



Dave Madaras, CSP, CHST

Safety Council's Mission

- *To educate and influence people to prevent accidental injury and death!*

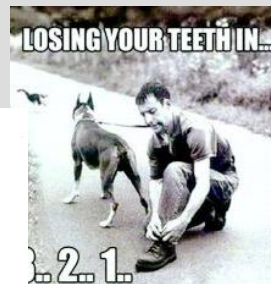


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Accident?



Philosophy on Safety

“If we think [the people] are not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion.”

- Thomas Jefferson



Check this out!



- Since 1970 our highway systems have grown 6%
- Since 1970 the number of drivers in the U.S. has increased by 64%

Time Is?



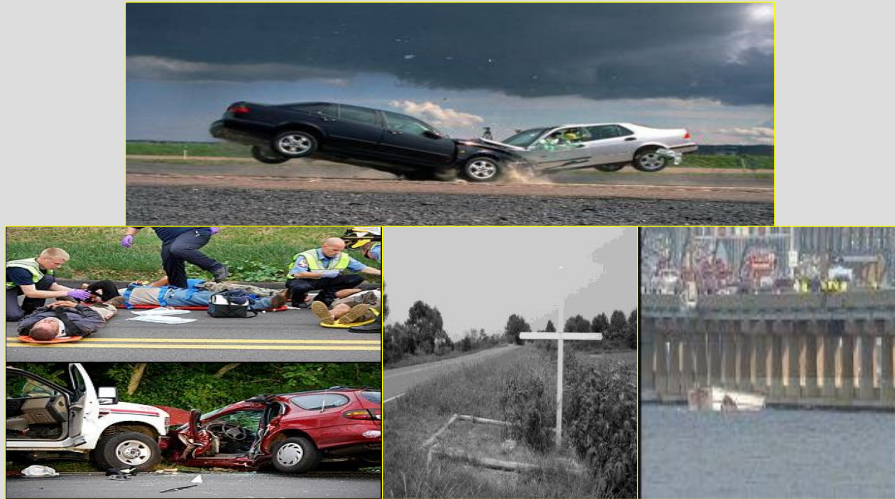
**D.C. Traffic Creeps Toward Nation's Worst
Area Drivers Spend Almost 69 Hours in Gridlock a
Year**

Washington Post

Does this impact our assessment of Driving Risks?



How often do we think of this?



Crash Facts

- 2016 – 37,461 – 103 / day
- 2015 – 35,092 – 96 / day
- 7.2 million fatal, injury & PDO
- Light Truck fatalities 10,302
 - Injury Crashes 1,071,000

NHTSA Data

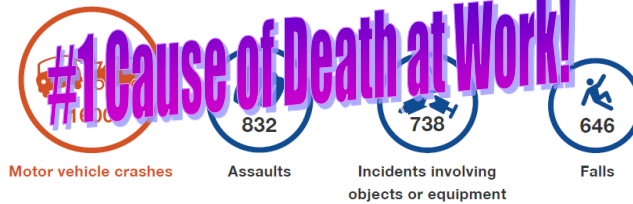




Impact of Car Crashes

WORKPLACE DANGER

#1 Cause of Workplace Death: Car Crashes



Calls kill

Hands-free is not risk-free

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2003 - 2007

- Americans Killed in the Iraq War
- Traffic Fatalities in Maryland

3,124



3,173



Trying to cause a panic?

- A sudden overpowering or groundless fright; terror inspired by a trifling cause or a misapprehension of danger.



Change in Risk Perception

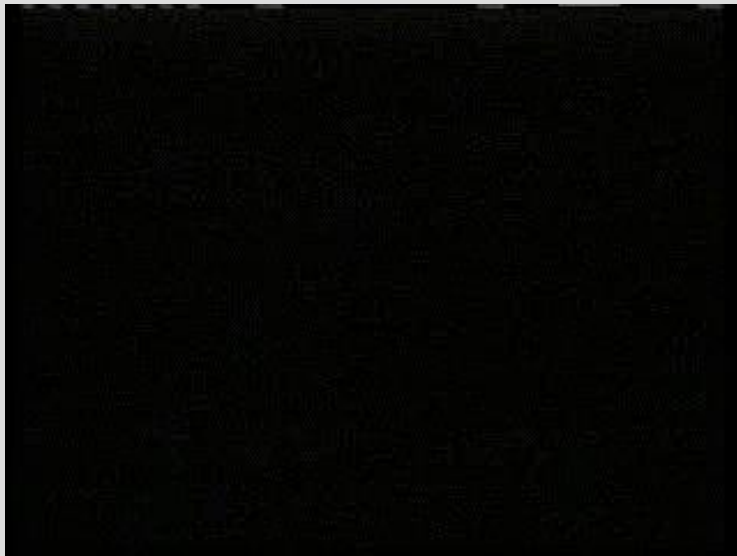
- *Perception* of risk is often very different than *actual* risk
- Risk perception = Actual risk + Outrage (Fear)

Numbers or statistics are often the least important factor in determining risk



Primary Driving Tasks

- Steering
- Acceleration
- Braking
- Speed Choice
- Lane Choice
- Maneuvering in Traffic
- Navigation to Destination
- Scanning for Hazards



Critical Risk Factors

- Occupant Protection
- Alcohol
- Speeding
- Distracted Driving



What is distracted driving?

- A diversion of attention from driving, because the driver is temporarily focusing on an object, person, task, or event not related to driving, which reduces the drivers awareness, decision making, and/or performance leading to an increased risk of corrective actions, near crashes or crashes.



Types of Distractions

- **Visual distraction**: Tasks that require the driver to look away from the roadway to visually obtain information.
- **Manual distraction**: Tasks that require the driver to take one hand off the steering wheel and manipulate a device.
- **Cognitive distraction**: The mental workload associated with a task that involves thinking about something other than driving (NHTSA, 2010).



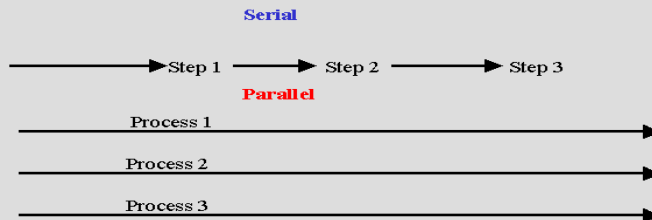
Poll of 2800 Drivers

- 86% Ate or Drank
- 44% Drove While Feeling Drowsy
- 25% Drove After 2 or More Drinks
- 41% Set or Changed GPS
- 37% Sent or Read Texts
- 20% Combed Hair
- 14% Applied Makeup
- 13% Browsed the Internet

Harris Interactive & Health Day

Information Processing

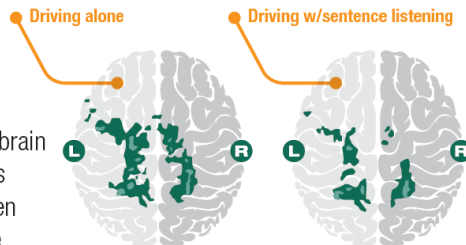
- Humans are serial information processors (***one thing at a time***)
- Multitasking is actually a rapid shift of attention not parallel processing.



Conversation is Distracting

The brain quickly toggles between tasks – but can't do two things at the same time.

The activity in the area of the brain that processes moving images **decreases by up to 1/3** when listening to talking on a phone.



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Causes of Car Crashes

HIGHWAY HAZARD

- Human error is the #1 factor in car crashes
- Distraction is a leading factor in car crashes
- Cell phones are a top driver distraction



Drivers using handheld or hands-free cell phones are

4x

as likely to crash.

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Focus



Awareness Test

whoisthemonkey.com



Conversation is Distracting

- 30 studies found no safety benefit to hands-free devices
- This is because of the conversation on phones
- Talking on a cell phone is mentally distracting
- Trying to do two thinking tasks at one time is mentally distracting



Conversation and driving are **both thinking** tasks.

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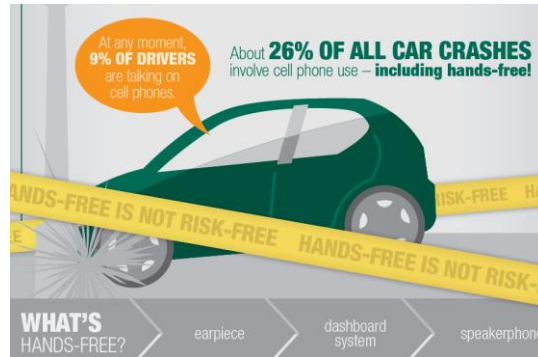
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Cell Phones are a Top Distraction



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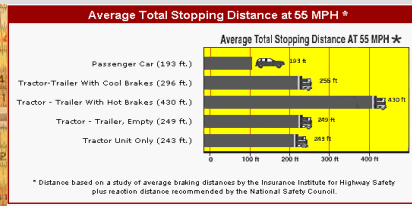
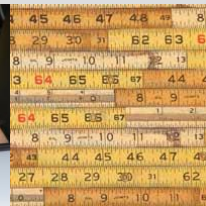


Think of this!

Cell Phone use
increases
reaction time by
.25 seconds

- 60 mph. is 90 fps.

***Perception Distance + Reaction Distance
+ Braking Distance =
Stopping Distance***





The Results are In

- A recent MSC poll shows that 80% of U.S. drivers believe hands-free cell phones are safer than using a handheld, and
- 53% believe hands-free devices must be safe if they are built into vehicles
- HOWEVER
- Hands free features in dashboards actually increase mental distraction (AAA Foundation for Traffic Safety)
- Drivers who text with their hands or voice (using text -to-speech systems) keep their eyes on the road less often and have reaction times twice as slow (Texas A&M Transportation Institute)

Visit nsc.org/cellfree for more information

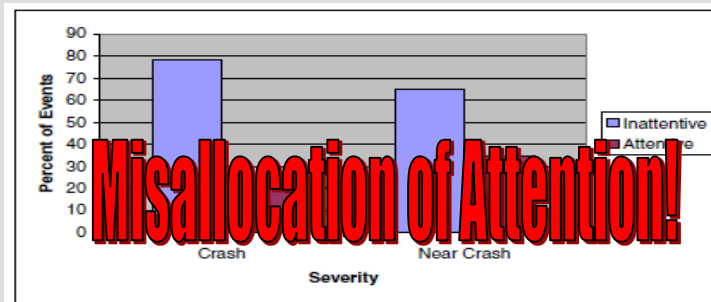
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VA. Tech Study



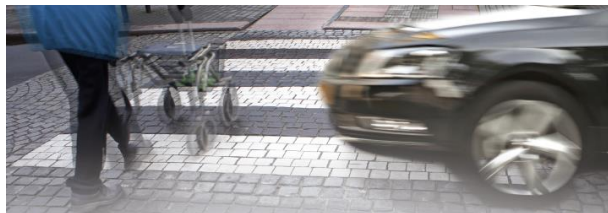
Inattention as a contributing factor

- 78% of the crashes
- 65% of the near crashes



Conversation is Distracting

Drivers talking on cell phones, handheld or hands-free, can miss seeing 50% of what's around them



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NY Law Study

- Hand held reduction
- Cut to ½ shortly after the law
- 1 yr later it returned to pre-law levels



Solutions?

- Distracted driving is difficult to regulate and enforce
- Cell phones and text messaging appear to be the low hanging fruit
- Is hands free an answer?
- What about food or even children?
- Company Policies



What You Can Do

- Before driving, turn off your cell phone or put it on silent
- Toss your cell phone in the trunk or glove box
- Set GPS before you start to drive
- On long drives, schedule stops to check voicemail, email and text messages
- Install an app on your phone to hold calls and messages while your car is in motion
- Ask a passenger to answer incoming calls and messages
- Change your voicemail greeting to say you might be driving, and you'll return calls when you can safely do so

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Winning the War!



- Focusing on driver behaviors will have the most profound impact on crash reduction.

American Transportation
Research Institute

Safety is for, not from!

