

Transport Topics

The Weekly Newspaper of Trucking and Freight Transportation

Week of January 2, 2006

Driver Sleep Apnea: a Hidden Crisis

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with Mark Berger, M.D.

Sleep apnea syndrome is a serious and sometimes fatal condition that is far more common than generally known. Because its symptoms include drowsiness, sleep apnea is of particular concern for an industry that relies on wide-awake truck drivers.

A sleep apnea study conducted with drivers employed by a major carrier is about to be published by Mark Berger, M.D., who contributed to this essay and whose specialty is this syndrome. The study looked at the incidence and costs related to sleep apnea among commercial drivers.

Sleep apnea syndrome affects at least 5% of the adult population in the United States and its incidence is significantly higher in commercial drivers. It is estimated that 25% to 30% of that population has the disease.

Sleep apnea is caused by complete, or near-complete, obstruction of the upper airway by redundant tissue and/or relaxed musculature just above the vocal cords. Its exact cause is unknown, but it is more common in overweight individuals. These obstructions to an individual's air flow during sleep can cause snoring, gasping breaths, abrupt awakening, daytime sleepiness and, most troubling, can cause the person to stop breathing.

Upper airway obstructions can occur scores of times per hour of sleep and each obstruction can last from many seconds to more than one minute in duration. These events produce frequent disruptions of the normal sleep cycle and quality of sleep, as well as profound drops in blood oxygen levels. People with untreated sleep-disordered breathing are excessively sleepy and are at risk for accidents, elevated blood pressure, heart disease, stroke and other adverse health conditions — and in severe cases, death.

Recently, 2,342 respondents to a questionnaire distributed to a random sample of 3,268 Australian commercial vehicle drivers revealed that more than half (59.6%) had sleep-disordered breathing and 15.8% had obstructive sleep apnea syndrome. Twenty-four percent of drivers had excessive sleepiness. One major risk factor for sleep apnea is being of the male gender; a second is an increased body mass index, which indicates overweight.

Various studies have found that drivers with sleep apnea have two to seven times the accident rate of drivers without sleep apnea.

Large truck crashes are expensive. Beyond the immeasurable costs of loss of life and permanent injury, the average cost per large truck crash involving a fatality in 1999 was \$3.54 million. The average cost for a crash with injury was \$217,005.

Moreover, fatigue-related accidents are beginning to be treated more seriously in courts of law. For example, in early 2001, a Florida judge sentenced a trucker to 15 years in prison for falling asleep at the wheel and killing three people.

At the federal level, Annette Sandberg, head of the Federal Motor Carrier Safety Administration, stated at a recent conference on truck and bus safety that her agency plans to focus future regulations on driver health.

An ongoing study of a large U.S. longhaul truckload carrier already has produced startling, but not unexpected results. Working with Dr. Berger's firm, the carrier has now implemented a program to rapidly identify and treat truckers with clinically significant sleep apnea.

Treatment is usually with a machine that delivers a constant flow of air through the nose. This produces continuous positive airway pressure — or CPAP — eliminating upper airway obstructions while the driver is

asleep. Participating drivers are allowed to continue driving so long as they comply with the CPAP therapy.

Results of this ongoing program recently were presented at the 2005 International Symposium on Truck and Bus Safety and Security, in Alexandria, Va. Significant findings included:

- Of 348 drivers with sleep apnea, CPAP intervention resulted in a 47.8% ($p < .0001$) reduction per member, per month in health-care spending.

- There was a 73% reduction in preventable driving accidents in a subgroup of 225 full-time CPAP-treated drivers.

- The driver retention rate in CPAP-treated individuals was 2.29 times greater than the 2004 global corporate driver retention rate.

It is obvious that sleep apnea and related disorders contribute significantly to health-care and liability costs in the commercial trucking industry. Beyond the already cited and easily recognized losses from major motor vehicle accidents, other costs are incurred daily, but generally not recognized. Untreated sleep apnea is intimately linked with:

- Heart disease.
- High blood pressure and stroke.
- Obesity.
- Diabetes.
- Chronic pain syndrome.
- Reduced life expectancy.

Recent medical studies have shown an increased risk of cardiovascular complications and death in patients with at least moderate or severe sleep-disordered breathing. However, many people with sleep apnea and high blood pressure enjoy a substantial reduction in their blood pressure once their sleep apnea is treated.

Other studies show a close link between sleep deprivation, appetite, obesity and the development of diabetes.

The programs already under way to identify and treat sleep apnea will save lives and millions of dollars in liability costs. Commercial carriers embracing these issues should be commended for their efforts to reduce the risk of large-truck accidents without a federal mandate. These forward-thinking companies already are enjoying lower employee health-care costs and fewer accidents for drivers treated for sleep apnea and will receive further financial rewards through lower liability premiums.

Moreover, in a time when most carriers are keenly aware that good drivers are in short supply, they may find drivers are anxious to work for a company considerate of their well-being.

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Goldberg



Berger

Opinion