

## Sleep Apnea

Obstructive sleep apnea (OSA) affects millions of people. Apnea is a condition in which breathing stops for 10 seconds or longer. Obstructive sleep apnea happens when the airway is blocked during sleep. No air moves in or out of the lungs. The blockage may be caused by the tongue or the soft part of the mouth falling over the airway.

During apnea, the oxygen level in the blood falls. When this happens, a person will wake up slightly, without knowing it, to start breathing again. Apnea can last from just a few seconds to more than a minute. It can happen many times during the night, and disrupts restful, healthy sleep. The lack of sleep may cause:

- Daytime sleepiness
- Headaches
- Lack of concentration
- Irritability
- Poor memory
- Accidents

If OSA is left untreated, the low oxygen level may harm the heart and other organs.

### OSA testing

Testing for OSA may begin with an overnight home sleep test. If needed, your physician may ask you to do a sleep study at the hospital. This study is done in the Sleep Laboratory at Northwestern Memorial Hospital Sleep Disorders Center. It is often done at night so that the care team can check your normal sleep patterns. During the study, the care team will record your brain, heart, muscle activity and eye movements. They will also check your heart rate, blood oxygen level and breathing.

### OSA treatment

Most often, people with OSA use nasal continuous positive airway pressure (CPAP) as a treatment. The nasal CPAP machine uses a mask that fits over your nose. The air blows through your nose into your upper airway. The constant air pressure keeps your airway open. This lets you breathe normally and have a restful sleep (Figure 1).

**Figure 1. Nasal CPAP keeping the upper airway open**



During your nasal CPAP treatment for OSA, it is important to follow these instructions:

- Keep up with your routine medical examinations.
- Contact your physician if you continue to be sleepy during the day or if you have a weight gain or loss of 15 pounds or more. You may need the pressure setting on your CPAP machine changed.
- Replace your CPAP masks and hoses on a regular schedule. Masks and hoses that are worn out can have a poor seal and leak air.

## **Surgery precautions for people with OSA**

Some medications used during surgery may cause even the normal airway to collapse or make OSA worse. It is important to know if you have an increased risk for airway collapse or have OSA. The surgical team will put special safeguards into place for people with OSA who are having surgery.

### ***Before surgery***

People who are scheduled for surgery are screened for OSA. Based on your health history and the type of surgery planned, this may include a sleep study.

If you have OSA, it is important to follow these instructions before surgery:

- Bring your CPAP unit, masks, power cord and accessories to the hospital. Please label all your equipment with your name. Make sure to empty water from the humidifier chamber.
- Be sure to tell your nurse that you have OSA.
- Talk with the anesthesiologist (physician who will manage your anesthesia) about your OSA and prescribed CPAP pressure.

### ***During surgery***

The anesthesiologist will take specific steps to protect your airway. They will use anesthesia medication for your specific needs during surgery. They will check your airway closely during surgery. When you are awake after surgery, they may restart your CPAP.

### ***After surgery***

Continue to use your CPAP machine during sleep.

If you have any questions, please talk with your physician.