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Unintentional Injuries in Pediatrics

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Dr Judy has disclosed no financial relationships relevant to this article. This commentary does not contain a discussion of an unapproved/investigative use of a commercial product/device.

Objectives After completing this article, readers should be able to:

1. Describe the role that unintentional injuries play in the morbidity and mortality of children.
2. List the risk factors that predispose children and adolescents to the risk of death from a motor vehicle crash.
3. Detail strategies to counsel parents effectively about bicycle safety.
4. Describe the safety measures that need to be taken to reduce the risk of drowning in children.
5. Discuss preventive measures with parents that can reduce the likelihood of scald burns occurring in the home.
6. Recite the national poison control number.
7. Detail strategies to avoid accidental firearm injuries in the home.

Introduction

Unintentional injuries are the leading cause of morbidity and mortality among children in the United States. The definition of an injury is “tissue damage secondary to acute exposure (inadvertent or deliberate) to physical agents (eg, thermal, kinetic, chemical, or electrical energy, or water) or chemicals (eg, poisoning).” Unintentional injuries are not accidents because they are understandable, predictable, and preventable occurrences.

In the United States, injuries kill more children between the ages of 1 and 19 years than all other causes combined (Table 1). Data from the Centers for Disease Control and Prevention (CDC) Childhood Injury Report indicate that 20 children die every day from preventable injuries. (1) The problem is even more profound in developing countries, where more than 95% of deaths occur from injury, accounting for nearly 1 million deaths annually. Injuries also result in significant childhood morbidity. It is estimated that 1 in 4 children sustains an unintentional injury that requires medical care each year. Injuries produce acute morbidity, short- and long-term disability, and high medical costs; United States medical costs for these injuries approach \$17 billion per year.

The CDC, World Health Organization, and United Nations Children’s Emergency Fund (UNICEF) have completed “A World Report on Childhood Injury Prevention” and initiated a new campaign, “Protect the Ones You Love,” to raise parents’ awareness about the leading causes of child injury and detail methods of prevention. As part of the initiative, the CDC’s Injury Center offers resources to help parents keep their children safe from injuries, including fact sheets, podcasts, media outreach, and event planning guides. All materials are available free of charge at www.cdc.gov/safekid.

Risk Factors

Young children and teenagers are at greatest risk from suffering acute unintentional injuries. Males have twice the risk of injury as females, primarily due to greater exposure to activities that result in injury and patterns of risk-taking and rougher play. Native Americans and Alaskan natives have the highest rate of unintentional injury in the United States. Further, more than 40% of Native American children are from low-income families and are more likely to have difficulty obtaining medical care. They are less likely to practice safe behaviors and to receive lifesaving preventive services. Substance abuse, especially

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Table 1. Leading Causes of Unintentional Injury Death Among Children Age 0–10 Years, 2000–2005

Rank	Age Group in Years				
	Younger than 1 (n=5,883)	1 to 4 (n=10,203)	5 to 9 (n=7,144)	10 to 14 (n=9,088)	15 to 10 (n=40,734)
1	Suffocation 66%	Drowning 27%	MVT occupant 22%	MVT occupant 26%	MVT occupant 41%
2	MVT occupant 8%	Pedestrian 15%	MVT unspecified 15%	MVT unspecified 15%	MVT unspecified 28%
3	Drowning 7%	Fires/Burns 14%	Pedestrian 13%	Pedestrian 12%	Poisoning 7%
4	MVT unspecified 5%	MVT occupant 13%	Fires/Burns 13%	Drowning 10%	MVT other 6%
5	Other injuries 5%	MVT unspecified 9%	Drowning 13%	MVT other 9%	Pedestrian 5%

MVT=motor vehicle traffic
 From Borse, NN, Gilchrist J, Dellinger AM, Rudd RA, Ballesteros MF, Sleet DA. *CDC Child Injury Report Patterns of Unintentional Injuries Among 0–19 Year Olds in the United States, 2000–2006*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2008

alcohol abuse, is a risk factor in motor vehicle crashes and is associated with injury mortality.

Prevention Activities

Attempts to decrease injury rates in children include active and passive measures. Active measures require the host (child or parent) to be involved every time protection is needed. For example, seat belt use requires compliance during each and every car trip. These measures are least likely to be adopted by the persons most at risk. Such efforts often require a change in cultural norms and are the only option in some areas of protection (eg, bicycle helmets). Passive measures have been more successful because the host does not have to change human behavior for the measure to be effective. For example, air bags automatically protect automobile passengers.

Health-care professionals can make an impact on injury prevention by providing counseling at health care visits (Table 2). The American Academy of Pediatrics (AAP) web site www.healthychildren.org is an excellent resource for parents. The Injury Prevention Program (TIPP) of the AAP offers helpful material for pediatricians to use for office-based injury prevention anticipatory guidance. Parents need to be reminded that close supervision is the best way to prevent unintentional injuries in children.

Counseling is most effective at the time of an encounter for assessment of an injury and in the context of community action. The most effective prevention programs are woven into the fabric of communities as they develop and grow. Sweden followed this pattern as they industrialized after World War II, making injury prevention a part of urban planning, road construction, transportation, health systems, and education. The result is that Sweden has the lowest rates of child injury deaths in

the world. Community action was well demonstrated by the community effort of pediatricians to pass bicycle helmet regulation in Seattle in the 1990s. Partnerships with community or school-based organizations such as Students Against Destructive Decisions (SADD) can maximize the impact of physicians' participation in injury prevention. Pediatricians must advocate for legislation and regulation to keep children safe.

Motor Vehicle Injuries

Motor vehicle crashes are the leading cause of injury death and disability in all age groups (Figure). In 2005, 20 children younger than 19 years of age were killed each day from motor vehicle crashes, and more than 200,000 were injured in that year, based on information from the CDC web-based Injury Statistics (WISQARS™) data at <http://www.cdc.gov/injury/wisqars/>. More than one third of children who were fatally injured were passengers in cars driven by drunk drivers. Fortunately, the mortality rate has been falling over the past several years, most likely due to more stringent child restraint laws. Currently, all 50 states have child restraint laws that vary by age, weight, and restraint system. Child safety seats reduce the risk of death by 50% to 70%, and positioning the child in the back seat is associated with a 40% reduction in risk of serious injury. Of note, child restraint use depends on the adult's restraint use; 40% of children who travel with an unbelted driver are themselves unrestrained.

Children younger than 2 years of age are safest riding rear-facing in a car seat. Recent evidence indicates that children generally are safer when riding backwards and may benefit from riding backwards for longer than 1 year. At 40 lb, children can be moved to a booster seat until they are at least 80 lb and 57 in tall. After that, children should remain restrained by a seatbelt in the

Table 2. Injury Prevention Tips

Motor Vehicle Crash

- Back seat (middle) placement of child
- Rear-facing car seat until age 2 y
- Forward-facing car seat until at least 40 lb
- Booster seat until at least 80 lb and 57 in
- Always check manufacturer's specifications on car seat
- Proper use of seat belts

Drowning

- Enclose pools completely with at least 4-ft fence and self-closing gate
- Wear life jackets on boats and when playing near water
- Do not leave children unattended in baths
- Supervise closely (adult within one arm's reach of a child in or near water)
- Teach swimming and water safety

Fire and Burns

- Install smoke detectors on every level of the home and near sleeping areas
- Test smoke detectors monthly, replace batteries yearly
- Establish a family fire escape plan
- Keep lighters, matches out of reach
- No smoking in bed!
- Reduce water heater temperature to 120°F
- Do not drink hot fluids near children
- Never leave the stove unattended
- Keep appliance cords, pot handles, grills, and fireplaces out of reach
- Cover outlets with protective devices

Poisoning

- Keep all potential poisons in original containers and out of reach
- Keep all medication out of reach
- Place child-resistant caps on medications
- Dispose of medications immediately and safely
- Install carbon monoxide detectors on every level of home
- Keep poison control number near the phone: 1-800-222-1222

Threats to Breathing

- Back to Sleep
- Remove comforters, pillows, bumpers, and stuffed animals from crib
- Avoid nuts, carrots, popcorn, and hotdog pieces
- Keep coins, batteries, small toys, magnets, and toy parts away from children <4 y old
- Cut blind cords short and tie them out of reach
- Ensure cribs and mattresses meet safety precautions

Falls

- No baby walkers with wheels
- Supervise children closely
- Use safety straps in high chairs, shopping carts, and for diaper changes
- Keep car seats and "bouncy chairs" on the floor

Recreation

- Ensure helmets are fitted and worn properly
- Keep children <10 y off the road
- Remove drawstrings, scarves, and ropes from clothing when children are on playground
- Supervise children closely
- Ensure playground equipment has deep soft surface underneath

backseat away from the airbag until they are at least 13 years of age. Correct installation of car seats cannot be overemphasized. Studies show that most car seats are not installed correctly and allow for too much movement (>1 in side to side and forward), thereby not providing appropriate protection. A valuable resource is www.seatcheck.org, a site where parents can enter their zip code and find out the location of the nearest certified car seat technician, who will help them install their car seat correctly for free.

Motor vehicle collisions are the leading cause of death for teenagers. In 2005, 12 teens died every day from such collisions. Teens are most at risk because they are newly licensed and distracted by other passengers. In addition, they underestimate dangerous situations, often speed, use alcohol, and have lower seat belt use. The intent of the *graduated* driver's license program is to allow new drivers to practice driving under low-risk conditions, with the goal of improving teen driving skills and safety. Increasing the legal age of drinking alcohol has lowered the rate of motor vehicle deaths in adolescents. Parents must reinforce the dangers of drinking and driving and address infractions seriously. A safe ride agreement encourages the teen to call the parent for a ride rather than drive while impaired or ride with another impaired driver. In this agreement, the parent must contract to provide a ride home and refrain from judgment. Pediatricians should encourage families to develop a parent-teen driving contract that specifies restrictions for the teen drivers, determines when restrictions will be lifted, and outlines the consequences for violating restrictions. An example of such a

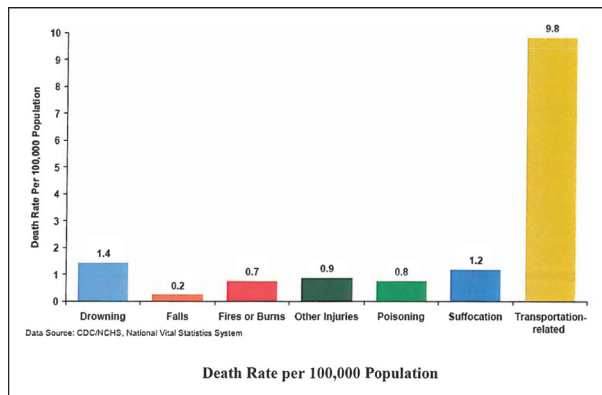


Figure. Unintentional injury death rates among children 0 to 19 years, by cause, United States, 2000–2005. Data source: Centers for Disease Control and Prevention, National Vital Statistics System. www.cdc.gov/nchs

driving contract can be found at <http://www.teen-driving.com/drivingcontract2.htm>.

Young children are at risk for pedestrian injuries because they are not aware of traffic threats. Children should not be allowed to cross streets independently until they are at least 10 years of age. Bicycles are another source of injury in young children. Bicycle helmets reduce pediatric head injuries by 85%, and it is estimated that 75% of all bicycle-related fatalities among children could be prevented with a bicycle helmet. All states should mandate bicycle helmets for children because such laws have proven to be effective in increasing helmet use and decreasing head injury rates. The annual cost of bicycle-related injuries and death (for all ages) in the United States is \$8 billion. Every dollar spent on bike helmets saves Americans \$30 in indirect medical costs and other costs. Helmets should be Snell or American National Standards Institute (ANSI)-approved to be appropriately protective during an impact. Helmets also must be fitted properly to provide optimum safety. For information on how to fit a bicycle helmet correctly, visit <http://bhsi.org/fit.htm>. Separate bicycle lanes are another protective measure.

Drowning

The formal definition of drowning is a process resulting in primary respiratory impairment from submersion in a liquid medium. In 2005, drowning killed more than 1,100 children in the United States. Four times as many children receive emergency department care for nonfatal drowning injuries for every child that dies. Nonfatal drowning has the highest average lifetime health and economic impact, with affected children often neurolog-

ically devastated and requiring prolonged medical and rehabilitative care. Factors that determine the clinical outcome of the victims include age, submersion time, water temperature, water tonicity, degree of water contamination, symptoms after a near-drowning event, associated injuries (especially cervical spine and head), presence of coingestants, underlying medical conditions, type and timing of rescue and resuscitation efforts, and response to initial resuscitation.

Drowning is the #1 cause of childhood death in Asia. The overall rate of drowning for African American children is 1.7 times higher than that for white children in the United States. A bimodal distribution of deaths is observed, with an initial peak in the toddler age group and a second peak in male adolescents. Children younger than 1 year of age often drown in bathtubs, buckets, and toilets. Children 1 to 4 years of age are more likely to drown in swimming pools where they have been unsupervised temporarily (usually for <5 min). Typical incidents involve a toddler left unattended temporarily or under the supervision of an older sibling. In the adolescent and young adult age groups (ages 15 to 24 y), most incidents occur in natural bodies of water. Approximately 90% of drownings occur within 10 yards of safety. Pediatricians should be educated about “touch supervision” in which a parent should be within an arm’s length of a swimming child.

Preventive measures for drowning at home include draining water from bathtubs and buckets and securing toilet seats. Swimming pools must be enclosed on all four sides by a fence (minimum 4 ft high) with a self-closing latch gate. Such fencing can reduce the incidence of drowning by 50% to 80%. Use of life vests seems to be an obvious preventive intervention for all age groups when they are around water, including toddlers playing around pools or open water, boaters, and even poor swimmers. Improving swimming ability with swim lessons makes sense but has not been proven effective; other conditions (eg, cold water, water currents, loss of consciousness, hypothermia) may preclude the effectiveness of swimming skills. Although swimming “buys time” to rescue, a life vest buys more time. It is clear that increasing life vest use among adolescents and adults is critical. Legislation requiring children to wear life vests when in small boats exists. Raising the age requirement for life vests to older than 6 to 14 years of age would be appropriate, given the age groups at risk.

Adolescents, a particularly high-risk group for drowning, must be informed about water safety and the dangers of intoxication while in and around the water. Changing culture to advertise the dangers of, instead of promoting,

the mixing of alcohol and water-related activities should be a goal, similar to that undertaken for drinking and driving. Driving under the influence (DUI) laws exist for boaters in all 50 states, but they have been poorly enforced. Recently, several states have linked boating violations with motor vehicle DUI violations.

Burns

About 120,000 children are treated in United States emergency departments each year for burn-related injuries. Most pediatric burns occur at home and are largely preventable. Most children 4 years of age and younger who are hospitalized for burn-related injuries suffer from scald burns (65%) or contact burns (20%). Most scald burns in children, especially children ages 6 months to 2 years, are caused by hot foods or liquids spilled in the kitchen where food is prepared and served. A key preventive measure is to set water heater temperatures no higher than 120°F. Within 3 seconds, a child's skin can be burned severely enough to require surgery when scalded with water at a temperature greater than 120°F.

After 6 years of age, the incidence of burn injuries tapers off, but it increases again as adolescents enter the work force and sustain activity- and work-related injuries, such as from motor vehicle crashes and repairs. In all age groups, accidental injuries most often are the result of carelessness and inattention to basic safety measures. The number of deaths due to fires and burns has declined since the "The Flammable Fabrics Act of 1971," which regulates the sale of flammable children's clothing, especially sleepwear. Overall, the most important factors in the reduction of burn-related deaths have been the use of smoke detectors and regulations on hot water heater temperature. In the United States, most people killed in house fires die from smoke inhalation rather than from burns.

Poisoning

Annually, more than 1 million children younger than 6 years of age experience toxic exposures, making poisoning a major and persistent cause of injury-related morbidity among children in the United States. Almost 90% of poisonings occur at home, and although more than 50% of poison exposures involve children younger than the age of 6 years, most fatal poisonings occur among adults. On average, United States poison control centers (PCCs) receive one call concerning a suspected or actual human poison exposure every 12.7 sec. Fortunately, the number of pediatric poisoning deaths has declined substantially over the past 30 years. This decline can be attributed to numerous factors, including child-resistant

packaging, heightened parental awareness of product toxic effects, intervention by poison information centers, and specially trained health professionals.

The compounds most likely to be involved in pediatric poisonings are cosmetics and personal care products, cleaning substances, analgesics, cough and cold preparations, and plants. Fortunately, most of these exposures do not result in toxic symptoms or cause only minor toxic symptoms in young children. Most ingestions can be managed at home after careful consultation with the regional PCC. However, physicians and parents should be aware of compounds that pose high risk to children. Syrup of ipecac is no longer recommended for the home management of pediatric poisonings because there is no evidence that it improves outcomes and it may delay the administration or reduce the effectiveness of other treatments, such as activated charcoal or other oral antidotes. Parents should be instructed to call the PCC immediately if they suspect a child has ingested a toxic substance. The regional PCC telephone number is 1-800-222-1222 anywhere in the United States.

Pharmaceutical products responsible for significant morbidity and mortality in young children have included iron supplements, tricyclic antidepressants, cardiovascular medications (calcium channel blockers, β -blockers), oral hypoglycemic agents, narcotic analgesics, and anti-malarials (chloroquine). During the past 10 years, pediatric poisoning fatalities have remained at 2% to 3% of all poisoning fatalities. This plateau in the number of pediatric poisoning fatalities may be due to inefficient use of resources. Many parents do not call the PCC for information when their child has experienced a potentially toxic ingestion. Primary care clinicians and emergency departments must continue to emphasize the importance of contacting the PCC immediately upon suspicion of toxic ingestion by a child.

Gun Violence

In the United States, more than 33% of households admit to having firearms, and almost 70% of parents admit that their guns are unlocked. Most accidental shootings result from having a gun in the home. For every instance in which a gun in the home is used in self-defense, there are four accidental shootings. Not only are children strong enough to fire most guns on the market, but they are also very curious and likely to want to play with novelty items, including the guns they find hidden at home. One study found that 75% of children who found a handgun played with it, and 50% of these children pulled the trigger. (2) All of these children had been educated previously about gun safety, including

instructions never to touch a gun and to find an adult if a gun is discovered. However, in one telephone survey of households, nearly 90% (regardless of gun ownership or age of child) responded that they believed that if their child found a gun, he or she would “know better” than to touch it. (3)

Removing guns from homes is the only action that can ensure decreased rates of accidental firearm deaths in the home. Parents need to be counseled, beginning at the newborn visit, about the hazards of having a gun in their home. Parents of older children should ask other parents about guns in the home before setting up playtime. If parents choose to keep a firearm in the home, the unloaded gun and ammunition must be kept in separate locked cabinets. Project Child Safe (www.projectchildsafe.org) is a program that provides gun safety kits at no cost to gun owners.

Suffocation

The #1 cause of mortality for children younger than 1 year of age is suffocation. Food, coins, and toys are the primary causes of choking-related injury and death. Certain characteristics, including shape, size, and consistency of certain toys and foods, increase the potential to cause choking among children. All babies and toddlers should avoid small objects and foods because of the threat of choking. Batteries, buttons, jewelry, coins, and small toys should be eliminated from the child’s environment. The most dangerous foods include peanuts, popcorn, hot dogs, whole grapes, raisins, bites of meat and apple, carrots, and candy. Young children are at increased risk of choking because their molars have not erupted, so they are unable to grind food adequately in preparation for swallowing.

Behavioral factors also may affect a child’s risk for choking. High activity levels while eating, such as walking or running, talking, laughing, and eating quickly, may increase a child’s risk of choking. Other agents that can cause suffocation are dangling cords, which may strangle a child (eg, cords on blinds, electrical cords), and dry cleaning bags. Parents, teachers, child care workers, and other child caregivers must be educated to supervise and create a safer environment for children. The United States Consumer Product Safety Commission (CPSC) has well-established surveillance systems and an array of legislation and regulations to protect children against choking and injury on toys and other consumer products. The CPSC works to ensure that toys have appropriate choking-hazard warnings and provides recall information for products that pose choking risks to children.

Falls

The leading cause of nonfatal injuries in children is falls from heights off the ground (Table 3). Most of these injuries occur at home during the warmer months of the year. Infants most often fall from furniture, toddlers from windows, and older children from playground equipment. The greater the height of the fall, the more severe the injury. Mortality rates increase at falls greater than 15 ft. Children younger than 3 years of age are less likely to have serious injuries from falls because they are smaller and have more fat and cartilage to dissipate energy. Most children suffer head, musculoskeletal, or thoracic injuries from falls.

Falls from windows, roofs, and balconies occur more often in urban areas in low-income housing. These falls can be prevented with window guards that keep children in, yet allow for egress during a fire. Openings in windows or railings should be less than 4 in to impede a young child from falling. In 1976 in New York City, window guards decreased mortality from falls by 35% and decreased hospital admissions for falls by 96%. Double-hung windows should be opened from the top. Children should be restricted from playing on fire escapes, roofs, or balconies. Furniture should not be placed near windows or balconies, and grass or shrubbery should be planted at bases of buildings to soften a fall.

Many parents purchase walkers with the belief that they encourage mobility, promote walking, and keep their infants safe. In contrast, evidence shows that walkers can delay normal motor and mental development and are dangerous. Reported injuries from the use of the walkers are overwhelmingly caused by falls; falls down stairs are implicated in 75% to 96% of cases. The AAP recommends that walkers be banned. Parents should be discouraged from using walkers with wheels; stationary activity centers are a safer alternative to mobile walkers.

Parents must be educated to restrain their children in highchairs and on changing tables. Infant seats should be placed only on the floor. Falls from beds can be prevented by lowering the mattress in the crib when the toddler learns to stand in the crib. Bunk beds require guardrails that open less than 3.5 in to prevent egress, and children younger than 6 years of age should not sleep in a top bunk. Supervision cannot be overemphasized. Bathtubs are a common site of injuries from falls, especially in children younger than age 4. Such children most often suffer head and facial lacerations, even while adults are supervising. Safety measures include slip-resistant devices, shatterproof enclosures, and elimination of sharp edges.

Table 3. Leading Causes of Nonfatal Unintentional Injuries Among Children 0 to 19 Years, by Age Group, United States, 2001–2006

Rank	Age Group in Years				
	Younger Than 1 (n=1,430,364)	1 to 4 (n=12,243,896)	5 to 9 (n=11,070,041)	10 to 14 (n=14,124,306)	15 to 19 (n=16,206,250)
1	Falls 52%	Falls 43%	Falls 37%	Falls 28%	Struck by/Ag 21%
2	Struck by/Ag 14%	Struck by/Ag 19%	Struck by/Ag 23%	Struck by/Ag 25%	Falls 17%
3	Bites/Stings 6%	Bites/Stings 9%	Bites/Stings 8%	Overexertion 12%	MV occupant 17%
4	Fires/Burns 5%	Foreign Body 6%	Cut/Pierce 7%	Cut/Pierce 7%	Overexertion 14%
5	Foreign Body 4%	Cut/Pierce 4%	Pedal cyclist 6%	Pedal cyclist 6%	Cut/Pierce 8%
6	MV occupant 3%	Overexertion 4%	Overexertion 4%	Unknown/ Unspecified 5%	Other injuries 4%
7	Cut/Pierce 3%	Fires/Burns 3%	MV occupant 4%	Bites/Stings 4%	Unknown/ Unspecified 4%
8	Poisoning 3%	Poisoning 3%	Foreign Body 3%	MV occupant 4%	MV other 4%
9	Overexertion 3%	Unknown/ Unspecified 2%	MV other 3%	MV other 4%	Bites/Stings 4%
10	Suffocation 3%	MV occupant 2%	Unknown/ Unspecified 2%	Other injuries 1%	Pedal cyclist 2%

Struck by /Ag=struck by or against an object, MV=motor vehicle
Data from Centers for Disease Control and Prevention National Vital Statistics System. www.cdc.gov/nchs

Playgrounds are a frequent site of falls in school-age children. Emergency departments treat more than 200,000 children per year who sustain playground injuries. Upper extremity fractures are the most common injury. Injuries are related to the height of the fall, usually greater than 5 to 6 ft, as well as to the type of playground undersurface (sand is safer than grass). Measures to improve the safety of playgrounds include creating energy-absorbing surfaces below the structures, lowering the height of playground equipment, inspecting the units, securing ropes at open ends, maintaining guardrails, and supervising at all times.

In 2005, 20,700 children younger than 5 years of age were seen in emergency departments for falls from shopping carts, most of whom had head injuries. Measures to protect children in shopping carts include using seat belts, prohibiting riding in the cart basket, restricting standing or climbing on carts, ensuring that adults push

carts, and designing carts to keep children closer to the floor.

Recreational activities, including bicycling, inline skating, skateboarding, and riding scooters, are a common cause of injuries in children. In 1998, the AAP recommended full protective gear for inline skating (eg, helmet, wrist guards, knee pads, and elbow pads). This recommendation led to a decrease in skating injuries in 1999. Parents must be counseled to set an example by wearing protective gear themselves when participating in sports. They must lead by example. Children are not likely to wear protective gear unless their parents do.

Pediatricians must continue to work diligently to prevent childhood injuries by educating parents, working with legislators, and advocating within communities. Such efforts should be rewarded with lives saved and injuries prevented.

Summary

- Injuries are the leading killer of children.
- A variety of host factors contribute to different types of injury.
- Motor vehicles remain the biggest threat.
- Both active and passive preventive strategies are necessary to prevent injuries.
- For maximal safety effectiveness, physicians must be active in their communities.

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Parent Resources From the AAP at HealthyChildren.org

The reader is likely to find material to share with parents that is relevant to this article by visiting this link: <http://www.healthychildren.org/English/Safety-prevention/pages/default.aspx>.

PIR Quiz

Quiz also available online at: <http://pedsinreview.aapublications.org>.

NOTE: Beginning in January 2012, learners will only be able to take *Pediatrics in Review* quizzes and claim credit online. No paper answer form will be printed in the journal.

13. In the United States, the number of children who die every day due to preventable injuries is closest to:
 - A. 5.
 - B. 10.
 - C. 20.
 - D. 35.
 - E. 50.

14. Among the major population groups in the United States, which has the highest rate of unintentional injury?
 - A. African Americans.
 - B. Asian Americans.
 - C. European Americans.
 - D. Hispanic Americans.
 - E. Native Americans.

15. Children should ride in the back seat of a motor vehicle until they are at least:
 - A. 10 years old.
 - B. 11 years old.
 - C. 12 years old.
 - D. 13 years old.
 - E. 14 years old.

16. What percentage of fatal bicycle injuries could have been prevented by wearing a helmet?
 - A. 25%.
 - B. 50%.
 - C. 66%.
 - D. 75%.
 - E. 90%.

17. The leading cause of accidental death in children younger than 1 year of age is:
 - A. Falling.
 - B. Motor vehicle crash.
 - C. Poisoning.
 - D. Scalding.
 - E. Suffocation.

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