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Sleep Disorders and CAM: At a Glance

People who have trouble sleeping may try dietary supplements, relaxation therapies, or other forms of complementary and alternative medicine (CAM) in an effort to fall asleep faster, stay asleep longer, and improve the overall quality of their sleep. This fact sheet provides basic information on sleep disorders and “what the science says” about the effectiveness of CAM practices people use as sleep aids. If you are considering a CAM therapy for sleep problems, this information can help you talk with your health care provider about it.

About Sleep Disorders

Chronic, long-term sleep disorders affect millions of Americans each year. These disorders and the sleep deprivation they cause can interfere with work, driving, social activities, and overall quality of life, and can have serious health implications. Sleep disorders account for an estimated \$16 billion in medical costs each year, plus indirect costs due to lost productivity and other factors.

There are more than 80 defined sleep disorders. Insomnia—difficulty falling asleep, difficulty staying asleep, and/or poor sleep quality—is one of the most common sleep disorders. Insomnia tends to increase with age, and is often associated with an underlying medical or psychiatric condition. Other sleep disorders include sleep apnea (breathing interruptions during sleep), restless leg syndrome (a tingly or prickly sensation in the legs), and narcolepsy (daytime “sleep attacks”). This fact sheet focuses on insomnia.

Lifestyle changes—for example, establishing a regular sleep schedule, relaxing before bedtime, exercising regularly, and avoiding alcohol, caffeine, and nicotine—can sometimes improve sleep quality. (A common

misconception is that drinking alcohol will aid sleep; although it can bring on a light sleep, alcohol actually robs people of the deeper stages of sleep.) Many prescription medications and over-the-counter sleep aids are widely advertised and used for insomnia; most have side effects and are intended for short-term use. Evidence suggests that cognitive-

To learn more about healthy sleep, visit the National Heart, Lung, and Blood Institute’s *Your Guide to Healthy Sleep* at: www.nhlbi.nih.gov/health/public/sleep/healthy_sleep.htm.

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behavioral (nondrug) therapies for insomnia may have long-term benefits. People with insomnia may also try dietary supplements and other CAM therapies.

CAM Use for Insomnia

In 2002 and 2007, the National Health Interview Survey (NHIS) asked participants about CAM use. In 2002, 2.2 percent of respondents who used some form of CAM in the past 12 months said they used it for insomnia or trouble sleeping; in 2007, that figure was 1.4 percent.

An analysis of data from the 2002 NHIS found that 17.4 percent of all participants said they regularly had insomnia or trouble sleeping in the past 12 months; most who reported insomnia also reported other medical/psychiatric conditions, such as anxiety or depression, chronic heart failure, diabetes, hypertension, and obesity. Among participants with insomnia, 4.5 percent (which translates to a total of 1.6 million U.S. adults) used some form of CAM to treat their condition—primarily biological/herbal therapies (64.8 percent) or mind-body/relaxation therapies (39.1 percent). Most found these therapies helpful.

Among the CAM approaches that people use for insomnia are

- Herbs, including aromatherapy, chamomile tea, and herbal supplements such as valerian and various “sleep formula” products
- Melatonin and related dietary supplements
- Other CAM modalities, such as acupuncture, music therapy, and relaxation techniques.

What the Science Says About CAM and Insomnia

Research on CAM and insomnia has produced promising results for some CAM therapies. However, evidence of effectiveness is still limited for most therapies, and additional research is needed. This section summarizes what is known about some of the CAM approaches that people use for insomnia.

Herbs

- **Aromatherapy** using essential oils from herbs such as lavender or chamomile is a popular sleep aid; preliminary research suggests some sleep-inducing effects, but more studies are needed.
- The herb **chamomile** is commonly used as a bedtime tea, but scientific evidence of its effectiveness for insomnia is lacking.
- The herb **kava** has been used for insomnia, but there is no evidence of its efficacy. The U.S. Food and Drug Administration has issued a warning that kava supplements have been linked to a risk of severe liver damage.
- The herbal supplement **valerian** is one of the most popular CAM therapies for insomnia. Several studies suggest that valerian (for up to 4-to-6 weeks) can improve the quality of sleep and slightly reduce the time it takes to fall asleep. However, not all of the evidence is

positive. One systematic review of the research concluded that although valerian is commonly used as a sleep aid, the scientific evidence does not support its efficacy for insomnia. Researchers have concluded that valerian appears to be safe at recommended doses for short-term use. Some “sleep formula” products combine valerian with other herbs such as **hops**, **lavender**, **lemon balm**, and **skullcap**. Although many of these other herbs have sedative properties, there is no reliable evidence that they improve insomnia or that combination products are more effective than valerian alone.

Melatonin and Related Supplements

- Like valerian, **melatonin** supplements (melatonin is a naturally occurring hormone associated with sleep) are widely used and researched for insomnia. Although more research is still needed, studies suggest that melatonin can help elderly people with insomnia fall asleep faster, and may also be beneficial for other people with insomnia; however, effects are generally small, with larger effects observed in patients whose sleep problems are caused by a circadian rhythm abnormality (disruption of the body’s internal “clock”). Studies indicate that melatonin also appears to be safe at recommended doses for short-term use.
- Dietary supplements containing melatonin “precursors”—**L-tryptophan** and **5-HTP**—are also used as sleep aids. (The amino acid L-tryptophan is converted to 5-HTP, which is converted to serotonin and then melatonin.) However, these supplements have not been proven effective in treating insomnia, and there are concerns that they may be linked to eosinophilia-myalgia syndrome (EMS), a complex and debilitating systemic condition with multiple symptoms including severe muscle pain.

Other CAM Approaches

- Traditional Chinese medicine commonly uses **acupuncture** to treat insomnia. A review of available studies found some evidence of benefits, but many studies had design flaws that make it difficult to draw firm conclusions.
- There is scientific evidence that **music therapy** can have sleep benefits for older adults and children.
- Studies suggest that **relaxation** techniques may help people with insomnia, although the effects appear to be short-lived. Cognitive forms of relaxation (such as **meditation**) have had slightly better results than somatic forms (such as progressive muscle relaxation). Preliminary studies suggest that **yoga** may also improve sleep quality. In addition, when these forms of relaxation are combined with other components of cognitive-behavioral therapy (e.g., sleep restriction and stimulus control), lasting improvements in sleep have been observed. Again, additional research is needed in these areas.

NCCAM Research on Sleep Disorders

The National Center for Complementary and Alternative Medicine (NCCAM) funds clinical trials that look at CAM for sleep disorders. Recent projects include studies of:

- High-intensity light therapy to help Alzheimer’s disease patients sleep
- Hypnosis to relieve sleep impairment in people with posttraumatic stress disorder
- Melatonin supplements as a sleep aid for people with hypertension
- Mindfulness-based stress reduction to improve sleep quality
- Valerian for improving sleep in healthy, older adults and in patients with Parkinson’s disease
- Yoga as a treatment for insomnia.

In addition to clinical trials, NCCAM also supports basic science research aimed at understanding the underlying biological mechanisms of CAM therapies, including those used to treat sleep disorders. NCCAM also participates in the National Institutes of Health (NIH) Trans-NIH Sleep Research Coordinating Committee.

If You Are Considering CAM for Sleep Problems

- Talk to your health care providers. Tell them about the therapy you are considering and ask any questions you may have. They may know about the therapy and be able to advise you on its safety, use, and likely effectiveness in relieving your sleep problems. Because trouble sleeping can be an indication of a more serious condition, it is especially important to discuss any sleep-related symptoms (such as snoring or daytime fatigue) with your health care providers before trying a CAM approach.
- Be cautious about using any sleep product—prescription medications, over-the-counter drugs, or CAM dietary supplements. Find out about potential side effects and the effects of long-term use and use of more than one product at a time.
- If you are considering herbal or other dietary supplements, keep in mind that “natural” does not always mean safe. For example, the herbs comfrey and kava can cause serious harm to the liver. Also, a manufacturer’s use of the term “standardized” (or “verified” or “certified”) does not necessarily guarantee product quality or consistency. Herbal or other dietary supplements can act in the same way as drugs. They can cause medical problems if not used correctly, and some may interact with medications you are already taking. The health care providers you see about your sleep problems can advise you. It is especially important to consult your health care provider if you are pregnant or nursing a child, or if you are considering giving a child a dietary supplement. For more information, see the NCCAM fact sheet *Using Dietary Supplements Wisely*.
- If you are considering a practitioner-provided CAM therapy such as acupuncture, check with your insurer to see if the services will be covered, and ask a trusted source (such as your doctor or a nearby hospital or medical school) to recommend a practitioner.
- Tell your health care providers about any complementary and alternative practices you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care. For tips about talking with your health care providers about CAM, see NCCAM’s Time to Talk campaign at nccam.nih.gov/timetotalk/.

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For More Information

Visit the NCCAM Web site (nccam.nih.gov) for more information about the CAM therapies discussed in this fact sheet (including clinical trials), as well as important tips for being an informed consumer of CAM services and products.

NCCAM Clearinghouse

The NCCAM Clearinghouse provides information on CAM and NCCAM, including publications and searches of Federal databases of scientific and medical literature. The Clearinghouse does not provide medical advice, treatment recommendations, or referrals to practitioners.

NCCAM Clearinghouse

Toll-free in the U.S.: 1-888-644-6226

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Web site: www.ncbi.nlm.nih.gov/sites/entrez

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NHLBI provides global leadership for a research, training, and education program to promote the prevention and treatment of heart, lung, and blood diseases.

Web site: <http://www.nhlbi.nih.gov/>

National Center on Sleep Disorders Research: <http://www.nhlbi.nih.gov/about/ncsdr/>

NIH National Library of Medicine's MedlinePlus

Sleep disorders listing: www.nlm.nih.gov/medlineplus/sleepdisorders.html

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