

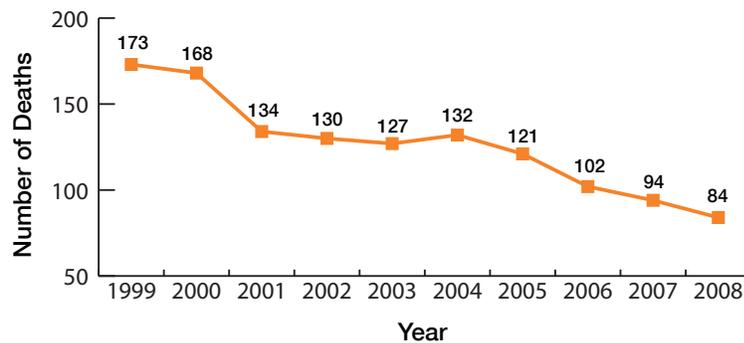


## Bicycle, Skate and Skateboard Safety



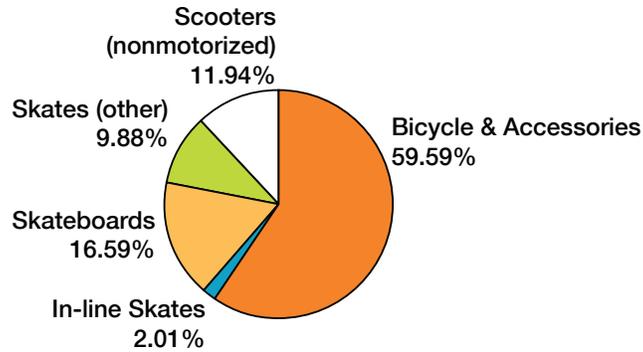
- Since 1999, an average of 127 children ages 14 and under were killed as cyclists (riding bicycles, tricycles, unicycles, mountain bikes) each year.
- In 2008, 84 children ages 14 and under were killed in cycle-related incidents. Of these deaths, 80 percent involved motor vehicles.

**1999-2008 Unintentional Bicycle-Related Deaths Among Children**  
(United States, Ages 14 and Under)



- On average since 2001, children ages 14 and under have sustained more than 254,000 nonfatal cycle-related injuries each year.
- In 2009, 229,811 children were treated in emergency departments for cycle-related injuries.
- On average, nearly 630 children are injured daily due to cycle-related crashes.
- In 2009, approximately 47,000 nonfatal injuries among child cyclists were traffic-related.
- More children ages 5 to 14 are seen in emergency departments for injuries related to biking than any other sport.
- Each month, three out of four children in the U.S. ride a bicycle.
- Approximately 45 percent of children always wear a helmet while bicycling.
- Apart from the automobile, bicycles are tied to more childhood injuries than any other consumer product.
- Nonmotorized scooters cause the most injuries of any toy among children ages 14 and under. In 2009, non-motorized scooters were associated with 49,500 injuries among children ages 14 and under.
- In 2009, among children ages 14 and under there are approximately 69,000 injuries involving skateboards, more than 8,000 involving in-line skates, almost 41,000 involving other skates, and more than 247,000 injuries involving bicycles and their accessories.
- A child who rides with companions wearing helmets or adults in general is more likely to wear a helmet himself.
- Compared to older children, younger children are more likely to wear helmets.

## 2009 Injuries by Product, 0-14, United States



### Where, When and How

- In 2009, 91 percent of bicyclists (of all ages) killed were not wearing a helmet.
- Children with bicycle-related head injuries are more likely to require hospitalization and to have their injuries result in death.
- For children ages 5 to 9, the sports and recreation activity most commonly associated with emergency department visits for nonfatal traumatic brain injury is bicycling. For children ages 4 and under, bicycling is the second leading sports and recreation activity associated with emergency department visits for traumatic brain injury.
- Of child bicyclists (16 years and under) killed on the road, 49 percent are killed while bicycling on minor roads (connecting roads and neighborhood streets) and almost 49 percent are killed while bicycling on major roads (high-volume roads across cities and towns).
- Almost half of bicycle crashes occur in driveways or on sidewalks.

For motor vehicle-related bicycle crashes among children:

- A majority (75 percent) of injuries occur during the warm-weather months of April through September.
- Approximately 60 percent of deaths among children (15 and under) occur at non-intersection locations.
- On weekdays, 43 percent of deaths and 52 percent of injuries occur between 3 p.m. and 9 p.m. On weekends, almost 45 percent of deaths occur between 6 p.m. and midnight.

### Who

- Among children ages 14 and under, males accounted for more than 70 percent of bicycle-related nonfatal injuries in 2009.
- Among children, boys ages 10 through 14 have the highest rate of bicycle-related injury.
- While older children are more likely to have fractures and injuries to the upper and lower extremities of the body, children under age 5 tend to have more facial injuries and lacerations.

### Proven Interventions

- Helmet use is the single most effective way to reduce bicycle-related fatalities.
- Universal bike helmet use among children ages 14 and under would prevent an estimated 212 to 294 deaths and 382,000 to 529,000 injuries each year.
- Universal use of bicycle helmets by children ages 4 to 15 could prevent between 135 and 155 deaths, between 39,000 and 45,000 head injuries, as well as 18,000 and 55,000 scalp and face injuries each year.

- A recent analysis of several helmet studies found that helmets reduce the risk of head injury by at least 45 percent, brain injury by 33 percent, facial injury by 27 percent and fatal injury by 29 percent. One study suggests that helmet use can reduce the risk of head injury by 85 percent and severe brain injury by 88 percent.
- Various studies show that bicycle helmet legislation is effective in increasing bicycle helmet use and reducing bicycle-related death and injury among children covered under the law.
- One study showed that within five years of passage of a state mandatory bicycle helmet law for children ages 13 and under, bicycle-related fatalities decreased by 60 percent. Police enforcement, supplemented by helmet giveaways and education, can increase the effectiveness of these laws.
- Bicyclists can increase their visibility by wearing brightly colored or fluorescent clothing while riding. In addition, front and rear lights can improve cyclist visibility while riding at night.
- Among bicyclists, skateboarders and scooter riders, wrist guards can reduce wrist injuries by up to 87 percent, elbow pads can reduce elbow injuries by 82 percent and knee pads can reduce the number of knee injuries by 32 percent.

### **Costs**

- In the U.S., every \$12 spent on a bicycle helmet for a child ages 3 to 14 generates \$580 in cost saving benefits to society.
- It is estimated that every dollar spent on a bicycle helmet saves society approximately \$30 in indirect medical costs and other costs.
- If 85 percent of all child cyclists wore helmets every time they rode bikes for one year, the lifetime medical cost savings could total between \$197 million and \$256 million.
- In 2005, the total lifetime cost among children ages 14 and under killed in motor vehicle-related bicyclist incidents was \$227 million. Nonfatal hospitalizations resulted in \$722 million in total lifetime costs for this age group.
- A 25 percent reduction in childhood bicyclist injuries and deaths could lead to savings of over \$500 million in medical costs and productivity loss.
- A \$3 mouth guard can help reduce injury to the mouth, teeth, lips, cheeks and tongue. Research shows that mouth guards reduce the risk of losing a tooth, potentially saving \$10,000 to \$15,000 in lifetime dental costs.

### **Laws and Regulations**

- Twenty-one states, the District of Columbia and 200 localities have enacted some form of bicycle helmet legislation.
- Eight states and the District of Columbia require children to wear a helmet while participating in other wheeled sports, such as skateboarding or inline skating.
- Studies show that helmet use is greater in communities that have more comprehensive bicycle helmet laws. The rate of bicycle helmet use by children ages 14 and under was 58 percent greater in a county with a fully comprehensive bike helmet law than in a similar county with a less comprehensive law.