



Fact Sheet

## Sleep & Pain

*“Getting enough sleep every day is as important to your health as eating healthy and being physically active.”* —Woodie Kessel, MD, MPH, Assistant Surgeon General, USPHS (retired), a member of the National Sleep Foundation (NSF) 2009 Sleep in America poll taskforce.<sup>1</sup>

### About

Sleep is critical for renewing our daily mental and physical energy. There are many potential reasons for lack of sleep, such as environmental causes, comfort of bedding, food and beverage choices, stress, erratic work or travel schedule, physical/physiological abnormalities, hormonal imbalances and many others.<sup>2</sup> Pain and chronic painful conditions can also lead to difficulty sleeping.

**“An estimated 15% of all people have sleep problems and two-thirds of chronic pain sufferers experience sleep problems.”<sup>3</sup>**

An estimated 15% of all people have sleep problems. However, the National Sleep Foundation (NSF) reports that two-thirds of chronic pain sufferers experience sleep problems. Bedtime, for some people, is a time of relaxation and rest from the hectic day past and the one to follow. For the

person living with chronic pain, it is unavoidable time alone with your pain. The pain may be magnified because it is the main focus of brain activity while you are lying in bed.<sup>3</sup>

When a chronic pain sufferer experiences interrupted sleep, a vicious cycle ensues – sleep disruption caused by chronic pain exacerbates the pain, which in turn interrupts sleeps. This can quickly become an insufferable pattern.<sup>4</sup> Given the reciprocal relationship between sleep and pain, there is increasing research interest in sleep disturbance linked to chronic pain.<sup>4</sup>

It is important to discuss options and an appropriate treatment plan with your health care provider. As part of a comprehensive pain management plan, additional ways to manage pain and sleep better may involve complementary and alternative therapies.<sup>6</sup>

## Facts

At least 40 million Americans each year suffer from chronic, long-term sleep disorders, and an additional 20 million experience occasional sleeping problems. These disorders and the resulting sleep deprivation interfere with work, driving, and social activities. They also account for an estimated \$16 billion in medical costs each year, while the indirect costs due to lost productivity and other factors are probably much greater. Doctors have described more than 70 sleep disorders, most of which can be managed effectively once they are correctly diagnosed. The most common sleep disorders include insomnia, sleep apnea, restless legs syndrome, and narcolepsy.<sup>6</sup>

The inability to get a good night's sleep hurts—literally. Pain, whether it is chronic back pain, an acute episode or pain from a disease condition, may prevent you from getting a good night's sleep. You may wake up hurting even more.<sup>5</sup>

Pain interferes with the normal cycles of light and deep sleep the body requires to wake up refreshed. Pain can interfere with the normal cycles of sleep, creating a non-specific pattern of alpha delta sleep waves found in other painful conditions such as arthritis and fibromyalgia, but also in healthy people.<sup>5</sup>

One study found that insomnia was present in 53% of chronic pain patients, when compared with only 3% in pain-free controls. Significant positive correlations with insomnia severity were detected for all six variables of interest (pain intensity, sensory pain ratings, affective pain ratings, general anxiety, general depression and health anxiety).<sup>4</sup>

### Other Causes of Sleep Problems When You Are in Pain<sup>5</sup>

- Anxiety and depression can make it hard to fall asleep or stay asleep, and the consequent sleep loss can lead to worse pain. Anxiety and depression themselves can also increase a person's sensitivity to pain.
- Some breathing-related sleep disorders are associated with obesity — and obesity is also linked with back pain. Sleep disorders like obstructive sleep apnea interfere with normal sleep patterns, leading to insufficient sleep and poor sleep quality.
- Limb movement disorders, such as restless legs syndrome, might further disrupt the normal sleep pattern.
- Fibromyalgia can cause pain throughout the body. It's also linked with fatigue, anxiety, and sleep problems.
- Many prescription medications can impair the quality of your sleep. For instance, medications for conditions such as high blood pressure, epilepsy, and ADHD may also cause sleep problems.

According to the National Center for Complementary and Alternative Medicine (CAM), only 2.2% of the U.S. population who suffer from insomnia and/or trouble sleeping used CAM techniques. Some CAM therapies, sometimes referred to as integrative medicine techniques, which may improve sleep quality and duration, include yoga, progressive relaxation and hypnosis.<sup>7</sup>

When people finish treatment for cancer, they want to bounce back to their former vital selves as quickly as possible. But a new Northwestern Medicine study - one of the largest survivor studies ever conducted - shows many survivors still suffer moderate to severe problems with pain, fatigue, sleep, memory and concentration three to five years after treatment has ended.<sup>8</sup>

## Additional Resources

### **American Sleep Apnea Association**

6856 Eastern Avenue, NW  
Suite 203  
Washington, DC 20012  
Phone: (202) 293-3650  
Fax: (202) 293-3656  
[www.sleepapnea.org](http://www.sleepapnea.org)

### **American Sleep Association**

Contact via website only  
[www.sleepassociation.org](http://www.sleepassociation.org)

### **Awake In America**

P.O. Box 51601  
Philadelphia, PA 19115-6601  
Phone: (215) 764-6568  
[www.awakeinamerica.org](http://www.awakeinamerica.org)

### **Narcolepsy Network**

110 Ripple Lane  
North Kingstown, RI 02852  
Phone: (888) 292-6522  
Phone: (401) 667-2523  
Fax: (401) 633-6567  
[www.narcolepsynetwork.org](http://www.narcolepsynetwork.org)

### **National Sleep Foundation**

1010 N. Glebe Road  
Suite 310  
Arlington, VA 22201 USA  
Phone: (703) 243-1697  
E-mail: [nspf@sleepfoundation.org](mailto:nspf@sleepfoundation.org)  
[www.sleepfoundation.org](http://www.sleepfoundation.org)

### **Restless Legs Syndrome Foundation**

1610 14th St NW  
Suite 300  
Rochester, MN 55901  
Phone: (507) 287-6465  
Fax: (507) 287-6312  
E-mail: [rlsfoundation@rls.org](mailto:rlsfoundation@rls.org)  
[www.rls.org](http://www.rls.org)

Resources verified July 2011.

# References

1. National Sleep Foundation.  
<http://www.sleepfoundation.org/sites/default/files/2009%20NSF%20POLL%20PRESS%20RELEASE.pdf>.  
Accessed May 25, 2011.
2. "Sleep & Health" a Wellness Booklet from the American Academy of Sleep Medicine. Copyright 2005.
3. About.com, Back and Neck. <http://backandneck.about.com/od/chronicpainconditions/p/painsleep.htm> Accessed June 8, 2011.
4. Tang NK, Wright KJ, Salkovskis PM. Prevalence and correlates of clinical insomnia co-occurring with chronic back pain. *J Sleep Res.* 2007 Mar;16(1):85-95.
5. WebMD. Back Pain Health Center: Chronic Back Pain and Sleep. <http://www.webmd.com/back-pain/chronic-back-pain-sleep> Accessed June 8, 2011.
6. American Sleep Association. <http://www.sleepassociation.org/index.php?p=whatissleep> Accessed June 8, 2011.
7. Barnes PM, Powell-Griner E, McFann K, Nahln RL. Complementary and alternative medicine use among adults: United States, 2002. Advance data from vital and health statistics; no 343. Hyattsville, Maryland: National Center for Health Statistics. 2004.
8. Medical News Today. Five Years After Cancer Treatment Ends, Many Survivors Still Suffer Pain, Fatigue, Insomnia, Foggy Brain. June 5, 2011. <http://www.medicalnewstoday.com/releases/227501.php?nfid=22205>. Accessed June 8, 2011.