

Insomnia

Definition

Insomnia is the inability to obtain an adequate amount or quality of sleep. The difficulty can be in falling asleep, remaining asleep, or both. People with insomnia do not feel refreshed when they wake up. Insomnia is a common symptom affecting millions of people that may be caused by many conditions, diseases, or circumstances.

According to a 1999 American Medical Association (AMA) report, approximately 30% of adults in the United States suffer occasionally from insomnia and 10% experience chronic insomnia.

Description

Sleep is essential for mental and physical restoration. It is a cycle with two separate states: rapid eye movement (REM), the stage in which most dreaming occurs; and non-REM (NREM). Four stages of sleep take place during NREM: stage I, when the person passes from relaxed wakefulness; stage II, an early stage of light sleep; stages III and IV, which are increasing degrees of deep sleep. Most stage IV sleep (also called delta sleep), occurs in the first several hours of sleep. A period of REM sleep normally follows a period of NREM sleep.

Sleeplessness or insomnia is a symptom and may be caused by "stress, **anxiety**, **depression**, disease, **pain**, medications, sleep disorders, poor sleep habits .. [and] sleep environment and health habits," according to the National Sleep Foundation (NSF).

Women are 1.3 times more likely to report insomnia than men, according to the NSF. Women may experience sleeplessness before and at the onset of the menstrual cycle, during **pregnancy**, and **menopause**. The foundation reported that people over the age of 65 are "more likely to complain of insomnia than younger people." Furthermore, people who are divorced, widowed, or separated are more likely to have the problem than those who are married. In addition, insomnia is more frequently reported by those with lower socioeconomic status.

Insomnia is classified both by its nightly symptoms and its duration. Sleep-onset insomnia refers to difficulty falling asleep. Maintenance insomnia refers to waking frequently during the night or waking early. Insomnia is also classified in relation

to the number of sleepless nights. Short-term or transient insomnia is a common occurrence and usually lasts only a few days. Long-term or chronic insomnia lasts more than three weeks and increases the risk for injuries in the home, at the workplace, and while driving because of daytime sleepiness and decreased concentration. Chronic insomnia can also lead to mood disorders like depression.

Insomnia comes with a high price tag for the nation. NSF in 1999 reported that an estimated \$14 billion was spent in one year on such direct costs as insomnia treatment, healthcare services, and hospital and nursing home care. Annual indirect costs like work loss, property damage from accidents, and transportation to and from health care providers were estimated at close to \$28 billion. Furthermore, insomnia accounted for \$18 billion in lost productivity, according to a 1997 National Sleep Foundation survey.

Causes & symptoms

Transient insomnia is often caused by a temporary situation in a person's life, such as an argument with a loved one, a brief medical illness, or **jet lag**. When the situation is resolved or the precipitating factor disappears, the condition goes away, usually without medical treatment.

Such prescription drugs as **asthma** medicine, steroids, and anti-depressants can cause insomnia. Sleeplessness may also be a side effect of over-the-counter products like nasal decongestants and appetite suppressants.

Chronic insomnia usually has different causes, and there may be more than one. These include:

- A medical condition or its treatment, including sleep apnea, arthritis, a heart condition, and asthma.
- Use of such substances as **caffeine**, alcohol, and nicotine.
- Psychiatric conditions like mood or anxiety disorders.
- **Stress** or depression, such as sadness caused by the loss of a loved one or a job.
- Disturbed sleep cycles caused by a change in work shift.
- Sleep-disordered breathing, such as snoring.
- Periodic jerky leg movements, *nocturnal myoclonus*, which happen just as the individual is falling asleep.
- Repeated nightmares or panic attacks during sleep.

Another cause is excessive worrying about whether or not a person will be able to fall asleep, which creates so much anxiety that the individual's bedtime rituals and behavior actually trigger insomnia. This is called psychophysiological insomnia.

Symptoms of insomnia

People who have insomnia do not start the day refreshed from a good night's sleep. They are tired. They may have difficulty falling asleep, and commonly lie in bed tossing and turning for hours. Or the individual may go to sleep without a problem but wakes in the early hours of the morning and is either unable to go back to sleep, or drifts into a restless, unsatisfying sleep. This is a common symptom in the elderly and those suffering from depression. Sometimes sleep patterns are reversed and the individual has difficulty staying awake during the day and takes frequent naps. The sleep at night is fitful and frequently interrupted.

Diagnosis

Insomnia, unlike some medical conditions, is easily recognizable. People know when they aren't getting enough sleep. The key to treating insomnia is determining its causes. Some people can identify sleep-inhibiting factors such as a death in the family or a hectic work schedule with too much caffeine consumption and not enough **exercise**. A doctor will take factors such as these into account when making a diagnosis.

The physician's diagnosis is based on the patient's reported signs and symptoms. The doctor may review a patient's health history or order tests to determine if a medical condition is causing the insomnia. The physician may ask if the patient is depressed, in pain, under stress, or taking medications, according to the National Sleep Foundation. The doctor may ask about disruptions in a patient's life such as working nontraditional shifts or traveling across different time zones.

It can be useful for the patient to keep a daily record for two weeks of sleep patterns, food intake, use of alcohol, caffeine, nicotine, medications, exercise, and any other information recommended by the physician. If the patient has a bed partner, information can be obtained about whether the patient snores or is restless during sleep. This record, together with a medical history and physical examination, can help confirm the doctor's assessment.

A wide variety of healthcare professionals can recognize and treat insomnia, but when a patient with chronic insomnia does not respond to treatment, or the condition is not adequately explained by the patient's physical, emotional, or

mental circumstances, then more extensive testing by a specialist in sleep disorders may be warranted.

Treatment

In both alternative and conventional medicine, treatment of insomnia includes alleviating or coping with any physical and emotional problems that contribute to the condition. Also effective is exploration of changes in lifestyle that will improve the situation.

Changes in behavior

Patients can make changes in their daily routine that are simple and effective in treating insomnia. Eating a healthy diet rich in calcium, **magnesium**, and the B vitamins is also beneficial. A high protein snack like yogurt before going to bed is recommended.

Patients should go to bed only when sleepy and use the bedroom only for sleep. Activities like reading, watching television, or snacking should take place elsewhere. If people are unable to go to sleep, they should go into another room and do something like reading. People should return to bed only when sleepy. Patients should set the alarm and get up every morning at the same time, no matter how much they have slept, to establish a regular sleepwake pattern. Naps during the day should be avoided, but if absolutely necessary, than a 30-minute nap early in the afternoon may not interfere with sleep at night.

Another successful technique is called sleep-restriction therapy, restricting the time in bed to the actual time spent sleeping. This approach allows a slight sleep debt to build up, which increases the individual's ability to fall asleep and stay asleep. If a patient sleeps five hours a night, the time in bed is limited to 5–5.5 hours. The time in bed is gradually increased in small segments, with the individual rising at the same time each morning; at least 85% of the time in bed must be spent sleeping.

Mind and body relaxation

Incorporating **relaxation** techniques into bedtime rituals helps a person go to sleep faster and improves the quality of sleep. These, alone or in combination with other relaxation techniques, can safely promote sleepiness. Also effective are massage techniques such as the "cat stroke." The masseuse's hands move gently across the back. Four other types of stress-reducing bodywork were recommended in *Spontaneous Healing*, the book by **Andrew Weil**, M.D., who practices natural and

preventative medicine. Weil recommended Feldenkrais, which includes movements, floor exercises, and body work; **Rolfing**, which involves firm pressure; shiatsu, the traditional Japanese form of body work; and Trager work.

Learning to substitute pleasant thoughts for unpleasant ones (imagery training) helps reduce worrying. Another technique is using audiotapes that combine the sounds of nature with soft relaxing music. Meditation, prayer, and breathing exercises can also be effective.

Many alternative treatments are effective in treating both the symptom of insomnia and its underlying causes. Much treatment is centered around herbal remedies. The herbs most often recommended for treating insomnia include **reishi mushroom**, **hops**, **valerian**, **skullcap**, passion flower, **lemon balm**, ginseng, St. John's wort, and kava, which is also known as **kava kava**. Herbs are "generally safe," but they have not been tested or classified in the United States by the U.S. Food and Drug Administration (FDA).

Herbal teas

Some people treat insomnia by sipping a warm cup of tea made with an herb such as **chamomile**, hops, passionflower, or St. John's wort.

Aromatherapy and hydrotherapy

Aromatherapy involves healing through **essential oils**, the aromatic extracts of plants. Essential oils may be used for a soothing bath; applied to the face, neck, shoulders, and pillow; or diffused in air.

Hydrotherapy consists of a warm bath, scented with an essence such as rose, **lavender**, marjoram, or chamomile. In the 1998 book *Healing Anxiety with Herbs*, Harold Bloomfield, M.D., recommended adding 2-15 drops of 10% essential oils into approximately 100°F (38° C) **water**. He also recommended using lavender and also suggested using ylang-ylang, neroli (orange blossom), geranium, and patchouli. The bath should be "approached in an unhurried and meditative state," Bloomfield wrote.

Dream pillows

Another form of aromatherapy involves sleeping on a dream pillow. Also known as a sleep pillow, it can be made by sewing together two 8-inch pieces of fabric. There should be an opening wide enough to insert a tablespoon. Herbs such as

hops, chamomile, and lavender are spooned into the dream pillow, which is placed under the bed pillow.

Melatonin

Melatonin is a natural hormone that is secreted from the brain's pineal gland. The gland regulates a person's biological clock, particularly day and night cycles. When taken as a 3-mg dose one to two hours before bed for a maximum of four to five days per week, the dietary supplement melatonin is said to be effective in shortening the time before one falls asleep. The hormone can help to avoid jet lag and to establish sleep patterns for shift workers. However, melatonin is not regulated by the FDA, so there are no regulatory controls. Side effects may include mental impairment, drowsiness, severe headaches, and nightmares.

Traditional Chinese medicine

Traditional Chinese medicine (TCM) treatments for insomnia include **acupuncture** and herbal remedies. Acupuncture involves the insertion of needles to manipulate energy flows around the body. Acupuncture is also applied to the treatment of conditions including anxiety.

In TCM, herbs are used as remedies in teas and other preparations. Treatments for insomnia include reishi, a medicinal mushroom available in extract form.

Light therapy

In **light therapy**, natural or artificial light is used to boost serotonin, a neurotransmitter in the brain related to reducing anxiety. This therapy is used to treat seasonal affective disorder, a condition that some people experience when there is less sunlight or fewer daylight hours. Bright light therapy can be used for people whose insomnia is caused by jet lag or irregular work shifts. In the morning, the person is exposed to artificial lamps with a brightness of more than 2,000 lux. The treatment continues with avoidance of bright light during the evening.

Allopathic treatment

A physician may determine that drug therapy is necessary to treat insomnia. Drugs may be prescribed if the patient is undergoing a crisis or insomnia persists after a patient has made lifestyle changes. However, drug therapy is regarded as a short-term remedy, not a solution.

Conventional medications given for insomnia include sedatives, tranquilizers, and anti-anxiety drugs. All require a doctor's prescription and may become habit-forming. They can lose effectiveness over time and can reduce alertness during the day. The medications should be taken up to four times daily or as directed for approximately three to four weeks. This will vary with the physician, patient, and medication. If insomnia is related to depression, then an antidepressant medication may be helpful.

Drugs prescribed for improving sleep are called hypnotics. This category includes benzodiazepines, which are prescribed for anxiety and insomnia. Benzodiazepines most commonly prescribed for insomnia include Dalmane (flurazepam), Halcion (triazolam), Ativan (lorazepam), Xanax (alprazolam), Restoril (temperazepam), and Serax (oxazepam).

Insomnia is such a widespread problem that "people buy more over-the-counter and prescription sleeping medications than any other drug," according to CBS Health Watch. Many over-the-counter drugs have antihistamines as an active ingredient. While these products are not addictive, some experts believe they are not very effective in sustaining stage IV sleep and can affect the quality of sleep.

Over-the-counter sleep products include Nytol, Sleep-Eez, and Sominex. Antihistamines are used in combination with pain relievers in products including Anacin PM, Excedrin PM, Tylenol PM, Unison, and Quiet World.

Expected results

Insomnia has numerous causes and treatments, so the amount of time may vary before results are seen. A prescription drug may bring immediate results to someone coping with a spouse's death. An herbal remedy may not work immediately for a person who consumed excessive amounts of caffeine to stay awake at work after a sleepless night.

There has been research that provides information about when some treatments take effect:

- Melatonin: a dose of 3-5 mg taken within an hour of retiring will normalize sleep within 1-2 weeks.
- A combination of hops and valerian at bedtime can provide a good night's sleep.
- A combination of alternative therapies should bring a difference in disturbed sleep within two to four days.

- Valerian extract may take from two to three weeks before "significant benefits" are seen.
- St. John's wort can take two weeks to take effect.
- Combinations of treatments could more quickly bring about an uninterrupted night of sleep. The person who reduces caffeine intake, walks for 15 minutes and enjoys an herbal bath may discover that that combination brings restful sleep.
- Acupuncture: "A state of deep relaxation is often an immediate benefit of treatment for chronically anxious patients," William Collinge wrote in *The American Holistic Health Association Complete Guide to Alternative Medicine*. In addition, positive results were recorded in a study of people who had trouble falling asleep or remaining asleep, according to the an article in the October 1999 issue of the *Alternative Medicine Newsletter*. Patients received acupuncture for three to five sessions at weekly intervals. While acupuncture appeared effective, a "directive influence by the therapist cannot be excluded," according to the article.
- Light therapy usually results in earlier bedtimes.

Prevention

Prevention of insomnia centers around promotion of a healthy lifestyle. A balance of rest, recreation, and exercise in combination with stress management, regular physical examinations, and a healthy diet can do much to reduce the risk.

Walking is also recommended. However, exercise should be done no more than three hours before bedtime.

Drinks that contain caffeine such as coffee, tea and colas, chocolate (which contains a stimulant), and alcohol, which initially makes a person sleepy but a few hours later can have the opposite effect should all be avoided.

Maintaining a comfortable bedroom temperature, reducing noise, and eliminating light are also helpful.

Watching television should be avoided because it has an arousing effect. Weil wrote that the news with its "murder, mayhem, and misery" is a major source of turmoil. He sometimes advises "news fasts" as part of a healing program.

Exercise, relaxation, and **nutrition** should be considered ongoing preventive measures. While life will bring unexpected stresses and pressures, the person who is familiar with relaxation techniques will be more prepared to cope with insomnia.

Resources

BOOKS

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