

Does inadequate sleep hours and snoring relate to chronic disease?

Sleep is one of the fundamental requirements for survival of human beings. Yet an outrageous number of population neglect its' importance. Although most people tend to think that lack of sleep (<7 hours) is more detrimental to our health; however, excess amount of sleep too (>9 hours) can seriously compromise our health. In fact, a study carried out in Bangladeshi male and female aged >35 years showed a relation between inadequate sleep hours and snoring with chronic disease.

Sleep disorder such as snoring and inadequate sleep duration are considered to be “next generation” health threat to low and middle income countries due to the rising instances of chronic illnesses. Some of the common chronic diseases are obesity, diabetes, hypertension, coronary heart disease (CHD), ischemic heart disease, and psychological disorders. It is seen in the cross-sectional survey of Bangladesh that sleep deprivation could pose a stronger threat on health than longer sleep duration, but excessive sleep duration increases the risk of mortality through chronic diseases by 20-30%. This does not however eliminate the possibility of biasness from individual population characteristics like genetics, environment, social factors, and other coexisting medical conditions.

The result showed that among 12,338 Bangladeshi adults surveyed, 2191 were witnessed with at least 1 chronic disease. Hypertension, diabetes, and CHD affected significantly greater proportion of women than man with greater risk for urban women than rural women. On the other hand, adult male and female who snore during sleep were observed to have a higher chance of suffering from chronic diseases. Other factors that influenced the occurrence of chronic diseases among men and women in Bangladesh were age (>50 years), severe exhaustion, and body mass index (BMI >25). Above all, snoring poses an alarming threat to urban Bangladeshi residents due to sedentary and stressful lifestyle. Snoring is an indication of poor nighttime oxygen supply and upper airway obstruction for which the individual becomes vulnerable to chronic diseases like chronic bronchitis and hypertension. It increases the risk of stroke by 2 to 10-fold. However, it all remains ambiguous as to whether shorter/longer sleep duration and snoring independently causes the chronic disease or vice versa. On the contrary a completely independent factor such as temperature in tropical Bangladesh could have an effect on sleep cycle and hence lead to chronic disease. A laboratory study also established a causal link between shorter sleep duration and body's glucose metabolism, which increases the risk of suffering from diabetes. It could also lead to high blood pressure, cerebrovascular disease, C-reactive protein, cortisol level and sympathetic nervous system. Although with some ambiguity, it was revealed through studies that longer than recommended sleep duration (>9 hours) and snoring increased the risk of chronic diseases.

The prevalence of snoring and the occurrence of psychiatric disorders also seemed to vary across countries. Low and middle income countries like Bangladesh was observed to be more prone to psychiatric disorders like depression and anxiety than high-income countries. Sleeping pattern also fluctuate between countries with varying income status and thus it changes the causal pattern between sleep duration or snoring with chronic diseases. Regardless of the country, the most pressing matter should be to increase awareness and improve the sleep-wake cycle.

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Publication

[Relationship of sleep pattern and snoring with chronic disease: findings from a nationwide population-based survey.](#)

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