

# **Tailored Approach to Sleep Health Education Materials—Sleep Apnea**

The following intervention materials, which answer common questions about sleep apnea, were developed by faculty in NYU Langone's Department of Population Health as part of their Tailored Approach to Sleep Health study.

## **What Is Sleep Apnea and Who Gets It?**

Sleep apnea is a common sleep condition. It is a sleep breathing disorder that is marked by partial or full blockage of a person's airway as well as bouts of gasping for air when sleeping, causing significant reduction in a person's oxygen level.

## **Why Do People Get Sleep Apnea?**

We don't know exactly why some people have sleep apnea and others don't, but your chances of getting sleep apnea increase if you:

- are overweight or obese
- have a large neck size
- are male
- are a smoker
- are a post-menopausal women
- are over 40 years old
- are Black/African-American
- have a family history of sleep apnea
- have large tonsils
- have a small lower jaw or certain other facial configurations
- drink alcohol at bedtime
- Have certain hormonal problems (such as hypothyroidism, low levels of thyroid hormone, or acromegaly, high levels of growth hormone)

About 18 million people in the U.S. have sleep apnea. Sleep apnea is more common in Blacks than the general public. Why Blacks are more commonly affected is not understood. But it may be caused by:

- genetic factors, meaning that it is passed from parents to their children
- excessive weight: Many Blacks are more overweight than other ethnic groups. Sleep apnea can get much worse if you gain a lot of weight really fast.

## **What Do People with Sleep Apnea (Or Their Bed Partners) Complain About?**

**Snoring:** One of the most common symptoms of sleep apnea is loud disruptive snoring on most nights. Some people or their bed partners are aware of breathing pauses or snoring (these are the “apneas”).

**Choking or gasping for breath:** Some are also aware of choking or gasping (these are actually the times when people wake up in order to improve their breathing). A family member or bed partner is likely to be the first to notice the choking or gasping. People with sleep apnea usually don’t know that this is happening.

**Tiredness:** Some people with sleep apnea try to get help because they feel sleepy all the time. They may always fight sleepiness at work, while driving, or during activities like watching T.V. or reading.

## **How Sleep Apnea Works**

When you have sleep apnea, your airway becomes partially or completely blocked during sleep for 10-60 seconds. During this time the level of oxygen in the blood drops. To help you start breathing again your body automatically wakes up. When you wake up, the muscles of the throat become stiff, and this reopens the airway. This waking up to make your windpipe open up can happen many—even hundreds of times—in one night while you are asleep.

For a person with sleep apnea, the airway is blocked during breathing because the muscles around the windpipe are too relaxed. Despite ongoing efforts to try and breathe, the windpipe closes and air does not reach the lungs. This causes a drop in the level of oxygen in the blood.

When the airway is completely blocked, this is called an apnea. If the windpipe is partially blocked, this is called a hypopnea. Hypopnea is often the case when you snore. When you snore, the tissues of the throat shake whether or not the airway fully closes or slightly closes. After 10-60 seconds of being closed, the brain wakes up and the windpipe opens up. This also happens from the drop of oxygen in the blood.

## **How Sleep Apnea Affects Your Health**

Bouts of restricted airflow and gasping for air causing serious sleep interruptions and can lead to serious illnesses, especially if not treated. People who don’t get treated for sleep apnea, may have major health problems like high blood pressure, heart attack, stroke, diabetes, car accidents, and depression. Also, people who don’t get treated for sleep apnea tend not to live as long.

## **What Are the Symptoms of Sleep Apnea?**

Symptoms of sleep apnea may include:

- loud and disruptive snoring
- choking or gasping during sleep
- frequent pauses of breathing during sleep (reported by a spouse or bed partner)
- daytime sleepiness
- do not feel refreshed in the morning after a night's sleep

Many people with sleep apnea also report the following:

- waking up sweating during the night
- morning headaches
- memory problems
- depression, feeling “down”

If you are experiencing any of these symptoms, or complaints you should speak with your doctor to find out if you have sleep apnea.

## **What Happens If You Don't Get Treated?**

Sleep apnea can affect your work and other important tasks.

This is because:

- you are likely to be less productive
- you may make more mistakes
- you are more likely to miss days from work
- you will have less energy to spend with family and friends

If you don't get treatment, sleep apnea can cause major health issues:

- it can lead to high blood pressure
- it can lead to diabetes
- it can lead to memory loss

## **How Is Sleep Apnea Treated?**

The good news is that sleep apnea can be treated. If treated, you will likely have more energy, feel less tired, and feel refreshed.

Using a special machine: This is called a Continuous Positive Airway Pressure (CPAP) machine and it is the best treatment for sleep apnea. The CPAP machine works by pumping air into your airway. PAP is a sealed mask that you wear over your nose while sleeping. Sometimes, you may have to wear the mask over both the nose and mouth. Air is pumped through a tube to the mask and a small pressure is provided to keep the airway from closing.

**Losing weight:** If you are overweight, losing as little as 10-15 pounds can help make the sleep apnea symptoms better. You may need to lose more weight to have an effect on sleep apnea.

**Having Surgery:** You can also get surgery to help if you are overweight to lose weight, and surgery may help with the sleep apnea symptoms. There are different surgeries on the tissues of the throat and/or jaw that may, in some cases, make the sleep apnea symptoms better. The results with these types of surgery are not clear.

**Using an oral device:** The most common oral device is called Mandibular Advancement Device (MAD). This is a mouthpiece (dental device) that clips onto the teeth and pulls the lower jaw or tongue forward. This device is most useful for people with mild or moderate sleep apnea. This is also for people who need treatment because the snoring is so disruptive.

**Using other medical devices:** There are a lot of new medical devices that may help with sleep apnea, but it is not clear if they are very good. You should speak with your doctor about your treatment options.

**Taking medications:** There are no FDA-approved medications for sleep apnea. For individuals who still feel asleep after treatment may be helped with certain medications.

The most important rule is that any treatment for sleep apnea needs to be checked by a medical professional who specializes in sleep disorders. You will need to have a test of your breathing while sleeping in order to find out what the best treatment is for you.

## **How Do I Find Out If I Have Sleep Apnea?**

The only way to be sure you do or do not have sleep apnea is to have a sleep study. If the symptoms common to sleep apnea, as listed in the “What do people with sleep apnea (or their partners) complain about” section, apply to you, the first step is to talk to a doctor or health care provider to help you to confirm if you may have sleep apnea.

A health care provider can assess your risk for sleep apnea. You should talk about your problems with sleep and any symptoms with your doctor or other health care provider. The doctor will get your medical history, do a physical exam that includes looking at your throat and then may give you a referral for an overnight sleep test.

## **What is a “Sleep Study” and What Happens?**

**What’s it called:** A sleep study, also called a polysomnogram or home sleep study (see: <https://sleep-disorders.net/polysomnography-sleep-study/>), is the only way to know for sure whether you do or do not have sleep apnea.

Where you do it? In the past, these studies were always done in a sleep lab—located either in a hospital or a community center—but now you can do this study at home.

Approval for a sleep study: Your doctor will decide if you can do the home sleep study. Then your doctor should give you a referral for an overnight sleep study done at a lab. A sleep lab may be in a hospital or in the community. A board-certified sleep doctor will likely be involved in going over the study results with you.

Differences between a lab and at-home sleep study: When the study is done in a sleep lab, there is usually a technician present, and there may be sensors on your head and face used to monitor your brain activity and review your sleep. Some studies will also record your heart rate (EKG) and limb movements. All this information is used to diagnose sleep apnea and look for other sleep disorders. In the home, testing is a little different. As of today, home sleep studies can diagnose many cases of sleep apnea, but generally are NOT very good for diagnosing other sleep disorders.

What happens: During a sleep study, sensors (like the ones used for EKG testing) will be placed on your head and face to record your breathing and measure your blood oxygen level. A little clip shines a light through your skin to do this. Most people find the testing not to be hard or uncomfortable. A common statement is “Although I looked like something from a bad horror movie after hookup, the sensors didn’t bother me during the night.”

What are the risks: There are very few risks—or things that could harm you—to having a sleep test. The biggest risks come from not being tested.

What happens after the test: A board-certified sleep doctor will likely be involved in going over the test results with you. The results will show you how many times you stopped breathing during sleep.

## **Sticking to Your Sleep Apnea Treatment**

For your sleep apnea symptoms to get better, you will need to stick to the treatment discussed with your healthcare provider. This will help your sleep problems and other health problems get better. There is no cure for sleep apnea, but if you are treated, it will reduce problems with weight, blood sugar, and high blood pressure.

## **Tips to Help You Stick to the Treatment**

Get technical help: Tell your doctor right away of any problems that you have with the PAP machine. The doctor can make adjustments to the PAP machine to best fit you. The doctor may change the machine too. You should never feel embarrassed to ask for help, as a correct fit for the machine will make it more likely that you will stick with the treatment and so become much healthier.

**Get support:** Talk to your friends and family for support. It is especially important to discuss your condition and treatment with your spouse or bed partner as they can be extremely helpful in reminding you to use the machine and to give you other support you. Find a support group—talking to other people going through what you are experiencing can be very helpful, especially in finding creative solutions to problems.

**Set up a routine:** Try wearing the machine while watching T.V. for about an hour before you go to bed. Using the machine should become a part of your bedtime routine. Have the machine at bedside to help remind you to use it. Remember, the more you use the machine, the more you will sleep and the better you will feel.

**Start out slow:** After you to talk with your doctor, you might try starting out using the PAP only a few hours each night. Then, increase the number of hours you use the machine until you use it for a full night.

**Use a humidifier:** This will help to reduce dryness in your nose and mouth.

**Be patient:** Like most things that we try out for the first time, it will take time to get used to the PAP machine. If you don't use the PAP machine, you will not sleep better and you will not have a restful night. Sleep apnea is a lifelong condition. Using the PAP machine all the time will help you.

## **Troubleshooting Treatment Challenges**

If you experience:

- dry mouth
- dry nose
- runny nose
- eye irritation
- sneezing
- nasal congestion

**Solution:** Talk to your doctor about changing the mask or adding heated humidification.

**Fear of being closed in:** If you feel nervous or anxious when being closed in (like in an elevator), you may have a fear of being in closed spaces. People who are fearful of being in closed spaces find it hard to use their PAP machine.

**Solution:** Try wearing the mask for a few hours during the day to get used to it. Relaxing and deep breathing exercises might also help too.