

The Truth about BMI

In May 2014, FMCSA's final rule entitled *The National Registry of Certified Medical Examiners*, which established training and testing requirements for medical professionals who conduct examinations of interstate truck drivers while also requiring truckers to go to said certified medical examiners (CME), went into effect. Since the Registry's inception, the practice of screening truck drivers for sleep apnea by utilizing a single risk factor, namely a driver's body mass index, or BMI, has become increasingly more common.

Although BMI, which is a calculation of a person's weight divided by their height squared and multiplied by 705, is not a measure of a person's body fat, it is often used to compare what is considered healthy and what is thought to be overweight or obese.¹ According to FMCSA's Medical Review Board, a person who has a BMI indicating that they are overweight (25-29.9), obese (30-34.9), or extremely obese (35 or more), is more likely to be diagnosed with OSA, thus they have suggested for BMI to be the key factor in determining if a truck driver should be tested.

BMI was created by a Belgian statistician named Adolphe Quetelet, and has been in use for over 100 years, mainly because of its simplicity. It is important to note however that the measurement does not take into account a person's body composition, age, or gender. In fact, FMCSA released a study in 2004 that found that 30 percent of those who were diagnosed with OSA had a BMI less than 30, while almost 40 percent of those without OSA had a BMI greater than 30.²

A 2016 UCLA study concluded that BMI mislabels approximately 54 million Americans as overweight or obese. The lead author for the study stated, "This should be a final nail in the coffin for BMI. The public is used to hearing 'obesity,' and they mistakenly see it as a death sentence, but obesity is just a number based on BMI, and we think BMI is just a really crude and terrible indicator of someone's health."³

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The study also found that more than 30 percent of those with BMIs in the "normal" range (18.5-24.9), or about 20.7 million people, were actually unhealthy based on other health data, while more than 2 million people who were considered "very obese" by virtue of having a BMI of 35 or greater were actually healthy.⁴ Hence, BMI should not be utilized as the only indicator for OSA screening, but rather instead CME's should use other comorbidity factors such as hypertension, diabetes, congestive heart failure, atrial fibrillation, etc.

¹ Douglas M. Wiegand, *Commercial Motor Vehicle Health and Fatigue Study Final Report*, VTTI (Feb 2009), pg. 3

² *Sleep Apnea Crash Risk Study*

³ Amina Khan, "BMI mislabels 54 million Americans as 'overweight' or 'obese,' study says," *Los Angeles Times* (Feb 4, 2016), <http://www.latimes.com/science/sciencenow/la-sci-sn-bmi-does-not-measure-health-20160204-story.html>

⁴ Stuart Wolpert, "Don't use BMI to determine whether people are healthy, UCLA-led study says," UCLA Newsroom (Feb 4, 2016), <http://newsroom.ucla.edu/releases/dont-use-body-mass-index-to-determine-whether-people-are-healthy-ucla-led-study-says>