Bicycle Helmets

Committee on Injury and Poison Prevention

Bicycling has become extremely popular in the last 10 years. There were an estimated 100 million cyclists in the United States in 1993. In addition to providing efficient transportation, bicycling can be an enjoyable form of aerobic exercise. The sport is not without hazards, however. In 1991, bicycle-related injuries necessitated approximately 600,000 emergency-department visits and contributed to approximately 800 deaths. Many of those injured or killed were children and adolescents.

Head injury from cycling is the most common cause of death (70% to 80% of cases) and the leading cause of disability. One fourth of injured bicyclists treated in emergency departments have head injuries, as do half of those admitted to the hospital. Many children are injured falling from their bicycles, and collision with fixed objects or motor vehicles plays a significant role in making bicycle safety a major pediatric health issue.

According to the National Safety Council, 180,000 collisions between motor vehicles and bicycles occurred in 1991. Eight hundred of these resulted in fatalities. Forty-two percent of these deaths occurred in children younger than 15 years. With the proliferation of mountain bikes, these patterns of injury may change for the worse as more cyclists venture into potentially treacherous areas.

Relatively low-cost, lightweight bicycle helmets capable of protecting against head injury are now available. Voluntary impact standards have been developed by the Snell Memorial Foundation and the American National Standards Institute (ANSI), and helmets meeting these standards are labeled Snell or ANSI. Studies in Australia4 and England5 have clearly demonstrated the efficacy of helmet use. On July 1, 1990, the government of Victoria, Australia enacted a mandatory helmet requirement for all cyclists. Overall compliance has increased from 31% in 1990 to 75% in 1992 and has been associated with a 51% reduction in mortality. Enforcement involves issuing citations to the parents of children who do not comply and imposing modest fines for repeat offenders.

A recent study in Seattle, Washington showed that helmets reduced the risk of head injury by 85% and brain injury by 88%. Despite this finding, data recorded in the National Pediatric Trauma Registry indicate that less than 5% of children who ride bicycles use helmets. Even with an aggressive public-safety education campaign, compliance in Seattle rose to only 38% of cyclists. Reasons for not using helmets have varied, but generally are thought to be a lack of awareness of the problem, peer pressure, and a lack of helmet availability at many retail outlets where bicycles are purchased or rented. On the basis of this information, the American Academy of Pediatrics makes the following recommendations.

1. All cyclists should wear a properly fitted ANSI- or Snell-approved helmet specifically designed for cycling. Children riding as passengers must wear appropriate-size helmets in specially designed protective seats.

2. Pediatricians must inform parents and patients of the importance of wearing bicycle helmets and the dangers of riding without a helmet. Damaged helmets do not provide complete protection and must be replaced.

3. Retail outlets should be urged to carry approved, inexpensive helmets that are available as a “package deal” at the time the bicycle is purchased.

4. Helmet manufacturers should be encouraged to provide attractive posters and educational videotapes for display by retailers and for distribution to parent groups and physician offices that emphasize both the safety advantages and the attractiveness of protective headgear.

5. State or local municipal governments should be urged to enact legislation requiring helmet use by all bicyclists and mandating bicycle rental agencies to include helmets as part of the rental contract. The Academy has developed model state legislation entitled, “Child Bicycle Safety Act.”

6. Coalitions of physicians, parents, and community leaders need to be encouraged to develop and support community-based and school education programs to promote bicycle safety training and helmet usage.

7. The popular media should be urged to depict bicycle riders who wear helmets on television, in advertisements, and in promotional materials.

This statement has been approved by the Council on Child and Adolescent Health.

The recommendations in this statement do not indicate an exclusive course of treatment or procedure to be followed. Variations, taking into account individual circumstances, may be appropriate.

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REFERENCES

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