MAY 2023

CARDI·OH
Ohio Cardiovascular and Diabetes Health Collaborative

Heart Health and the Science of Sleep

Additional Questions and Answers

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From the May 24, 2023 Cardi-OH Statewide Webinar

Question **How accurate are wearable devices in measuring sleep and sleep quality?**

Answer Wearable devices may estimate sleep duration and sleep quality, though more data is needed on their accuracy and reliability. For more information, this article on sleepeducation.org (the patient-facing website for the American Academy of Sleep Medicine) provides additional insight: How Technology is Helping – and Hurting – Your Sleep.[1]

Question **Has the increased use of computers and the light they emit been associated with the alteration of melatonin release or pineal gland function?**

Answer Melatonin is suppressed by light and is released when it becomes dark. Light, specifically blue light, can lead to suppression of melatonin release from the pineal gland and disrupt sleep at night. Turning off electronic devices 30-60 minutes before bedtime is recommended.[1]

Question **With the evidence of further negative effects from diphenhydramine and patients commonly using this as an over-the-counter sleep aid, have you witnessed during a sleep study if pauses/extended pauses in heart rate are commonly related to its use?**

Answer To my knowledge and review, there have been no studies that have show any associations between diphenhydramine and heart rate in sleep. Of note, diphenhydramine and other over-the-counter medications typically are not recommended for the treatment of chronic insomnia. Additionally, diphenhydramine has anti-cholinergic effects that may affect cognition, especially with long-term use. Optimizing non-pharmacological approaches is a standard recommendation for insomnia.[2]

Question **How much of the cardiovascular event risk with obstructive sleep apnea (OSA) is due to risk factors, i.e., increased blood pressure, metabolic (glucose), obesity, etc?**

Answer The relationship between OSA and other cardiovascular risk factors is multifactorial and often bidirectional. There also is heterogeneity in OSA phenotypes. For example, while ~60% of moderate to severe OSA has been attributed to obesity, we have seen patients with normal body weight have severe OSA in clinical practice. As a result, the exact attributable risk of each of these risk factors may be challenging to discern.[3]

Question Does bad snoring mean someone has OSA?

Answer Snoring is seen in 24-40% of adults, with the prevalence increasing with age. Since snoring is a common symptom of OSA, a sleep study is necessary to determine objectively if OSA is present.[3]

Question Is it true that patients who live alone cannot do home sleep apnea tests?

Answer Home sleep apnea tests can be performed if someone lives alone, though if someone is having cognitive symptoms, it may be best to have a family member be present to assist with putting on the sensors for the study.

Per American Academy of Sleep Medicine clinical practice guidelines, in-lab polysomnography is recommended for "significant cardiorespiratory disease, potential respiratory muscle weakness due to neuromuscular condition, awake hypoventilation or suspicion of sleep-related hypoventilation, chronic opioid medication use, history of stroke or severe insomnia."[4]

Question Have we seen increased sleep needs in post-COVID long-haulers?

Answer The COVID-19 pandemic has been associated with more sleep disturbances. Both insomnia and daytime sleepiness have been seen in those with post-COVID-19 symptoms, and better sleep health prior to a COVID-19 infection may decrease the risk of post-COVID-19 symptoms. More studies are needed to determine how best to manage the sleep needs in those with post-COVID-19 symptoms.[5-8]

References

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