

Sleep Apnea Linked to High Blood Pressure and Heart Disease

Sleep apnea not only causes problems on the roads for commercial motor vehicle drivers, it also leads to an increase in blood pressure, a major contributor to heart disease – the nation’s number one killer. Studies suggest that people with sleep apnea are twice as likely to have high blood pressure as those without the disorder.¹

Sleep apnea is a serious, potentially life threatening condition. It is characterized by brief interruptions of breathing during sleep, causing a disruption in sleep. These breathing pauses are nearly always accompanied by snoring, though not everyone who snores has the condition. Sleep apnea can also be characterized by choking sensations. The lack of oxygen to the heart and brain can significantly increase a person’s risk of heart disease (particularly coronary heart disease and heart failure), high blood pressure (hypertension) and stroke. The frequent interruptions of deep, restorative sleep often leads to excessive daytime sleepiness and performance problems such as drowsy driving.

There are two types of sleep apnea, obstructive sleep apnea (OSA) and central sleep apnea.

Obstructive sleep apnea (OSA), by far the most common, is caused by the soft tissues in the back of the throat relaxing to the point that they obstruct or close off the airway. After 10–30 seconds, the brain is alerted, you awaken briefly, and the muscles regain their tone, allowing you to breathe again. The cycle then starts all over. People with sleep apnea are not aware of these very brief awakenings!

In *central sleep apnea*, the brain fails to send signals to the muscles that control your breathing, instructing you to inhale and exhale. Both types of apnea cause the level of carbon dioxide in your blood to rise. The rising carbon dioxide, the lowered oxygen levels, or perhaps the increased effort to breathe against a blockage prompts you to breathe again and possibly awaken.

It is estimated that as many as 18 million Americans have sleep apnea. It appears that commercial truck and motorcoach drivers might be at higher risk of having this potentially life-threatening disorder. A study conducted by the University of Pennsylvania and sponsored by the Federal Motor Carrier Safety Administration (FMCSA) and the American Transportation Research Institute of the American Trucking Associations found that almost one-third (28 percent) of commercial truck drivers have mild to severe sleep apnea.² The study found that the risk of having sleep apnea depended on two major factors, age and degree of obesity, with prevalence increasing with both.

Sleep apnea affects people of all ages and genders. However, there are factors which may put some at greater risk including:

- A family history of sleep apnea.
- Being overweight.
- Having a large neck (17 inches or greater for men, 16 inches or greater for women).
- Being 40 years of age or older.
- Having a small upper airway.
- Having a recessed chin, small jaw, or a large overbite.
- Smoking and alcohol use.

- Ethnicity.

If you suspect that you or a loved one has sleep apnea or another sleep problem, visit the websites listed below and try the following:

- Take a self-screener such as *How's Your Sleep?*
- Keep a sleep diary for a week.
- Reference the article *Talking with Your Doctor*.
- Make an appointment with your doctor and take these materials with you and discuss a referral to an accredited sleep disorders center for further testing.

References

1. Nieto FJ, et al. (2002) Association of sleep-disordered breathing, sleep apnea, and hypertension in a large community-based study. Sleep Heart Health Study. *JAMA*. 2000 Apr 12;283(14):1829-36.
2. Pack AI, Dinges DF, & Maislin G. (2002). A study of prevalence of sleep apnea among commercial truck drivers. Federal Motor Carrier Safety Administration (Publication No. DOT-RT-02-030). Washington DC: U.S. Department of Transportation, FMCSA.

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