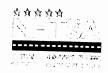
Email



Aggressive Driving

Bicycles

Child Safety

Distracted Driving

#### Driver Education

- Teen Drivers

Senior Drivers

Enforcement & Justice Services

Impaired Driving

Motorcycles

Occupant Protection

Pedestrians

Research &

Evaluation

School Buses

#### Teen Drivers



### A Comprehensive Approach to Teen Driver Safety

A MESSAGE TO ALL TEEN DRIVERS:

Keep your hands on the wheel, your eyes on the road, and both (hands and eyes) away from your cell phone while driving.

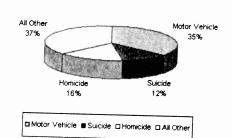
NHTSA has developed a multi-tiered strategy to prevent motor vehicle-related deaths and injuries among teen drivers: increasing seat belt use, implementing graduated driver licensing, reducing teens' access to alcohol, and parental responsibility.



#### Leading Cause of Death for Teens

The heart of NHTSA's mission is keeping families safe on America's roadways. Young drivers, ages 15- to 20-years old, are especially vulnerable to death and injury on our roadways—traffic crashes are the leading cause of death for teenagers in America. Mile for mile, teenagers are involved in three times as many fatal crashes as all other drivers.

## Leading Causes of Death for Teens



#### We Know the Causes

Research shows which behaviors contribute to teen-related crashes. Inexperience and immaturity combined with speed, drinking and driving, not wearing seat belts, distracted driving (cell phone use, loud music, other teen passengers, etc.), drowsy driving, nighttime driving, and other drug use aggravate this problem.

#### The Objective of this Site

We've designed this site to provide you with the fundamental resources and information you'll need to help promote what research clearly shows reduces teen crashes

- Increasing reat belt use.
- Emplementing graduated driver licensing, and

Edder Crown Adjoin

Reducing trens' access to alcohol.

Sign up for Europe sind and

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#### Parents and Teens

Share

Set the Standards

Parental Responsibility Toolkit Additional Resources

RSS Feed

#### Seat Belt Use

Print

Earned media materials

Creative materials

TV / radio spots

#### **Graduated Driver Licencing**

The GDL System

Driver Education

#### Youth Access to Alcohol

Earned media materials

Creative materials

TV / radio spots

#### **Additional Resources**

Priority program areas

Teen safety statistics

Studies & reports
Glossary

Points of contact

http://www.nhtsa.gov/Teen-Drivers

Table 2.300 Leading Causes of Non-Fatal Injury Requiring Hospitalization, by Age Group, 2000-2004

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75	Bicycle	Pedestrian 76	87 Pedestrian 76		94 Sports			Snowmachine 120	134 134		Assault 404		458	MV Traffic	Attempt 664	Suicide/		35-44	37 14
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30	Pedestrian	Assault 32		Machinery 33		ATV 35		Water Transport 38		Snowmachine 41		92 Cut		Suicide/ Attempt				55-64	
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Source: Walden, Stephanie. (2007). Personal communication re: 2000 2004 L		Sports 558	Bicycle 559 Sports		614	Cut 614		ATV 729		1662 Snowmachine		Assault		3106	Suicide/ Attempt			All Ages	AGE GROUPS

Note: Rates are per 100,000 Population. For further information: <u>http://www.hss.state.ak.us/dph/ipems/injury\_prevention/default.htm</u>



News Release | July 12, 2005

## 1st evidence of effects of cell phone use on injury crashes: crash risk is four times higher when driver is using a hand-held cell phone

ARLINGTON, VA — Common sense as well as experience tell us that handling and dialing cell phones while driving compromise safety, and evidence is accumulating that phone conversations also increase crash risk. New Institute research quantifies the added risk — drivers using phones are four times as likely to get into crashes serious enough to injure themselves. The increased risk was estimated by comparing phone use within 10 minutes before an actual crash occurred with use by the same driver during the prior week. Subjects were drivers treated in hospital emergency rooms for injuries suffered in crashes from April 2002 to July 2004.

The study, "Role of cellular phones in motor vehicle crashes resulting in hospital attendance" by S. McEvoy et al. is published in the *British Medical Journal*, available at bmj.com.

"The main finding of a fourfold increase in injury crash risk was consistent across groups of drivers," says Anne McCartt, Institute vice president for research and an author of the study. "Male and female drivers experienced about the same increase in risk from using a phone. So did drivers older and younger than 30 and drivers using hand-held and hands-free phones."

Weather wasn't a factor in the crashes, almost 75 percent of which occurred in clear conditions. Eighty-nine percent of the crashes involved other vehicles. More than half of the injured drivers reported that their crashes occurred within 10 minutes of the start of the trip.

The study was conducted in the Western Australian city of Perth. The Institute first tried to conduct this research in the United States, but US phone companies were unwilling to make customers' billing records available, even with permission from the drivers. Phone records could be obtained in Australia, and the researchers got a high rate of cooperation among drivers who had been in crashes.

Another reason for conducting the study in Australia was to estimate crash risk in a jurisdiction where hand-held phone use is banned. It has been illegal while driving in Western Australia since July 2001. Still one-third of the drivers said their calls had been placed on hand-held phones.

Hands-free versus hand-held: The results suggest that banning hand-held phone use won't necessarily enhance safety if drivers simply switch to hands-free phones. Injury crash risk didn't differ from one type of reported phone use to the other.

"This isn't intuitive. You'd think using a hands-free phone would be less distracting, so it wouldn't increase crash risk as much as using a hand-held phone. But we found that either phone type increased the risk," McCartt says. "This could be because the so-called hands-free phones that are in common use today aren't really hands-free. We didn't have sufficient data to compare the different types of hands-free phones, such as those that are fully voice activated."

**Evidence of risk is mounting:** The findings of the Institute study, based on the experience of about 500 drivers, are consistent with 1997 research that showed phone use was associated with a fourfold increase in the risk of a property damage crash. This Canadian study also used cell phone billing records to establish the increase in risk. The Institute's new study is the second to use phone records and the first to estimate whether and how much phone use increases the risk of an injury crash.

Taken together, the two studies confirm that the distractions associated with phone use contribute significantly to crashes. Other studies have been published about cell phone use while driving, but most have been small-scale and have involved simulated or instrumented driving, not the actual experience of drivers on the road. When researchers have tried to assess the effects of phone use on real-world crashes, they usually have relied on police reports for information. But such reports aren't reliable because, without witnesses, police cannot determine whether a crash-involved driver was using a phone.

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#### PRESS IMAGES



A student talks on a hands-free cell phone while operating a high-tech driving simulator. The simulator was used during a University of Utah study that found motorists who talk on cell phones while driving are as impaired as drunken drivers with blood-alcohol levels at the legal limit of 0.08 percent.

Photo Credit: Jim Moulin

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# DRIVERS ON CELL PHONES ARE AS BAD AS DRUNKS

UTAH PSYCHOLOGISTS WARN AGAINST CELL PHONE USE WHILE DRIVING

6

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Media Contacts

June 29, 2006 -- Three years after the preliminary results first were presented at a scientific meeting and drew wide attention, University of Utah psychologists have published a study showing that motorists who talk on handheld or hands-free cellular phones are as impaired as drunken drivers.

"We found that people are as impaired when they drive and talk on a cell phone as they are when they drive intoxicated at the legal blood-alcohol limit" of 0.08 percent, which is the minimum level that defines illegal drunken driving in most U.S. states, says study co-author Frank Drews, an assistant professor of psychology. "If legislators really want to address driver distraction, then they should consider outlawing cell phone use while driving."

Psychology Professor David Strayer, the study's lead author, adds: "Just like you put yourself and other people at risk when you drive drunk, you put yourself and others at risk when you use a cell phone and drive. The level of impairment is very similar."

"Clearly the safest course of action is to not use a cell phone while driving," concludes the study by Strayer, Drews and Dennis Crouch, a research associate professor of pharmacology and toxicology. The study was set for publication June 29 in the summer 2006 issue of *Human Factors: The Journal of the Human Factors and Ergonomics Society*.

The study reinforced earlier research by Strayer and Drews showing that hands-free cell phones are just as distracting as handheld cell phones because the conversation itself – not just manipulation of a handheld phone – distracts drivers from road conditions.

*Human Factors* Editor Nancy J. Cooke praised the study: "Although we all have our suspicions about the dangers of cell phone use while driving, human factors research on driver safety helps us move beyond mere suspicions to scientific observations of driver behavior."

The study first gained public notice after Strayer presented preliminary results in July 2003 in Park City, Utah, during the Second International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design. It took until now for the study to be completed, undergo review by other researchers and finally be published.

## Key Findings: Different Driving Styles, Similar Impairment

Each of the study"s 40 participants "drove" a PatrolSim driving simulator four times: once each while undistracted, using a handheld cell phone, using a hands-free cell phone and while intoxicated to the 0.08 percent blood-alcohol level after drinking vodka and orange juice. Participants followed a simulated pace car that braked intermittently.

Both handheld and hands-free cell phones impaired driving, with no significant difference in the degree of impairment. That "calls into question driving regulations that prohibited handheld cell phones and permit hands-free cell phones," the researchers write.

The study found that compared with undistracted drivers:

• Motorists who talked on either handheld or hands-free cell phones drave slightly slower, were o percent slower to but the brakes, displaced up percent more variation in following distance as their attention switched between driving and conversing, were 19 percent slower to resume normal speed after braking and were more likely to crash. Three study participants rear ended the pace car. All were talking on cell phones, None were dramk.

• Drivers drunk at the 0.08 percent blood-alcohol level drove a bit more slowly than both undistracted drivers and drivers using cell phones, yet more aggressively. They followed the pace car more closely, were twice as likely to brake only four seconds before a collision would have occurred, and hit their brakes with 23 percent more force. "Neither accident rates, nor reaction times to vehicles braking in front of the participant, nor recovery of lost speed following braking differed significantly" from undistracted drivers, the researchers write.

"Impairments associated with using a cell phone while driving can be as profound as those associated with driving while drunk," they conclude.

## Are Drunken Drivers Really Less Accident-Prone than Cell Phone Users?

Drews says the lack of accidents among the study's drunken drivers was surprising. He and Strayer speculate that because simulated drives were conducted during mornings, participants who got drunk were well-rested and in the "up" phase of intoxication. In reality, 80 percent of all fatal alcohol-related accidents occur between 6 p.m. and 6 a.m. when drunken drivers tend to be fatigued. Average blood-alcohol levels in those accidents are twice 0.08 percent. Forty percent of the roughly 42,000 annual U.S. traffic fatalities involve alcohol.

While none of the study's intoxicated drivers crashed, their hard, late braking is "predictive of increased accident rates over the long run," the researchers wrote.

One statistical analysis of the new and previous Utah studies showed cell phone users were 5.36 times more likely to get in an accident than undistracted drivers. Other studies have shown the risk is about the same as for drivers with a 0.08 blood-alcohol level.

Strayer says he expects criticism "suggesting that we are trivializing drunken-driving impairment, but it is anything but the case. We don't think people should drive while drunk, nor should they talk on their cell phone while driving."

Drews says he and Strayer compared the impairment of motorists using cell phones to drivers with a 0.08 percent blood-alcohol level because they wanted to determine if the risk of driving while phoning was comparable to the drunken driving risk considered unacceptable.

"This study does not mean people should start driving drunk," says Drews. "It means that driving while talking on a cell phone is as bad as or maybe worse than driving drunk, which is completely unacceptable and cannot be tolerated by society."

#### **University of Utah Cell Phone Research**

Previous research by Strayer, Drews and colleagues include:

- A 2001 study showing that hands-free cell phones are just as distracting as handheld cell phones.
- A 2003 study showing that the reason is "inattention blindness," in which motorists look directly at road conditions but don't really see them because they are distracted by a cell phone conversation. And such drivers aren't aware they are impaired.
- A 2005 study suggesting that when teenagers and young adults talk on cell phones while driving, their reaction times are as slow as those of elderly drivers.

The University of Utah psychologists conducted the alcohol study because a 1997 study by other researchers evaluated the cell phone records of 699 people involved in motor vehicle accidents and found one-fourth of them had used their phone in the 10 minutes before their accident – a four-fold increase in accidents compared with undistracted motorists.

Those researchers speculated there was a comparable risk from drunken driving and cell phone use while driving. So Strayer and Drews conducted a controlled laboratory study.

The study included 25 men and 15 women ages 22 to 34 who were social drinkers (three to five drinks per week) recruited via newspaper advertisements. Two-thirds used a cell phone while driving. Each participant was paid \$100 for 10 hours in the study.

The driving simulator has a steering wheel, dashboard instruments and brake and gas pedals from a Ford Crown Victoria sedan. The driver is surrounded by three screens showing freeway scenes. Each simulated daylight freeway drive lasted 15 minutes. The pace car intermittently braked to mimic stop-and-go traffic. Drivers who fail to hit their brakes eventually rear-end the pace car. Other simulated vehicles occasionally passed in the left lane, giving the impression of steady traffic flow.

Each study participant drove the simulator during three sessions – undistracted, drunk or talking to a research assistant on a cell phone – each on a different day.

The simulator recorded driving speed, following distance, braking time and how long it would take to collide with the pace car if brakes were not used.

The study was funded by a \$25,000 grant from the Federal Aviation Administration – which is interested in impaired attention among pilots – and by Strayer's and Drews' salaries. The Utah Highway Patrol loaned the researchers a device to measure blood-alcohol levels.

## **Driving while Distracted: A Growing Problem**

The researchers cited figures from the Cellular Telecommunications Industry Association indicating that more than 100 million U.S. motorists use cell phones while driving. The National Highway Transportation Safety Administration estimates that at any given moment during daylight hours, 8 percent of all drivers are talking on a cell phone.

"Fortunately, the percentage of drunk drivers at any time is much lower," Drews says. "So it means the risk of talking on a cell phone and driving is probably much higher than driving intoxicated because more people are talking on cell phones while driving than are driving drunk." The main reason there are not more accidents is that "92 percent of drivers are not on a cell phone and are compensating for drivers on cell phones," he adds.

Cell phone use is far from the only distraction for motorists. The researchers cite talking to passengers, eating, drinking, lighting cigarettes, applying makeup and listening to the radio as the "old standards" of driver distraction.

"However, over the last decade many new electronic devices have been developed, and they are making their way into the vehicle," the researchers write. "Drivers can now surf the Internet, send and receive e-mail or faxes, communicate via a cellular device and even watch television. There is good reason to believe that some of these new multitasking activities may be substantially more distracting than the old standards because they are more cognitively engaging and because they are performed over longer periods of time."

News media may obtain a copy of the study by emailing  $\underline{leesiegel@ucomm.utah.edu}$  or, starting June 29, by going to  $\underline{http://hfes.org}$  and clicking on "What's New"

Other studies by Strayer and colleagues on cell phones and driving may be downloaded from:  $\underline{http://www.psych.utah.edu/AppliedCognitionLab/}$ 

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