

## Obstructive Sleep Apnea Symptoms

- Loud Snoring
- Gasping or Choking while asleep
- Observed pauses in breathing
- Excessive daytime sleepiness
- Morning headaches
- Trouble concentrating, irritability

## Central Sleep Apnea Symptoms

- Congestive Heart Failure
- Gasping/shortness of breath during sleep
- Witnessed episodes of stopped breathing
- Snoring may be absent
- Non-restorative Sleep

## Heart Conditions Related to Sleep Apnea

- Hypertension
- Stroke
- Coronary Artery Disease
- Congestive Heart Failure

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## Sleep & Heart Disease



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## Importance of Sleep to Your Heart

Sleep is the body's natural way of resting itself from the day's activities. The heart, which works full time day and night, also needs some "rest". Because the heart is still functioning, but typically slows during sleep, any unhealthy heart functions can affect the quality of one's rest.

### The connection between sleep disorders and heart health is increasingly being recognized

#### Hypertension (High Blood Pressure)

"Several studies have shown a link between hypertension and the presence of Obstructive Sleep Apnea (OSA)."<sup>1</sup> Obstructive sleep apnea occurs when the airway becomes blocked repeatedly during the night and breathing temporarily ceases.

Evidence suggests OSA can lead directly to the development of hypertension. Patients with OSA typically have increased blood pressure during these apnea spells. These occurrences can happen hundreds of times per night. The resulting increase in blood pressure stresses the heart.

If there is difficulty treating the hypertension, it may be that OSA is present and still putting stress on the heart throughout the night. Therefore, treating OSA will help treat the hypertension.

1. Hypertension and the presence of Obstructive Sleep Apnea (*Chest*. 2004; 125:805-807.) 2004 American College of Chest Physicians White Coat Hypertension and sleep Apnea Is There a Link? **Hecto O. Ventura, MD and Mandeep R. Mehra, MD**

## Treating Sleep Apnea Improves Heart Health

"Studies have shown that patients who use CPAP therapy for Obstructive Sleep Apnea greatly improve heart disease complications."<sup>2</sup>

Using CPAP therapy can reduce or even eliminate the need for hypertension medications.

"CPAP can improve inspiratory muscle strength as well as relieve shortness of breathe and fatigue in patients with central sleep apnea (CSA)"<sup>3</sup> Improving CSA can also reduce the severity of coronary artery disease.

**If you already have hypertension, CAD, CHF or a history of stroke, talk with your healthcare provider about sleep and breathing disorders. He/she may suggest a sleep study to determine if you have any sleep abnormalities.**

#### Coronary Artery Disease

When a person has coronary artery disease (CAD), blood and oxygen flow to the heart is limited. CAD is frequently found in persons with obstructive sleep apnea and is caused by hypertension.

The events during an apnea can put strain on the heart, such as limited blood flow, making CAD worsen. Studies have shown that people with OSA have an increased morbidity rate from CAD.

Treatment of OSA can reduce chances of death due to coronary artery disease.

2. *New England Journal of Medicine*. 2005 Mpv 10; 353(19);2025-2033.  
3. Improving CSA can reduce severity of coronary artery disease  
*American Journal of Respir. Crit. Care Med.*, Vol 153, No. 1, 01 1996, 277-282

## Stroke

During a stroke, blood and oxygen supply is reduced or cut off completely resulting in brain damage.

The most common cause of stroke is hypertension, patients with untreated OSA may have a higher probability of having a stroke.

If OSA is treated, hypertension can improve, lowering the chances of having a stroke.



#### Congestive Heart Failure

Congestive heart failure (CHF) occurs when the heart is damaged so much so it is unable to pump blood efficiently.

"About 40% of people with congestive heart failure also have a sleep-related breathing disorder called Central Sleep Apnea."<sup>4</sup>

CSA patients have interruptions of breathing just like those with obstructive sleep apnea. However, the CSA sufferer stops making efforts to breathe even though his airway is open.

CSA causes frequent awakenings, drops in oxygen levels, and increased stress on the heart. This condition can decrease heart function and worsen heart failure.

4. <http://medicalcenter.osu.edu/mediaroom/press/article.cfm>