According to recent reports, many people today have a serious problem getting a good night's sleep. Our lives are simply too busy for us to get the 8 hours we really need. To make matters worse, many of us suffer from insomnia. When we do get to bed, we may stay awake thinking for hours. Sleep itself may be restless instead of refreshing.

Most people who sleep substantially less than 8 hours a night experience a variety of unpleasant symptoms. The most common are headaches, mental confusion, irritability, malaise, immune deficiencies, depression, and fatigue. Complete sleep deprivation can lead to hallucinations and mental collapse.

The best way to improve sleep involves making lifestyle changes: eliminating caffeine and sugar from your diet, avoiding stimulating activities before bed, adopting a regular sleeping time, and gradually turning down the lights. More complex behavioral approaches to improving sleep habits can be adopted as well.

Many drugs can also help with sleep. Such medications as Sonata, Lunesta, Ambien, Restoril, Ativan, and Xanax are widely used for sleep problems. Of these, only Lunesta has been tested for long-term use. All of these medications are in essence tranquilizers, and therefore, have potential for dependence and abuse; the newer sleep-inducing drug Rozerem (ramelteon) acts like an enhanced version of the supplement melatonin (see below) and is not thought to have such potential.

Antidepressants can also be used to correct sleep problems. Low doses of certain antidepressants immediately bring on sleep because their side effects include drowsiness. However, this effect tends to wear off with repeated use. For chronic sleeping problems, full doses of antidepressants can sometimes be helpful. Antidepressants are believed to work by actually altering brain chemistry, which produces a beneficial effect on sleep. Trazadone and amitriptyline are two of the most commonly prescribed antidepressants when improved sleep is desired, but most other antidepressants can be helpful as well.

Principal Proposed Natural Treatments

Although the scientific evidence isn't yet definitive, the herb valerian and the hormone melatonin are widely accepted as treatments for certain forms of insomnia.

Valerian
Valerian has a long traditional use for insomnia, and today it is an accepted over-the-counter treatment for insomnia in Germany, Belgium, France, Switzerland, and Italy. However, the evidence that it really works remains inconsistent and incomplete. A systematic review published in 2007 concluded that valerian is safe but probably not effective for treating insomnia. And in a subsequent review of 18 randomized trials, researchers found that people who took valerian did report an improvement in their sleep. But, this finding was not supported by more objective measures of sleep quality.

However, there have been some positive results, both with valerian alone and valerian combined with other herbs.

Valerian is most commonly recommended to be used as needed for occasional insomnia. Interestingly, however, the results of the largest and best designed positive study only found benefits regarding long-term improvement of sleep. In this double-blind, placebo-controlled trial, half of the participants took 600 mg of an alcohol-based valerian extract 1 hour before bedtime while the other half took placebo. Valerian didn't work right away. For the first couple of weeks, valerian and placebo were running neck and neck. However, by day 28 valerian pulled far ahead. Effectiveness was rated as good or very good by participant evaluation in 66% of the valerian group and in 61% by doctor evaluation, whereas in the placebo group, only 29% were so rated by participants and doctors.

Although positive, these results are a bit confusing, because in another large study valerian was effective on an immediate basis, which is more in keeping with how the herb is typically used. Other studies, most of relatively low quality, found immediate benefits as well. And to make matters even murkier, four more recent studies of valerian failed to find evidence of any benefit, including a 4-week study in which 135 people were given valerian and 135 given placebo. The most recent trial, a 2-week study of 405 people, reported “modest benefits at most” [italics added].

A study of 184 people that tested a standardized combination of valerian and hops, with mixed results. Researchers tested quite a few aspects of sleep (such as time to fall asleep, length of sleep, number of awakenings) and found evidence of benefit in a few. This use of “multiple outcome measures” makes the results somewhat unreliable.

Other studies have compared valerian (either alone or in combination with hops or melissa) against benzodiazepine drugs. Most of these studies found the herbal treatment approximately as effective as the drug, but due to the absence of a placebo group these results are less than fully reliable.

Mixed results like these suggest that valerian is at most modestly helpful for improving sleep.

For more information, including dosage and safety issues, see the full Valerian article.

**Melatonin**

The body uses melatonin as part of its normal control of the sleep-wake cycle. The pineal gland makes serotonin and then turns it into melatonin when exposure to light decreases. Strong light (such as sunlight) slows melatonin production more than weak light does, and a completely dark room increases the amount of melatonin made more than a partially darkened room does. Taking melatonin as a supplement seems to stimulate sleep when the natural cycle is disturbed. It may also have a direct sedative effect.

Although not all studies were positive, reasonably good evidence indicates that melatonin is helpful for insomnia related to jet lag, according to a major review published in 2001. One of the best supporting studies was a double-blind, placebo-controlled study that enrolled 320 travelers crossing 6 to 8 time zones. The participants were divided into four groups and given a daily dose of 5 mg of standard melatonin, 5 mg of slow-release melatonin, 0.5 mg of standard melatonin, or placebo. The group that received 5 mg of standard melatonin slept better, took less time to fall asleep, and felt more energetic and awake during the day than the other three groups.

Mixed results have been seen in studies involving the use of melatonin for ordinary insomnia, insomnia in swing-shift workers, and insomnia in elderly people.

A 4-week, double-blind trial evaluated the benefits of melatonin for children with difficulty falling asleep. A total of 40 children who had experienced this type of sleep problem for at least a year were given either placebo.
or melatonin at a dose of 5 mg. The results showed that use of melatonin helped participants fall asleep significantly more easily. Benefits were also seen in a similar study of 62 children with this condition. Note: The long-term safety of melatonin usage has not been established. Do not give your child melatonin except under physician supervision.

Many individuals stay up late on Friday and Saturday nights, and then find it difficult to go to sleep at a reasonable hour on Sunday. A small double-blind, placebo-controlled study found evidence that use of melatonin 5.5 hours before the desired Sunday bedtime improved the ability of participants to fall asleep. Benefits were seen in a similar study of 62 children with this condition. It is famously difficult to sleep in an ICU, and the resulting sleep deprivation is not helpful for those recovering from disease or surgery. In this study of 8 hospitalized individuals, 3 mg of controlled-release melatonin significantly improved sleep quality and duration.

Blind people often have trouble sleeping on any particular schedule because there are no light cues available to help them get tired at night. A small double-blind, placebo-controlled crossover trial found that the use of melatonin at a dose of 10 mg per day was able to synchronize participants sleep schedules.

Some individuals find it impossible to fall asleep until early morning, a condition called delayed sleep phase syndrome (DSPS). Melatonin may be beneficial for this syndrome.

In addition, people trying to quit using sleeping pills in the benzodiazepine family may find melatonin helpful. A double-blind, placebo-controlled study of 34 individuals who regularly used such medications found that melatonin at a dose of 2 mg nightly (controlled-release formulation) could help them discontinue the use of the drugs. Note: There can be risks in discontinuing benzodiazepine drugs. Consult your physician for advice.

For more information, including dosage and safety issues, see the full Melatonin article.

Other Proposed Natural Treatments

Acupressure or acupuncture may be helpful for insomnia, but the supporting evidence remains weak. A single-blind, placebo-controlled study involving 84 nursing home residents found that real acupressure was superior to sham acupressure for improving sleep quality. Treated participants fell asleep faster and slept more soundly. In a similar study, researchers found that performing acupressure on a single point on both wrists for five weeks improved sleep quality among residents of long-term care facilities more than lightly touching the same point. Another single-blind, controlled study reported benefits with acupuncture, but failed to include a proper statistical analysis of the results. For this reason, no conclusions can be drawn from the report. In a third study, 98 people with severe kidney disease were divided into three groups: no extra treatment, 12 sessions of fake acupressure (not using actual acupressure points), or 12 sessions of real acupressure. Participants receiving real acupressure experienced significantly improved sleep as compared to those receiving no extra treatment. However, fake acupressure was just as effective as real acupressure. a small placebo-controlled trial involving 60 adults with insomnia found that 3 weeks of electroacupuncture improved sleep efficiency and decreased wake time after sleep onset.

In a trial involving 28 women, 6 weeks of auricular acupuncture, in which needles are placed in the outer ear, was more effective than sham acupuncture. But, in a carefully conducted review of 10 randomized trials involving auricular acupuncture or acupressure (using magnetic pellets), researchers were unable to draw conclusions because of the poor quality of the studies.

Preliminary evidence suggests that Tai Chi, an ancient Chinese practice involving graceful movements combined with mediation, may benefit some individuals having trouble sleeping. In one randomized study, a certain form of Tai Chi was more effective than health education after 25 weeks in subjects with moderate insomnia.
Numerous controlled studies have evaluated relaxation therapies for the treatment of insomnia. These studies are difficult to summarize because many involved therapy combined with other methods such as biofeedback, sleep restriction, and paradoxical intent (trying not to sleep). The type of relaxation therapy used in the majority of these trials was progressive muscle relaxation (PMR). Overall, the evidence indicates that relaxation therapies may be somewhat helpful for insomnia, although not dramatically so. For example, in a controlled study of 70 people with insomnia, participants using progressive relaxation showed no meaningful improvement in the time taken to fall asleep or the duration of sleep, but they reported feeling more rested in the morning. In another study, 20 minutes of relaxation practice was required to increase sleeping time by 30 minutes.  

One small double-blind study found a particular Ayurvedic herbal combination helpful for insomnia.  

Herbs used for anxiety are commonly recommended for insomnia as well. As noted above, hops and lemon balm have been studied in combination with valerian. One double-blind study found that the anti-anxiety herb kava taken alone may aid sleep for people whose insomnia is associated with anxiety and tension. However, a fairly large study failed to find kava helpful for ordinary insomnia. (Note: There are serious concerns that kava may occasionally cause severe liver disorders.)

The substance GABA (gamma-aminobutyric acid) is a naturally occurring neurotransmitter that is used within the brain to reduce the activity of certain nerve systems, including those related to anxiety. For this reason, GABA supplements are sometimes recommended for treatment of anxiety-related conditions, such as insomnia. However, there are no studies whatsoever supporting the use of GABA supplements for this purpose. In fact, it appears that, when taken orally, GABA cannot pass the blood-brain barrier, and therefore does not even enter the brain.

One tiny study hints that the fragrance of lavender essential oil might aid sleep. Slight evidence exists to support the use of magnesium or probiotics (healthy bacteria) for insomnia in seniors.

The herb St. John’s wort and the supplement 5-HTP have shown promise as treatments for depression. Because prescription antidepressants can aid sleep, these natural substances have been suggested for insomnia as well. However, there is no direct evidence that they are effective. A double-blind trial of 12 non-insomniacs found no sleep-promoting benefit with St. John’s wort.

Other herbs reputed to offer both anti-anxiety and anti-insomnia benefits include ashwagandha, astragalus, chamomile, He shou wu, lady’s slipper, passionflower, and skullcap. However, there is again no supporting evidence to indicate that any of these really work.

A number of supplements might offer benefits for improving mental function during periods of sleep deprivation. See the Enhancing Memory and Mental Function article for more information.

References [+]


