

Highlights from more than 60 published studies from the Wisconsin Sleep Cohort Study

Year	Summary of findings	Citation
1989	First participants recruited for the Wisconsin Sleep Cohort	
1993	First estimates of sleep apnea prevalence in an adult population-based sample. Sleep apnea is found to be much more common than previously assumed in both men and women (9% of men and 4% of women found to have at least moderately severe sleep apnea).	Young T, Palta M, Dempsey J, Skatrud J, Weber S, Badr S. The occurrence of sleep-disordered breathing among middle-aged adults. <i>New England Journal of Medicine</i> 1993;328(17):1230-1235.
1996	A "gender bias" is identified in the diagnosis of sleep apnea. Even when men and women report the same symptoms of sleep apnea, men are more likely to be correctly diagnosed.	Young T, Hutton R, Finn L, Badr S, Palta M. The gender bias in sleep apnea diagnosis. Are women missed because they have different symptoms? <i>Archives of Internal Medicine</i> 1996;156(21):2445-2451.
2000	Persons with moderate to severe sleep apnea are found to have 3 times the risk of developing hypertension over a 4-year period compared to persons without sleep apnea.	Peppard PE, Young T, Palta M, Skatrud J. Prospective study of the association between sleep-disordered breathing and hypertension. <i>New England Journal of Medicine</i> 2000;342(19):1378-1384.
2000	Over a 4-year period, weight loss and weight gain, respectively, are shown to substantially decrease and increase the risk and severity sleep apnea.	Peppard PE, Young T, Palta M, Dempsey J, Skatrud J. Longitudinal study of moderate weight change and sleep-disordered breathing. <i>JAMA</i> 2000;284(23):3015-3021.
2003	In women, independent of age, menopause is shown to increase the risk of sleep apnea, and the risk further increases with time since menopause.	Young T, Finn L, Austin D, Peterson A. Menopausal status and sleep-disordered breathing in the Wisconsin Sleep Cohort Study. <i>American Journal of Respiratory and Critical Care Medicine</i> 2003;167(9):1181-1185.
2004	In both normal weight and overweight persons, exercise is found to be associated with decreased risk of sleep apnea.	Peppard PE, Young TB. Exercise and sleep-disordered breathing: an association independent of body habitus. <i>SLEEP</i> 2004;27:480-484.
2004	Persons who do not get sufficient sleep (6 hours or less per night) are found to be more likely to be overweight and have altered levels of appetite-regulating hormones (leptin and ghrelin).	Taheri S, Lin L, Austin D, Young T, Mignot E. Short sleep duration is associated with reduced leptin, elevated ghrelin, and increased body mass index. <i>PLoS Medicine</i> 2004;1(3):e62.
2005	Persons with more severe sleep apnea are found to be 4 times more likely to also have had a stroke, accounting for age, gender, body weight and other factors.	Arzt M, Young T, Finn L, Skatrud JB, Bradley TD. Association of sleep-disordered breathing and the occurrence of stroke. <i>American Journal of Respiratory and Critical Care Medicine</i> 2005;172(11):1447-1451.
2006	Over a 4-year period, persons who developed sleep apnea were found to be approximately twice as likely to develop depression.	Peppard PE, Szklo-Coxe M, Hla KM, Young T. Longitudinal association of sleep related breathing disorder and depression. <i>Archives of Internal Medicine</i> 2006; 166:1709-1715.
2008	Over an 18-year period, adjusting for age, gender, body weight and other factors, persons with severe sleep apnea are found to be 3 times more likely to die of any cause compared to persons without sleep apnea.	Young T, Finn L, Peppard PE, Szklo-Coxe M, Austin D, Nieto FJ, Stubbs M, Hla KM. Sleep-disordered-breathing and mortality: Eighteen-year follow-up of the Wisconsin Sleep Cohort. <i>SLEEP</i> 2008;31(8):1071-1078.
2010	Greater sleep apnea severity was shown to be associated with reduced responsiveness of cerebral arteries, indicating a possible link between sleep apnea and brain-blood vessel dysfunction.	Morgan BJ, Reichmuth KJ, Peppard PE, Finn L, Barczi SR, Young T, Nieto FJ. Effects of sleep-disordered breathing on cerebrovascular regulation: A population-based study. <i>Am J Respir Crit Care Med</i> . 2010;182(11):1445-52
2012	Adjusting for age, gender, body weight and cigarette smoking, persons with severe sleep apnea are found to have almost 5 times the CANCER death rate of persons without sleep apnea over a 20-year period.	Nieto FJ, Peppard PE, Young T, Finn LA, Hla KM, Farre R. Sleep apnea and cancer mortality: results from the Wisconsin Sleep Cohort Study. <i>American Journal of Respiratory and Critical Care Medicine</i> . 2012. In Press.