and under are treated in hospital emergency departments annually for injuries sustained from falling out of windows.
 - 28% of these children require hospitalization.
 - Head injuries account for the majority of these injuries.

9. Playground Falls

Each year, an estimated 15 children ages 14 and under die from playground equipment-related injuries.

Approximately 233,500 are treated in hospital emergency rooms for playground equipment-related injuries.

More than 70% of playground-related injuries involve falls to the surface.

9% involve falls onto equipment.

Falls account for 90% of the most severe playground-related injuries (mostly head injuries and fractures).

Falls account for one-third of playground fatalities.

- Head injuries are involved in 75% of all fall-related deaths associated with playground equipment.

10. Falls Prevention Laws and Regulations

- ◆ All baby walkers manufactured after June 30, 1997, must meet American Society for Testing and Materials (ASTM) voluntary and mandatory standards.
- ◆ These standards require that baby walkers either:
 - Be too wide to fit through a standard doorway.
 - Have features, such as gripping mechanism, to stop the walker at the edge of a step.
 - Playground equipment guidelines have been developed by the CPSC and ASTM.

11. Fire-related Injuries

- ◆ Fires and burns are the fifth leading cause of unintentional injury-related death among children ages 14 and under.
- ◆ Children, especially those ages 5 and under, are at the greatest risk from home fire-related death and injury.
 - The fire death rate is more than twice the national average.

- ◆ In 2001, US fire departments responded to nearly 396,500 residential fires.
- ◆ Equates to one every 80 seconds.
- ◆ Residential fires accounted for just 22% of all reported fire incidents but caused:
 - 83% of all reported fire deaths.
 - Nearly 76% of all fire-related injuries.
- ◆ Smoke alarms are extremely effective at preventing fire-related death and injury.
 - The chances of dying in a residential fire are cut in half when a smoke alarm is present.
- ◆ In 2000, 561 children ages 14 and under died in residential fires.
 - Nearly 56% of these children were ages 4 and under.
- ◆ Each year, nearly 40,000 children ages 14 and under are injured by fires in the home.
- ◆ More than 70% of all fire-related deaths are from smoke inhalation, caused by toxic gases produced as fires develop and spread.
- ◆ Flames and burns are responsible for the remaining 30% of fire-related deaths.
- ◆ A working smoke alarm is not present in two-thirds of the residential fires in which a child is killed or injured.
- ◆ Nearly 55% of children ages 5 and under who die from home fires are asleep at the time.
- ◆ Another 31% of these children are too young to react appropriately.
- ◆ Home cooking equipment is the leading cause of residential fires and fire-related injuries.
- ◆ However, residential fires caused by smoking materials (e.g., cigarettes) are the leading cause of fire-related death.
- ◆ Account for nearly a quarter of all fatalities.
- ◆ Though children playing with fire accounts for only 5% of residential fires, this causes for 40% of residential fire-related deaths among children.
 - As many as two-thirds of child fireplay victims are not the playing children.
 - More than 60% of all child-play home fires begin in a bedroom or living room where children are often left alone to play.
 - More than three-quarters of these fires are started by children playing with matches or lighters.
- ◆ The number of candle-related fire deaths, most caused by candles left unattended which then tipped over, increased 750% between 1980 and 1998.
 - A child playing with or near a candle is one of the biggest contributors to candle fires.
- ◆ Children ages 5 and under represent only 9% of the US population make up more than 17% of fire-related deaths in the home.
 - Children in this age group are more than twice as likely to die in a fire as the rest of the population.
- ◆ In 2001, at least 630 children ages 14 and under died from fires and burns in the home.
 - Of these children, 45 percent were ages 4 and under.

12. Burns

- ◆ Scald injury is the most common type of burn injury among children.
 - Flame burns are more prevalent in older children.
- ◆ All children are also at risk for contact, electrical, and chemical burns.
- ◆ Because young children have thinner skin than of older children and adults, their skin burns at lower temperatures and more deeply.
 - 140° F water requires only 3 seconds to inflict third-degree burns, an injury requiring hospitalization and skin grafts, to a child.
 - 156° F it water takes 1 second to cause a third degree burn.
 - 125° F takes about 2 minutes to cause a second degree burn.
 - 120° F takes 3 minutes to cause a second degree burn.
- ◆ In 2000, 603 children ages 14 and under died due to unintentional fire- and burn-related injury.
- ◆ In 2001, an estimated 99,400 children ages 14 and under were treated in hospital emergency rooms for burn-related injuries.
 - 58,270 were thermal burns.
 - 27,200 were scald burns.
 - 8,940 were chemical burns.
 - 2,600 were electrical burns.
- ◆ An average of ten children ages 14 and under die of scald burn-related injuries each year.
 - Children ages 4 and under account for nearly all of these deaths.
- ◆ Among children ages 4 and under hospitalized for burn-related injuries:
 - An estimated 65% are for scald burns.
 - An estimated 20% are for contact burns.
- ◆ In 2001, more than 4,700 children ages 14 and under were treated in hospital emergency rooms for fireworks-related injuries.
- ◆ Child-play fires are the leading cause of residential fire-related death and injury among children ages 9 and under.
- ◆ Most common causes of product-related thermal burn-related injuries among children ages 14 and under:
 - Hair curlers and curling irons.
 - Room heaters.
 - Ovens and ranges.
 - Irons.
 - Gasoline.
 - Fireworks.
- ◆ The majority of scald burns to children, especially those ages 6 months to 2 years, are from hot foods and liquids spilled in the kitchen or other places where food is prepared and served.
- ◆ Hot tap water accounts for nearly one-fourth of all scald burns among children and is associated with more deaths and hospitalizations and other hot liquid burns.
- ◆ Tap-water burns most often occur in the bathroom.
 - They tend to be more severe than other scald burns.
 - They tend to cover a larger portion of the body than other scald burns.
- ◆ Nearly two-thirds of electrical burn injuries among children ages 12.

- These are generally associated with household electrical cords and extension cords.
- ◆ Wall outlets are associated with an additional 14% of these injuries.
- ◆ The vast majority of microwave burns among children are scald burns.
 - Typically caused by spilling hot liquids or food.
 - Primarily associated with the trunk or face.

13. Drowning

- ◆ Drowning is the second leading cause of unintentional injury-related death among children 14 and under.
- ◆ Drowning is the leading cause of injury-related death in children ages 1 to 4.
- ◆ Children can drown in as little as 1" of water.
- ◆ Two minutes following submersion, a child will lose consciousness.
- ◆ Irreversible brain damage occurs after four to six minutes and determines the immediate and long-term survival of the child.
- ◆ Early discovery is crucial for survival:
 - 92% of children who survive are discovered within two minutes following submersion.
 - The majority (86%) who die are found after 10 minutes.
- ◆ Nearly all who require CPR die or are left with severe brain damage.
- ◆ In 2000, 943 children ages 14 and under died as a result of drowning.
 - Children ages 4 and under accounted for more than 60% of these deaths.
- ◆ In 2001, nearly 4,700 children ages 14 and under were treated in hospital emergency rooms for drowning-related accidents.
- ◆ In 2001, an estimated 450 children ages 14 and under drowned in or around the home.
 - Nearly 80 percent were ages 4 and under.
- ◆ Fifteen percent of children admitted for near-drowning die in the hospital.
- ◆ As many as 20% of near-drowning survivors suffer severe, permanent neurological disability.
- ◆ More than half of drowning among infants (under age 1) occur in bathtubs.
- ◆ Drownings in this age group also occur in toilets and buckets.
- ◆ Since 1984 more than 327 children have drowned in buckets containing water or other liquids used for mopping or other household chores.
 - More than half of drownings among children ages 1 to 4 are pool-related.
- ◆ Children ages 5 to 14 most often drown in open water sites.
- ◆ Approximately 10% of childhood drownings occur in bathtubs.
 - The majority of these occur in the absence of adult supervision.
 - An estimated 8 children die annually in baby bath seat-related incidents.
- ◆ Among children ages 4 and under, there are approximately 350 residential swimming pool drownings each year.
 - More than half of these drownings occur in the child's home pool.
 - One-third occur at the home of friends, neighbors, or relatives.
- ◆ The majority of children who drown in swimming pools:
 - Were last seen inside the house.

- Have been missing from sight for less than five minutes.
- Were in the care of one or both parents at the time.
- ◆ Since 1980, more than 230 children ages 4 and under have drowned in spas and hot tubs.
- ◆ In 2000, at least 21 children ages 14 and under drowned in boating-related incidents.
- ◆ In 2000, more than 188 children ages 14 and under sustained personal watercraft-related injuries.

14. Poisoning

- ◆ In 2001, an estimated 60 children ages 14 and under died from poisonings in the home.
- ◆ In 2000, 91 children ages 14 and under were fatally poisoned.
 - Children ages 4 and under accounted for more than half of these deaths.
- ◆ In 2001, more than 1.1 million unintentional poisonings among ages 5 and under were reported to poison control centers.
- ◆ In 2001, nearly 114,110 children ages 14 and under were treated in hospital emergency rooms for unintentional poisoning.
- ◆ Nearly 80% of these injuries were to children ages 4 and under.
- ◆ More than 90% of all poison exposures occur in homes.
- ◆ Among children ages 5 and under:
 - 60% of poisoning exposures are by non-pharmaceutical products such as cosmetics, cleaning substances, plants, foreign bodies and toys, pesticides, art supplies, and alcohol.
 - 40% are by pharmaceuticals.
- ◆ Of the oral prescription drugs ingested by children ages 4 and under:
 - 23% belong to someone who does not live with the child.
 - 17% belong to a grandparent or great-grandparent.
- ◆ Only 30% of caregivers are able to accurately measure a correct dosage when dispensing over-the-counter medications to their children.
- ◆ It is estimated that 890,000 children ages 1 to 5 have elevated blood lead levels high enough to affect intelligence, growth, and development.
 - Children ages 1 to 2 are at the greatest risk for lead poisoning.
- ◆ Potentially toxic fumes from chemicals are often heavier than air, causing them to settle near the ground or floor where baby is.
- ◆ Each year approximately 24 children ages 14 and under are fatally poisoned by carbon monoxide, a colorless, odorless gas.
- ◆ The majority of CO exposures occur in the winter months.
- ◆ The most common sources of residential CO-related poisoning are unvented supplemental heaters.
- ◆ Of cases reported to poison control centers, 75% are managed in a non-healthcare facility (e.g., site of exposure, the patient's home).

15. Unintentional Firearm Injury

- ◆ In 2001, an estimated 80 children ages 14 and under died from unintentional shootings in the home.
 - Of these children, nearly 90 percent were ages 5 to 14.
- ◆ In 2000, 86 children ages 14 and under died from unintentional firearm-related injuries.
 - Children ages 10 to 14 accounted for 57% of these deaths.
- ◆ In 2001, nearly 1,400 children ages 14 and under are treated in hospital emergency rooms for unintentional firearm-related injuries.
 - 21% of these injuries are severe enough to require hospitalization.
- ◆ The unintentional firearm injury death rate among children ages 14 and under in the United States is nine times higher than in 25 other industrialized countries combined.
- ◆ In 2001, more than 8,000 children ages 14 and under were treated in hospital emergency rooms for non-powder gun-related injuries (e.g., BB guns, pellet guns).
- ◆ Nearly all childhood unintentional shooting deaths occur in or around a home.
 - 50% occur in the home of the victim.
 - Nearly 40% occur in the home of a friend or relative.
- ◆ Most childhood unintentional shooting deaths:
 - Involve guns that have been kept loaded and accessible to children.
 - Occur when children play with loaded guns.
- ◆ In one recent study, more than half of gun-owning parents reported storing a firearm loaded or unlocked in their home.
- ◆ An estimated 3.3 million children in the US live in households with firearms that are always or sometimes kept loaded and unlocked.
- ◆ More than 70% of unintentional firearm shootings involve handguns.
- ◆ Nearly two-thirds of parents with school-age children who keep firearms in the home believe the firearm is safe from their children.
 - One study found that when a gun was in the home, 75-80% of first and second graders knew where the gun was kept.
- ◆ Children as young as age 3 are strong enough to pull the trigger of many of the handguns available in the US.

16. Motor Vehicle Injuries – Occupant

- ◆ Motor vehicle crashes remain the leading cause of unintentional injury-related death among children ages 14 and under.
- ◆ Unrestrained children are more likely than children who are restrained:
 - To be injured.
 - To suffer more severe injuries.
 - To die in motor vehicle crashes.
- ◆ In 2000, 1,654 child occupants ages 14 and under died in motor vehicle crashes.

- ◆ In 2001, an estimated 228,000 children ages 14 and under were injured as occupants in motor vehicle crashes.
- ◆ In addition to physical trauma, motor vehicle injuries can have long-lasting psychological effects.
 - One study showed that 25% of children who suffered from traffic injuries, and 15% of their parents, were later diagnosed with post-traumatic stress.
- ◆ Through October 1, 2001, 137 children have been killed by passenger air bags.
 - 88% of all children killed by passenger air bags were either unrestrained or improperly restrained at the time of the crash.
 - 22 infants died in rear-facing child safety seats in front of a passenger air bag.
- ◆ Seventy percent of motor vehicle crashes occur within 25 miles of home.
- ◆ 60% of crashes occur on roads with posted speed limits of 40 MPH or less.
- ◆ In 2001, 23% of all traffic deaths among children ages 14 and under involved alcohol.
 - More than half were passengers in vehicles with drunk drivers.
- ◆ Child restraint use decreases as both the age of the child and the blood alcohol level of the child's driver increase.
- ◆ Riding unrestrained is the greatest risk factor for death and injury among child occupants of motor vehicles.
 - 55% of children ages 14 and under killed as occupants in motor vehicle crashes in 2001 were not using safety restraints at the time.
- ◆ Approximately 14% of children ages 14 and under ride unrestrained.
 - This places them at twice the risk of death and injury of those riding restrained.
- ◆ Nearly a third of children ride in the wrong restraints for their age and size.
 - According to the Crash Injury Research & Engineering Network, inappropriately restrained children are nearly three and a half times more likely to be seriously injured than their appropriately restrained counterparts.
- ◆ Incorrect use of child safety seats is widespread.
 - 96% of parents believe they install their child safety seats correctly.
 - Approximately 82% of children who are placed in child safety seats are improperly restrained.
- ◆ Driver safety belt use is positively associated with child restraint use.
 - According to a recent study, nearly 40% of children riding with unbelted drivers were completely unrestrained, compared to only 5% of children riding with belted drivers.
- ◆ The back seat is the safest place for children to ride.
 - Children ages 12 and under are 36% less likely to die in a crash if seated in the rear seat of a passenger vehicle.
- ◆ It is estimated that one-third of children ride in the front passenger seat, many in front of air bags.
- ◆ Children are more likely to be riding in the front seat when:
 - Traveling with unbelted drivers.
 - They are the only passengers.

- They are ages 6 and over.
- ◆ Child safety seats are extremely effective when correctly installed and used in passenger cars.
- ◆ They reduce the risk of death by:
 - 71% for infants.
 - 54% for children ages 1 to 4.
- ◆ They reduce the need for hospitalization by:
 - 69% for children ages 4 and under.
- ◆ From 1975 through 2001, an estimated 5,085 child lives were saved by the use of safety seats or adult belts.
- ◆ If all child passengers ages 14 and under were restrained properly, an estimated 182,000 serious injuries could be prevented annually.
- ◆ Though adult safety belts do not adequately protect children ages 4 to 8 from injury in a crash, an estimated 83% of children ages 4 to 8 ride improperly restrained in adult safety belts.
- ◆ Although belt-positioning booster seats are the best way to protect them, only 19% of children who should be restrained in booster seats use them.

17. Motor Vehicle Injury – Pedestrian

- ◆ In 2000, 705 children ages 14 and under died from pedestrian injuries.
- ◆ One-fifth of all traffic fatalities among children ages 14 and under are pedestrians.
- ◆ In 2001, more than 47,300 children ages 14 and under were treated in hospital emergency rooms for pedestrian-related injuries.
- ◆ In 2001, 23 children ages 14 and under were killed as pedestrians in school bus-related incidents.
- ◆ (return to top of page)
- ◆ Electrical Shock
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- ◆ Most fatalities occur from high-placed outlets.

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