

Confronting Drowsy Driving: The American Academy of Sleep Medicine Perspective

An American Academy of Sleep Medicine Position Statement

American Academy of Sleep Medicine Board of Directors: Nathaniel F. Watson, MD, MS¹; Timothy Morgenthaler, MD²; Ronald Chervin, MD³; Kelly Carden, MD⁴; Douglas Kirsch, MD⁵; David Kristo, MD⁶; Raman Malhotra, MD^{7,8}; Jennifer Martin, PhD⁹; Kannan Ramar, MD¹⁰; Ilene Rosen, MD^{11,12}; Terri Weaver, PhD, RN¹³; Merrill Wise, MD¹⁴

¹University of Washington Sleep Disorders Center, University of Washington, Seattle, WA; ²Mayo Center for Sleep Medicine, Mayo Clinic, Rochester, MN; ³University of Michigan Sleep Disorders Center, University of Michigan, Ann Arbor, MI; ⁴Saint Thomas Sleep Specialists, Nashville, TN; ⁵Carolinas Healthcare Medical Group Sleep Services, Charlotte, NC; ⁶University of Pittsburgh, Pittsburgh, PA; ⁷SLUCare Sleep Disorders Center and ⁸Department of Neurology, Saint Louis University, St. Louis, MO; ⁹Veteran Affairs Greater Los Angeles Health System, North Hills, CA; ¹⁰Division of Pulmonary/Sleep/Critical Care, Mayo Clinic, Rochester, MN; ¹¹Penn Sleep Center, Philadelphia, PA; ¹²Center for Sleep, Philadelphia, PA; ¹³College of Nursing, University of Illinois at Chicago, Chicago, IL; ¹⁴Methodist Healthcare Sleep Disorders Center, Memphis, TN

Drowsy driving is a serious public health concern which is often difficult for individual drivers to identify. While it is important for drivers to understand the causes of drowsy driving, there is still insufficient scientific knowledge and public education to prevent drowsy driving. As a result, the AASM is calling upon institutions and policy makers to increase public awareness and improve education on the issue, so our society can better recognize and prevent drowsy driving. The AASM has adopted a position statement to educate both healthcare

providers and the general public about drowsy driving risks and countermeasures.

Keywords: drowsy driving, sleep deprivation, undiagnosed sleep disorders

Citation: Watson NF, Morgenthaler T, Chervin R, Carden K, Kirsch D, Kristo D, Malhotra R, Martin J, Ramar K, Rosen I, Weaver T, Wise M. Confronting drowsy driving: the american academy of sleep medicine perspective. *J Clin Sleep Med* 2015;11(11):1335–1336.

American Academy of Sleep Medicine (AASM) is a leading professional society dedicated exclusively to the medical subspecialty of sleep medicine. As the leading voice in the sleep field, the AASM sets standards and promotes excellence in health care, education, and research. The AASM has a combined membership of 10,000 accredited member sleep centers and individual members, including physicians, scientists and other health care professionals. The AASM is dedicated to advancing sleep health policy to improve the health and well-being of the general public.

Drowsy driving is defined as the operation of a motor vehicle while impaired by a lack of adequate sleep. This impairment can be due to a chronic condition (e.g., an undiagnosed sleep disorder or chronic partial sleep deprivation), or an acute effect (e.g., staying awake for 18+ hours).¹

Driving while drowsy can have the same consequences as driving while under the influence of drugs and alcohol: drowsiness is similar to alcohol in how it compromises driving ability by reducing alertness and attentiveness, delaying reaction times, and hindering decision-making skills.² Unfortunately, drowsy driving can be difficult for individual drivers to identify; some drivers aren't aware that they have fallen asleep at the wheel even after being asleep for a few minutes. Drowsiness can impair the ability to drive safely, even if the driver does not fall asleep. Drowsy driving usually occurs at

high speeds and the driver is often unable to attempt to avoid a crash, resulting in serious accidents. A recent AAA Foundation for Traffic Safety study showed that an estimated 6% of all crashes in which a vehicle was towed from the scene, 7% of crashes in which a person received treatment for injuries sustained in the crash, 13% of crashes in which a person was hospitalized, and 21% of crashes in which a person was killed involved a drowsy driver.³ Drowsy driving is a serious public health concern, and the AASM has adopted the following position statement to educate the public and healthcare providers on drowsy driving risks and countermeasures.

The American Academy of Sleep Medicine:

- Believes that an awake and alert driver makes the roadways safer.
- Believes that every driver has a responsibility to be awake and alert when operating a motor vehicle.
- Supports the collaboration of sleep physicians, state departments of motor vehicles and licensing, highway patrol, the insurance industry, and legislative and regulatory bodies in the development and implementation of policies and procedures that reduce drowsy driving.
- Supports the inclusion of drowsy driving educational material and content in state's drivers manuals, drivers education curricula, and drivers licensing examinations.

- Supports the automobile insurance industry in the development of drowsy driving educational discount programs.
- Supports the automobile manufacturing industry in the development of technology to mitigate the effects of drowsy driving.
- Supports the U.S. Department of Transportation in building infrastructure to reduce and mitigate drowsy driving.
- Believes that any individual who has difficulty staying awake while driving, despite adequate sleep, should be evaluated and, when appropriate, treated by a physician for a sleep disorder.

To avoid drowsy driving, it is important to understand what causes it. Healthy sleep requires adequate duration and quality, appropriate timing and regularity, and the absence of sleep disturbance or disorders. Both long-term and short-term sleep deprivation can cause drowsy driving. The average adult needs 7 or more hours of sleep per night,⁴ and failing to get enough sleep on a regular basis can result in excessive sleepiness behind the wheel. Even if you are sleeping for at least 7 hours per night, an undiagnosed sleep disorder will result in poor sleep quality and can cause drowsy driving. Non-traditional work schedules (e.g., shift-work) can disrupt and shorten sleep time because it is difficult for many shift workers to sleep in the daytime instead of the night. Using sleeping pills or other sedatives prior to sleep can result in residual sleepiness the following day and cause drowsy driving. Driving for long distances, extended periods of time, or driving late at night can increase the chances of become drowsy while driving. All of these factors have a cumulative effect on drowsy driving; the more risk factors you have, the worse your driving performance likely will be due to drowsiness.³

Regardless of the cause of drowsy driving, everyone should be aware of the symptoms which include:

- Frequent yawning or difficulty keeping your eyes open
- “Nodding off” or having trouble keeping your head up
- Inability to remember driving the last few miles
- Missing road signs or turns
- Difficulty maintaining your speed
- Drifting out of your lane

If you find yourself becoming drowsy while driving, you should pull off the road and rest until you no longer feel sleepy. Consumption of caffeinated beverages can temporarily increase alertness while driving but are not a substitute for adequate sleep. Turning up the radio, opening the window, and turning up the air conditioner are not effective techniques for staying awake while driving. Get plenty of sleep before driving long distances. If you are planning a long trip and know that you might be tired, use a designated driver or alternate drivers, rather than risk driving while drowsy.

Preventing drowsy driving starts with individual drivers, but must be a priority for both public and private institutions. The AASM encourages more research that better defines indicators of drowsy driving, identifies the threshold at which sleepiness while driving becomes dangerous, and provides the public with simple methods to determine when they might be too tired to drive safely. Young men aged 16–24 are most at risk of getting into an accident while driving drowsy; therefore, educational efforts to reduce drowsy driving should include this age group.³ Private companies should educate their employees on the dangers of driving while drowsy, especially within the transportation industry or when long work hours or shift work is prevalent to the industry. These companies should work to prevent excessive sleepiness in their employees and employ fatigue management strategies to reduce drowsy driving risk.

Drowsy driving has gained attention over the last few years in the eyes of the public and the government⁵; however, there is still a lack of scientific knowledge and public education necessary to prevent drowsy driving. The American Academy of Sleep Medicine calls on institutions and policy makers to raise public awareness and improve education in order to better recognize and prevent drowsy driving.

REFERENCES

1. Wheaton AG, Shults RA, Chapman DP, Ford ES, Croft JB. Drowsy driving and risk behaviors—10 States and Puerto Rico, 2011–2012. *MMWR Rep* 2014;63:557–62.
2. Dawson A, Reid K. Fatigue, alcohol, and performance impairment. *Nature* 1997;388:235.
3. Tefft BC. Prevalence of motor vehicle crashes involving drowsy drivers, U.S. 2009–2013. AAA Foundation for Traffic Safety. November, 2014:1–8. Available at: <https://www.aaafoundation.org/prevalence-motor-vehicle-crashes-involving-drowsy-drivers-us-2009-2013>.
4. Watson NF, Belenky G, Bliwise DL, et al. Recommended amount of sleep for a healthy adult: a joint consensus statement of the American Academy of Sleep Medicine and Sleep Research Society. *Sleep* 2015;38:843–4.
5. Strohl KP, Blatt J, Council F, et al. Drowsy driving and automobile crashes: NCSDR/NHTSA Expert Panel on Driver Fatigue and Sleepiness. NHTSA, Web. 28 May 2015. Available at: http://www.nhtsa.gov/people/injury/drowsy_driving1/Drowsy.html.

SUBMISSION & CORRESPONDENCE INFORMATION

Submitted for publication September, 2015

Accepted for publication September, 2015

Address correspondence to: Nathaniel F. Watson, MD, MSc, 2510 N. Frontage Road, Darien, IL 60561; Tel: (630) 737-9700; Fax: (630) 737-9790; Email: research@aasmnet.org

DISCLOSURE STATEMENT

This was not an industry supported study. Dr. Chervin is on the advisory board of the not-for-profit SweetDreamzzz. Dr. Weaver has received research support from Tera, Inc., and Jazz. The other authors have indicated no financial conflicts of interest.