

Safety Trends: Driver Fatigue

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This article is part of an ongoing safety moment series that will be featured in every SafetyLine publication. The purpose of this series is to address popular safety issues and offer simple, real world solutions.

According to a recent study conducted by the Virginia Tech Transportation Institute, **fatigue is the No. 1 cause of driver distractions, and accounts for 20 percent of all crashes** – a significant increase from the previously though 2 to 3 percent that was estimated based on surveys, test track and simulator studies.

The study also showed that 18- to 20- year-olds account for more fatigue related crashes than any other age group. All participating drivers of the study were under the age of 25.

Cars used in the study were equipped with sensors that included five video channels, forward and rearward Vorad™ radar units, accelerometers, lane tracking software and in-vehicle sensors. Cameras were also mounted unobtrusively to promote a natural driving environment.

In total, 38 participants were involved in fatigue-related crashes and near-crashes.

Tom Dingus, director of the Virginia Tech Transportation Institute, said that **drivers who drive while fatigued are at a four times greater risk of being involved in a crash or near-crash.**

Researchers examined 110,000 events to validate 10,548 events:

- 82 crashes.
- 761 near crashes.
- 8,295 incidents (braking hard for slowed traffic).
- 1,423 non-conflict events (running red lights without the presence of traffic).

What's most shocking is the prevalence of fatigue during the day that drivers often overlook. In 20 percent of crashes and 16 percent of all near crashes, drivers exhibited at least one symptom of fatigue:

- Eye-lid closure.
- Head bobbing.
- Severe loss of facial musculature.
- Micro sleep.



HOW TO REDUCE STRESS AND AVOID DRIVING WHILE FATIGUED

The best ways to reduce fatigue is through a gradual lifestyle change:

Exercise regularly

- 30 minutes of vigorous exercise. Aim to get your heart rate between 120-180 BPM. Swimming, hiking and biking are great, low-impact options
- 20-30 minutes of walking

Establish good sleep habits

Eat a balanced diet

- Stay hydrated—drink at least half of your body weight in fluid ounces of water
- Decrease caffeine and alcohol intake
- Always eat breakfast
- Opt for snacks and smaller meals throughout the day
- Focus on complex carbohydrates and foods rich in essential vitamins and antioxidants

Manage stress, workload and emotional problems

- Identify your stressors
- Learn to relax
- Listen to soothing music, keep a journal, get massages and any other activity you find enjoyable
- Yoga, meditation and deep breathing
- Mental activities
- Avoid negative thinking and focus on positive self-talk
- Organize and prioritize your life and schedule, focusing on difficult tasks first