Motor Vehicle Safety

For children between the ages 14 and under, unintentional injury-related deaths occur most often when riding in a car. According to the most recent statistics, among children ages 14 and under as occupants in motor vehicle crashes, 53 percent were not using safety restraints at the time of collision. According to the National SAFE KIDS Campaign, children under age 4 who ride in motor vehicles unrestrained are twice as likely to die or suffer injuries in a car crash.

Injury and Incidence Statistics

The following statistics are the latest available from the National SAFE KIDS Campaign, the National Highway Traffic Safety Administration, and the National Center for Injury Prevention and Control (part of the Centers for Disease Control and Prevention, CDC):

Injury and death rates:
- Motor vehicle crashes are the leading cause of unintentional injury-related deaths among children ages 14 and under.
- In 2005, 1,451 children ages 0 to 15 years were killed in vehicle-related deaths.
- Fifty percent of children ages 14 and under killed in motor vehicle crashes were not safely restrained.
- Approximately 203,000 children ages 14 and under suffered injuries in motor vehicle crashes in 2004.
- The majority of the children killed by airbags in motor vehicle crashes were unrestrained or improperly restrained.

Where and when:
- The majority (75 percent) of motor vehicle crashes occur within 25 miles of home.
- Most crashes occur in areas where the speed limit is 40 mph or less.

Safety restraint statistics:
- About 73 percent of child safety seats or booster seats are improperly used.
- One-third of children ride in the front passenger seat, increasing the risk for injury and death.
- Properly installed and used child safety seats can reduce the risk of death by 71 percent for infants and 54 percent for children ages 1 to 4. Child safety seats can also reduce the need for hospitalization among children ages four and under by 69 percent.
Pedestrian statistics:
- Pedestrian injury is the second leading cause of unintentional injury-related death among children ages five to 14.
- Children ages one to two suffer the highest number of pedestrian injuries, most often when a vehicle is backing up.

Identifying High-Risk Situations

With proper precautionary measures, such as the proper use of age-appropriate child safety seats, most unintentional injuries and unintentional injury-related deaths can be prevented. Children can get hurt when parents or caregivers do not properly restrain them when riding in a vehicle, or are unaware of the dangers associated with certain motor vehicle situations. High-risk situations may include, but are not limited to, the following:
- lack of the use of child safety restraints or improper use of safety restraints in motor vehicles
- improperly used or installed child safety seats
- placing children in front of passenger seat airbags (either in an infant safety seat or sitting facing forward)
- allowing children to ride in the cargo areas of pickup trucks
- trunk entrapments
- leaving children unattended in cars

Use of safety restraints in motor vehicles:
Physically, children are smaller than average adults. Their smaller size means that the standard safety belts in motor vehicles do not properly fit to protect children’s bodies. One age group, from 4 to 8 years of age, is especially at risk for improperly using safety belts in motor vehicles. According to the Centers for Disease Control and Prevention (CDC), children do not fit in adult shoulder/lap belts (without a booster seat) until they are 58 inches tall and weigh 80 pounds.

However, children between the ages of 4 to 8 years who have outgrown their child safety seat often are placed too soon in adult lap/shoulder belts without a booster seat. Unfortunately, it is estimated that only five percent of children in this age group are properly restrained with booster seats in motor vehicles.

Use of child safety seats:
Many people think they have installed their child safety seat correctly and believe they are using it properly. However, National SAFE KIDS Campaign Car Seat Check Ups prove differently. As many as 85 percent of child safety seats are found to be improperly installed and/or used when vehicles are stopped and checked. A child can suffer injuries or death in a motor vehicle crash if the child safety seat is not properly installed or used. Some of the most common mistakes in installing or using child safety seats include the following:
- safety belt not holding the seat in tightly and/or not in locked mode
- harness straps not snug and/or routed correctly
- harness retainer clip not at armpit level
- locking clip not used correctly
- car seat recalled and not repaired (includes booster seats)
- infants placed rear-facing in front of an active air bag
- children turned forward-facing before reaching 1 year of age and 20 pounds

Parents and caregivers should carefully read their vehicle owner's manual and the instructions that come with the child safety seat to ensure proper installation and use of the seat. Some child safety seats are not compatible with certain vehicles - try the child's safety seat in your vehicle before you purchase it. Also, place your child in the child safety seat before purchase, to ensure proper fit.

**The danger of airbags:**
Airbags, when properly used with the vehicles' lap/shoulder belts system, can save adult lives. However, airbags can increase the danger to a child's safety.
When infants in rear-facing child safety seats and children who are unrestrained are placed in the front seat with an airbag, they may be too close to an inflating airbag in the event of a crash. An airbag will inflate at speeds up to 200 mph, which can hurt passengers who are too close to the airbag. In addition, because of the child's size, the airbag can strike him/her on the head or neck, resulting in serious or fatal injuries.

To ensure your child is as safe as possible in a vehicle, never place him/her in front of an airbag. The safest place for small children riding in vehicles is the rear seat, away from the impact of head-on crashes. If your child must ride in the front seat, move the seat as far back as possible, away from the airbag. If the car has no back seat, infants will only be safe in their rear-facing child safety seats if the vehicle has no airbag, or if the airbag has been switched off (an option in some vehicles).

**Riding in the cargo area of trucks:**
Pickup trucks, although popular vehicles may not be as safe as other vehicles for small children. Limited cab space often leads to parents letting their children ride in the cargo area. However, riding in cargo areas increases the risk of dying 10 times when involved in a collision, compared to other types of collisions, according to the US Department of Transportation. Ejection (being thrown out) from the cargo area is the main cause of injury and death for cargo passengers. More than half of the deaths that occur among people riding in pickup truck cargo beds are children and teenagers. Covered cargo areas, too, can pose a danger to children because of carbon monoxide poisoning from exhaust fumes.

The National Highway Traffic Safety Administration (NHTSA) is campaigning for stricter passenger safety laws nationwide for passengers riding in pickup trucks. Currently, only 25 states prohibit child passengers riding in open beds of pickup trucks. To protect your children, the NHTSA recommends that children never be allowed to ride or play in cargo areas of any vehicles.
Trunk entrapment:
A child's nature is to explore his/her surroundings. Unfortunately, this exploration can place a child in danger. Unintentional trunk entrapment, when children lock themselves in a trunk, can be fatal due to hyperthermia (heat stroke) and/or asphyxiation (suffocation).

To prevent unintentional trunk entrapment, teach your children not to play in and around vehicles. Always lock the vehicle and keep the keys away from children. Carefully watch your young children when they are around vehicles. Keep rear fold-down seats closed inside the vehicle. Certain automobile manufacturers now include escape releases or sensor systems in trunks. However, small children may not know how to operate these.

Leaving children unattended in cars:
As tempting as it may be to run a quick errand, leaving children unattended inside a vehicle, "even for a minute," can be dangerous. When left unattended, children may be able to start the vehicle or put the vehicle in neutral. In addition, heat build-up or dangerously cold temperatures inside a vehicle can quickly become fatal to children.

Available online at www.musckids.com

This handout was developed to help individuals understand more about injury prevention measures. It is meant to be used as a guide. Please consult the manufacturer’s instructions and/or your healthcare provider if you have any questions.