

## **Distracted Driving** Prevention

FedWeek: 2017

**OSHA Directorate of Training and Education** 

#### **Shattered Dreams!!!**

Shattered Dreams\_ Distracted Driving Changes Lives

https://www.youtube.com/watch?v=mKK w-Q1M80o



#### **Distracted Driving Prevention**

#### Objectives:

- Define distractive driving
- Statistics
- Identify the hazards related to distracted driving
- OSHA Field Safety and Health Manual
- Identify available reference and outreach materials



#### What is distracted driving?

- Any non-driving activity that has the potential to distract a person from driving and increase the risk of crashing
  - Driving is a skill that requires your full attention to safely control your vehicle and respond to events happening around you. Distractions are anything that takes your attention off the primary task of driving.









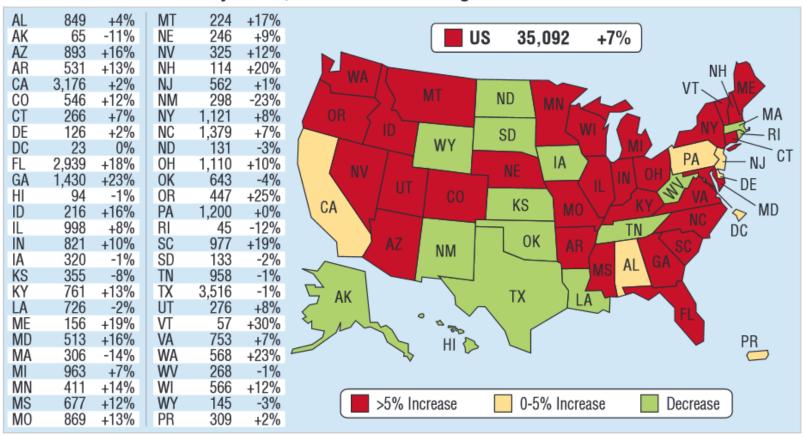
#### What is distracted driving?

mr bean - driving to dentist
<a href="https://www.youtube.com/watch?v">https://www.youtube.com/watch?v</a>
<a href="mailto:=DNV0mc\_cpQ0">=DNV0mc\_cpQ0</a>



#### **Statistics!**

Figure 1
2015 Traffic Fatalities by State, and Percent Change From 2014



NOTE: Puerto Rico is not included in the U.S. National Total.

Source: Fatality Analysis Reporting System (FARS) 2014 Final File and 2015 Annual Report File (ARF).



#### Statistics (cont'd)

■ In 2015, 3,477 people were killed in crashes involving driver distraction, and an estimated 391,000 were injured (NHTSA)

How big is the problem?

US deaths

In 2015, 3,477 people were killed in crashes involving a distracted driver. 1

**US** injuries

In 2015, 391,000 people were injured in motor vehicle crashes involving a distracted driver. 1

	2010	2011	2012	2013	2014	2015
Distracted Driving Deaths	3,092	3,331	3,328	3,154	3,179	3,477
All Motor Vehicle Deaths	32,999	32,479	33,782	32,894	32,744	35,092
Distracted Driving Injuries	416,000	387,000	421,000	424,000	431,000	391,000
All Motor Vehicle Injuries	2,239,000	2,217,000	2,362,000	2,313,00	2,338,000	2,443,000

Source: https://crashstats.nhtsa.dot.gov ☑



#### Statistics (cont'd)

Table 64
Related Factors for Drivers and Motorcycle Riders Involved in Fatal Crashes

Factors	Number	Percent
Driving too fast for conditions or in excess of posted speed limit		18.1
Under the influence of alcohol, drugs or medication		11.1
Failure to yield right of way		7.1
Failure to keep in proper lane or running off road	3,365	6.9
Distracted (phone, talking, eating, etc.)	3,263	6.7
Operating vehicle in a careless manner	2,606	5.4
Failure to obey traffic signs, signals, or officer		3.9
Overcorrecting/oversteering	1,839	3.8
Operating vehicle in erratic, reckless, or negligent manner		3.6
Vision obscured (rain, snow, glare, lights, building, trees, etc.)	1,601	3.3
Swerving or avoiding due to wind, slippery surface, vehicle, object, nonmotorist in roadway, etc		3.0
Drowsy, asleep, fatigued, ill, or blackout		2.6
Driving wrong way on one-way trafficway or on wrong side of road		2.2
Making improper turn		2.0
Other factors	5,649	11.6
None reported		30.5
Unknown	7,139	14.7
Total Drivers	48,613	100.0

Notes: The sum of the numbers and percentages is greater than total drivers as more than one factor may be present for the same driver.



#### Types of distractions!

- 3 main types of distraction:
  - -Visual
    - Anything that takes your off the road.

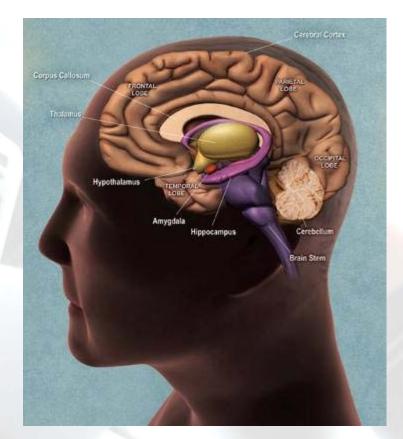


- -Manual
  - Anything that takes your off the steering wheel
- -Cognitive
  - Anything that takes your mind off driving.





- Multitasking for the brain is a myth
- Human brains do not perform two tasks at same time
  - Brain handles tasks sequentially
  - Brain switches between one task and another



The four lobes of the brain.

**Source: National Institutes of Health** 



Brain engages in a constant process to:

- 1. Select information the brain will attend to process
- 2. **Process** the selected information
- 3. *Encode* the processed information to create memory
- 4. Store information

#### It must also:

- 5. Retrieve
- 6. Execute or act on information

When brain is overloaded these steps are affected



#### **Encoding Stage**

- Brain filters information due to overload
- Drivers not aware of information filtered out
- Information does not get into memory
- Drivers miss critical information on potential hazards



Inattention blindness and encoding. Source: National Safety Council



- Brain juggles tasks, focus and attention
- Brain switches between primary and secondary tasks
- Inattention blindness
  - When people do 2 cognitively complex tasks (driving and using a cell phone), causing brain to shift focus
- Bottleneck
  - Different regions of brain must pull from a shared and limited resource for unrelated tasks



#### <u>Inattention Blindness</u>

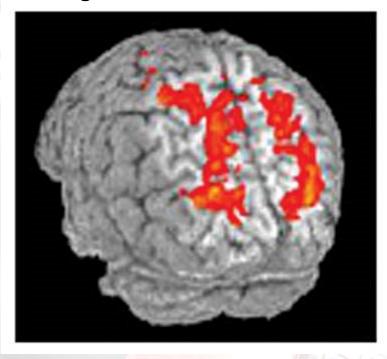
- A type of cognitive distraction
  - "looking" but not "seeing"
- Hands-free drivers less likely to see:
  - High and low relevant objects
  - Visual cues
  - Exits, red lights and stop signs
  - Navigational signage
  - Content of objects



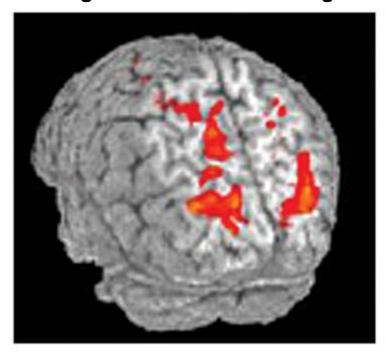
- Carnegie Mellon University Study (2008)
- Took MRI pictures of brain while drivers listened to sentences and drove simulator
- Literally see the results...



#### **Driving alone**



**Driving with sentence listening** 



R L R

Functional magnetic resonance imaging images.

**Source: Carnegie Mellon University** 



- Just listening to sentences on cell phones decreased activity by 37% in the brain's parietal lobe which perceives movement, integrates sensory information and also has importance for language processing
- Listening and language comprehension drew cognitive resources away from driving
- Also decreased activity in brain's occipital lobe which processes visual information



- We can walk and chew gum safely because it is not a cognitively-demanding task
- But even cell phone-using pedestrians act unsafely. They are less likely to:
  - Look for traffic before stepping into street
  - Look at traffic while crossing street
  - Notice unusual objects placed along path



- Driving involves a more complex set of tasks than walking:
  - Visual
  - Manual
  - Cognitive
  - Auditory
- A driver's job is to watch for hazards, but this cannot be done when brain is overloaded



### Workshop!!!

11	16	7	3
8	5	13	10
15	2	9	1
12	6	14	4

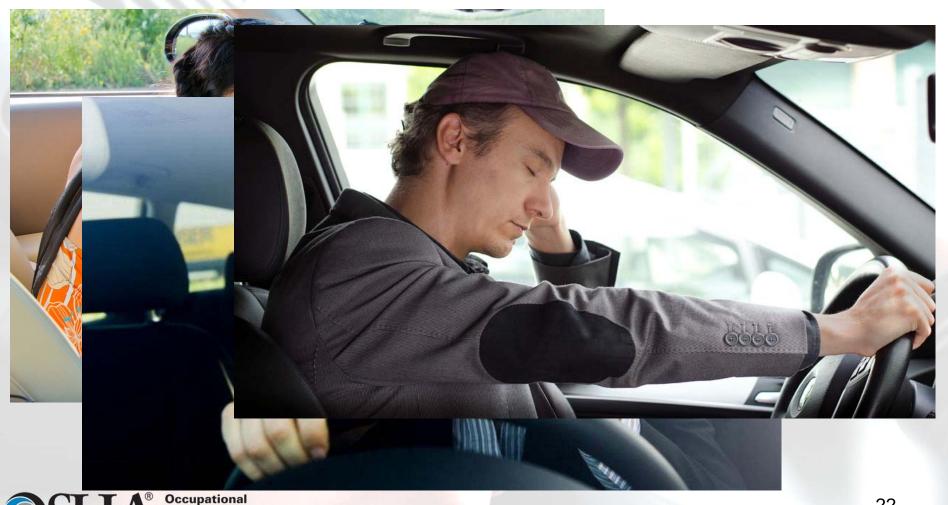


# Lets talk about the most common distracted driving hazards.

They Are:

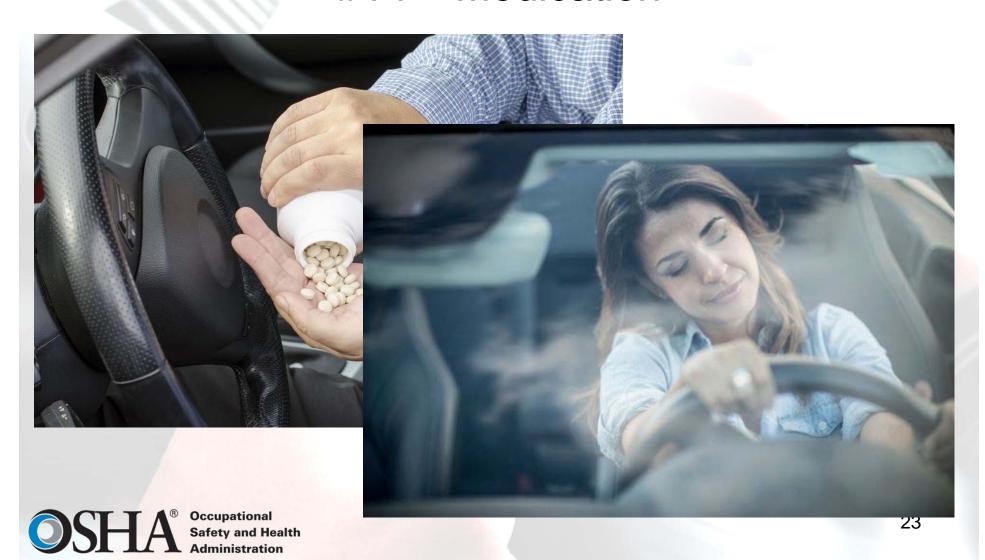


#15 – Body fatigue



Safety and Health

#14 - Medication



#13 – Smoking





#### Smoke'm if you got them... NOT!!

- Smoking and dealing with lighting up, putting out cigarettes, or falling ashes increases the risk of an accident
- Smoke before you get in to the car
- If you must smoke, pull over to a safe spot
- Be courteous of your passengers



#12 - Reading



#11 – Grooming/Makeup/Tooth Brushing/ Getting Dressed

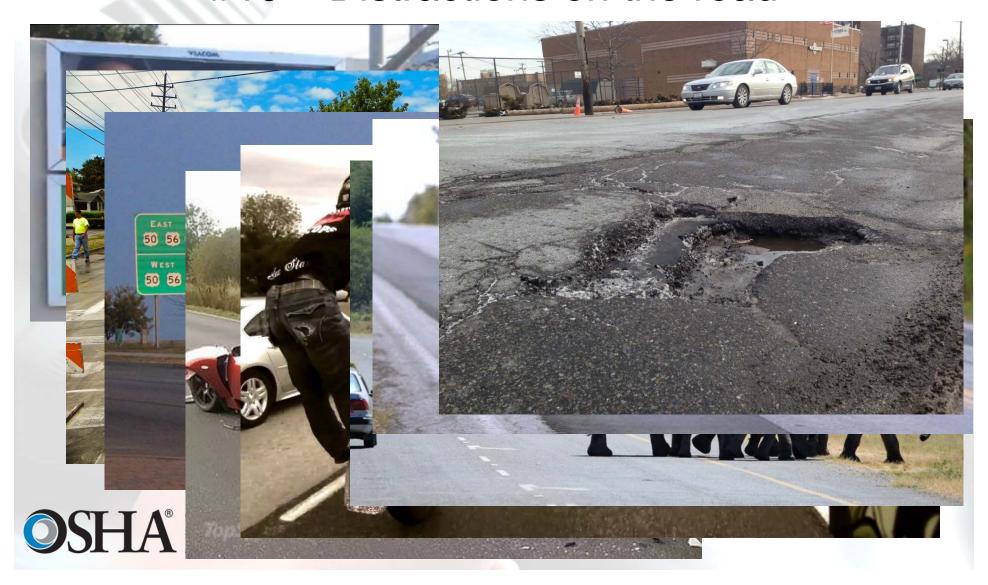


#### Looks Can Kill...

- Wake up early so you have enough time to:
  - -Brush your teeth
  - -Clean your ears
  - -Shave
  - -Put on makeup
  - -Take your morning pills/vitamins
  - -Get dressed!!!



#10 - Distractions on the road



#### **Curiosity killed the Cat!!!**

- Looking out your window at what you are passing while you are driving can be a distraction if you are concentrating on getting a good look at:
- an accident
- a vehicle pulled over by law enforcement
- construction work
- a billboard advertisement
- a scenic view
- street names and addresses
- Always focus on your driving. It's crucial that you remain alert while on the road to arrive at your destination safely.



#9 - Mental distractions



#8 – Road rage

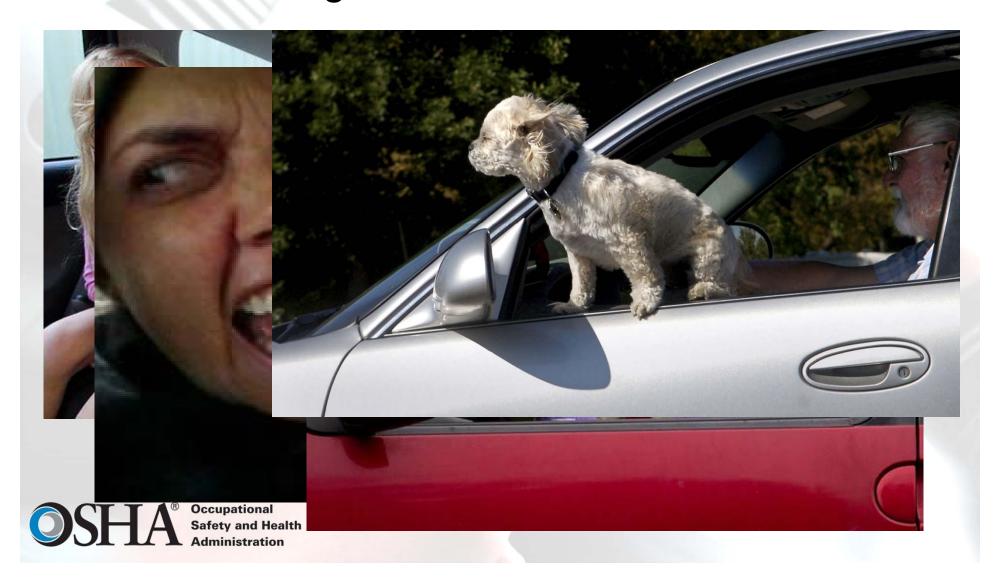
Road Rage – Driving and Texting

https://www.youtube.com/watch?v

=ooarpsPtibk



#7 – Passengers in the car/Pets in the car



# Are You Being Driven to Distraction?

What do children, friends, and pets all have in common?

All can be a dangerous distraction to you while you are driving.



# Are You Being Driven to Distraction?

- Teach young children that driving is an important job and that you must concentrate when you are behind the wheel.
  - Buckle up your children properly.
  - Give them distractions—books, games, or other appropriate toys to occupy their time.
  - If you need to attend to your children, pull over to a safe place. Don't try to handle children while you are driving.



# Are You Being Driven to Distraction?

- When you are driving with friends and relatives, establish some strategies to keep your passengers under control.
- A carload of friends can be very distracting with loud talking, quarrelling over music selections, or horseplay.
- Arguments and other disturbing conversations should be held in a safe, appropriate place, not while you are driving in your vehicle.



# Are You Being Driven to Distraction?

- A loose pet in a moving vehicle can be very dangerous.
  - Properly secure your pet in a pet carrier, portable kennel, or specially designed pet harness when you are driving.
  - Never allow your pet to sit in your lap while you are driving your vehicle.



#6 – Temperature controls



#5 - Radio/CD/Ipod/GPS



## Turning Dials Can Turn Your Head!

- Making destination entries on an in-vehicle navigation system, radio surfing for a good song, or adjusting your vehicle's climate controls are distracting activities that can put you in danger of a vehicle crash or near-crash.
- Adjust vehicle's controls (climate controls, mirrors, radio, seat, etc.) before you begin to drive.
- Take advantage of normal stops to adjust controls.
- Ask your passenger to adjust the radio, climate control, navigation system, etc. for you.



#4 – Talking on the phone



- Make and finish your cell phone calls before you start your vehicle and drive.
- If your phone rings while you are driving, let your voicemail pick up the call.
- If you must answer your phone, pull over to a safe location and park before using your cell phone.



- Tech aids can reduce distraction.
  - -Hands-free aids
    - Many cars come with bluetooth systems built in.
      - They can handle incoming calls with press of a button and some will read text messages to you.
      - Outgoing calls can be distracting.



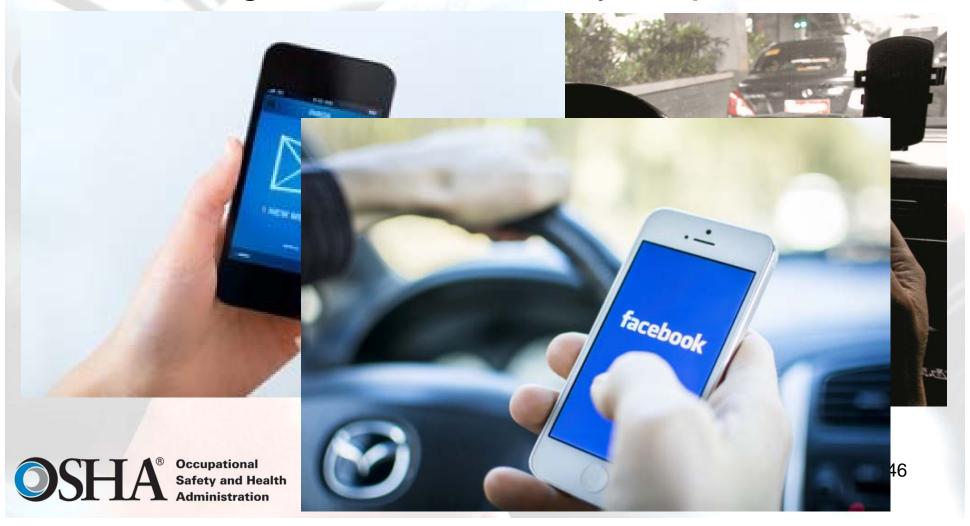
- Tech aids can reduce distraction.
  - Smart-phone apps
    - They restrict the phone from being used when the app is switched on or when the vehicle is in motion.
      - They can still dial 911 and some are free. Some are automatically activated.
      - There are monthly cost for some, and drain the phone's battery life.



- Tech aids can reduce distraction.
  - Devices connected to the vehicle's diagnostic port.
    - They plug into a connector under the dash and restrict phone use.
      - They send auto reply texts, don't drain battery life and tamper resistance.
      - Pricey \$\$\$ and only work for one car.



#3 – Emailing & posting to social media, using GPS function on your phone

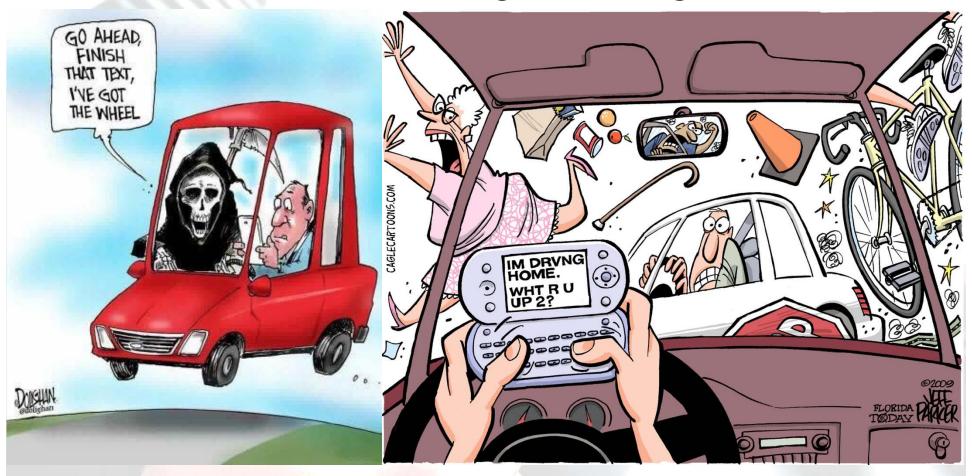


#### Checking phone before your trip

- The availability of in-vehicle Internet and e-mail access from cell phones, blackberries, and other portable devices are added distractions that increase your risk of a crash if you engage in these activities while driving.
- Check your e-mail, voicemail, and any other portable devices you have before you begin driving.
- Buy a phone dashboard mount for the car if using phone as GPS.



#2 – Texting & driving





Are You Compulsive About
Texting and Driving\_ - AT&T It
Can Wait \_ AT&T
 https://www.youtube.com/watch
?v=PjuhL\_PrrjE



#1 – Eating & drinking while driving





Dangers of Eating & Driving <a href="https://www.youtube.com/watch?v=X">https://www.youtube.com/watch?v=X</a>
<a href="https://www.youtube.com/watch?v=X">xS8bPOp7PE</a>



#### **Are You Eating a Crash Diet?**

- If you are eating in your vehicle while driving, you are focusing on your food and not on your driving:
  - chewing and swallowing;
  - opening packages, unwrapping and re-wrapping food,
  - reaching, leaning, spilling, wiping, and
  - cleaning yourself or your vehicle.
- Eat/Drink before driving or pull over in a safe spot.



#### **Driving Distractions Study**

- Driver distractions are the leading cause of most vehicle crashes and near-crashes.
- The distraction occurred within three seconds before the vehicle crash!



#### Who is at risk?

#### **EVERYONE!!!**

- Drivers under the age of 30 have the highest proportion of distraction-related fatal crashes.
- In 2015, 42% of high school students who drove in the past 30 days reported sending a text or email while driving.
- Students who reported frequent texting while driving were:

Less likely to wear a seatbelt.

More likely to ride with a driver who had been drinking.

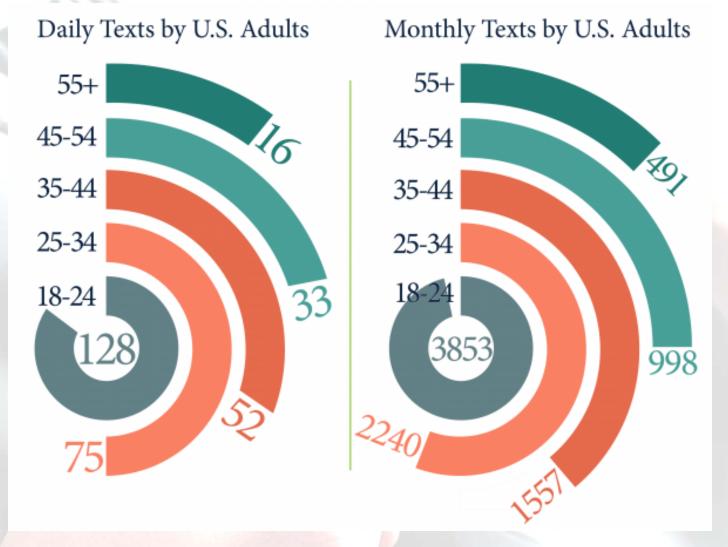
More likely to drink and drive.





- Each day in the United States, over 8 people are killed and 1,161 injured in crashes that are reported to involve a distracted driver (CDC)
- Drivers who use hand-held devices are 4 times more likely to get into crashes serious enough to injure themselves (Monash University)
- 81% of Americans text regularly (Pew Research Center)
- Over 6 Billion texts are sent every day (CTIA)
- America is responsible for approx. 45% of worlds text volume (CTIA)







- Using a cell phone while driving hand-held or hands-free - delays a driver's reactions as much as having a blood alcohol concentration at the legal limit (University of Utah)
- Headset cell phone use is not substantially safer than hand-held use (VTTI)
- Driving while using a cell phone reduces the amount of brain activity associated with driving by 37% (Carnegie Mellon)



- Text messaging creates a crash risk 23 times worse than driving while not distracted (VTTI)
- Sending or receiving a text takes a driver's eyes from the road for an average of 4.6 seconds, the equivalent, at 55 mph, or driving the length of an entire football field blind (VTTI)
- One in three teens who text has texted while driving (PEW)



#### So Why do People Text and Drive?

Are You Compulsive About Texting and Driving\_ - AT&T It Can Wait \_ AT&T

https://www.youtube.com/watch?
v=PjuhL\_PrrjE



#### **How fast is your reaction?**

- 10mph = 14.7ft per second
- 20mph = 29ft per second
- 30mph = 44ft per second
- 40mph = 58.6ft per second
- 50mph = 73ft per second
- 60mph = 88ft per second
- 70mph = 102.6ft per second
- 80mph = 117ft per second



#### Executive Order 13513 - Oct 2009

"Federal employees shall not engage in text messaging:

- (a) when driving GOV, or when driving POV while on official Government business, or
- (b) when using electronic equipment supplied by the Government while driving"

www.whitehouse.gov/the-press-office/executive-order-federal-leadership-reducingtext-messaging-while-driving



#### **DOL's and OSHA's Internal Actions**

- Department of Labor memo
- OSHA Field Safety and Health Manual
  - Chapter 9 Vehicular Operations

The Driver will:

- Not use a hand held cellular phone or other device for calls or texting
- Not use photographic devices while operating the vehicle



#### Tips to keep everyone safe:

- Ensure all passengers are buckled-up properly.
- Be well-rested and in the appropriate mindset to drive. Driving when upset or angry can be just as dangerous as driving while tired.
- Identify and reduce all distractions before driving.
- Do not tailgate.
- Allow sufficient time to reach your destination.
- Ensure your vehicle is properly maintained.
- Put your cell phone on silent or turn it off and put it out or reach. If someone calls, call them back when you safely reach your destination.
- Put your makeup on before you leave the house or at your destination. Don't brush or comb your hair or shave while driving.
- When you're on the road, keep your eyes on the road and your hands on the steering wheel.
- Avoid eating while driving.
- Do not read a book or check your email in the car.
- Do not be distracted by the passengers in the car.



#### **OSHA Resources!**

https://www.osha.gov/Publications/motor\_vehicle\_guide.html



#### **OSHA Resources!**

https://www.osha.gov/SLTC/motorvehiclesafety/index.html



#### SAFETY AND HEALTH TOPICS



According to the Bureau of Labor Statistics <u>Table A-8</u>. <u>Fatal occupational injuries resulting from transportation incidents and homicides by occupation, All United States, 2010 (PDF)</u>, more than 1,788 deaths a year result from occupational transportation incidents. That number is more than 38 percent of the 4,547 annual number of fatalities from occupational injuries. Fatal transportation incidents were lower by 10 percent in 2013, but still accounted for about 2 out of every 5 fatal work injuries in 2013. <u>More...</u> (PDF).

OSHA requirements for the motor vehicle industry are addressed in specific standards for agriculture and marine terminals.

How do I find out about employer responsibilities and workers' rights?

<u>Workers</u> have a right to a safe workplace. The law requires employers to provide their employees with safe and healthful workplaces. The OSHA law also prohibits employers from retaliating against employees for exercising their rights under the law (including the right to raise a health and safety concern or report an injury). For more information see <a href="https://www.whistleblowers.gov">www.whistleblowers.gov</a> or <a href="https://www.whistleblowers.gov">Workers</a> rights under the OSH Act.

OSHA can help answer questions or concerns from employers and workers. To reach your regional or area OSHA office, go to the OSHA Offices by State webpage or call 1-800-321-OSHA (6742).

Small business amployers may contact OSHA's free and confidential On-site Consultation program to help

Safety and Health
Administration

#### Highlights

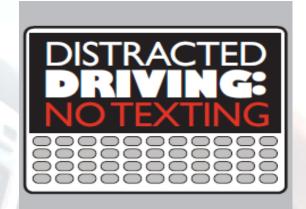
- Preventing Backovers. OSHA, (2013).
- The Network of Employers for Traffic Safety (NETS) has partnered with the Department of Transportation in <u>Drive Safety Work Week</u> (<u>DSWW</u>) 2014. They also provide distracted driving resources and meaningful education and awareness activities to keep workers safe
- Safe Driving Practices for Employees (PDF\*)
   OSHA Quick Card. Provides a list of safe driving practices in English and Spanish.
- Guidelines for Employers to Reduce Motor Vehicle Crashes (PDF). OSHA/National Highway Traffic Safety Administration (NHTSA)/Network of Employers for Traffic



#### **Distracted Driving Brochure**

https://www.osha.gov/Publications/3416distracted-driving-flyer.pdf

Distracted Driving:
No Texting business
brochure



MORE WORKERS

ARE KILLED

EVERY YEAR IN

MOTOR VEHICLE

CRASHES THAN ANY

OTHER CAUSE.

Businesses can help solve this big problem.



### https://www.safercar.gov/





#### Always remember that distracted driving kills

Safety and Health Administration

You've got one job, and that's to drive safely. So make a positive, lifesaving change that will make you safer year-round. Before you start the car, shut down your phone. Read More

Crash ratings

Recalls & investigations

SAFETY RECALL NOTICE

Complaints & defects



#### TAKATA RECALL UPDATE

>> As of April 28, 15,463,814 air bags have been repaired. Sign up for our Recall Alerts to be notified when you can search for all vehicles affected by this recall



>> Complete Takata recall coverage



More information at SaferCar.gov/CheckForRecalls

**Latest News and Information** 

70

#### www.distraction.gov



Risky Driving Road Safety Equipment Technology & Innovation Q

#### **Distracted Driving**

Language: English -

#### Overview

Distracted driving is dangerous, claiming 3,477 lives in 2015 alone. NHTSA leads the national effort to save lives by preventing this dangerous behavior. Get the facts, get involved, and help us keep America's roads safe.











Distraction is Deadly





#### http://trafficsafety.org/



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The Network of Employers for Traffic Safety (NETS) is a collaborative group of employer road safety professionals whose objective is to advance road safety for employees, their family members and members of the communities where they live and work. Members help one another improve road safety and reduce losses through fleet safety benchmarking and sharing proven, best practice approaches. NETS membership includes global traffic safety leaders across private industry and government, whose fleets range from fewer than 100 vehicles to those with more than 50,000.



#### **Distracted Driving Resources**

- Distraction.Gov: http://www.distraction.gov/
- National Safety Council: http://www.nsc.org/safety\_road/distracted\_driving/pages/distracted\_driving.aspx
- Nationwide Insurance: http://www.nationwide.com/newsroom/dwd-facts-figures.jsp
- Geico Insurance: http://www.geico.om/information/safety/auto/teendriving/distracted-driving/
- Focus Driven: http://www.focusdriven.org/index.aspx
- Federal Communications Commission: http://www.fcc.gov/cgb/driving.html
- The Oprah Show: http://www.oprah.com/oprahshow/End-Distracted-Driving
- Remember Alex Brown (R.A.B): http://www.rememberalexbrownfoundation.org/index.php



# More than 1.6 million crashes are caused by cell phone use and texting while driving each year.

The Last Word
<a href="https://www.youtube.com/watch?v=0DH1">https://www.youtube.com/watch?v=0DH1</a>
<a href="https://www.youtube.com/watch?v=0DH1">JGIYOL0&t=2s</a>





Joe, 12



Bailey, Merideth, Hannah, Sara and Katie



Cady, 16



Erica, 9



Jean and Jay, 58

# Countless lives have been lost as a result.



Linda, 61



Jason, 38



Lauren, 17



Matt, 25



Frances, 13



Jordan, 72



