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An Analysis of Sleep Apnea: Detection and Treatment Approaches

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Abstract: *A review of sleep apnea diagnosis and treatment techniques is presented in this publication. The most prevalent kind of breathing-related sleep disturbance is sleep apnea. It may take many different forms, such as involuntary nocturnal activities like night terrors or teeth grinding. Narcolepsy, hypersonic, sleep talking, sleep walking, and bedwetting are the most prevalent sleep disorders. A dangerous sleep disease called sleep apnea causes breathing to stop while you're asleep. During sleep, breathing pauses happen at least thirty times. These pauses range anywhere from a few seconds to several minutes, following which regular breathing resumes. Patients with untreated sleep apnea may stop breathing hundreds of times while they sleep, which may lead to atrial fibrillation, cardiac arousal, stroke, brain tumors, and other vascular disorders that can be fatal by the age of 65. Smokers are more likely to develop sleep apnea. According to a number of studies, smokers who smoke more than two packs a day are 40 times more likely to develop sleep apnea than nonsmokers. The topic of identifying sleep apnea from respiratory episodes and heart rate is covered in this review. There is also discussion of the published research on sleep apnea and its treatment options.*

Keywords: Sleep apnea, detection methods, treatment techniques, polysomnography, machine learning

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