

Making Roads Safer: Treating Sleep Apnea in Truckers

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A truck driver waking up in a field 100 yards off the highway with a street sign attached to his grill doesn't take long to realize he's lucky to be alive, and even luckier he didn't hurt anyone else. He never correlated his sleepiness, fatigue and lack of concentration as telltale signs of a serious disorder.

The National Sleep Foundation (NSF) estimates that sleep apnea affects 18 million people with nearly 80-90 percent of them undiagnosed. According to the American Academy of Sleep Medicine (AASM), about 24 percent of men and 9 percent of women have the breathing symptoms of sleep apnea, or obstructive sleep apnea (OSA). OSA is a sleep-related breathing disorder that involves a decrease in airflow with interruptions usually lasting 10 to 30 seconds before an arousal from sleep is signaled by the brain. In the trucking industry the majority of drivers are men, many of whom fit the criteria for risk of developing sleep apnea: being middle aged and overweight. Add to that a sedentary daily life of driving and prevalent sleep deprivation, and these drivers are trifling with a lethal combination for themselves and everyone on the road around them.



A 2006 study from the University of Pennsylvania produced data suggesting a large number of commercial drivers have impaired performance due to lack of sleep. Since then further studies have been produced by the Department of Transportation's (DOT) Federal Motor Carrier Safety Administration (FMCSA) and the American Trucking Association (ATA), bringing the issue of sleep apnea among truck drivers further into the light and resulting in stricter guidelines throughout the industry.

As a result, increasingly more truckers are visiting sleep centers by mandate of their supervisor or referral by their doctor for assessment of sleep apnea. Federal and industry guidelines are focused on a person's weight and anatomy, specifically the mouth and neck. A trucker with a high BMI, thick neck, (17 inches or greater in men) and over the age of 40, turns up a red flag. Other possible risks involve smoking or alcohol usage, hypertension, diabetes and cardiovascular problems, as well as a recessed chin and small jaw.

While most patients are symptomatic with the common signs of sleep apnea such as daytime sleepiness, not all patients are experiencing obvious signs.

"Some patients with hypertension and sleep apnea, who apparently don't have any daytime symptoms, are referred by their cardiologist for problems controlling hypertension," explained St. Francis Sleep Center pulmonologist Dr. William Mariencheck.

Mariencheck treats many patients in the trucking industry as well as a high number of FedEx drivers and pilots.

"With obesity becoming rampant, sleep apnea is becoming more and more common and it's becoming more common for it to interfere with good control of diabetes and hypertension. Over the years you

see compounded problems for the individual.”

If sleep apnea goes untreated, sufferers, if not already experiencing hypertension and diabetes, can develop them or exacerbate existing conditions like cardiovascular disease, which may lead to stroke.

Most of the truck drivers that pulmonologist Dr. Marc E. Hofmann treats have many of these co-morbid conditions, especially obesity, diabetes and cardiovascular conditions, “almost 80 to 90 percent,” he said.

Hofmann is with Memphis Lung Physicians PC, and is also the medical director for Memphis Sleep Center, De Soto Center in Southaven and two others in the Mid-South including Marion, Arkansas and Tupelo, Mississippi. He estimates about a 30 percent increase in referrals for truckers in the past year, adding that, “one in three people I’m dealing with now are truckers.”

“The trucking industry is policing itself,” Hofmann said. “Companies are doing better than they have in the past.”

In fact Schneider National, one of the largest truckload carriers in North America, received the NSF Healthy Sleep Community Award in 2007. The NSF recognizes outstanding efforts by businesses to initiate activities or programs based on sleep science. Schneider administered a sleep apnea program that was created in response to a study by the FMCSA which revealed up to 28 percent of commercial driver’s license holders have some severity of OSA. That number was too high for Schneider National, most of whose drivers fall into the risk profile for the disorder, so leadership met the problem head on by initiating an education campaign to raise awareness within the organization with newsletters, posters, leadership involvement and one-on-one meetings with drivers. Through this hands-on approach, Schneider National tested 547 drivers from April to December, and an astounding 80 percent were diagnosed with a sleep disorder and provided treatment.

Assessment for sleep apnea begins with an overnight sleep study which monitors a variety of functions including airflow, heart rate, blood and oxygen levels, muscle activity and eye movement. Physicians determine the amount of hypopneas (partial breathing reductions) and apneas (full reductions) to diagnose the level of OSA, which is called the apnea-hypopnea index (AHI). If a patient has more than five hypopneas a night, he has mild sleep apnea. An AHI of 15-30 is moderate and more than 30 is severe. At that point a driver is probably spending much of his time actively trying to stay awake during work activities.

After a sleep study, patients are given a device called CPAP (continuous positive airway pressure), a mask that keeps a steady stream of pressurized air into the mouth, effectively keeping the airway open and preventing pauses in breathing. This device often successfully restores normal oxygen levels and allows for a full night’s sleep. After a week or two on CPAP, patients typically come in for a maintenance-of-wakefulness test (MWT) to measure their ability to stay awake. Patients sit in the sleep lab bedroom during the day for 40 minutes, four times. Truckers who have been or are pending possible suspension must pass the MWT and the CPAP readings must show consistent usage for at least six to eight hours with improvement in oxygen levels, in order to be okayed by the doctor to resume work.

“It’s really quite amazing how well they do on therapy,” said Hofmann.

By addressing the issue of sleep apnea, Schneider National ultimately reported a reduction in healthcare costs and was able to pass those savings onto the drivers in the form of free CPAP machines. While expanding the campaign within their company, Schneider is also promoting an industry-wide revolution by helping DOT shape future guidelines for screening and treatment of OSA in commercial drivers.

"I think the trucking industry is doing the right thing," said Hofmann. "It's a liability concern and (treatment is) safer for drivers and their health, which also leads to less absenteeism."

Preventive measures are encouraged such as losing weight, quitting smoking and increasing physical activity.

June 2008