

SLEEP AND HIGH BLOOD PRESSURE

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THINGS TO CONSIDER:

- **Over 50% of patients with heart failure have Sleep Apnea.**
- **Treatment of Sleep Apnea with CPAP has been shown to lower blood pressure levels.**

Think of two of your adult friends. Given current odds, one of the three of you will develop high blood pressure, if you haven't already. Hypertension is one of the most commonly diagnosed conditions in the world. New evidence strengthens the connection between poor sleep quality and high blood pressure.

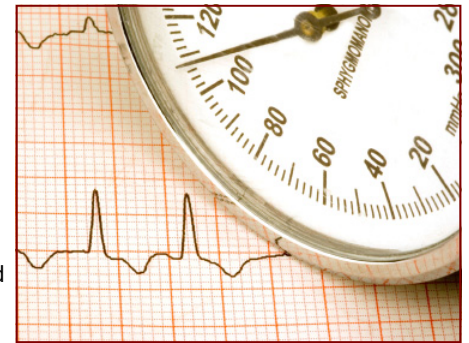
It is estimated that 7 million people die each year as a result of complications from hypertension and cardiovascular disease. With over 75 million people suffering from hypertension in the US alone, medications for high blood pressure are among the most prescribed drugs. Yet physicians advising these patients often overlook an important cause when making a diagnosis: sleep deprivation.

A recent study released by the University of Chicago examined the relationship between lack of sleep and an increase in blood pressure. The participants slept on average 6 hours or less per night. The results were surprising. Researchers found that individuals who slept fewer hours were significantly more likely to have higher systolic and diastolic blood pressure. In fact, each hour of reduction in sleep duration was associated with a *37 percent increase in the odds of developing high blood pressure.*

The study authors note, "*Laboratory studies of short-term sleep deprivation have suggested potential mechanisms for a causal link between sleep loss and hypertension.*" Sleep deprivation is associated with increased activity in the sympathetic nervous system, which controls the body's stress response. Over time, this activation could contribute to high blood pressure. (AASM 2010)

A leading cause of sleep loss and poor sleep quality is Obstructive Sleep Apnea (OSA), which has been linked to hypertension in the past. OSA is characterized by repeated collapses of a person's airway while asleep. These occlusions of the airway cause a lack of oxygen to the brain, increased arousals or disruptions from sleep, and stresses upon the heart. Symptoms of OSA include snoring, gasping or stopping breathing at night, fatigue, and high blood pressure. In fact, studies have shown that middle-aged and older adults with Sleep Apnea have a *45 percent greater risk of hypertension* than people without the condition. (JAMA 2000) Severe Sleep Apnea also leads to a *90% greater risk of a myocardial infarction* within 5 years and even mild to moderate Apnea increases the risk 25-50%.

Patients who are told they have high blood pressure should be screened for a sleep disorder. Often if there aren't other mitigating factors, treating an underlying disorder such as Obstructive Sleep Apnea can correct the hypertensive symptoms without the need for medications. For more information on sleep and high blood pressure, or to get screened for a sleep disorder, contact *Oregon Sleep Associates at 503-288-5201 or visit www.OregonSleepAssociates.com.*



BACK TO SCHOOLS TIPS FOR KIDS

Summer vacation is the time for kids to have adventures, stay out late, and enjoy themselves. But now that school has started again, it can be hard for children to adjust back to a routine conducive to learning.

Multiple studies have shown that many American youths do not get the recommended amount of sleep for their age groups. Lack of sleep in kids has been shown to negatively affect school performance, lead to increased levels of childhood obesity and Diabetes, and produce symptoms similar to ADHD. Sleep deprivation in children can be caused by sleep disorders such as Obstructive Sleep Apnea, but more often it is simply caused by bad sleep habits. Parents can sometimes have a tough time getting children to bed, but the American Academy of Sleep Medicine offers some tips to make it easier:

- Set a regular bedtime for your child, and enforce it even on weekends. Staying up late on Saturdays may throw off their body clock and make bedtime difficult early in the school week.
- A transition period may help children change their bedtime. Try putting them to sleep a half hour earlier every night until you have reached the desired bedtime. Then get them outside in the morning and expose them to sunlight. This can help them get used to being awake earlier by regulating their body clock.
- Set an electronics "black-out" an hour before bedtime. Cell phones, computers and video games all have bright screens that can prevent children from feeling tired at bedtime. The stimulation from video games can also make winding down difficult. Try a reading hour instead and encourage a healthy hobby that can last a lifetime.
- Chocolate, cola and caffeine in general should be off limits in the late afternoon and evening. There's nothing more difficult than trying to get a kid on a so-called "sugar rush" to sleep.



The AASM recommends that children get the proper amount of sleep for their age group.

For more information on sleep related issues please visit www.sleepeducation.com.

MOST AMERICANS SLEEP WITH THEIR CELL PHONES

Cell phones have become ubiquitous in modern life. Once a rare luxury only available to the rich, now they are so commonplace that even children have them in elementary school. They're found in our pockets, purses, cars, and workplaces. Unfortunately they're also found one place they shouldn't be: the bedroom.



The bright screens and extended capabilities of modern cell phones can disrupt sleep patterns.

A Pew Research survey recently reported that over two-thirds of Americans now sleep with their cell phones within reach. This may not be a serious problem if people only used them for emergency calls or as alarm clocks, but with the advent of smartphones the usage of cell phones has changed. They are now more commonly used to check email, watch videos, text, and surf the web. These practices, while useful during the daytime, disrupt and delay sleep for many people. In addition to the bad habits cell phones encourage in the bedroom, their screens can actually alter your brain chemistry to disrupt your sleep cycle and cause insomnia. Many phones have bright screens that emit blue and green light. These wavelengths can alter the natural human light reactive circadian process by preventing the body from secreting melatonin, a sleep inducing neurotransmitter. Many sleep specialists who have encouraged people not to watch TV before bedtime for the same reason now extend the warning to avoid cell phones and computer screens around bedtime. If you're an avid texter, internet surfer, or compulsive email checker try turning of your phone an hour before bed. Don't worry, it will still be there the next morning and you may just get a better night's sleep.

PLAYING CATCH UP: WEEKEND RECOVERY SLEEP MAY NOT BE ENOUGH

It's a common scenario for millions of Americans: Get up early, work a nine-to-five job, stay up late, and make up for lost time on the weekends. But this cycle takes its toll on people's bodies and minds, and eventually it will catch up to you.

A study released in the August 2010 issue of *SLEEP* details the extent to which repetitive sleep deprivation can affect cognitive performance. Participants were assigned a reduced sleep schedule for five consecutive nights then randomly assigned different lengths of recovery sleep to simulate weekend rest after a workweek. The subjects were then tested on their cognition, motor skills, and sleepiness.

The researchers found that those who have their sleep time reduced on a regular basis, such as when someone has to rise early for a job, accrue significant *sleep debt*. Sleep debt is the result of sleep deprivation in which an individual does not experience a feeling of being rested or refreshed. The drive for rest becomes increasingly strong and affects peoples' daytime functioning. The subjects who had longer recovery periods scored slightly higher on tests but their performance was still impaired. The evidence suggests that most people cannot sleep long enough on the weekends to compensate for lack of sleep throughout the week. Worse still, trying to sleep in or make up for lost sleep time on weekends often disrupts a person's normal sleep cycle, further complicating matters when Monday arrives.

If you find yourself trying to compensate for a lack of sleep by catching up on the weekends, it may be a sign that you need to improve your sleep hygiene. Try to cut out caffeine and alcohol before bed, eliminate distractions such as television from the bedroom, and try going to bed earlier and at the same time each night. You may not be able to change your work schedule, but adopting a better sleep schedule will make it that much easier to deal with. For more information on sleep hygiene, visit www.oregonsleepassociates.com.



Trying to catch up on sleep over the weekend may won't repay the week's sleep debt.

MODERATE EXERCISE MAY HELP CHRONIC INSOMNIA

A good diet and a regular exercise regimen have been heralded for years as the best way to lose weight and stay healthy. Regular moderate exercise may also help people to combat the most common sleep disorder: Insomnia.

Many people suffer from Insomnia, the inability to fall or stay asleep. There can be multiple causes for the condition including stress, bad sleep hygiene, hormone imbalance, and Obstructive Sleep Apnea. When faced with repeated instances of insomnia, one should contact a sleep specialist for evaluation. Appropriate testing may rule out a physical cause of the problem. If there is no evidence of an underlying sleep disorder, doctors may recommend several countermeasures to help alleviate the condition. One that has great value is the introduction of a moderate exercise program. Researchers recently investigated different exercises and determined that a light to moderate intensity daily workout worked best to eliminate insomnia. Examples of the low to moderate exercises found to be beneficial to sleep include 50 minutes light jogging on a treadmill, yoga, and resistance band training. They found that higher intensity workouts close to bedtime, while beneficial physically, often actually disrupt people's sleep patterns. Instead, it is recommended that exercise should occur 4-8 hours before bedtime to avoid sleep disruption. (AASM 2010)

If you have chronic primary insomnia, regular exercise may help to get you into a normal sleep cycle. As with any change in physical activity, you should consult with your physician before beginning a new exercise regimen. For more information or to seek help for your insomnia problems, contact *Oregon Sleep Associates* at 503-288-5201.



Daily moderate exercise helps Insomniacs to get to sleep.

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SPOTLIGHT ON OSA: 5 YEARS OF HELPING PEOPLE SLEEP

In September 2005, Oregon Sleep Associates opened its doors to help the public get a better night's sleep. Since then, we've helped literally thousands of people improve their health by diagnosing and treating sleep disorders.

At OSA, patients will find a welcoming environment. Our friendly office staff will assist you in setting up a consultation with one of our board certified sleep physicians, regardless of a doctor's referral. Dr Daniel Root and Dr Jennifer Kim provide a full consultation in which they will review your symptoms and sleep complaints. They'll help you determine the best course of action to address the problem, including offering complete overnight sleep testing.

Our five-bed fully accredited sleep center is a comfortable, clean, and relaxing environment to have a sleep study. Set up like a hotel, each room features a fully adjustable Sleep Number bed, TV/DVD with cable, private bathroom and shower, and free WiFi. Our night technicians are highly trained to make sure your stay is as comfortable and beneficial as possible. Unlike many other facilities, the doctors are there most mornings after the study to provide you with instant results and feedback.

If you have trouble sleeping or if you're just curious and would like to learn more about sleep medicine, please feel free to give us a call or stop by. We might just be able to help you get on the path to a better night's sleep.