## MOTOR VEHICLE OCCUPANT PROTECTION



## CHILDREN

## FACTS

## YOUTH



YOUNG ADULTS

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Throughout the United States, many people and organizations are working to promote motor vehicle occupant protection for children, youth, and young adults. In spite of the great strides made in this country, every year, thousands of young people die or experience serious injuries that could have been prevented had they been properly restrained in child safety seats, booster seats, or seat belts.

The National Highway Traffic Safety Administration has produced this booklet since 2002 to explain the need for legislation, enforcement, education, and public awareness campaigns about protecting children, youth, and young adults in motor vehicles. Collectively, this information underscores why protecting young people is so important.

The majority of data in this fact book comes from 2013, the most recent year data was available. It has been generated from the Fatality Analysis Reporting System (FARS) and the General Estimates System (GES) produced by the National Center for Statistics and Analysis (NCSA) at NHTSA. Data from NHTSA's 2013 National Occupant Protection Use Survey (NOPUS) is also included.

## Using This Booklet as a Resource

The facts in this booklet can be used to develop speeches and presentations, public information and education publications, backgrounders, and news releases for the media, and to promote the use of occupant restraints in conjunction with law enforcement officials. States and local communities have vital roles to play in creating a national norm that makes it unacceptable to ride unrestrained in a motor vehicle. Our national goal must be to make child safety seats and seat belts lifelong habits for everyone.

The discussion refers to young people according to these age groups.

- Children: newborns to age 7
- Youth: 8 to 15 (in some States 15 -year-olds are permitted to obtain learner's permits, so they are sometimes included as "young drivers")
- Young adults: 16 to 20

The booklet has five main sections.

- The national scope of motor vehicle crashes
- The need for and importance of appropriately sized restraint systems for each age group
- Facts about restraint use for children and youth from birth to 15 years old
- Facts about restraint use for young adults 16 to 20
- Biennial telephone survey findings from NHTSA's 2007 Motor Vehicle Occupant Safety Survey (MVOSS) on the behavior, attitudes, and opinions about seat belts and seat belt laws, including those of 16 - to 20-year-olds.

Three appendices cover State-specific information on fatalities, restraint use, and child restraint laws.

## Definitions

As you review the information that follows, keep in mind the following definitions:

Fatal Crash: A police-reported crash involving a motor vehicle in which at least one person dies within 30 days of the crash (including the deaths of people who were not in the vehicle, such as pedestrians and pedalcyclists).

Fatal Injury: Any injury that results in death within 30 days of the crash.

Incapacitating Injury: Any nonfatal injury that prevents the person from walking, driving, or normally continuing those activities the person was capable of before the injury. Often defined as "needing help from the scene."

Injury Crash: A police-reported crash involving a motor vehicle in which no one died but at least one person was reported to have (1) an incapacitating injury, (2) a visible but not incapacitating injury, (3) a possible but not visible injury, or (4) an injury of unknown severity.

Nonincapacitating Injury: Any injury, other than a fatal injury or an incapacitating injury, which is evident to observers at the scene of the crash. Examples: bruises, cuts, bloody nose.

Passenger Vehicles: Includes all cars, SUVs, vans up to 15-passenger capacity, and light trucks (under 10,000 lbs. gross vehicle weight rating) including pickups and truck-based station wagons. Motorcycles, buses, and large trucks (more than 10,000 lbs. GVWR) are not included in this category.

Restraint Use: All the restraint use percentages reported in this document are based on known restraint use; that is, the occupants with an unknown restraint status have not been considered when calculating the percentages.

|n 2013, nearly 5.7 million police-reported motor vehicle crashes occurred in the United States. In this same year, 21,132 occupants of passenger vehicles were killed in motor vehicle crashes. Over 15 percent $(3,208)$ of these fatalities were children, youth, and young adults. ${ }^{1}$

Motor vehicle crash fatalities rank third in terms of years of life lost (the number of remaining years that the person would be expected to live had they not died) behind only cancer and heart disease. ${ }^{2}$

Motor vehicle traffic crashes were the leading cause of death for children age 4 and the second leading cause of death for children age 3 and every age 5 through 14 in 2013. ${ }^{3}$ However, motor vehicle crashes were the leading cause of death for 15 - to 20-year-olds in 2013. ${ }^{4}$ In 2013, an average of 3 children 14 and younger were killed and 470 were injured every day in motor vehicle traffic crashes. ${ }^{5}$

Of the estimated 2,046,000 occupants of passenger vehicles injured in traffic crashes in 2013:

- 45,000 children under 5 were injured;
- 33,000 children 5 to 7 were injured;
- 49,000 youth 8 to 12 were injured;
- 36,000 youth 13 to 15 were injured; and
- 258,000 young adults 16 to 20 were injured.


## The Importance of Occupant Restraints

One of the most effective measures a person can take to prevent injury and death in a crash is to be appropriately restrained in rear- or forward-facing child safety seats, booster seats, or seat belts. NHTSA estimates that lap/shoulder seat belts, when used correctly, reduce the risk of fatal injury to front-seat occupants of passenger cars by 45 percent and the risk of moderate-to-critical injury by 50 percent. For light-truck occupants, seat belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent. Research on the effectiveness of child safety seats has found them to reduce fatal injury by 71 percent for infants (less than 1 year old) and by 54 percent for toddlers ( 1 to 4 years old) in passenger cars. ${ }^{6}$ For infants and toddlers in light trucks, the corresponding reductions are 58 percent and 59 percent, respectively. ${ }^{\text {? }}$

[^0]Thousands of lives are saved every year because of child restraints and seat belts. Among passenger vehicle occupants in 2013:

- Child restraints saved an estimated 263 children under 5; if child restraint use had been 100 percent, another 56 lives could have been saved. ${ }^{8}$
- Seat belts saved an estimated 12,584 lives for those 5 and older. ${ }^{9}$
- If all passenger vehicle occupants age 5 and older had worn seat belts, 15,384 lives (that is, an additional 2,800 ) would have been saved in 2013. ${ }^{10}$

In spite of this evidence, the majority of fatally injured people are not properly restrained. In 2013, 21,132 occupants died in motor vehicle traffic crashes. Of the 21,132 passenger vehicle occupants killed, 9,777 (49\%) were known to be restrained. Chart 1 compares the percentage of fatally injured occupants who were restrained to those who were unrestrained in passenger vehicle crashes when restraint use was known.

Chart 1 Passenger Vehicle Occupant Fatalities in 2013 By Age and Restraint Use When Known


[^1]
## Economic Burdens

The cost of reported as well as non-reported motor vehicle crashes totaled $\$ 242$ billion in 2010, the latest year for which this data is available. This translates to an annual average of \$784 for every person living in the United States. Included in this figure are $\$ 77$ billion in lost productivity, $\$ 23.4$ billion in medical expenses, and $\$ 76.1$ billion in property damage. The average cost for a critically injured survivor of a motor vehicle crash is estimated at $\$ 1$ million over a lifetime. Conversely, the use of seat belts saved society $\$ 1.2$ trillion in medical care, lost productivity, and other injury-related economic costs since 1975.11

In 2010, seat belt nonuse alone caused an estimated $\$ 10.43$ billion in economic costs to society. When people don't wear seat belts, the potential costs increase because unbelted crash victims receive worse injuries and more fatalities than belted crash victims.

[^2]

Restraint use saved an estimated 263 lives of children under the age of 5 in 2013. ${ }^{12}$


Of the 8- to 14-year-old passenger vehicle occupants with known restraint use killed in fatal crashes in 2013, 53 percent were unrestrained. ${ }^{13}$


In 2013, 55 percent of the passenger vehicle occupants age 16 to 20 with known restraint use who were killed were not wearing seat belts. ${ }^{14}$

The use of occupant restraints must be reinforced at an early age to reduce the high rates of death and injury that children, youth, and young adults experience in motor vehicle crashes. But parents should not have to bear the burden by themselves. In communities across the country, health professionals, law enforcement officers, educators, elected officials and public employees, and every adult must contribute to the social and legal infrastructures necessary to make seat belt use a lifelong habit.

While fatality and injury rates (per 100 million vehicle miles traveled, VMT) have declined slightly during the past 10 years (see Chart 2), thousands of children and young adults still continue to be killed and injured in motor vehicle crashes. Among passenger vehicle occupants in 2013, there were 3,208 young people from birth to age 20 killed. An additional 421,000 were injured in passenger vehicle crashes. (See Appendix A for a State-by-State breakdown of fatalities.)

Chart 2 Occupant Fatality and Injury Rates, 2004-2013
Per 100 Million VMT, in Passenger Vehicles


[^3]Despite widespread public education campaigns, a significant percentage of children, youth, and young adults who were killed in passenger vehicle crashes in 2013 were unrestrained. There were 278 fatalities among children under the age of 5; of those with known restraint use, 31 percent were unrestrained. Among the 135 fatalities for children 5 to 7 years old with known restraint use, 41 percent were unrestrained.

For children 8 to 12 years old there were 225 fatalities, of which 45 percent were unrestrained. The 13- to 15-year-old age group had one of the highest known percentages of unrestrained occupants, at 61 percent. Among the 246 fatalities where restraint use was known for youth 13 to 15 years old, 134 were known to not be wearing their seat belts.

Charts 3 and 4 illustrate the motor vehicle fatalities and injuries for our children, youth, and young adults.

Chart 3 Occupant Fatalities in 2013
By Age, in Passenger Vehicles


## Seat Belt Use Makes a Difference

Research conducted by NHTSA on occupant protection use from 2004 to 2013 shows that in vehicles where adult drivers wear seat belts, children are more likely to be restrained as well. ${ }^{16}$ Research about fatally injured children and youth from birth to 15 reveals the following:

- When drivers didn't wear their seat belts, 55 percent of children up to age 4 were also unrestrained. But when drivers were wearing seat belts, 78 percent of the children were properly restrained.
- Among fatally injured children 5 to 7 years old, 71 percent were unrestrained when the drivers were unrestrained. But when the drivers were wearing seat belts, far fewer children (34\%) 5 to 7 were unrestrained.

Chart 4 Estimated Occupant Injuries in 2013
By Age, in Passenger Vehicles


- Among fatally injured children 8 to 12 years old, 83 percent were unrestrained when the drivers were unrestrained. When the drivers were wearing seat belts far fewer children (36\%) 8 to 12 were unrestrained.
- Among fatally injured children 13 to 15 years old, 90 percent were unrestrained when the drivers were unrestrained. Conversely, when the drivers were wearing seat belts far fewer children (48\%) 13 to 15 were unrestrained.

[^4]Exhibit 1 illustrates the relationship between driver and child restraint use in crashes in which a child was fatally injured.

Exhibit 1 Driver and Child Restraint Use in Passenger Vehicles in Fatal Crashes Involving Children Fatally Injured From Birth to 15, 2004-2013

| Percentage of Child Passengers Unrestrained, |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| By Age Group |  |  |  |  |

This strong association between parental and child restraint use speaks to the importance of maintaining programs and outreach for children, youth, and parents to encourage the use of occupant restraints. NHTSA's 2007 Motor Vehicle Occupant Safety Survey further illustrates this need. In the 2007 MVOSS, researchers asked people their level of agreement with the statement, "I have a habit of wearing a seat belt because my parents insisted I wear them when I was a child." Among people 16 to 24 years old, 80 percent either strongly agreed or somewhat agreed with this statement. ${ }^{17}$

## Restraints for All Age Groups Save Lives

Most of the people who die in motor vehicle crashes are vehicle occupants; almost one-third of fatalities caused by crashes involve pedestrians, pedalcyclists, and motorcyclists. Seat belts and child safety seats have been designed to protect drivers and passengers from death and injury during a crash. But these restraints cannot save lives if they are not used. (See Appendix B—Passenger Vehicle Occupants Killed in Motor Vehicle Crashes, by State and Restraint Use, 2013.)

- In 2013, seat belts saved an estimated 12,584 lives among passenger vehicle occupants 5 and older.
- In 2013, an estimated 263 lives were saved by child restraint use for children under 5.
- Over the period from 1975 to 2013, among children 4 and younger an estimated 10,421 lives were saved by child safety seats or seat belts. ${ }^{18}$
- Ejection from the vehicle is one of the most injurious events that can happen to a person in a crash. In 2013, 79 percent of

[^5]people in fatal crashes who were completely ejected from passenger vehicles were killed. Seat belts are effective in preventing total ejections: Only 1 percent of people wearing seat belts were totally ejected from passenger vehicles, compared with 31 percent of unbelted people. ${ }^{19}$

- In fatal crashes in 2013, children, youth, and young adults were more likely to be ejected compared to persons of all ages. See Chart 5.

Chart 5 Percent of Occupant Fatalities in 2013 By Age and Ejection Status, in Passenger Vehicles


## Use of Correct Restraint Types

Young children who are either placed in the wrong type of car seat/ booster seat or moved prematurely into seat belts meant for larger children and adults continues to be a serious problem.

To increase correct restraint use, NHTSA required a new system to help make child safety seat installation easier. This system, comprised of lower anchors and top tethers, is required on most child safety seats and vehicles manufactured after September 1, 2002.

NHTSA recommends that all infants should ride in the back seat, in rear-facing child safety seats as long as possible up to the height and weight limit of the particular seat. By supporting the entire posterior torso, neck, head and pelvis, a rear-facing car seat distributes crash forces over the entire body rather than focusing them only at the belt contact points.

[^6]When children outgrow these rear-facing child safety seats they should ride in forward- facing seats, in the back seat, until they reach the height or weight limit of the particular seat.

- Despite these recommendations, the 2013 National Survey of the Use of Booster Seats (NSUBS) found that 9 percent of children less than 20 pounds were not restrained in rearfacing car seats in 2013 ( $7 \%$ were prematurely graduated to forward-facing car seats and $2 \%$ were unrestrained). ${ }^{20}$
- NHTSA found that most of the "premature graduation" for these children were to front-facing child safety seats, before the children were ready for them.

In 2011, NHTSA conducted a national child restraint use study which addressed the use and misuse of car seats and booster seats. The data were collected from a national representative sample of 24 randomly selected geographic areas throughout the country. The focus was children from birth to age 8 . Results showed that overall car seat and booster seat misuse was 46 percent. However, car seat misuse was 59 percent while booster seat misuse was 20 percent. The most frequently observed misuse was incorrect recline for rear facing seats, loose car seat installation for forward facing seats, and improper lap belt position for booster seats. ${ }^{21}$

The reason children should ride in the rear seat is that children in the front seats of cars with air bags can be killed or seriously injured if those air bags deploy. NHTSA recommends that children and youth 12 and younger sit in the rear seat away from the force of deploying air bags. If the vehicle has side-impact air bags, NHTSA recommends that children be properly restrained and in a proper seating position at all times. To minimize injury risks, children should not lean or rest against side-impact air bags that are the chest-only or head/chest combination types.

## Booster Seat Use Saves Lives and Reduces the Risk of Injury

The appropriate restraint system for children 4 to 7 years old is either a front-facing safety seat or a booster seat, depending on the child's height and weight. Booster seat use substantially reduces the risk of injury for children; however, some children in this age group are currently (and very often incorrectly) restrained only by seat belts designed for adults. The National

[^7]Survey of the Use of Booster Seats (NSUBS) survey conducted in 2013 indicated that about 24 percent of children 4 to 7 years old were prematurely graduated to seat belts and 46 percent of children in this age group were riding in booster seats. ${ }^{22}$

A 2003 study conducted by the Children's Hospital of Philadelphia found that the use of belt-positioning booster seats lowers the risk of injury to children in crashes by 59 percent compared with the use of vehicle seat belts. The study also found that none of the 4- to 7-year-olds who were in belt-positioning booster seats had any injuries to the abdomen, neck, spine, or back. Yet, such injuries did occur in children who only used seat belts but who were too small for them. ${ }^{23}$

Persuading parents to place their children in the appropriate occupant restraint will reduce the number of children killed or seriously injured.

The 2013 National Survey of the Use of Booster Seats (NSUBS), ${ }^{24}$ a nationwide survey of observed restraint use conducted by NHTSA, found that among 4- to 7-year-old children:

- Booster seat use was 46 percent;
- 24 percent of children were in adult seat belts;
- 9 percent of the children were completely unrestrained; and
- 20 percent of the children were in child safety seats.

These results indicate that as many as 33 percent of children 4 to 7 in the United States were not being properly restrained (24\% prematurely in seat belts and 9\% unrestrained).

Children who have outgrown child safety seats, but are too small to ride safely in adult seat belts, should be properly restrained in booster seats until the adult belt fits properly, i.e., the lap belt must lie snugly across the upper thighs, not the stomach, and the shoulder belt should lie snug across the shoulder and chest and not cross the neck or face.

If placed in an adult seat belt prematurely, a child may suffer serious internal injuries, slip out of the seat belt, or be ejected from the vehicle during a crash.

[^8]
## Closing the Gaps in Occupant Restraint Laws Can Save Young Lives

Every State except New Hampshire has adult seat belt laws, and all States have child restraint laws requiring drivers to restrain children in approved, age-appropriate child restraint devices or seat belts. In some States, though, these laws do not cover all occupants in all seating positions such as in the rear seat.

See Appendix C for information on State Restraint Laws.
A 2007 study published in the Archives of Pediatric and Adolescent Medicine revealed that children 4 to 7 in States with booster seat laws are 39 percent more likely to be appropriately restrained in those booster seats or child safety seats than children in States without such laws. In States with booster seat laws, children 4 and 5 years old were 23 percent more likely to
be appropriately restrained while those 6 and 7 years old were twice as likely to be in child restraints, such as booster seats, than they were in States without booster seat laws. For 6- and 7-year-olds, the effect was much stronger when the law included those age 4 to 7 than when it only included those 4 and 5 years old. ${ }^{25}$

As of 2015, there were 49 States and the District of Columbia that had enacted provisions in their child restraint laws requiring the use of booster seats or other appropriate restraint devices by children who have outgrown their forward-facing child safety seats, but who are still too small to use an adult seat belt system correctly. The only State lacking this lifesaving provision is South Dakota. See Exhibit 2 for a map of State requirements for child restraint laws.

Exhibit 2 Map: Age at Which a Child Must Be in a Child Restraint or a Booster Seat ${ }^{26}$


Only State WITHOUT a booster seat law - South Dakota; States that mandate booster seat use - all others

[^9][^10]
## Primary Enforcement Laws Help Protect Children of All Ages

Seat belt laws have played an integral role in increasing belt use, contributing to an increase from 14 percent in $1983^{27}$ to 87 percent in 2013. The extent of this effect has been in part related to the type of enforcement allowed by law (primary versus secondary). Child restraint laws are "primary" laws (laws that allow law enforcement officers to stop vehicles and issue citations for unrestrained drivers or passengers). As of July 2015, the seat belt laws in 15 States are "secondary" enforcement laws, and New Hampshire has no adult seat belt law (see Appendix C, State Restraint Laws). Secondary laws mean that police officers cannot stop drivers for the sole purpose of enforcing the use of occupant restraints. Rather, police officers can write tickets for not using occupant restraints only if they stop vehicles for other driving infractions.

Studies have also documented that primary enforcement seat belt laws are more effective in increasing seat belt use. For instance, data from the 2014 NOPUS study showed that the seat belt use rate was 11 percentage points lower in secondary law States compared to primary law States (79\% versus 90\% respectively). ${ }^{28}$

As previously mentioned, studies have shown that drivers who use seat belts are more likely to buckle up the children they transport. For this reason, it is hypothesized that primary laws may also indirectly increase child passenger restraint use. ${ }^{29}$

Primary laws permit a law enforcement officer to stop a vehicle and issue a citation for a seat belt violation, even if this is the only violation the officer notices. A secondary law allows officers to issue seat belt citations to motorists only after they stop the drivers for other violations.

[^11]
## FACTS ABOUT CHILDREN AND YOUTH

0
n average, 3 children were killed and 470 children were injured every day in traffic crashes in 2013. ${ }^{30}$

## Facts About Restraint Use

As stated earlier, in 2013 the use of child restraints saved the lives of an estimated 263 children under age 5. From 1975 through 2013, an estimated 10,421 lives of children from birth to age 4 were saved by the use of occupant restraints including child safety seats and seat belts. ${ }^{31}$

During 2013 a total of 884 children and youth from birth to age 15 were killed in passenger vehicle crashes. Forty-four percent of child fatalities with known restraint use were unrestrained. Among occupants with known restraint use, the breakdown by age group is:

- 31 percent of children from birth to 4 were unrestrained;
- 41 percent of children 5 to 7 were unrestrained;
- 45 percent of children 8 to 12 were unrestrained; and
- 61 percent of children 13 to 15 were unrestrained.

Chart 6 shows data on the use and nonuse of occupant restraints among those killed in passenger vehicle crashes in 2013 with known restraint use. Note that most occupants between the ages of 13 and 20 who were killed were not restrained. Unfortunately, being properly restrained cannot prevent all passengers from being fatally injured, especially in some kinds of high-impact crashes. However, a number of occupants in all age groups would not have been killed had they been properly restrained.

As children get older, they are less likely to be properly restrained (when compared to the $<5$ age group). This decrease illustrates the critical need for public information and education about the importance of restraint use, along with the need for ongoing enforcement of existing laws.

Chart 6 Passenger Vehicle Occupant Fatalities in 2013
By Age and Restraint Use (when known)

| Age | Percent <br> Restrained | Percent <br> Unrestrained |
| :--- | :---: | :---: |
| <5 | 69 | 31 |
| $\mathbf{5 - 7}$ | 59 | 41 |
| $\mathbf{8 - 1 2}$ | 55 | 45 |
| $\mathbf{1 3 - 1 5}$ | 39 | 61 |
| $\mathbf{1 6 - 2 0}$ | 45 | 55 |
| $\mathbf{2 1 - 2 4}$ | 39 | 61 |
| $\mathbf{2 5 - 4 4}$ | 40 | 60 |
| $\mathbf{4 5 - 6 4}$ | 54 | 46 |
| $\mathbf{6 5 - 7 4}$ | 66 | 33 |
| $\mathbf{7 5 +}$ | 74 | 26 |
| Total | 69 | 31 |

When viewing the chart, keep in mind that even with the use of occupant restraints:

- Some crashes are so severe that some occupants do not survive even when properly protected by child safety seats, booster seats, or seat belts.
- There are instances in which the effectiveness of a child restraint or seat belt is compromised by incorrect use, such as improper installation or use of a child safety seat, or placing a child in a seat belt designed for an adult.
- Occupants in the youngest age group, 4 and under, and the oldest age group, 65 and older, are more fragile. Therefore, they are more vulnerable to death or serious injury during a crash.
- In recent years, every State except South Dakota has strengthened its child restraint law to require the use of appropriate child restraint devices (often specifically defined as booster seats) by children who have outgrown their car seats but who do not yet fit properly in adult seat belt systems. In spite of this, according to the 2013 NSUBS report, only 46 percent of 4 - to 7 -year-old children were restrained in booster seats in 2013. As a result, many children are inappropriately placed in adult belts, or worse, allowed to ride completely unrestrained. ${ }^{32}$

[^12]
## Facts About Motor-Vehicle-Related Deaths and Injuries

- Based on the 10-year period between 2004 and 2013 an average of 1,228 children from birth to age 15 died and approximately 186,000 were injured in passenger vehicle crashes each year.
- Every day in the United States in 2013, an average of 3 children younger than 15 were killed and an estimated 470 were injured in motor vehicle crashes.
- In 2013 a total of 884 children 15 and younger were killed and an estimated 163,000 were injured in passenger vehicle crashes. Approximately 3 percent of these injured occupants had incapacitating injuries.
- In 2013 there were:
» 278 crash fatalities and an estimated 45,000 injured among children 5 and under;
» 135 crash fatalities and an estimated 33,000 occupants injured among children 5 to 7;
» 225 crash fatalities and an estimated 49,000 occupants injured among children 8 to 12; and
» 246 crash fatalities and an estimated 36,000 occupants injured among children 13 to 15.

Chart 7 further highlights facts about injury severity.

Chart 7 Occupants Injured in Passenger Vehicles in 2013 by Age and Injury Severity

| Age Groups | Injured, Incapacitating |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Count | Injured, Non-incapacitating | Injured, Other* |  | Total |  |  |
|  | Percent | Count | Percent | Count | Percent | Count |  |
| $\boldsymbol{< 5}$ | 1,000 | $2 \%$ | 10,000 | $22 \%$ | 34,000 | $76 \%$ | 45,000 |
| $\mathbf{5 - 7}$ | 1,000 | $3 \%$ | 10,000 | $30 \%$ | 22,000 | $67 \%$ | 33,000 |
| $\mathbf{8 - 1 2}$ | 2,000 | $4 \%$ | 12,000 | $24 \%$ | 35,000 | $71 \%$ | 49,000 |
| $\mathbf{1 3 - 1 5}$ | 1,000 | $3 \%$ | 10,000 | $28 \%$ | 25,000 | $69 \%$ | 36,000 |
| $\mathbf{1 6 - 2 0}$ | 15,000 | $6 \%$ | 82,000 | $32 \%$ | 160,000 | $62 \%$ | 258,000 |
| $\mathbf{2 1 - 2 4}$ | 17,000 | $7 \%$ | 68,000 | $29 \%$ | 148,000 | $64 \%$ | 232,000 |
| $\mathbf{2 5 - 4 4}$ | 40,000 | $6 \%$ | 182,000 | $27 \%$ | 459,000 | $68 \%$ | 680,000 |
| $\mathbf{4 5 - 6 4}$ | 28,000 | $5 \%$ | 133,000 | $26 \%$ | 349,000 | $68 \%$ | 510,000 |
| $\mathbf{6 5 - 7 4}$ | 8,000 | $7 \%$ | 31,000 | $26 \%$ | 81,000 | $68 \%$ | 120,000 |
| $\mathbf{7 5 +}$ | 6,000 | $7 \%$ | 25,000 | $30 \%$ | 52,000 | $63 \%$ | 83,000 |
| Total | 119,000 | $6 \%$ | 563,000 | $28 \%$ | $1,365,000$ | $67 \%$ | $2,046,000$ |

*Injured Other includes possible injuries and severity unknown. million) of the 212 million licensed drivers in the United States.
This age group is generally just getting their licenses and many are under a graduated drivers licensing program as they learn driving skills. ${ }^{33}$ Each year at least 2 million people—mostly teenagers-begin driving. At the same time, motor vehicle crashes kill more young adults than any other cause. ${ }^{34}$

A significant percentage of young drivers are involved in traffic crashes, and they are twice as likely as adult drivers to be in fatal crashes. Sixteen-year-old drivers have crash rates that are three times greater than 17-year-olds, five times greater than 18-yearolds, and twice the rate of 85 -year-old drivers. The factors contributing to these higher crash rates include a lack of driving experience and inadequate driving skills; excessive driving during night-time; risk-taking behavior; poor driving judgment and decision making skills; drinking and driving; and distractions from teenage passengers. ${ }^{35}$

In addition to the disproportionate harm teen drivers experience from motor vehicle crashes, consider the following:

- Motor vehicle crashes are the leading cause of death for young adults 16 to 20.
- More young adults 16 to 20 are killed or injured in motor vehicle crashes than children 15 and under. In 2013, of the 3,208 young people from birth to age 20 killed in traffic crashes, 72 percent were 16 to 20 years old. Of the estimated 421,000 young people who were injured in crashes, 61 percent were 16 to 20 years old. (See Chart 8.)
- Driver fatalities for 16- to 20-year-olds decreased by 57 percent between 2004 and 2013, dropping from 3,176 in 2004 to 1,373 in 2013.
- During 2013 almost half of the young passenger vehicle occupants (16 to 20) died in weekend (6 p.m. Friday to 5:59 a.m. Monday) traffic crashes.
- In 2013 a total of 742 young people 16 to 20 years old died when they were totally or partially ejected from passenger vehicles.

[^13]- Although young drivers make up about 6 percent of the total licensed driving population, 10 percent $(3,537)$ of all drivers involved in fatal crashes were young drivers 16 to 20 years old, and 12 percent $(169,000)$ of all drivers involved in injury crashes were young drivers.
- In 2013, 16-to 20-year-old drivers had some of the highest fatality rates per 100,000 licensed drivers. In fact, the fatality rate for young drivers (11.24) was significantly higher than the rate for drivers of all ages (7.27). (See Chart 9.)

Chart 8 Percentage of All Occupants From Birth to Age 20 Killed or Injured in 2013
By Age, in Passenger Vehicles


Chart 9 Driver Fatality Rates per 100,000 Licensed Drivers in 2013
By Age, in Passenger Vehicles


- In 2013 an estimated 15,000 people 16 to 20 years old experienced incapacitating injuries. This number represents nearly 13 percent $(119,000)$ of all incapacitating injuries from traffic crashes.
- In 2013 an estimated 125,000 young adults experienced non-incapacitating injuries. This number represents about 22 percent $(563,000)$ of all people with non-incapacitating injuries from traffic crashes.
- Male and female drivers 16 to 20 have some of the highest involvement rates for fatalities and injuries (per 100,000 licensed drivers) in passenger vehicle crashes. (See Charts 10 and 11.)

Chart 10 Driver Fatality Rates per 100,000 Licensed Drivers in 2013

By Age and Gender, in Passenger Vehicles


Chart 11 Driver Injury Rates per 100,000 Licensed
Drivers in 2013
By Age and Gender, in Passenger Vehicles


## Young Adults and Seat Belt Use

- Fifty-five percent of the passenger vehicle occupants age 16 to 20 who were killed in 2013 were not wearing seat belts.
- Despite an improvement in seat belt use for 16- to 20-yearold drivers, the percentage of driver fatalities in which the drivers were not wearing seat belts has averaged over 55 percent for the past 10 years. (See Chart 12.)
- Drivers are less likely to use restraints when they have been drinking. In 2013, about 46 percent of the young drivers of passenger vehicles involved in fatal crashes who had been drinking were unrestrained. Of the young drivers (16 to 20) who had been drinking and were killed in crashes, 65 percent were unrestrained. ${ }^{36}$

Chart 12 Driver Fatalities, 16- to 20-Year-Olds, by Restraint Use When Known, 2004-2013


[^14]
## SELF-REPORTED BEHAVIOR, ATTITUDES, AND OPINIONS ON SEAT BELT USE

The following information was reported in the 2007 Motor Vehicle Occupant Safety Survey (MVOSS report). ${ }^{37}$ This telephone survey was administered to a randomly selected national sample of 6,000 people 16 and older (with younger ages over-sampled).

## Seat Belt Use Behavior

- Eighty-two percent of 16- to 20-year-olds reported they wear their seat belts all the time. About 11 percent reported that they wear their seat belts most of the time.
- Most drivers (89\%) reported that when they were riding as passengers, they usually rode in the front seat. However, only 58 percent said they always wore seat belts when riding in the back seat, while 11 percent said they never wore their seat belts when riding in the back seat.


## Attitudes Toward Seat Belt Use

- Among people 16 to 24,62 percent strongly agreed and 18 percent somewhat agreed ( 80 percent when combined) with the statement, "I have a habit of wearing a seat belt because my parents insisted I wear them when I was a child."
- The number dropped to 59 percent among people 25 to 34 and to 33 percent among people 35 to 44, reflecting the lower usage rates during their childhood years.
- The vast majority of 16 - to 20 -year-olds (94\%) either strongly agreed or somewhat agreed with the statement, "If I were in an accident, I would want to have my seat belt on." However, about one-half (44\%) of 16- to 20-year-olds also agreed with the statement, "Seat belts are just as likely to harm you as help you."
- Twenty-seven percent of 16 - to 20-year-olds agreed with the statement, "I would feel self-conscious around my friends if I wore a seat belt and they did not."
- Avoiding serious injury was the most frequent reason given for wearing a seat belt.
- The most common reasons given by drivers in the 16-to-20 age group for not wearing seat belts were that they forgot (68\%) or were driving a short distance (61\%).

[^15]- Twenty-eight percent of 16 - to 20-year-olds agreed with the statement that a crash close to home was usually not as serious, and 26 percent agreed that putting on a seat belt makes them worry more about being in a crash.


## Opinions About Seat Belt Use Laws

- When asked how they felt about laws that require drivers and front-seat passengers to wear seat belts, 80 percent of 16- to 20 year-olds said they favor them.
- Many (68\%) 16- to 20-year-olds answered "yes" when asked whether police should be allowed to stop vehicles if they observe seat belt violations when no other traffic laws are being broken.
- Many (70\%) 16- to 20-year-olds favored fines for drivers who do not wear seat belts.
- About 41 percent of 16- to 20-year-olds favored points against a license as a penalty for seat belt violations.


## Teens and Distraction

- Ten percent of all drivers 15 to 19 years old involved in fatal crashes were reported as distracted at the time of the crash. This age group has the largest proportion of drivers who were distracted at the time of the crashes. ${ }^{38}$
- There were 244 teens 15 to 19 years old killed in distrac-tion-affected crashes in 2013. ${ }^{39}$
- The risk of a crash or near-crash among novice drivers increases with the performance of many secondary tasks, including texting and dialing cell phones. ${ }^{40}$
- Compared to their parents, teens 16 to 18 reported significantly more frequent involvement in reading or sending a text message, using an electronic device for music, checking the internet or social media, and looking for something in the vehicle. ${ }^{41}$
- Twenty percent of teens admit that they have extended multi-message text conversations while driving. ${ }^{42}$
- About 20 percent of young drivers 18 to 20 years old thought sending text messages or e-mails made no difference on their driving, compared to 27-29 percent for drivers 21 to $34 .{ }^{43}$
${ }^{41}$ Bingham, C. R., Zakrajsek, J. S., Almani, F., Shope, J. T. \& Sayer, T. B. (2015). Do as I say, not as I do: Distracted driving behavior of teens and their parents. Journal of Safety Research; 55 pp. 21-29.
${ }^{42}$ Toyota Motor Sales, USA (2012, November 27). Teen Driver Distraction Study Release. (Web page press release from Toyota Collaborative Safety Research Center about an UMTRI report). Retrieved from the Toyota website at www.toyota.com/csrc/teen-driver-distraction-study-release.html
${ }^{43}$ National Highway Traffic Safety Administration. (2012, April). Young drivers report the highest level of phone involvement in crash ornear-crash incidences. (Traffic Safety Facts Research Note,. Report No. DOT HS 811 611). Washington, DC: Author. Available at http://www.distraction.gov/downloads/pdfs/ traffic-safety-facts-04-2012.pdf


## APPENDICES

The most common reasons given by drivers in the 16-to-20 age group for not wearing seat belts were that they forgot or were driving a short distance.

## Appendix A

People Killed in Passenger Vehicle Crashes, by State and Age Group, 2013

## Appendix B

People Killed in Passenger Vehicle Crashes, by State and Restraint Use, 2013

## Appendix C

State Restraint Laws

Passenger Vehicle Occupant Fatalities, by State and Age Group, 2013

| State | Age Group |  |  |  |  |  |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | <5 | 5-7 | 8-12 | 13-15 | 16-20 | 21-24 | 25-44 | 45-64 | 65-74 | 75+ | Unknown |  |
| Alabama | 16 | 6 | 10 | 10 | 68 | 73 | 237 | 157 | 38 | 49 | 1 | 665 |
| Alaska | 0 | 0 | 0 | 0 | 4 | 3 | 11 | 6 | 2 | 1 | 0 | 27 |
| Arizona | 9 | 4 | 10 | 8 | 43 | 39 | 124 | 115 | 48 | 50 | 1 | 451 |
| Arkansas | 6 | 4 | 8 | 3 | 36 | 27 | 112 | 78 | 30 | 36 | 0 | 340 |
| California | 14 | 14 | 21 | 15 | 191 | 244 | 510 | 351 | 113 | 137 | 1 | 1,611 |
| Colorado | 8 | 3 | 3 | 4 | 44 | 31 | 92 | 81 | 24 | 27 | 0 | 317 |
| Connecticut | 3 | 1 | 1 | 2 | 26 | 23 | 65 | 31 | 11 | 18 | 1 | 182 |
| Delaware | 1 | 1 | 0 | 0 | 3 | 4 | 15 | 15 | 3 | 8 | 0 | 50 |
| Dist of Columbia | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 1 | 0 | 6 |
| Florida | 8 | 8 | 18 | 7 | 111 | 146 | 361 | 292 | 105 | 160 | 2 | 1,218 |
| Georgia | 14 | 5 | 8 | 12 | 96 | 75 | 245 | 204 | 75 | 76 | 1 | 811 |
| Hawaii | 2 | 0 | 1 | 1 | 6 | 6 | 12 | 9 | 2 | 3 | 0 | 42 |
| Idaho | 2 | 1 | 4 | 1 | 23 | 21 | 39 | 42 | 15 | 11 | 0 | 159 |
| Illinois | 8 | 2 | 7 | 7 | 76 | 65 | 190 | 165 | 52 | 78 | 0 | 650 |
| Indiana | 10 | 3 | 6 | 6 | 69 | 64 | 166 | 123 | 34 | 63 | 0 | 544 |
| lowa | 2 | 1 | 1 | 3 | 25 | 36 | 58 | 56 | 21 | 34 | 0 | 237 |
| Kansas | 4 | 2 | 2 | 5 | 31 | 31 | 74 | 49 | 23 | 44 | 0 | 265 |
| Kentucky | 2 | 2 | 5 | 4 | 38 | 37 | 134 | 139 | 51 | 53 | 0 | 465 |
| Louisiana | 6 | 3 | 4 | 6 | 46 | 50 | 168 | 124 | 36 | 32 | 1 | 476 |
| Maine | 1 | 0 | 0 | 1 | 15 | 10 | 25 | 29 | 15 | 16 | 0 | 112 |
| Maryland | 6 | 4 | 1 | 5 | 32 | 31 | 73 | 80 | 24 | 22 | 1 | 279 |
| Massachusetts | 3 | 0 | 0 | 0 | 25 | 34 | 52 | 36 | 22 | 34 | 0 | 206 |
| Michigan | 7 | 1 | 6 | 10 | 69 | 57 | 153 | 143 | 62 | 93 | 0 | 601 |
| Minnesota | 3 | 4 | 1 | 5 | 25 | 25 | 73 | 57 | 27 | 39 | 0 | 259 |
| Mississippi | 6 | 3 | 6 | 1 | 54 | 40 | 149 | 156 | 33 | 41 | 0 | 489 |
| Missouri | 3 | 3 | 11 | 10 | 85 | 61 | 165 | 112 | 44 | 65 | 0 | 559 |
| Montana | 1 | 3 | 0 | 2 | 17 | 24 | 50 | 31 | 16 | 17 | 0 | 161 |
| Nebraska | 1 | 0 | 3 | 8 | 25 | 24 | 50 | 41 | 8 | 9 | 0 | 169 |
| Nevada | 2 | 0 | 1 | 3 | 9 | 14 | 42 | 30 | 12 | 10 | 0 | 123 |
| New Hampshire | 0 | 0 | 0 | 0 | 8 | 12 | 26 | 21 | 12 | 12 | 0 | 91 |
| New Jersey | 5 | 1 | 3 | 3 | 23 | 36 | 97 | 65 | 39 | 57 | 0 | 329 |
| New Mexico | 6 | 2 | 1 | 4 | 29 | 22 | 54 | 47 | 9 | 14 | 0 | 188 |
| New York | 10 | 3 | 1 | 2 | 82 | 71 | 158 | 130 | 59 | 95 | 3 | 614 |
| North Carolina | 15 | 5 | 9 | 10 | 79 | 100 | 258 | 219 | 91 | 85 | 0 | 871 |
| North Dakota | 2 | 0 | 0 | 1 | 11 | 15 | 45 | 30 | 6 | 2 | 0 | 112 |
| Ohio | 6 | 3 | 8 | 9 | 70 | 68 | 208 | 190 | 56 | 81 | 0 | 699 |
| Oklahoma | 10 | 5 | 8 | 11 | 43 | 44 | 147 | 121 | 39 | 46 | 0 | 474 |
| Oregon | 0 | 0 | 3 | 2 | 23 | 18 | 68 | 56 | 23 | 23 | 0 | 216 |
| Pennsylvania | 10 | 6 | 5 | 4 | 81 | 100 | 210 | 202 | 61 | 119 | 1 | 799 |
| Rhode Island | 0 | 0 | 0 | 0 | 5 | 7 | 6 | 4 | 3 | 12 | 0 | 37 |
| South Carolina | 4 | 1 | 3 | 3 | 53 | 59 | 163 | 124 | 39 | 39 | 0 | 488 |
| South Dakota | 0 | 0 | 0 | 2 | 8 | 10 | 34 | 22 | 12 | 12 | 0 | 100 |
| Tennessee | 7 | 4 | 9 | 5 | 64 | 75 | 234 | 168 | 78 | 75 | 0 | 719 |
| Texas | 40 | 18 | 21 | 33 | 268 | 290 | 714 | 496 | 154 | 168 | 3 | 2,205 |
| Utah | 3 | 0 | 1 | 0 | 14 | 12 | 38 | 37 | 16 | 19 | 0 | 140 |
| Vermont | 0 | 0 | 0 | 0 | 6 | 8 | 8 | 15 | 3 | 11 | 0 | 51 |
| Virginia | 2 | 2 | 5 | 2 | 54 | 63 | 174 | 128 | 62 | 57 | 0 | 549 |
| Washington | 2 | 1 | 3 | 7 | 46 | 36 | 75 | 66 | 18 | 33 | 0 | 287 |
| West Virginia | 3 | 3 | 3 | 4 | 26 | 23 | 69 | 72 | 22 | 22 | 0 | 247 |
| Wisconsin | 2 | 3 | 3 | 1 | 29 | 45 | 129 | 82 | 33 | 49 | 0 | 376 |
| Wyoming | 3 | 0 | 1 | 4 | 10 | 5 | 26 | 12 | 1 | 4 | 0 | 66 |
| National | 278 | 135 | 225 | 246 | 2,324 | 2,415 | 6,390 | 5,059 | 1,782 | 2,262 | 16 | 21,132 |
| Puerto Rico | 1 | 0 | 0 | 3 | 22 | 21 | 57 | 46 | 15 | 19 | 6 | 190 |

[^16]
## APPENDIX B

Passenger Vehicle Occupant Fatalities, by State and Restraint Use, 2013

| State | Restraint Use |  |  |  |  |  | Total |  | Percent "Known" Restrained | Percent <br> "Known" <br> Unrestrained |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Restrained |  | Unrestrained |  | Unknown |  |  |  |  |  |
|  | Number | Percent | Number | Percent | Number | Percent | Number | Percent |  |  |
| Alabama | 271 | 41 | 369 | 55 | 25 | 4 | 665 | 100 | 42 | 58 |
| Alaska | 13 | 48 | 12 | 44 | 2 | 7 | 27 | 100 | 52 | 48 |
| Arizona | 175 | 39 | 227 | 50 | 49 | 11 | 451 | 100 | 44 | 56 |
| Arkansas | 135 | 40 | 174 | 51 | 31 | 9 | 340 | 100 | 44 | 56 |
| California | 986 | 61 | 500 | 31 | 125 | 8 | 1,611 | 100 | 66 | 34 |
| Colorado | 124 | 39 | 177 | 56 | 16 | 5 | 317 | 100 | 41 | 59 |
| Connecticut | 80 | 44 | 75 | 41 | 27 | 15 | 182 | 100 | 52 | 48 |
| Delaware | 26 | 52 | 23 | 46 | 1 | 2 | 50 | 100 | 53 | 47 |
| Dist of Columbia | 6 | 100 | 0 | 0 | 0 | 0 | 6 | 100 | 100 | 0 |
| Florida | 601 | 49 | 553 | 45 | 64 | 5 | 1,218 | 100 | 52 | 48 |
| Georgia | 350 | 43 | 376 | 46 | 85 | 10 | 811 | 100 | 48 | 52 |
| Hawaii | 15 | 36 | 23 | 55 | 4 | 10 | 42 | 100 | 39 | 61 |
| Idaho | 54 | 34 | 98 | 62 | 7 | 4 | 159 | 100 | 36 | 64 |
| Illinois | 292 | 45 | 276 | 42 | 82 | 13 | 650 | 100 | 51 | 49 |
| Indiana | 279 | 51 | 201 | 37 | 64 | 12 | 544 | 100 | 58 | 42 |
| lowa | 108 | 46 | 102 | 43 | 27 | 11 | 237 | 100 | 51 | 49 |
| Kansas | 103 | 39 | 146 | 55 | 16 | 6 | 265 | 100 | 41 | 59 |
| Kentucky | 220 | 47 | 245 | 53 | 0 | 0 | 465 | 100 | 47 | 53 |
| Louisiana | 197 | 41 | 248 | 52 | 31 | 7 | 476 | 100 | 44 | 56 |
| Maine | 55 | 49 | 56 | 50 | 1 | 1 | 112 | 100 | 50 | 50 |
| Maryland | 153 | 55 | 108 | 39 | 18 | 6 | 279 | 100 | 59 | 41 |
| Massachusetts | 59 | 29 | 96 | 47 | 51 | 25 | 206 | 100 | 38 | 62 |
| Michigan | 329 | 55 | 183 | 30 | 89 | 15 | 601 | 100 | 64 | 36 |
| Minnesota | 149 | 58 | 80 | 31 | 30 | 12 | 259 | 100 | 65 | 35 |
| Mississippi | 201 | 41 | 284 | 58 | 4 | 1 | 489 | 100 | 41 | 59 |
| Missouri | 192 | 34 | 325 | 58 | 42 | 8 | 559 | 100 | 37 | 63 |
| Montana | 50 | 31 | 108 | 67 | 3 | 2 | 161 | 100 | 32 | 68 |
| Nebraska | 44 | 26 | 105 | 62 | 20 | 12 | 169 | 100 | 30 | 70 |
| Nevada | 56 | 46 | 57 | 46 | 10 | 8 | 123 | 100 | 50 | 50 |
| New Hampshire | 35 | 38 | 56 | 62 | 0 | 0 | 91 | 100 | 38 | 62 |
| New Jersey | 174 | 53 | 141 | 43 | 14 | 4 | 329 | 100 | 55 | 45 |
| New Mexico | 72 | 38 | 96 | 51 | 20 | 11 | 188 | 100 | 43 | 57 |
| New York | 337 | 55 | 186 | 30 | 91 | 15 | 614 | 100 | 64 | 36 |
| North Carolina | 453 | 52 | 355 | 41 | 63 | 7 | 871 | 100 | 56 | 44 |
| North Dakota | 28 | 25 | 66 | 59 | 18 | 16 | 112 | 100 | 30 | 70 |
| Ohio | 288 | 41 | 352 | 50 | 59 | 8 | 699 | 100 | 45 | 55 |
| Oklahoma | 200 | 42 | 248 | 52 | 26 | 5 | 474 | 100 | 45 | 55 |
| Oregon | 138 | 64 | 54 | 25 | 24 | 11 | 216 | 100 | 72 | 28 |
| Pennsylvania | 282 | 35 | 419 | 52 | 98 | 12 | 799 | 100 | 40 | 60 |
| Rhode Island | 17 | 46 | 19 | 51 | 1 | 3 | 37 | 100 | 47 | 53 |
| South Carolina | 214 | 44 | 242 | 50 | 32 | 7 | 488 | 100 | 47 | 53 |
| South Dakota | 32 | 32 | 61 | 61 | 7 | 7 | 100 | 100 | 34 | 66 |
| Tennessee | 294 | 41 | 351 | 49 | 74 | 10 | 719 | 100 | 46 | 54 |
| Texas | 1,107 | 50 | 900 | 41 | 198 | 9 | 2,205 | 100 | 55 | 45 |
| Utah | 70 | 50 | 57 | 41 | 13 | 9 | 140 | 100 | 55 | 45 |
| Vermont | 28 | 55 | 21 | 41 | 2 | 4 | 51 | 100 | 57 | 43 |
| Virginia | 248 | 45 | 300 | 55 | 1 | 0 | 549 | 100 | 45 | 55 |
| Washington | 164 | 57 | 89 | 31 | 34 | 12 | 287 | 100 | 65 | 35 |
| West Virginia | 95 | 38 | 113 | 46 | 39 | 16 | 247 | 100 | 46 | 54 |
| Wisconsin | 158 | 42 | 186 | 49 | 32 | 9 | 376 | 100 | 46 | 54 |
| Wyoming | 20 | 30 | 41 | 62 | 5 | 8 | 66 | 100 | 33 | 67 |
| National | 9,777 | 46 | 9,580 | 45 | 1,775 | 8 | 21,132 | 100 | 51 | 49 |
| Puerto Rico | 72 | 38 | 117 | 62 | 1 | 1 | 190 | 100 | 38 | 62 |

## State Restraint Laws

The first mandatory child restraint use law was implemented in Tennessee in 1978. Since 1985, all 50 States and the District of Columbia have had child restraint use laws in effect. However, these laws differ in terms of the ages of children covered, as well as in other important ways, including height and weight limits, seating position requirements and the presence of varying exemptions and exceptions.

The first mandatory belt use law was enacted in New York in 1984. Adult belt use laws are now in effect in 49 States, the District of Columbia, and Puerto Rico. The laws differ from State to State, according to the type and age of the vehicle, occupant age and seating position, etc. The goal of these laws is to promote belt use and thereby reduce deaths and injuries in motor vehicle crashes.

As of July 2015, there were 34 States, the District of Columbia and Puerto Rico that have primary seat belt laws, enabling law enforcement officers to stop vehicles and write citations when they observe violations of the seat belt law. In 15 States, the law specifies secondary enforcement, meaning that police officers are permitted to write a citation only after a vehicle is stopped for some other traffic infraction. New Hampshire is the only State without a seat belt law for adults, although it does have a primary child passenger safety law that covers all drivers and passengers under 18.

The most current information on seat belt laws and child passenger safety laws is available at the Governors' Highway Safety Association's website.

For seat belt laws
www.ghsa.org/html/stateinfo/laws/seatbelt_laws.html
For child passenger safety laws
www.ghsa.org/html/stateinfo/laws/childsafety_laws.html


This page lists organizations and agencies that have additional information on occupant restraint use and other occupant protection issues.

## National Highway Traffic Safety Administration

1200 New Jersey Avenue SE.
Washington, DC 20590
888-327-4236
Hearing Impaired TTY: 800-424-9153
www.nhtsa.gov
National Transportation Safety Board
490 L'Enfant Plaza SW
Washington, DC 20594
202-314-6000
www.ntsb.gov
Governors Highway Safety Association
444 N. Capitol St. NW., Suite 722
Washington, DC 20001
202-789-0942
Fax: 202-789-0946
www.ghsa.org
National Safety Council
1121 Spring Lake Drive
Itasca, IL 60143-3201
630-285-1121
www.nsc.org
AAA Foundation for Traffic Safety
607 14th Street NW, Suite 201
Washington, DC 20005
202-638-5944
www.aaafoundation.org/home
Insurance Institute for Highway Safety
1005 North Glebe Road, Suite 800
Arlington, Virginia 22201
703-247-1500
Fax: 703-247-1588
www.iihs.org

## Safe Kids Worldwide

1301 Pennsylvania Avenue NW., Suite 1000
Washington, DC 20004-1707
202-662-0600
www.safekids.org
Advocates for Highway and Auto Safety
750 First Street NE
Suite 1130
Washington, DC 20002
202-408-1711
Fax: 202-408-1699
www.saferoads.org
Children's Hospital of Philadelphia - Research Institute
Center for Injury Research and Prevention
34th Street and Civic Center Blvd.
Philadelphia, PA 19104
215-590-1000
http://injury.research.chop.edu/
Automotive Safety Program at Indiana University School of Medicine
Affiliated with Riley Hospital for Children
1130 West Michigan
Fesler Hall Room 207
Indianapolis, IN 46202
Local tel: 317-274-2977
Tel: 1-800-543-6227
Fax: 317-274-6710
www.preventinjury.org


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U.S. Department of Transportation

National Highway Traffic Safety
Administration
11313-030116-v6


[^0]:    1 Data 2013, Washington DC: National Highway Traffic Safety Administration
    2 Subramanian, R. (2012, May). Motor vehicle traffic crashes as leading cause of death in the United States, 2008 and 2009. (Report No. DOT HS 811 620). Washington, DC: National Highway Traffic Safety Administration.
    ${ }^{3}$ National Center for Statistics and Analysis. (2015a, June). Children: 2013 data. (Traffic Safety Facts. Report No. DOT HS 812 154). Washington, DC: National Highway Traffic Safety Administration. Available at www-nrd.nhtsa.dot.gov/Pubs/812154.pdf
    ${ }^{4}$ National Center for Statistics and Analysis. (2015b, October). Young drivers: 2013 data. (Traffic Safety Facts. Report No. DOT HS 812 200). Washington, DC: National Highway Traffic Safety Administration. Available at http://www-nrd.nhtsa.dot.gov/Pubs/812200.pdf

[^1]:    ${ }^{5}$ NCSA, 2015a.
    ${ }^{6}$ National Center for Statistics and Analysis. (2015c, May). Occupant protection: 2013 data. (Traffic Safety Facts DOT HS 812 153). Washington, DC: National Highway Traffic Safety Administration. Available at www-nrd.nhtsa.dot.gov/Pubs/812153.pdf
    ${ }^{7}$ NCSA, 2015a.
    ${ }^{8}$ NCSA, 2015 C.
    9 NCSA, 2015 C .
    ${ }^{10}$ NCSA, 2015 c.

[^2]:    ${ }^{1 "}$ Blincoe, L. J.,Miller, T. T. R., Zaloshnja, E., \& Lawrence, B. A. (2015, May). The economic and societal impact of motor vehiclecrrashes, 2010 (Revised) (Report No. DOT HS 812 013). Washington, DC: National Highway Traffic Safety Administration. Available at http://www-nrd.nhtsa.dot.gov/pubs/812013. pdf
    ${ }^{12}$ NCSA, 2015c.
    ${ }^{13}$ NCSA, 2015a.
    ${ }^{14}$ NCSA, 2015c.

[^3]:    ${ }^{15}$ Fatal restraint data is based on "known" restraint usage

[^4]:    ${ }^{16}$ Pickrell, T. M., \& Liu, C. (2015a, January). Occupant restraint use in 2013: Results from the NOPUS controlled intersection study (Report No. DOT HS 812 080). Washington, DC: National Highway Traffic Safety Administration.

[^5]:    ${ }^{17}$ Boyle, J.M., \& Lampkin, C. (2008, August). 2007 Motor Vehicle Occupant Safety Survey, Volume 2, Seat belt report. (Report No. DOT HS 810 975). Washington, DC: National Highway Traffic Safety Administration. Available at http://www.nhtsa.gov/Driving+Safety/Research+\&+Evaluation/ National+Telephone+Surveys

[^6]:    ${ }^{18}$ NCSA, 2015a.
    ${ }^{19}$ NCSA, 2015c.

[^7]:    ${ }^{20}$ Pickrell, T.M., \& Choi, E-H. (2014, June). The 2013 national survey of the use of booster seats (Report No. DOT HS 812 037). Washington, DC: National Highway Traffic Safety Administration. Available at www-nrd.nhtsa.dot.gov/Pubs/812037.pdf
    ${ }^{21}$ Greenwell, N. K. (2015, May). Results of the national child restraint use special study (Report No. DOT HS 812 142). Washington, DC: National Highway Traffic Safety Administration. Available at www-nrd. nhtsa.dot.gov/Pubs/812142.pdf

[^8]:    22 Pickrell \& Choi, 2014
    ${ }^{23}$ Durbin, D., Elliott, M., \& Winston, F. (2003). Belt-positioning booster seats and reduction in risk of injury among children in vehicle crashes. Journal of the American Medical Association. 289 (21), pp. 2835-2840.
    ${ }^{24}$ Pickrell \& Choi, 2014.

[^9]:    ${ }^{25}$ Winston, F. K., Kallan, M. K., Elliot, M. R., Xie, D., \& Durbin, D. R.. (2007, March). Effect of booster seat laws on appropriate restraint use by children 4 to 7 years old involved in crashes. Archives of Pediatric and Adolescent Medicine, 161(3).

[^10]:    ${ }^{26}$ Insurance Institute for Highway Safety. (2015). Child safety (map taken from web page). Arlington, VA: Author. Available at www.iihs.org/iihs/topics/laws/safetybeltuse/mapchildrestraintagereq-uirements?topicName=child-safety

[^11]:    ${ }^{27}$ Nichols, J., Tippetts, A., Fell, J., Auld-Owens, A., Wiliszowski, C., Haseltine, P.., \& Eichelberger, A. (2010, November). Strategies to increase seat belt use: an analysis of levels of fines and the type of law (Report No. DOT HS 811 413). Washington, DC: National Highway Traffic Safety Administration. Available at www.nhtsa.gov/staticfiles/nti/occupant_protection/pdf/811413.pdf
    ${ }^{28}$ Pickrell, T. M., \& Liu, C. (2015b, February). Seat belt use in 2014 - Overall results. (Traffic Safety Facts Research Note. Report No. DOT HS 812 113). Washington, DC: National Highway Traffic Safety Administration.
    ${ }^{29}$ Durbin, D., Smith, R., Kallan, M., Elliott, M., \& Winston, F. (2006). Seat belt use among 13-15-yearolds in primary and secondary enforcement law States. Accident Analysis and Prevention;39, 524-529.

[^12]:    ${ }^{30}$ NCSA, 2015a.
    ${ }^{31}$ NCSA, 2015c.
    ${ }^{32}$ Pickrell \& Choi (2014)

[^13]:    ${ }^{33}$ NCSA, 2015b.
    ${ }^{34}$ Opiela, K. S., Sant,B.M., \& Childers, J. A. (2006, September/October). Turning young drivers into survivors. In Public Roads, Vol. 70, No. 2, pp. 12-17. (Web Page, Publication No. FHWA-HRT-2006-006). Washington, DC: Federal Highway Administration. Available at www.fhwa.dot.gov/publications/ publicroads/06sep/03.cfm
    ${ }^{35}$ National Highway Traffic Safety Administration. (2008, January). Graduated Drivers Licensing System. (Traffic Safety Facts: Laws. Report No. DOT HS 810 888W). Washington, DC: Author.

[^14]:    ${ }^{36}$ Data 2013, Washington DC: National Highway Traffic Safety Administration

[^15]:    ${ }^{37}$ Boyle \& Lampkin (2008)
    ${ }^{38}$ National Center for Statistics and Analysis. (2015d, April). Distracted Driving 2013. (Traffic Safety Facts Research Note, DOT HS 812 132)., Washington, DC: National Highway Traffic Safety Administration. Available at www.distraction.gov/downloads/pdfs/Distracted_Driving_2013_Research_note.pdf
    ${ }^{39}$ NCSA, 2015d.
    ${ }^{40}$ Klauer, S. G., Guo, F., Simons-Morton, B.G., Ouimet, M. C., Lee, S. E., \& Dingus, T. A. (2014). Distracted driving and risk of road crashes among novice and experienced drivers. New England Journal of Medicine; 370:pp. 54-59

[^16]:    Note: Passenger vehicles include passenger cars, SUVs, pickup trucks, vans, and other light trucks

