

Upper Airway Resistance Syndrome

Upper Airway Resistance Syndrome (UARS):

A sleep-breathing disorder characterized by partial airway resistance to breathing during sleep. UARS can be described as a “lighter” sleep-breathing disorder than Obstructive Sleep Apnea. People with UARS have some difficulty breathing during sleep, which makes them tired during the day.

Features

UARS, like Obstructive Sleep Apnea (OSA), involves airway resistance to breathing during sleep. The airway partially collapses, which affects breathing, but not enough to reduce blood oxygen levels. Although not as severe or obvious as OSA, this sleep disorder not only interferes with sleep, but may negatively impact health.

There is some controversy in the medical community as to the existence and relevance of UARS. Among those who do recognize this condition, it is considered to be a mild form of sleep-disordered breathing.

Many people with UARS have no idea that they have a sleep-breathing disorder. They do not likely snore dramatically enough to awaken their bed partners, or at all. Nor do they experience as much daytime sleepiness as those with OSA. Instead, they feel fatigued or may be diagnosed with other conditions such as Depression or Sleep-Onset Insomnia.

Diagnosis

A special type of sleep study is required to positively identify upper airway resistance. This type of polysomnography not only records several bodily functions, including respiratory

rate, heart rate, and blood-oxygen levels, but also Pes. Pes measures fluctuations in pressure around the esophagus that are associated with UARS. Because apneas and hypopneas detected through the use of standard polysomnography are either absent or minimal, Pes is the gold standard diagnostic test for UARS.

Treatment

Treatment for UARS is similar to that of sleep apnea. The first and most effective treatment involves mechanical therapy through the nightly use of a Continuous Positive Airway Pressure (CPAP) machine to aid with breathing during sleep. The CPAP machine or a variation of it blows air through a mask worn over the nose, forcing the airway open. Reimbursement for the CPAP device may be a problem if an insurance provider does not recognize UARS.

As with sleep apnea, surgical options such as Uvulo Palato Pharyngo Plasty (UPPP) and linguloplasty may be able to increase airway size.

Behavioral Therapy such as weight loss and Good Sleep Habits should accompany CPAP therapy, or may be all that is needed to treat mild UARS. Finally, dental devices such as the mandibular advancement oral appliance or other small appliances may be enough to open the airway, in some cases.



Do I have UARS?

It takes at least one half hour for me to fall asleep at night.

I have headaches.

I have Irritable Bowel Syndrome.

I snore or make noises in my sleep.

I feel tired, even after sleeping.

I have high blood pressure or borderline high blood pressure.

UARS Mechanics

A structural or mechanical problem reduces the flow of air in those with Upper Airway Resistance Syndrome. The airway tends to be smaller in size or otherwise restricted. Airway tissues relax during sleep, reducing the diameter of the airway even more.

Although the airway does not become as narrowed or completely blocked as with obstructive sleep apnea, the constriction is still enough to reduce air flow. Breathing then becomes labored. UARS can be likened to breathing through a straw. Enough air is passing through to maintain healthy blood-oxygen levels, but not enough to prevent a brief arousal from sleep due to the work of breathing.



Need more information?

Visit the SleepMedicine Education web site at: sleepmedicineeducation.com for additional publications. See also:

SleepIssues: "Breathing & Sleep"

SleepGuides: "Treating Sleep Disorders"

To schedule an appointment at any Sleep Medicine Centers location, visit www.sleepmedicinecenters.com or call:

(716)92-DREAM
(877)53-SNORE

Did You Know?

Noted sleep researchers Guilleminault et al. report that up to 75% of adult patients with sleepwalking have UARS.

A 2000 study by the Walter Reed Army Medical Center (in which 44 of 527 patients were found to have UARS) found that UARS may occur in the absence of snoring and may be a cause of excessive daytime sleepiness.

A study by the Stanford University Sleep Disorders Center found that some patients with UARS and borderline high blood pressure can control their high blood pressure by treating UARS.

SleepCaptions

Risks for UARS

- ✓ Smoking
- ✓ Obesity
- ✓ Neck size greater than 17 inches
- ✓ Male gender
- ✓ African American
- ✓ Upper airway obstructions
- ✓ Neuromuscular disorders
- ✓ Connective tissue disorders
- ✓ Renal (kidney) failure
- ✓ Endocrine disorders
- ✓ Frequent use of alcohol, analgesics, and sedatives

Effects of UARS

- ✓ Chronic daytime tiredness
- ✓ Nocturia (increased urination)
- ✓ Hypertension (high blood pressure)
- ✓ Gastroesophageal Reflux Disease (GERD)
- ✓ Poor job or school performance

