



MANUFACTURING A HEALTHIER YOU

Testing and treatment are easier than ever, so you can stay safe on the job.



For shift workers or operators of heavy machinery, disrupted sleep due to obstructive sleep apnea (OSA) is more than exhausting; it's dangerous.

Working with and around heavy equipment requires a "safety first" mindset from everyone on a jobsite. Heavy equipment operators must maintain intense concentration and focus in jobs that require long hours, irregular or night shifts, and repetitive work.

- In shift workers, significant differences were observed between patients with mild OSA and those with severe OSA in terms of time management.
- Workers with OSA are at an increased risk of recent work disability when compared to those without OSA.

Source: National Center for Biotechnology Information, U.S. National Library of Medicine

THE DANGERS OF FATIGUE ON THE JOB

When fatigue contributes to excessive daytime sleepiness, it can create safety concerns for everyone on a job site.

Some of the negative effects of fatigue among heavy equipment operators include:

- Incidents of microsleeping while operating equipment
- Impaired decision making and problem solving
- Slow or delayed response time in unexpected situations
- Impaired memory
- Poor performance in critical situations
- Inability to think through complex tasks

It's a wonder that fatigue is a major concern in many industries. Fatigue is one of the biggest factors behind on-the-job accidents, injuries and death in the United States. The good news is that there are ways to predict, monitor and prevent fatigue.

Of all the causes of poor quality or loss of sleep, Obstructive Sleep Apnea (OSA) is by far the most prevalent. OSA can cause excessive awakenings during sleep, each and every night, that lead to on-the-job fatigue and fatigue-related accidents.

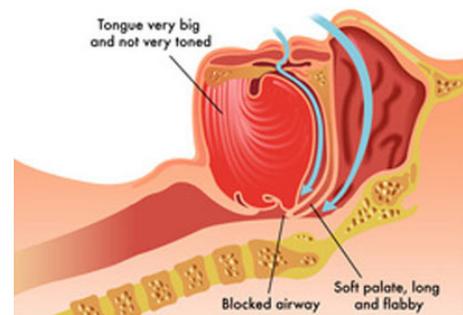
A good night's sleep may seem out of reach for those with sleep apnea, but new breakthroughs in OSA therapy bring new sleep solutions for you and your sleep partner. Feeling sharp, alert, and rested is more realistic than ever – and it will keep you safer on the job!

OSA and Workplace Accidents

- The odds of work accidents in persons with OSA are almost double that of those without OSA.
- OSA had the strongest association with workplace accidents compared to all other sleep disorders.

What is Obstructive Sleep Apnea?

Obstructive sleep apnea is a sleep disorder that affects 25 million to 28 million Americans. In individuals who have OSA, the soft tissue in the back of their throat collapses and partially or completely closes their airway while they are asleep. This can cause their breathing to stop from 10 to 120 seconds at a time, as often as dozens of times per hour or hundreds of times per night.



Obstructive sleep apnea

Source: Sleep Apnea Guide

When breathing stops, their blood-oxygen levels drop, releasing stress hormones that affect blood pressure and heart rate. Obstructive sleep apnea and its associated poor sleep quality can also cause or worsen underlying health conditions, such as diabetes, hypertension and obesity, as well as depression, congestive heart failure, erectile dysfunction, stroke, Alzheimer's disease, and certain cancers.

Higher Risk for People with Untreated OSA

- About half of all sleep apnea sufferers will receive a diagnosis of hypertension.
- Three times more likely to have heart disease.
- Four times more likely to have a stroke than someone without OSA.
- Five hours of sleep or less was associated with a 45% increase in risk for heart attack.
- People with less than 6 hours of sleep are 7.5 times more likely to have a higher body mass index by their late 20s.
- Middle-aged and older people with 5 hours of sleep or less are 2.5 times more likely to have diabetes, compared with those who slept 7 to 8 hours per night.
- Sleeping 5 hours or less increased mortality risk, from all causes, by roughly 15%.

Sources: National Center for Biotechnology Information and Sleep Disorders Guide.

OSA Risk Factors

Some risk factors for OSA are hereditary, including a family history of OSA. Others have to do with physical characteristics, including

having a small upper airway, or a recessed chin, small jaw or large overbite. Other risk factors, such as being overweight, having a large neck size, and smoking and alcohol use, may be associated with the stress and job demands of operating heavy equipment.

Source: *Work, Obesity, and Occupational Safety and Health*

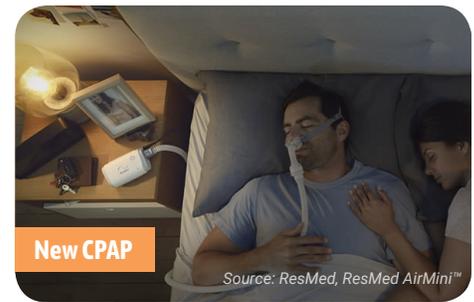
Prevent Fatigue Instead of Fighting It

Fatigue has gotten the attention of many industries that use heavy equipment. However, much of the research and innovation has focused on predicting and monitoring fatigue, not preventing it. For many people, fatigue prevention includes treating their OSA. Research has shown that most people can be successfully treated for OSA. And those treatments have greatly improved in recent years in terms of effectiveness, comfort and ease of use.

Options for Treating CPAP include:

Continuous Positive Airway Pressure (CPAP).

A CPAP machine keeps the airway open while the user is sleeping. New CPAPs can provide better sleep for both users and their sleep partner.



Auto-CPAP, also called Automatic Positive Airway Pressure (APAP).

Another treatment option is the Auto-CPAP, which varies the air pressure throughout the night in response to the individual's breathing resistance. Automatic adjustments ramp up from a lower starting pressure, which makes CPAP more comfortable and much easier to tolerate, particularly when people are starting treatment.



Oral Appliance Therapy (OAT)

OAT repositions the jaw with a custom-fitted mouthpiece. This holds the lower jaw in a forward position during sleep to keep the upper airway open, preventing apneas and reducing snoring. OAT devices are available through many dentists.

KNOW THESE SYMPTOMS OF OSA

- Loud snoring
- Choking or gasping while sleeping
- Morning headaches and nausea
- Excessive daytime sleepiness
- Irritability or feelings of depression
- Disturbed sleep
- Concentration and memory problems
- Frequent night-time urination
- Loss of sex drive, impotence or both

Source: FMCSA

GET TESTED: Not only is OSA easier to treat than ever, it is also easier to diagnose. In fact, about 80 percent of cases can be diagnosed using a home sleep test. Most insurance companies now cover home sleep tests, which are a convenient alternative to in-lab sleep studies. Check with your insurance provider to see if home sleep testing is covered under your plan.



DROWZLE is an easy-to-use software program, conveniently deployed through a smartphone, which quickly assesses an individual's risk for sleep breathing disorders, including OSA. DROWZLE enables drivers to check their sleep breathing and determine if they are at risk for OSA.

LEARN MORE: Contact your HR department to learn how to download DROWZLE at GetDrowzle.com.