

MMWRTM

MORBIDITY AND MORTALITY WEEKLY REPORT

- 845 Notice to Readers
- 845 Air-Bag-Associated Fatal Injuries to Infants and Children Riding in Front Passenger Seats — United States

Notice to Readers

Because of the furlough of U.S. government employees, CDC has restricted its activities to responses to emergencies and other public health matters of extreme urgency. Therefore, this issue of *MMWR* contains only one report with immediate public health implications. This report includes measures for preventing serious injuries and death in children as the result of deployment of air bags in vehicles in which children have been improperly restrained or seated; these measures should be implemented immediately to decrease the risk for children, particularly during the holiday period of increased travel. Other reports of public health importance and findings from the ongoing National Notifiable Disease Surveillance System will be published at a later date. Printed versions of this issue also will be available to CDC's subscribers at a later date.

David Satcher, M.D., Ph.D.
Director, CDC

Air-Bag-Associated Fatal Injuries to Infants and Children Riding in Front Passenger Seats — United States

Air bags, when used as a supplement to safety belts, effectively prevent deaths and serious injuries in frontal motor-vehicle crashes. Air bags are standard equipment in most new cars; federal safety standards require that all new passenger cars and light trucks be equipped with both driver- and passenger-side air bags by 1999. The safety of air bags is well documented, and air bags have saved an estimated 900 lives since the late 1980s (1); however, special precautions are needed to safely transport children in vehicles equipped with air bags. Reports of eight deaths of child passengers in crashes involving air-bag deployment are of special concern because they involved low-speed crashes that the children otherwise might have survived. This report summarizes three of these eight cases (2).

Case 1. In October 1995, in Utah, a 5-year-old child sitting in the front passenger seat of a 1994-model automobile was killed when the passenger-side air bag deployed

Air Bags — Continued

during a collision. Preliminary information indicates the child was not restrained by the lap/shoulder belt. The child sustained a skull fracture as a result of head contact with the air bag and subsequent head contact with the roof of the vehicle.

Case 2. In July 1995, in Pennsylvania, a 20-day-old infant seated in a rear-facing convertible child safety seat in the front passenger seat of a 1995-model automobile was killed when the passenger-side air bag deployed. The infant sustained multiple skull fractures and crushing injuries to the brain as a result of the impact of the air-bag compartment cover flap with the back of the child safety seat at the location of the child's head. At the time of collision, the vehicle was traveling at approximately 23 miles per hour. The vehicle had a label on the right front sun visor warning against using a rear-facing child safety seat in the front passenger seat. The child safety seat also had a warning label that read "when used in a rear facing mode, do not place in the front seat of a vehicle that has a passenger air bag."

Case 3. In April 1993, in Ohio, a 6-year-old child who was sitting unrestrained in the front passenger seat of a 1993-model automobile was killed when the passenger-side air bag deployed during a collision with a stopped vehicle. The child died from a brain injury caused by blunt force trauma.

Reported by: Traffic Safety Programs, National Highway Traffic Safety Administration. Div of Unintentional Injury Prevention, National Center for Injury Prevention and Control, CDC.

Editorial Note: Although infants, children, and all other occupants always should be properly restrained in safety seats or safety belts, as many as 35% of young children ride unrestrained (3). Any child who rides unrestrained or incorrectly restrained in the front seat of a vehicle with a passenger-side air bag is at risk for serious injury or death if the air bag deploys. Precrash braking may propel an unrestrained child against the dashboard in immediate proximity to the point of air-bag deployment. The inflating air bag then can propel the child against structures inside the vehicle, causing serious injury or death.

Rear-facing child restraints also pose a hazard in vehicles with a passenger-side air bag and must never be placed in the front seat (4). To be properly protected, infants must ride in a rear-facing child restraint until they weigh 20 pounds or are approximately 1 year old (5). In a crash, a rear-facing child restraint placed in the front seat with its back close to the vehicle's instrument panel could be struck by the rapidly inflating air bag, and the child in the restraint could be seriously injured or killed.

Forward-facing safety seats are less likely to be affected by air bag interaction because of their greater distance from the point of air-bag deployment in the dashboard. However, because these seats usually place the child at least several inches closer to the dashboard than adults in the standard seating position, the safest practice is to place *all* child safety seats in the back seat of the vehicle. If a forward-facing safety seat must be placed in the front seat of a vehicle with a passenger-side air bag, the vehicle seat should be moved as far back as possible to maximize clearance with the dashboard.

As a result of an investigation of air-bag-related fatalities and serious injuries to child passengers, the National Transportation Safety Board (NTSB) recently released safety recommendations regarding children and air bags (2). NTSB recommends collaboration between automobile and safety-seat manufacturers, the news media, health and medical organizations, and the National Highway Traffic Safety Administration (NHTSA) to inform motorists and parents of the correct procedures for

*Air Bags — Continued***Public Health Recommendations
to Prevent Air-Bag-Associated Injuries
to Infants and Children**

- All infants and children should be properly restrained in child safety seats or lap and shoulder belts when riding in a motor vehicle.
- Infants riding in rear-facing child safety seats should never be placed in the front seat of a car or truck with a passenger-side air bag.
- Children should ride in a car's rear seat. If a vehicle does not have a rear seat, children riding in the front seat should be positioned as far back as possible from an air bag.

transporting children in vehicles equipped with air bags. NHTSA has enacted several regulatory measures addressing the air bag/child passenger problem, including labeling requirements for vehicles and child safety seats and specifications for air-bag cutoff switches. CDC and NHTSA have developed recommendations to prevent air-bag-associated injuries to infants and children (see box).

In addition to intensifying efforts to educate motorists, NHTSA has solicited public comment regarding further strategies to reduce adverse effects of air bags (published in the November 9, 1995, *Federal Register* *); written comments are due by December 26, 1995, to Docket Section, Room 5109, NHTSA, 400 Seventh St., S.W., Washington, DC 20590 (refer to docket 74-14, notice #97).

Additional information is available from Child Safety Seats, c/o NHTSA, NTS-13, 400 Seventh St., S.W., Washington, DC 20590; or from NHTSA's Auto Safety Hotline, telephone (800) 424-9393 or (202) 366-0123.

Air-bag-associated serious injuries and deaths to infants and children should be reported to Vernon Roberts, NTSB, telephone (202) 382-0660.

References

1. National Center for Statistics and Analysis, National Highway Traffic Safety Administration. Traffic safety facts 1994: occupant protection. Washington, DC: US Department of Transportation, National Highway Traffic Safety Administration, 1995.
2. National Transportation Safety Board. Safety recommendation, H-95-17. Washington, DC: National Transportation Safety Board, 1995.
3. National Center for Statistics and Analysis, National Highway Traffic Safety Administration. Research note. National occupant protection use survey: controlled intersection study. Washington, DC: US Department of Transportation, National Highway Traffic Safety Administration, May 1, 1995.
4. CDC. Warnings on interaction between air bags and rear-facing child restraints. MMWR 1993; 42:280-2.
5. American Academy of Pediatrics. 1995 Family shopping guide to car seats: guidelines for parents. Elk Grove Village, Illinois: American Academy of Pediatrics, 1995.

* 60 FR 56554.

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format and on a paid subscription basis for paper copy. To receive an electronic copy on Friday of each week, send an e-mail message to lists@list.cdc.gov. The body content should read *subscribe mmwr-toc*. Electronic copy also is available from CDC's World-Wide Web server at <http://www.cdc.gov/> or from CDC's file transfer protocol server at <ftp.cdc.gov>. To subscribe for paper copy, contact Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 512-1800.

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to: Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone (404) 332-4555.

All material in the *MMWR* Series is in the public domain and may be used and reprinted without permission; citation as to source, however, is appreciated.

Director, Centers for Disease Control
and Prevention
David Satcher, M.D., Ph.D.
Deputy Director, Centers for Disease Control
and Prevention
Claire V. Broome, M.D.
Director, Epidemiology Program Office
Stephen B. Thacker, M.D., M.Sc.

Editor, *MMWR* Series
Richard A. Goodman, M.D., M.P.H.
Managing Editor, *MMWR* (weekly)
Karen L. Foster, M.A.
Writers-Editors, *MMWR* (weekly)
David C. Johnson
Darlene D. Rumph-Person
Caran R. Wilbanks

☆U.S. Government Printing Office: 1996-733-175/27027 Region IV