



Short Safety Subject

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www.bragg.army.mil/psbc-bm/PubsAndForms/ShortSafetySubjects.htm

Bicycle Injury Fact Sheet



Forty percent (39.6 million) of the 99 million riders in the United States are children ages 14 and under. This age group rides about 50 percent more than the average bicyclist and accounts for more than one-third of all bicycle-related deaths in addition to 65 percent of all bicycle-related injuries. Bicycles are associated with more child hood injuries than any other consumer product except the automobile.

Head injury is the leading cause of death in bicycle crashes and is the most important determinant of bicycle-related death and permanent disability. Head injuries account for more than 60 percent of bicycle related deaths and about one-third of hospital emergency room treated bicycling injuries. The most effective safety device available to reduce head injuries and fatalities from bicycle crashes is a bicycle helmet. Other protective safety equipment, including retro-reflective material, headlights and taillights, can also help prevent bicycle-related injuries and even deaths.

Deaths and Injuries

- Each year approximately 250 children ages 14 and under are killed in bicycle-related incidents. Ninety percent of bicycle related deaths (all ages) are the result of collisions with motor vehicles.
- Children between the ages of 5 and 14 have a death rate more than two times the death rate of all other bicycle riders. The fatality rate rises rapidly beginning at about age 4 and is the highest among 12 to 14-year olds.
- In 1994, almost 400,000 children ages 14 and under were treated in emergency rooms for bicycle related injuries. Approximately 10 percent of these injuries were related to collisions with motor vehicles.
- Children ages 14 and under are approximately six times more likely to be injured than children ages 15 and older from bicycle-related crashes.
- Children ages 4 and under are also at risk from bicycle related deaths and injuries. In 1993, six children were killed, more than 10,000 suffered from head injuries and more than 22,000 suffered from face injuries.

When and Where Deaths and Injuries Occur

- Children ages 14 and under are more likely to die from bicycle crashes in urban areas (60 percent), at non-intersection locations (72 percent), during the months of May to September (56 percent) and between noon and 9:00 pm (62 percent)

- The risk of sustaining an injury in non-daylight conditions (e.g. at dawn, dusk or night) is 3.6 times greater for children ages 14 and under than riding during the daytime.
- For children, cycling on streets is about 3.4 times the risk of riding on unpaved surfaces and eight times riskier than riding on bike paths.

Who Is At Risk

- Due to differences in risk exposure and lifestyle, the fatality rate for males is greater than that for females at all ages.
- Children ages 9 and under are at risk for bicycle-related head injuries.

Bicycle Helmet Effectiveness

- 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.
- Universal use of bike helmets by children ages 4 to 15 would prevent between 135 and 155 deaths, between 39,000 and 45,000 head injuries, and between 18,000 and 55,000 scalp and face injuries annually.
- Nationwide, only 15 percent of children ages 14 and under use bicycle helmets. However, 85 percent of children who own bicycle helmets use them.

Bicycle Helmet Laws

- To date, 13 states have enacted some form of bicycle helmet legislation, most of which cover only young riders.
- None of the 50 states has a bicycle helmet law that applies to all riders.

Health Care Costs and Savings

- Every \$15 bike helmet saves this country \$30 in direct health care costs and an additional \$365 in other costs to society.
- If 85 percent of all child cyclists wore bicycle helmets in one year, the lifetime medical cost savings would total between \$109 million and \$142 million.

Prevention Tips

- A bicycle helmet is a necessity, not an accessory. Always wear a bicycle helmet every time you ride.
- Wear a bicycle helmet correctly. A bicycle helmet should fit comfortably and snugly, but not too tightly. It should sit on top of your head in a level position, and should not rock forward and back or from side to side. The helmet straps must always be buckled.
- Buy a bicycle helmet that meets or exceeds the safety standards developed by the American National Standards Institute (ANSI) Z-90.4, the Snell Memorial Foundation B-90 or the American Society for Testing Materials (ASTM) F1447.
- Learn the rules of the road and obey traffic laws. Ride on the right side of the road, with traffic, not against; use appropriate hand signals; respect traffic signals; stop at all intersections, marked and unmarked; and stop and look both ways before entering a street.
- Cycling should be restricted to sidewalks, paths and driveways until a child is able to show how well they ride and observes the basic rules of the road.