



FACTS ABOUT INJURIES TO CHILDREN RIDING BICYCLES

Bicycles are associated with more childhood injuries than any other consumer product except the automobile. More than 70 percent of all children ages 5 to 14 ride bikes.

- In 2002, 130 children ages 14 and under died in bicycle-related crashes. The bicycle injury death rate among children ages 14 and under declined 70 percent from 1987 to 2002.
- In 2003, nearly 285,600 children ages 14 and under were treated in hospital emergency rooms for bicycle-related injuries.
- Children ages 14 and under are five times more likely to be injured in a bicycle-related crash than older riders.
- Males account for 83 percent of bicycle-related deaths and 71 percent of nonfatal injuries among children ages 14 and under.
- Children ages 14 and under are nearly four times more likely to be injured riding at dawn, dusk or night than during the daylight hours.
- Among children ages 14 and under, more than 80 percent of fatal bicycle-related crashes are associated with the bicyclist's behavior, including riding into a street without stopping, and turning left or swerving into traffic that is coming from behind, running a stop sign.

Head injury is the leading cause of death in bicycle crashes and is the most important determinant of bicycle-related death and permanent disability.

- Nearly half (47 percent) of children ages 14 and under hospitalized for bicycle-related injuries are diagnosed with traumatic brain injuries. Head injuries account for more than 60 percent of bicycle-related deaths.
- Children ages 10 to 14, especially males, have the highest death rate of all ages from bicycle-related head injury. This is probably because helmet use declines as children grow older.

Collisions with motor vehicles account for an estimated 90 percent of all bicycle-related deaths and 10 percent of all nonfatal bicycle-related injuries.

- In 2003, children ages 14 and under accounted for 32 percent of bicyclists injured in motor vehicle crashes.
- Children are more likely to die from motor vehicle-related bicycle crashes at non-intersection locations (65 percent), during the months of May through October (75 percent) and between 2 p.m. and 8 p.m. (63 percent).

- The typical bicycle crash with a motor vehicle occurs within one mile of the bicyclist's home.
- The total annual cost of traffic-related bicyclist death and injury among children ages 14 and under is more than \$1.5 billion.

The single most effective safety device available to reduce head injury and death from bicycle crashes is a helmet.

- Bicycle helmets have been shown to reduce the risk of head injury by as much as 85 percent and the risk of brain injury by as much as 88 percent.
- It is estimated that 75 percent of fatal head injuries among child bicyclists could be prevented with a bicycle helmet.
- Universal use of bicycle helmets by children ages 4 to 15 could prevent between 135 and 155 deaths, and between 39,000 and 45,000 head injuries annually. 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 \$134 million and \$174 million.
- Correct fit and proper positioning are essential to the effectiveness of bike helmets at reducing injury. Children whose helmets fit poorly are at twice the risk of head injury in a crash compared with children whose helmet fit is excellent.

Unfortunately, fewer than half (41 percent) of kids ages 5 to 14 wear helmets when participating in wheeled activities, and more than a third (35 percent) of children who use helmets wear them improperly.

- Child helmet ownership and use increases with parent income and education levels, yet decreases with the child's age.
- In a national survey of children ages 8 to 12, 53 percent reported that a parental rule for helmet use would persuade them to wear a helmet, and 49 percent would wear a helmet if a state or community law required it. Children are more likely to wear a bicycle helmet if riding with others (peers or adults) who are also wearing one.

Various studies have shown bicycle helmet legislation to be effective at increasing bicycle helmet use and reducing bicycle-related death and injury among children covered under the law.

- Twenty states, the District of Columbia and more than 140 localities have enacted some form of bicycle helmet legislation. Thirteen of these twenty laws cover children ages 15 and under. Seven states and Washington, D.C., now require children to wear a helmet while participating in other wheeled sports (e.g., scooters, inline skates, skateboards).
- One study showed that in the five years following the passage of a state mandatory bicycle helmet law for children ages 13 and under, bicycle-related fatalities decreased by 60 percent. Police enforcement increases the effectiveness of these laws.
- One recent study reported that 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.