



Could You Have Sleep Apnea Without Knowing It?

(Lessons from Truck Drivers)

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Target audience: Employers and Employees

A True Story from My Office

"Doc, I'm glad you made me have that test. Now I feel better than ever. I just didn't realize how tired I really was!"

A truck driver told me that. He had seen me for his Department of Transportation (DOT) required certification exam. That was his parting comment as we exchanged a hearty handshake, and he left with his certificate, satisfied.

Although we were seeing eye-to-eye by then, things didn't start that way. I had surprised him a month earlier when I required him to have a sleep study to screen for sleep apnea.

I had explained how this very common condition causes people to momentarily but repeatedly stop breathing while asleep, disrupting normal sleep cycles. He understood that, and admitted his wife once mentioned she noticed pauses in his snoring pattern while he slept.

Then I covered the connection between untreated sleep apnea and health conditions, including how it can lead to high blood pressure, heart failure, and even sudden death. He said he'd heard that, too, and knew his own blood pressure had been borderline.

I went on to say that, because sleep apnea sufferers never reach deeper levels of sleep, they are prone to excessive daytime drowsiness, which could lead to falling asleep at the wheel. That's where he stopped agreeing with me. More accurately, he clammed up. He pled the 5th, so to speak. But, to his credit, he went along with my request, as a professional driver should, albeit reluctantly.

His test confirmed severe sleep apnea. He started nightly use of a CPAP machine, and noticed results right away. "I should have done this years ago!" he told me. Ironic, I thought. I should have started requiring these tests years ago.

Sleep apnea isn't new. But requiring tests for it, in people who don't feel they have it, is new. This has created no small amount of controversy, particularly among truck drivers, who are under scrutiny because of the obvious public safety implications of their job.

A Sad Story

There are more than 5,000 deaths due to large truck crashes in the U.S. annually. Somewhere between 7 percent and 20 percent of these crashes are due to truck drivers falling asleep behind the wheel. Their job is very demanding and would be stressful for anyone. But it's a killer for someone with untreated sleep apnea, which may increase crash risk by two to seven times. And it is estimated that 17 percent to 28 percent of truck drivers have that condition. (Reference: Parks, 2009).



Still, those same statistics mean most truck drivers don't have sleep apnea. And, most truck drivers finish long careers without ever being in any accident. So, how can doctors decide which drivers need to go through this inconvenient and expensive process, simply to remain eligible to drive a truck?

The Tale of the Tape/the Battle of the Bulge/Contents Under Pressure

The answer is: by using a tape measure, a scale, and a blood pressure cuff. This answer was given to us when experts gathered to answer these difficult questions. In 2006, a joint task force of three major professional groups was formed: The American College of Occupational and Environmental Medicine, the American College of Chest Physicians, and the National Sleep Foundation. One of their tasks was to decide how doctors could identify drivers who ought to have sleep apnea screening, even among drivers who didn't think they were drowsy. Their consensus was to require the screening test if two out of the following three criteria were met:

1. Body mass index of 35 or greater
2. Neck circumference of 17" or greater in male drivers and 16" in females.
3. High blood pressure that was either new, uncontrolled, or requiring two or more medicines to control (Source: Hartenbaum et al, 2006)

So, these are the three things I look for when I evaluate a truck driver. These are what led me to ask the driver I described earlier to have a sleep study. And I was right, he had sleep apnea. So, how often am I right? In this situation, at least nine times out of ten!

The Proof of the Pudding (It's in the Eating!)

I know those odds from my own experience, and from talking to colleagues. But more importantly, I know this because two recent studies have put this approach to the test, and found it is remarkably good at predicting sleep apnea. The first study found that 98.4 percent of truck drivers who had at least two of the three indicators listed above proved to have sleep apnea when tested (Talmadge, 2008). In the second study, it was 100 percent (Parks, 2009). I know of few other medical decision-making rules that work as well as this one.

The Moral of the Story

The moral depends on who you are. If you are a truck driver, staying alive requires that you can stay awake. The moral for you is to discuss sleep apnea with your own doctor, and have the test if they or your DOT medical examiner recommends.

If your work is not as safety-sensitive as that, talk to your doctor if you are concerned about feeling tired or sleepy. The "Epworth Sleepiness Scale" below gives you a way to measure that. And, know your body mass index (click here for a BMI calculator <http://www.nhlbisupport.com/bmi/>).

Ideally, it should be about 19-25. If it is over 25, set a realistic goal of gradually lowering it. If it is 35 or greater, you may be at risk for sleep apnea and not know it. Talk to your doctor, especially if your neck measures 17 or more inches around; 16 inches if you are female. If your blood pressure is a problem, you may also be at increased risk, if either BMI or neck circumference is increased.

The "Rest" of the Story

I expect to see my truck driver patient next year, knowing that in the meantime, he will continue to use his bedside CPAP device to keep breathing normally in his sleep, even when on the road. And I believe he is a safer, more alert truck driver because he is now treating a condition that was putting him at risk of drowsy driving, even though he didn't know it.

When I see him then, he will be better rested than when I met him. And I rest easier meanwhile!

References:

1) Parks, Philip D. MD, MPH, et al, "Screening for Obstructive Sleep Apnea during Commercial Driver Medical Examinations"

Journal of Occupational and Environmental Medicine (JOEM): March 2009 - Volume 51 - Issue 3 - pp 275-282

2) Talmage, James B. MD; et al, "Consensus Criteria for Screening Commercial Drivers for Obstructive Sleep Apnea: Evidence of Efficacy"

JOEM: March 2008 - Volume 50 - Issue 3 - pp 324-329

3) Hartenbaum, N, et al, "Sleep Apnea and Commercial Motor Vehicle Operators: Statement from the Joint Task Force"

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THE EPWORTH SLEEPINESS SCALE

*How likely are you to doze off or fall asleep in the following situations, in contrast to feeling just tired?
This refers to your usual way of life recently.*

Use the following scale to choose the most appropriate number for each situation:

- 0 = no chance of dozing
- 1 = slight chance of dozing
- 2 = moderate chance of dozing
- 3 = high chance of dozing

Situation	Chance Of Dozing
Sitting and reading	
Watching TV	
Sitting inactive in a public place (e.g. a theater or a meeting)	
As a passenger in a car for an hour without a break	
Lying down to rest in the afternoon when circumstances permit	
Sitting and talking to someone	
Sitting quietly after a lunch without alcohol	
In a car, while stopped for a few minutes in traffic	

SCORE:

0 - 9 - average score, normal population

10 - 24 - sleep specialist advice recommended