

Understanding Sleep Apnea

**A Report from National Sleep Foundation,
with Support from Inspire Medical Systems, Inc.**



March 11, 2025

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I. Introduction and Summary of Findings

The National Sleep Foundation (NSF; www.theNSF.org) is dedicated to improving health and well-being through sleep education and advocacy. NSF conducts representative, population-level research in the United States, and globally, through multiple instruments, including its annual *Sleep in America*® Poll (SIA Poll), which is the premier annual review of public attitudes and behaviors around current sleep topics. In addition to the annual SIA Poll, NSF conducts regular population-based research to monitor important sleep-related topics. Among the U.S. population, sleep apnea is a common sleep disorder that causes a person’s breathing to stop during sleep. It has multiple negative consequences and is often undiagnosed and undertreated. With support from Inspire Medical Systems Inc., NSF independently polled a representative, random sample of US adults to identify the public’s current understanding of and attitudes about sleep apnea: (1) symptoms, (2) treatment options and preferences, and (3) consequences of untreated sleep apnea. Key findings include:

Sleep apnea risk is very common in US adults

- Nearly 4 in 10 adults have elevated risk for sleep apnea.
- Approximately 29 million undiagnosed adults suspect they have sleep apnea.
- Almost 1 in 3 adults diagnosed with sleep apnea are not currently being treated.

Most people are aware of common sleep apnea symptoms

- Between 30 and 50% of adults may fail to identify common symptoms of sleep apnea.
- Nearly 1 in 5 adults were not able to identify a single symptom of sleep apnea.
- Important group differences in symptom awareness were found, highlighting the need for focused public outreach.

Sleep apnea is serious, and most people would take action to treat it

- While the majority of people would want to know if they had sleep apnea, an estimated 45 million adults would not want to know if they had sleep apnea.
- Almost 8 in 10 adults say it would be “important” for them to treat sleep apnea if they had it.
- Nearly 32 million adults do not consider sleep apnea a serious medical condition that is important to treat.
- Only very few people, less than 1 in 10, would do nothing to support a friend or family member who had sleep apnea.
- Roughly 1 in 4 adults were able to identify only 3 or less common consequences of untreated sleep apnea.

Common sleep apnea treatments were recognizable to the public, but treatment preferences varied widely

- Nearly all treatment options were identified by 50% of adults, with medications and surgical options being the lowest recognizable options.
- Four in ten adults were able to only identify 50% or fewer of the sleep apnea treatment approaches.
- Over 4 in 10 adults said they were unlikely to try CPAP, the most commonly prescribed treatment for sleep apnea.

II. Survey Methodology and Sample

The survey was conducted by National Sleep Foundation via the nationally representative Ipsos KnowledgePanel®, in which participants are randomly recruited via address-based sampling to respond to survey questionnaires online. The questionnaire was administered in either English or Spanish, and field work was conducted December 20-30. Data were weighted via iterative proportional fitting to match the distributions of adults from the most recent U.S. Census Bureau’s Current Population Survey. The final sample was comprised of 1,015 American adults ages 18-90 years old ($M = 48$, $SD = 18.21$) who were representative of the US adult population (i.e., 61% White, 12% Black, and 18% Hispanic; 51% female).

National Sleep Foundation recommends most adults get 7 to 9 hours of sleep per night (7 to 8 hours for most older adults).³ Two out of every three adults (66%) reported not consistently getting NSF’s recommended amount of sleep each night. Regarding sleep quality, less than 40% of adults called their sleep quality excellent or very good.

III. Sleep Apnea Risk and Status

Individuals were administered the STOP-BANG^{1,2} to assess risk for sleep apnea. Based on responses, 62% of adults categorized as low risk, followed by 26% as intermediate risk, and 12% as high risk. Stated differently, nearly 4 in 10 adults has elevated risk for sleep apnea. While 38% of the adult population is at increased risk for sleep apnea, only half that (19% of the adult population) indicate that they have been tested for sleep apnea.

When asked directly about sleep apnea diagnosis and treatment status, the overwhelming majority of people reported never being tested or diagnosed (81%), with the majority of those not suspecting they have sleep apnea (70%). Eleven percent of those who have never been tested or diagnosed have a suspicion that they likely have sleep apnea—this equates to just over 29 million people who think they might have sleep apnea. Of the 19% of adults who have had some form of diagnostic workup, 13% reported being diagnosed; however, 4% of those diagnosed with sleep apnea say they are not currently being treated. Stated differently, approximately 31%, or over 10.5 million adults, diagnosed with sleep apnea are not currently receiving needed treatment. The final 6% of people said they were tested but ultimately not diagnosed with sleep apnea.

IV. Sleep Apnea Awareness

General awareness of common symptoms of sleep apnea were assessed by presenting a list of common symptoms and asking whether or not people believed them to be a potential sign of sleep apnea or not. As shown in the chart, there were varying degrees of awareness of sleep apnea symptoms, with approximately 70% of adults correctly noting loud snoring, waking unrefreshed, and being sleepy during the day as common sleep apnea symptoms.

Americans' knowledge about symptoms of sleep apnea

Poll by National Sleep Foundation

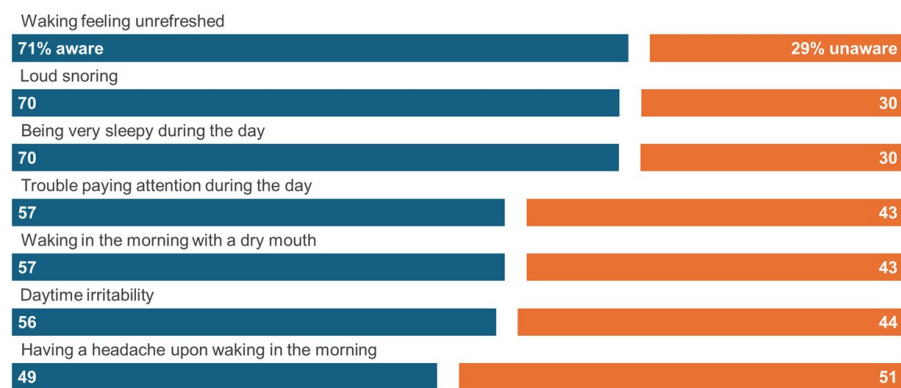


Chart excludes those who didn't answer.

Much fewer people, between 49 and 57%, correctly identified morning headaches and dry mouth, and daytime attention and irritability as sleep apnea symptoms. Generally, anywhere between 30% and 50% of the population may fail to identify a common symptom of sleep apnea. In fact, nearly 1 in 5 adults (19%) were not able to identify a single symptom of sleep apnea, and only 36% of adults correctly identified all symptoms of sleep apnea.

While the levels of sleep apnea awareness in the general population suggest opportunities for public health education, specific groups could benefit more than others from increased knowledge of sleep apnea symptoms. For example, while middle-aged and older adults were more likely than younger adults to be aware of common symptoms of sleep apnea, men and women displayed similar levels of familiarity with sleep apnea symptoms. Large and consistent differences in symptom awareness were observed by race/ethnicity, with White adults demonstrating higher levels of symptom awareness. Interestingly, symptoms awareness also varied by risk level for sleep apnea, with those at high and intermediate risk showing the highest levels of symptom awareness.

V. Sleep Apnea is a Serious Medical Condition

People want to know if they have sleep apnea.

When presented with the scenario of having symptoms of sleep apnea, only about 50% of people were definitive in their desire to know if they actually had sleep apnea. While 30% of those who were not certain they would want to know their diagnostic status say they “mostly” would like to know their diagnostic status, another 17% of people would not want to know if they had sleep apnea, including 9% of adults who “would not want to know at all.” Extrapolated to the US adult population, an estimated 45 million adults would not want to know if they had sleep apnea. These findings were robust, consistent across all groups.

People consider sleep apnea serious and view treatment as important.

Nearly 90% of adults consider sleep apnea either “very serious” or “moderately serious.” Identical rates of people considered it important to get their sleep apnea treated if they had the disorder. Twelve percent of adults, representing nearly 32 million adults, do not consider sleep apnea a serious medical condition that is important to treat.

Would Americans Want to Know if They Had Sleep Apnea?

Poll by National Sleep Foundation

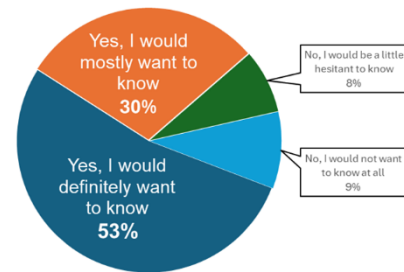


Chart excludes those who didn't answer.

To Americans, sleep apnea is...

Poll by National Sleep Foundation

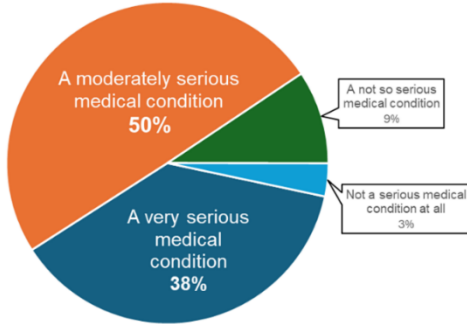


Chart excludes those who didn't answer.

Do Americans think treating sleep apnea is important?

Poll by National Sleep Foundation

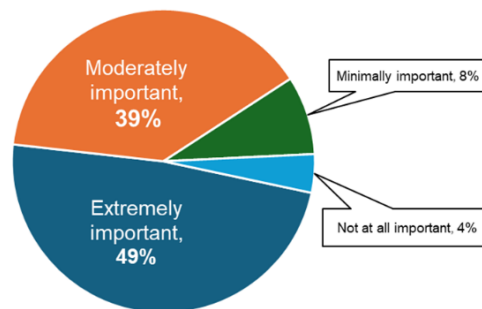


Chart excludes those who didn't answer.

Viewing sleep apnea as a serious medical condition that is deserving of treatment were fairly consistently held beliefs—robust across age groups and sleep apnea risk status. Small, but perhaps meaningful, differences were observed such that more females described sleep apnea as “very” serious while more males described it as “moderately” serious. A similar pattern emerged between White and Black adults, with more Black adults than White adults calling the condition “very” serious. The only notable difference in treatment importance was such that more females described sleep apnea as “extremely” important to treat while more males described it as “moderately” important to treat.

People would support friends and family in their sleep apnea journey.

The serious nature of sleep apnea was reflected in how people would respond if one of their friends or family members had sleep apnea, with the majority of people saying they would be concerned for their loved one’s health and well-being (64%), share their concern with the person (60%), and support the person through any treatment challenges (57%). In fact, only 8% of people said they would “do nothing” if someone they cared about was diagnosed with sleep apnea.

How Americans would respond if they thought friends or family members had sleep apnea

Poll by National Sleep Foundation

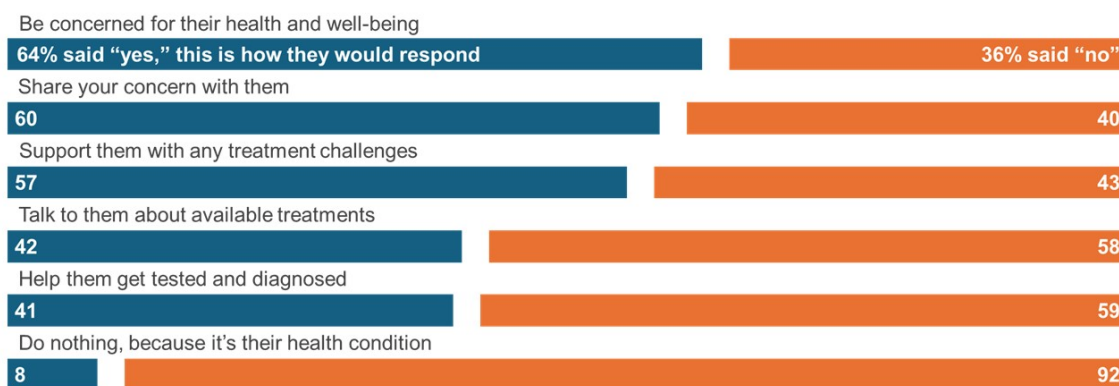


Chart excludes those who didn't answer.

Young adults were less likely to be concerned for friends or family or to offer various forms of support should someone they know have sleep apnea. Similarly, males were also less likely to be concerned or take action to help someone they know with sleep apnea, a finding consistent with the gender differences typically observed in helping behavior research.^{4,5} No differences were noted by race/ethnicity or disease risk status.

Harms of not treating sleep apnea.

Perhaps lending to people’s perception of the seriousness of sleep apnea, a majority of adults were aware of the numerous consequences of untreated sleep apnea. In fact, only health conditions, like diabetes, were endorsed as a consequence of untreated sleep apnea by less than 50% of adults. Nonetheless, there is still opportunity for increased awareness of the serious consequences of untreated sleep apnea in that roughly ¼ of the US adult population were only able to identify 3 or fewer of consequences of untreated sleep apnea (out of the provided 9 consequences of untreated sleep apnea).

What Americans think are potential consequences of untreated sleep apnea

Poll by National Sleep Foundation

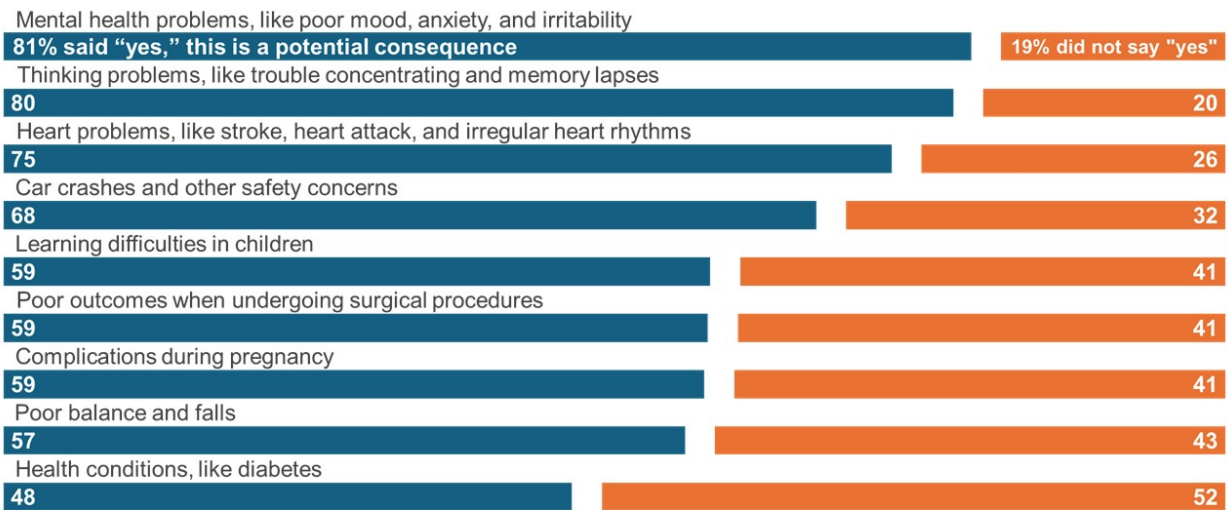


Chart excludes those who didn't answer.

While many adults were aware of the serious consequences associated with untreated sleep apnea, younger adults generally demonstrated lower levels of awareness than middle-aged and older adults. Similarly, White adults had higher levels of awareness about the potential consequences of untreated sleep apnea than Black adults. Again, these findings highlight important opportunities for focused public health campaigns.

VI. Sleep Apnea Treatments: Awareness and Willingness

Sleep apnea treatment awareness.

When queried to identify various treatment options for sleep apnea, most people correctly identified lifestyle changes like losing weight or limiting alcohol and breathing devices, like CPAP. Fewer, but still the majority, identified treatment options like implantable medical devices, dental appliances, nasal strips, and specialty pillows and bedding as treatments for sleep apnea. Less than half of all adults identified throat/facial surgery or medication as treatments for sleep apnea. Unfortunately, 4 in 10 adults were able to only correctly identify 50% or fewer treatment approaches for sleep apnea, and only 22% of adults correctly identified all presented treatment options.

How do Americans think sleep apnea can be treated?

Poll by National Sleep Foundation

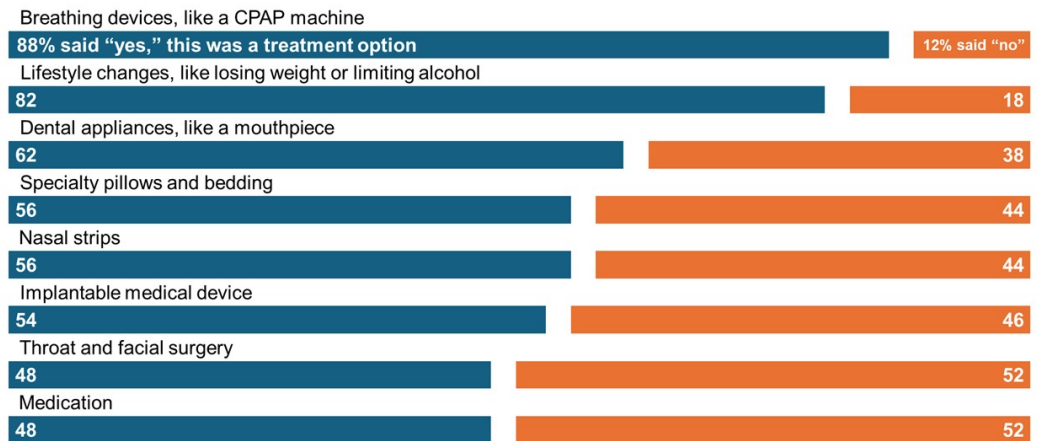


Chart excludes those who didn't answer.

Like symptoms awareness above, a general pattern emerged in which younger adults were slightly less aware of the various sleep apnea treatment options than middle-aged and older adults. Men also displayed a higher treatment awareness, specifically for throat and facial surgery and implantable medical device options, than women. Fairly consistent differences in treatment awareness were observed by race/ethnicity, with White adults demonstrating higher levels of treatment awareness. Treatment awareness also varied by risk level for sleep apnea, with those at highest risk also showing the highest levels of treatment awareness. Findings suggest targeted outreach to increase treatment awareness in younger, female, and historically underserved communities is needed.

Sleep apnea treatment preferences.

In terms of likeliness to try various sleep apnea treatment options, American adults were most likely to try lifestyle changes (85%), followed by oral medications (72%), dental appliances (68%), and CPAP machines (59%). People were less likely to try injectable medication (47%), implantable devices (34%), or general surgeries (33%).

How likely are Americans to try sleep apnea treatments?

Poll by National Sleep Foundation

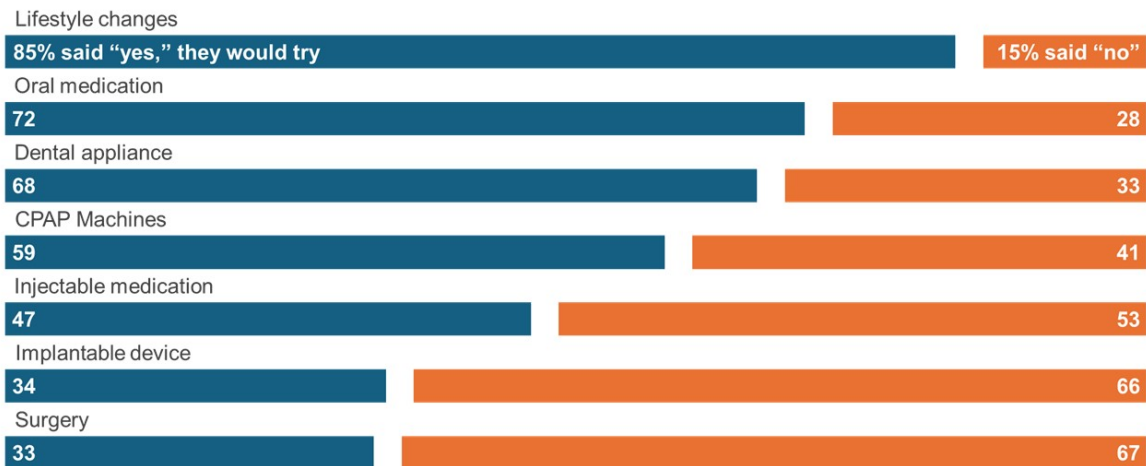


Chart excludes those who didn't answer.

Rates of willingness to try various sleep apnea treatments were largely consistent across age groups, sex, race/ethnicity, and risk status with a notable exception being that those at highest risk for sleep apnea were more likely to try CPAP treatment compared to those at intermediate or low risk.

References

1. Cho T, Yan E, Chung F. The STOP-Bang questionnaire: A narrative review on its utilization in different populations and settings. *Sleep Med Rev.* 2024;78:102007. doi:10.1016/j.smr.2024.102007
2. Nagappa M, Liao P, Wong J, et al. Validation of the STOP-Bang Questionnaire as a Screening Tool for Obstructive Sleep Apnea among Different Populations: A Systematic Review and Meta-Analysis. *PLoS One.* 2015;10(12):e0143697. doi:10.1371/journal.pone.0143697
3. Hirshkowitz M, Whiton K, Albert SM, et al. National Sleep Foundation's sleep time duration recommendations: methodology and results summary. *Sleep Health.* 2015;1(1):40-43. doi:10.1016/j.sleh.2014.12.010
4. Eagly AH. The his and hers of prosocial behavior: An examination of the social psychology of gender. *American Psychologist.* 2009;64(8):644-658. doi:10.1037/0003-066X.64.8.644
5. Eagly AH, Crowley M. Gender and helping behavior: A meta-analytic review of the social psychological literature. *Psychological Bulletin.* 1986;100(3):283-308. doi:10.1037/0033-2909.100.3.283