Drowsy Driving

- Definition
- NHTSA Statistics
- Virginia DMV
- AAA Information
- Fatigue
- Driver Fatigue and Crashes
- Local Case Study
Drowsy driving is similar too and at times probably more dangerous than drinking and driving.

Drivers may not even realize they have even fallen a sleep while traveling down the road.

Having trouble keeping your eyes open?

Drifting from your lane?

Not remembering the last few miles driven?
Drowsy Driving, What causes it?

I'm tired
Lack of Sleep!!

You mean to tell me

I'm supposed to sleep all night long?
Warning Signs

- Yawning or trouble keeping eyes open
- Nodding off or trouble keeping your head up
- Forgetting the most recent miles driven
- Missing your exit
- Trouble maintaining your speed
- Drifting from your lane
- Hitting rumble strip
In 2014 there were 846 fatalities due to drowsy driving

In 2015 there were 824 fatalities due to drowsy driving

From 2011 to 2015 there were 4,121 deaths which were drowsy driving related
Males are 5x more likely to be involved in a drowsy driving crash
“Drowsy Driving Research and Program Plan”

- 6 focus areas to include
  - Measurement and Problem Identification
  - Public Awareness and Education
  - Policy Development
  - High Risk Populations
  - Vehicle Technology
  - Infrastructure
What is the result of fatigue/sleepiness
- Cognitive and behavioral changes
- Automobile crashes
- Poor work/school performance
- Accidents at work
- Long term physical and mental health consequences
2-20% of annual traffic fatalities are attributed to drowsiness

- Commonly under reported
- 37% of people admitted to nodding off or fallen asleep at least once since they began driving
- 1 in 4 drivers admitted to driving when they were so tired they could not keep their eyes open in the last 30 days
  - 1 in 5 reported doing this more than once
  - 2.4% reported having done this fairly often or regularly
NHTSA is conducting ongoing surveys to better understand the public's knowledge, attitudes and drowsy driving behaviors. This is an important step in developing and deploying education and other countermeasures to decrease the amount of drowsy drivers on our roadways.
Not getting enough rest before driving can be as deadly as drunk, drugged and distracted driving. Constant yawning, head nodding, heavy eyelids, difficulty remembering the last few miles driven, missing road signs or exits, unplanned lane changes, driving off the road or hitting rumble strips are all signs of drowsy driving.

Driving while drowsy increases crash risk as drivers struggle to process complex information coming from different places at once. Drivers may make careless driving decisions, have trouble paying attention or fall asleep while driving.
The AAA Foundation for Traffic Safety found that drivers who only get 4-5 hours of sleep can more than quadruple their crash risk compared to those who get at least 7 hours of sleep.

- This is the same risk associated with driving over the legal limit of alcohol.
- AAA’s research found that 9.5% of crashes involved drowsiness
- 96% of those asked found driving drowsy was unacceptable
Crash risk for drivers who get less than 7 hours of sleep

- 1.3x
- 6-7 hours
- 1.9x
- 5-6 hours
- 4.3x
- 4-5 hours
- 11.5x
- < 4 hours
- **Warning signs**
  - Trouble keeping eyes open
  - Trouble staying in lane
  - Memory lapses

- **What can you do?**
  - Get recommended amount of sleep
  - Avoid heavy foods before driving
  - Drive when you are normally awake
  - Take breaks
  - Drive with passengers and take turns driving
  - Do not take meds which make you drowsy
Fatalities Due to Drowsiness

- When do they happen?
  - Most frequently between midnight and 6am
  - Late in the afternoon
  - Both these times are when the human body has dips in the circadian rhythm (the internal clock which regulates sleep)
Fatalities Due to Drowsiness

- **Who does it affect?**
  - A lot of times drowsy driving crashes involve a single vehicle with just the driver with no passengers
  - Shift workers
  - Those with untreated sleep disorders
  - Those on medications

- **Where do most occur?**
  - Most crashes happen on rural roads or on highways

- **What happens?**
  - Vehicles drift off of the roadway with no evidence of braking
Lamond & Dawson (1999) systematically compared the effects of fatigue and alcohol impairment on a range of neurobehavioral functions and found significant impairment after being awake more than 17 hours. Impairments after 20 hours of wakefulness were similar to that of an individual with a blood-alcohol concentration of 0.10 (p. 258). While federal or state regulatory commissions restrict the work hours of commercial truck drivers, pilots, firefighters, and doctors, no such regulations exist for most law enforcement officers (Lindsey, 2007).
The Federal Motor Carrier Safety Administration

- Taking a proactive approach to drowsy driving
- E-Logs among many uses it limits the amount of hours they are operating on our roadways
- Phase 1 of Driver Fatigue and Distraction Monitoring and Warning System
  - Measuring drivers pose, eye movements, yawning and hand gestures
  - Device which detects erratic lane changes
Sleepiness causes crashes because it leads to:

- Slower reaction time
- Reduce vigilance
- Slower information processing
- There is no objective testing available on scene to identify a sleepy driver like there is for alcohol.
- Self reporting and good interviews
NHTSA identifies shift workers who typically work night hours are a high risk group for drowsy driving crashes.

Long distance travel at speeds in excess of 55mph may cause inattentiveness during nighttime hours

- Bored?
- Alone?
- Dash lines causing a hypnosis?
Common Characteristics

- Late night hours
- High speed highways
- Likely to be serious
- Vehicle leaves the roadway
- High risk groups
  - Shift workers (Night)
  - 2/3 are under the age of 30
According to stats from the Officer Down Memorial Page there have been 364 officers killed in automobile crashes in the last 10 years:

- One every 10 days!!
- That is 2nd only to gunfire!!
- How many were directly related to fatigue?
- What are departments doing to lower this number?
- What is causing officers to drive drowsy?
Why Law Enforcement?

- Long work hours
- Court
- Family Life
- Part Time
- Overtime
- Call Outs
- Stress
How to Prevent Driving Drowsy

- Call a taxi, get a ride from co-worker
- Carpool with others, talk during drive
- Drink a caffeinated beverage 20 minutes before driving
- Pull over somewhere safe and take a 20 minute power nap
- Open windows, turn on A/C
- Listen to loud music has also been helpful
Virginia Beach Police Department as well as other departments have taken a pro-active stance on fatigue.

- VBPD recognizes fatigue is a contributing factor affecting safety, performance and long term health of its employees.
- VBPD limits hours officers work to protect the employee, the city and community.
- How are they accomplishing this mission?
- Officers are restricted from working more than 16 hours in a 24 hour period
- This includes:
  - Planned or unplanned department sponsored O/T
  - Supplemental assignments
  - Court
  - Training
  - Security off duty employment
Department members are prohibited from working a combination of the previous assignments for more than 68 hours in a 7 day period.

Officers who reach these limits are responsible for notifying their supervisor as soon as practical.

Supervisors will evaluate the circumstances on a case by case basis to keep the employee’s health and safety a priority.
Supervisors can temporarily revoke an officer’s ability to work off duty assignments

- Is it working?
- Do officers agree with these limitations?
- How are they tracking hours?
### VBPD Sworn Employee WORK REPORT

**Directions:** All employees classified as non-exempt under the FLSA must complete this form and sign the certificate at the bottom of the page for every work period.

**Employee:** MPO T.J. Schultz  
**Code:** _____  
**Command:** Spec Ops - FACT  
**Scheduled Shift Hours:** Various  
**Scheduled Days Off:** SSM  
(Indicate OFF below)

**From 0701 Hours:** Thursday, March 29, 2018  
**To 0700 Hours:** Wednesday, April 11, 2018

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<th>Calendar Dates</th>
<th>Actual Hours Worked</th>
<th>Normal Shift Hours: Mins</th>
<th>OT/KE Hours: Mins</th>
<th>Requesting</th>
<th>Adjusted Off</th>
<th>Leave Taken</th>
<th>Secondary Employment</th>
<th>Supervisor Name approving OT/KE or increased time limit</th>
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**Weekly Totals:** 29:30:00

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**Weekly Subtotals:** 0:00:00 17:30:00 0:00:00 0:00:00 0:00:00 0:00:00 0:00:00

**Weekly Totals:** 17:30:00
It’s Rescue Workers Too!!
There's only two jobs in this world where you make your money laying on your back: prostitution and firefighting.
Virginia Beach Crash

- Subject stated she worked the entire day and finally went to bed at 3AM.
- She woke up at 8AM and left for her friend’s house at 10AM.
- She left her friend’s house and crashed shortly before midnight.
**Important Notice:** Robert Bosch LLC and the manufacturers whose vehicles are accessible using the CDR System urge end users to use the latest production release of the Crash Data Retrieval system software when viewing, printing or exporting any retrieved data from within the CDR program. Using the latest version of the CDR software is the best way to ensure that retrieved data has been translated using the most current information provided by the manufacturers of the vehicles supported by this product.

### CDR File Information

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<tr>
<td>User</td>
<td>MPO T.J. SCHULTZ</td>
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<td>Case Number</td>
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<td>EDR Data Imaging Date</td>
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<td>EDR Device Type</td>
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<td>Event(s) recovered</td>
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**Comments**

VIN: JTDBG4EEXAJ074739
### Virginia Beach Crash

**System Status at Event (Most Recent Frontal/Rear Event, TRG 5)**

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<th>Description</th>
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**Virginia Beach Crash**

### DTCs Present at Start of Event (Most Recent Frontal/Rear Event, TRG 5)

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<th>Ignition Cycle Since DTC was Set (times)</th>
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<td>Diagnostic Trouble Codes</td>
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### Pre-Crash Data, -5 to 0 seconds (Most Recent Frontal/Rear Event, TRG 5)

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* "Invalid" may be set for M/T vehicle
Virginia Beach Crash
Virginia Beach Crash
Virginia Beach Crash
The driver suffered a severe laceration to her face.

The passenger suffered several broken bones, fractured skull and a brain bleed.

Driver being charged with reckless driving.
Deputy with the Virginia Beach Sheriff’s Office
56 years old
Lucero had a rather full day at home with his family prior to his first day back to work.
Family stated he usually takes a nap before going to work
Wife left for work around 2pm
Lucero’s shift starts at 6pm and he usually leaves early
It is believed he took at most a 2 hour nap
Lucero completed a 12 hour shift and was on his way home.

Lucero was driving 20-30 minutes when he crashed in his neighborhood.

Lucero’s vehicle drifted to the left where he struck another vehicle in motion.

Investigators determined Lucero was traveling approximately 19mph at impact.

Lucero was not wearing his seatbelt at the time of the crash.
The steering wheel in his vehicle was cracked by the force of his body.

Lucero was able to exit his vehicle under his own power and was transported to VBGH.

Lucero was still wearing his uniform as well as his duty gear which ultimately contributed to his death.

Lucero died as a result of blunt force trauma which is believed to be from his magazine pouch which was torn off of his belt.
Deputy Lucero Case
This is a survivable crash

Lucero’s vehicle drifted to the left and impacted the other vehicle at a low speed which is consistent with someone who is experiencing Micro-Sleep.
Helpful Links & References


- National Sleep Foundation. www.sleepfoundation.org

Helpful Links & References


I'm outta bullet points...

Any questions?