

Risk Insights™

Obstructive Sleep Apnea (OSA) — Safety Managers

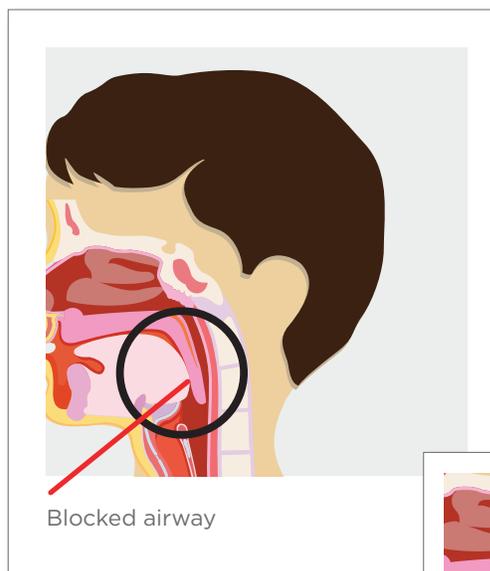


In the last 20 years, we've seen greater awareness of the impact that fatigue has on the human body and brain. Of late, Obstructive Sleep Apnea (OSA) has received a lot of publicity as a cause of fatigue. The increased attention to sleep apnea may be due to its possible role as a contributing factor to diabetes and obesity. Or it is simply may be that we have more awareness about all types of medical disorders than before, combined with a growing awareness of the lack of sleep has on our quality of life. Regardless of why sleep apnea is becoming more prominent as a medical condition, one fact is clear: driver fatigue is a major contributor to motor vehicle collisions, and there are ways that you can be part of the solution.

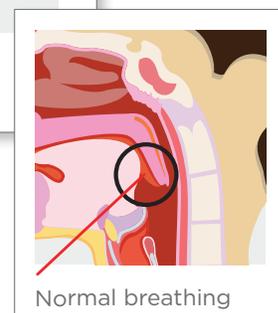
What is Obstructive Sleep Apnea (OSA)?

Normally when you breathe in, air flows from the nose and/or mouth, past the back of the throat and down into the lungs. With OSA, air does not properly get to a person's lungs while they are asleep due to collapse or blockage of the airway. In order to have restorative sleep, the body needs to breathe deeply while sleeping. A person with OSA will often wake up feeling as though they had never slept at all.

Without treatment of OSA, lack of sleep causes stress to the heart. As a result, a person may develop hypertension, weight gain and heart disease. In addition to the serious physical symptoms, sufferers often have other issues such as decrease in mental well-being, memory problems, depression and decreased sexual desire.



Blocked airway



Normal breathing

How does OSA affect a person with this disorder?

OSA causes a lack of oxygen and an increase in carbon dioxide in the bloodstream. As the carbon dioxide levels rise the brain is signaled to wake the person. In a person with severe OSA, this can occur as many as 30 times per hour. If untreated, it can lead to increased risk of further health complications such as diabetes, hypertension, heart disease and weight gain. In addition to the physical symptoms, OSA can result in mental issues such as mood swings, memory loss, depression and decreased sexual desire. Simply put, an individual with OSA will have difficulty attaining quality rest and may start each day as though they have not slept.

Imagine not sleeping for days – and what that level of fatigue does to your system. Imagine operating any vehicle, but especially a large vehicle, with that level of fatigue. The risks are substantial.



OSA in commercial drivers

Research sponsored by the Federal Motor Carriers Safety Administration and the American Trucking Association found that

28% of commercial truck drivers have some degree of sleep apnea.

4.7% of these were severe cases, 5.8% were moderate cases and 17.6% were mild. It is important to consider that even relatively mild sleep apnea can result in unwanted drowsiness or involuntary sleep episodes, even during tasks that require minimal attention.

OSA and collisions

Recent studies and polls show that fatigue is a major contributor to collisions. Annual polls from the National Sleep Foundation consistently show that, on average, people feel they are getting inadequate sleep, and 4% admitted they have had a collision or near misses because they dozed off or were too tired to drive.

Modern collision statistics may underreport where fatigue is a factor.

Common examples of this are:

- Drivers not reporting if they have fallen asleep at the wheel
- Being unable to verify if a crash resulted from an untreated sleep disorder
- Sleep deprivation, as a cause of motor vehicle collisions, is not a widely recognized classification for collision reporting

Since individuals with sleep apnea are more likely to be in a constant state of fatigue, their physical and mental abilities can be reduced which greatly increase the risk of collision.

Managing the risk of OSA through fatigue management

Fatigue management practices should be a pillar of every fleet's wellness program. Wellness programs set your fleet up for success by ensuring that your drivers can meet the demands of their job. The impact of OSA on fatigue cannot be underestimated.

¹ Research sponsored by FMCSA and ATA reported in "Get on the Road to Better Health – Recognizing the Dangers of Sleep Apnea" Conference co-sponsored by FMCSA and the National Sleep Foundation.

Launching an OSA program

The best way of managing the risks associated with OSA in your fleet is through a comprehensive program that screens, tests, treats and manages adherence to prescribed treatment. As a fleet manager, you will need to determine if you can manage these risks in-house, with the support of medical experts. It is generally recommended that a company employ the support of an external service provider because of the expertise and specialist resources needed to manage people with OSA.

1. Education and awareness of fatigue and OSA

The first step to a successful program is to recognize the risks that come from fatigue. Part of this is to ensure everyone in the company, but especially drivers, understand the impacts of OSA on fatigue and if they have it, how it affects them.

Things like excessive daytime sleepiness, morning headaches, moodiness or a person's inability to concentrate or remember aren't normal for most people. Be sure to review what the common risk factors are; these include obesity, smoking, high blood pressure, large neck size, age, and male gender.

The company needs to be prepared for employees who come looking for help or additional information.

It is important to highlight that the purpose of screening is not to catch sufferers but to help people identify if they are suffering and offering appropriate treatment, supported by the business.

2. Initial Screening for OSA

Given that OSA's common risk indicators are not uncommon in the transportation industry and general in nature, companies should have some simple steps to help screen employees and identify sufferers.

The use of screening tests can help determine who is a good candidate for a sleep study. Examples of such tests include the "STOP BANG" questionnaire (created by the University of Toronto Health Network), Harvard Health Publications Sleep Apnea screen, the Epworth Sleepiness Scale, and a Neck Circumference test.

If your company uses health service providers for routine driver medicals or pre-employment testing it's often easy to get these screens as part of their program.

Some health providers will use a portable monitor or pulse oximeter. This test is done at home and will measure the pulse rate and oxygen level in a person's blood while they are asleep. If the test results indicate that a person should continue testing, a full sleep study could be prescribed. In some areas of Canada the pulse oximeter test could be used to diagnose sleep apnea and lead to prescribed treatment. The limitation of screening is that it won't confirm if someone has OSA, just that it's likely they do.



3. Testing for OSA

If an employee screening test shows an increased risk for OSA, they should be encouraged to get professional medical advice and testing to confirm the presence of OSA. This will often require they undergo a polysomnogram. This test electronically transmits and records physical and physiological sleep activities. The test typically includes brain waves (EEG), eye movements (EOG), muscle activity (EMG), oral and nasal airflow, chest and abdominal movement, snoring, blood oxygen levels and video monitoring of the subject during study. This test is usually conducted in a sleep clinic, although less comprehensive studies can be completed at home for less complicated OSA cases. This test can only be analyzed by a sleep specialist who will make the final diagnosis.

Under Canadian privacy legislation, there is no requirement for either the driver or medical professional to provide the company with the specifics of the results.



4. Treatment for drivers with OSA

All treatments for OSA should be managed by a medical professional who will recommend the type of treatment a driver needs.

Treatments can be behavioral, physical and most commonly mechanical in nature, or a combination of all three.

a. Behavioral
treatments involve lifestyle changes like weight loss (if the driver is overweight), avoiding alcohol, nicotine and sleep medications

b. Physical
treatments like surgery can be required for severe or specialized cases

c. Mechanical
treatment for OSA includes dental appliances to alter the jaw's position while sleeping, or use of a CPAP (Continuous Positive Airway Pressure) machine. This is the most widely recognized treatment for moderate to severe OSA because it directly provides oxygen while sleeping.

5. Managing driver compliance with prescribed treatment

The most difficult part of managing OSA in drivers is managing the compliance with prescribed treatment. As each treatment differs for every patient, different measures must be assessed for patient compliance. Simply asking drivers with OSA if they are following treatment is unreliable. It is not recommended for fleet managers to take this responsibility on themselves. Instead, they should rely on a qualified professional through a health service provider.

It should be noted that medical providers have a requirement under the law to report patients who, in their opinion, may be unfit to drive for medical reasons. If the company has partnered with a health service provider, clear guidelines about information and communication regarding drivers and treatments must be established. This should include all necessary permissions for all involved parties.

It's important that all employees trust and feel comfortable with the process.

6. Advantages of wellness programs that include an OSA program Driver Retention

Driver Retention

Currently in Canada and the U.S., implementing OSA programs is a best practice. This is simply a case of regulation not catching up to science. It is likely only a matter of time before managing this risk will become law. This presents companies who do offer OSA programs with a unique opportunity to retain drivers through support and care for their well being.

In addition, OSA programs can be a selling point to potential drivers during the recruitment process. We are facing a driver shortage and therefore, if organizations can show respect and acknowledge their drivers' value through wellness programs, they may find benefits in attracting and retaining drivers.

Other Benefits of fatigue management

There are, of course, many other benefits to minimizing collisions caused by fatigue in other ways, such as minimizing downtime due to driver absenteeism, saving time in avoiding claims management for collisions, savings in insurance premium due to claims reduction, increasing driver productivity when OSA is managed effectively, and managing reputational risks associated with collisions caused by driver fatigue.

While it is impossible to precisely quantify the collisions that your company will avoid as the result of OSA treatment, it is important to understand that cost savings realized by an effective program can be substantial.

Treatment as part of health insurance

OSA treatment may already be part of what your organization's health service provider offers to your fleet. If this is the case, inform your drivers of this service to increase awareness of the support you can provide.

Complete an assessment of company resources and costs to determine how to best manage such a program. Many third party providers can manage this for you at a fee. Documentation and ongoing monitoring are essential to a good OSA prevention program.

i Where can I obtain more **information?**

- National Sleep Foundation
www.sleepfoundation.org
- Canadian Medical Association Journal
www.cmaj.ca
- Health Canada
www.hc-sc.gc.ca
- Harvard Medical (Division of Sleep Medicine)
<http://healthysleep.med.harvard.edu/sleep-apnea>



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Living with Sleep Apnea: Dave's Story

Dave spent most of his adult life feeling tired. He had many professional accomplishments, enjoyed his work and home life, but knew for many years that something was wrong. After many years of feeling tired all the time, sneaking in a few minutes of sleep throughout the day, and struggling to meet the demands of work due to exhaustion, Dave decided he deserved better. Dave was tired of being tired.

Dave got screened for OSA and found that he was at risk. He got tested and was told that he had moderate to severe sleep apnea. Dave was first prescribed a dental guard and found no relief. After X-rays, it was determined that Dave's septum was too damaged for this type of treatment to work. He was subsequently fitted for a nasal pillow CPAP mask and found relief for the symptoms of OSA within forty-eight hours. His morning headaches were gone, his snoring disappeared, and he was far more alert and productive than he felt in years.



Dave's advice:

"It starts by acknowledging that OSA is a growing issue for many commercial drivers. It is vital for companies to understand that their future success depends on how they support their drivers. Make time to meet with health service providers that can treat OSA. Understand the process and costs of such programs and start the conversation with your drivers and staff.

Knowing you care for your fleet has a huge impact on each and every driver, their families, and those who they share the road with."

Sleep deprived drivers are cognitively impaired drivers. Collisions involving sleep deprived drivers are becoming easier to articulate because of better technology, better understanding of the disorder, and better ability to define collision statistics through OSA testing. Prepare for the changing landscape and get in ahead of the regulations. The key to an effective fleet management program is prevention.

It isn't about having OSA, it's more about not treating OSA that may disqualify your drivers from operating commercial vehicles in the future.