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### What Factors Can Affect Our Sleep?

Sleep disorders are very common conditions that can be overcome. It is important to understand what affects sleep and the importance of sleep. The following will help you understand sleep disorders and their treatment.

#### Insomnia

Insomnia is trouble falling asleep, staying asleep, and/or waking up too early. Insomnia can be a short-term problem or a chronic, long-term problem. People with insomnia often have a hard time relaxing in bed and turning off the mind. They often spend time in bed thinking, worrying, tossing, turning, and trying hard to sleep. Their sleep is very unpredictable; they never know what kind of night's sleep they will have. They often have several nights of poor sleep followed by a better night's sleep followed by a few more poor nights, and so on.

Persons with insomnia often have a number of daytime consequences of difficulty sleeping that include: not feeling rested; feeling fatigued or 'run down'; problems with attention, concentration or memory; problems with work or school performance; problems with relationships; feeling irritable; mood problems; low motivation, energy, or desire to start an activity.

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### Sleep Apnea

Sleep is recognized as an important part of disease prevention and health promotion. [Sleep and Sleep Disorders \(CDC\)](#) provides a brief overview of disorders, how much sleep you need and tips for the promotion of sleep.

[Sleep Apnea \(MedlinePlus\)](#) also called sleep-disordered breathing is a common disorder. As you are sleeping, it can cause shallow breathing or your breathing can stop for a period of time.

[Apnea del sueño \(Medline Plus\) \(en Español\)](#)

[El sueño y los trastornos del sueño \(CDC\) \(en Español\)](#)

[What Is Your Snore Score? \(American Sleep Apnea Association\)](#)

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### Medical or Psychiatric Illness

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### Related Links

- [Five things you should know BEFORE you go to the doctor](#) (369 KB)
- [Helpful Health Links](#)
- [Nutritional Information from the VA Canteen Service](#)
- [Healthier US Veterans](#)
- [VA Multiple Sclerosis Center of Excellence](#)
- [My HealtheVet Learning Center](#)

### TriCare Online

Are you a TriCare Online registrant? You

Medical and psychiatric illnesses including stress, anxiety, depression, worry, pain and medications can affect sleep. Body tension and too much thinking and worrying in bed can affect our sleep.

[Post Traumatic Stress Disorder \(PTSD\) \(My HealthVet\)](#)

[Stress \(MedlinePlus\)](#)

[Estrés \(MedlinePlus\) \(en Español\)](#)

[Anxiety \(Medline Plus\)](#)

[Ansiedad \(Medline Plus\) \(en Español\)](#)

[Depression \(Medline Plus\)](#)

[Depresión \(Medline Plus\) \(en Español\)](#)

[Sleep and Posttraumatic Stress Disorder \(National Center for PTSD\)](#)

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### **Restless Legs Syndrome and Periodic Limb Movement Disorder**

Restless legs syndrome is a sleep disorder but it doesn't happen while you are sleeping! Periodic limb movement disorder is a sleep disorder that occurs during sleep. Restless legs syndrome and periodic limb movement disorder are two different sleep disorders but they are closely related to each other.

People with restless legs syndrome complain of uncomfortable or unpleasant feelings in their legs. They often use the words 'creepy', 'crawly', 'itchy', 'like bugs in my legs' and describe the sensation as a feeling that is 'deep down' in the legs. People with restless legs syndrome have a strong urge to move their legs. The unpleasant feelings and the urge to move their legs happen at the same time. Restless legs syndrome is not a muscle cramp and it is not 'fidgety legs'. Persons are typically lying down or sitting for a period of time when the unpleasant sensations and urge to move their legs occur. Usually the longer a person is resting, the worse the problem becomes. When persons are confined to the car, a movie theatre seat, or an airplane seat, restless legs syndrome can be a real problem. Restless legs syndrome is often worse in the evening and at night. Restless legs syndrome is a sleep disorder that keeps people from falling asleep and falling back to sleep.

Persons with periodic limb movement disorder kick their legs and flex their feet up during sleep. It can happen quite often during the night. Often the bed partner is the one who notices the leg movements but it may wake the person who is experiencing them. Periodic limb movement disorder can also include the arms but is more common in the legs. Periodic limb movement disorder occurs more in older persons.

Many persons with restless legs syndrome also have periodic limb movement disorder. Restless legs syndrome and periodic limb movement disorder can be worsened by such things as sleep deprivation, certain medications, excessive hot or cold temperatures, alcohol, and caffeine.

[Read more about restless legs syndrome \(RLS\) and periodic limb movement disorder \(PLMD\):](#)

[Sleep Disorders \(Patient Education Institute\) \(MedlinePlus\) \(Requires Flash Player\)](#)

[Restless Legs \(MedlinePlus\)](#)

[Síndrome de las piernas inquietas \(MedlinePlus\) \(en Español\)](#)

[What is RLS? \(RLS Foundation\)](#)

[Fact Sheet on Periodic Limb Movements in Sleep \(National Sleep Foundation\)](#)

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### **What about Sleep Medication?**

Sleep medication is not the best way to treat a persistent or chronic insomnia problem. Some people can benefit from sleep medication for short-term, intermittent use – a few nights only. Sleeping pills may work well for a while and then start to

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lose their effectiveness requiring larger doses in order to work. There is not much research on the long-term use of sleep medication.

Some things to remember about sleep medication

- Newer brands of sleeping pills may have less side effects but they are still not recommended for a persistent or chronic insomnia problem
- You can develop serious side effects by stopping medication abruptly
- Do not make any changes in sleep medication use unless you talk to your health care provider

#### Side Effects of Sleep Drugs (FDA)

Finally, your provider may want to do a sleep study on you. Sleep studies are tests that watch what happens to your body during sleep. The studies are done to find out what is causing your sleep problems

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Reviewed/Updated Date: July 2009

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Patient Education Subject Matter Experts: **Eileen Canzonetti, Karen M. Ott, Patricia Jost**

#### **Tip of the Day**



**Have fun with exercise!** Not all exercise is boring or costly. Most of the time you may not realize you are raising your heart rate and burning calories while you go through the day. Regular, moderate activity, such as three 10-minute walks a day, reduces your risk of death from disease by as much as 60%.

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# Research



## Diagnosis and Prevention of Sleep Apnea in Cerebrovascular Disease

### Project Team

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### The Need

The primary aims of this project are to evaluate whether a diagnostic and therapeutic intervention strategy among veterans with cerebrovascular disease, hypertension, and obesity that consists of using unattended polysomnography to diagnose sleep apnea and auto-titrating CPAP with a targeted adherence evaluation and educational protocol to treat sleep apnea results in:

1. Improved rate of diagnosed sleep apnea. We hypothesize that unattended polysomnography will increase the rate of diagnosed sleep apnea from 10% (usual care) to 60% (intervention).
2. Improved rate of treated sleep apnea. We hypothesize that the intervention will increase the treatment rate among patients with sleep apnea from 15% (usual care) to 50% (intervention).
3. Reduced hypertension. We hypothesize that intervention patients compared with usual care patients will have a 10mm Hg lower mean 24-hour systolic blood pressure.

The secondary aims are: 1) to determine whether the intervention strategy is effective in reducing the number of antihypertensive medications, 2) to collect cost data in support of a cost-effectiveness evaluation if the intervention strategy is found to be effective in the primary analysis, and 3) determine whether the intervention strategy is effective in reducing daytime sleepiness.

### Systems-Research Tools

We will use the electronic medical databases to identify patients at two VHA medical centers with cerebrovascular disease who have hypertension, and obesity and randomly assign N=167 to the intervention arm and N=167 to the control (usual care) arm. Patients in the intervention arm with evidence of sleep apnea will receive auto-titrating CPAP therapy for one year. Control patients will receive usual care and their primary care providers will be notified that they are at risk of having sleep apnea; control patient will receive unattended polysomnography at the end of the one-year study period. Twenty-four hour blood pressure will be measured in both groups at baseline and after one-year. The primary outcomes are sleep apnea diagnosis rate, sleep apnea treatment rate, and mean 24-hour systolic blood pressure. The sample size provides at least 80% power to detect the hypothesized differences in the primary outcomes between the intervention and usual care arms.

# Research



## Project Overview

Sleep apnea is common among veterans, occurs in the majority of patients with cerebrovascular disease (stroke or transient ischemic attack patients), is a cause of hypertension, and is associated with recurrent stroke and death. Continuous positive airways pressure (CPAP) safely and effectively treats sleep apnea. Unfortunately, few veterans with cerebrovascular disease are identified as having sleep apnea or offered treatment, perhaps due to the general under-diagnosis of sleep apnea or to the long wait times for polysomnography.

## The Impact on Veterans

The results of this study may improve care for veterans with cerebrovascular disease across the Veterans Health Administration (VHA) system by overcoming barriers to the diagnosis and treatment of sleep apnea. The intervention strategy has been designed to be feasible to institute across the spectrum of VHA medical centers. The results will be disseminated using both the Stroke QUERI infrastructure and the National VA Sleep Field Advisory Group.

**Department of  
Veterans Affairs**

**VA Center of Excellence for Implementation of Evidence-based Practice**

<http://www.ciebp.research.va.gov/>

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### Affiliated Centers:

Indiana University-Purdue University at Indianapolis

Center for Health Services & Outcomes Research

<http://www.indyhealthservicesresearch.org/>

National Stroke QuERI Coordinating Center

<http://www1.va.gov/stroke-QuERI/>

West Haven VA Medical Center

Clinical Epidemiology Research Center (CERC)

<http://www.cerc.med.va.gov>



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