

Insomnia

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Key points

- What is insomnia?
- Sign & Symptoms of insomnia
- Causes of insomnia
- Treatment of insomnia

Insomnia is a common sleep disorder characterized by difficulty in falling asleep. Short-term insomnia generally ranges from a few days to weeks. Physical, psychological, or interpersonal stress can cause short term insomnia. With improvement and resolution of stress it can be cured but if not, chronic insomnia can occur. Chronic insomnia refers to difficulty in sleeping, in continuing sleep, or being unable to go back to sleep after waking up in the morning for a long period of time, usually for almost 3 months or more.

Consequently, it can worsen due to certain feelings and behaviours that create adverse connection/s with sleep such as frustration, anxiety, restlessness.¹

Sign and Symptoms

Insomniacs reportedly have higher levels of anxiety than the general population because of appreciable emotional dysregulation compared to people without suffering from insomnia. Alcohol cravings and lapse is also a common sighting in insomniacs.² This inability to sleep further deteriorates intellectual and social functioning of the patient. When studied, insomniacs have shown abnormal metabolic changes such as variation seen in branched chain amino acids and metabolism of glucose.³

Cause of Insomnia

There are abundant causes of insomnia such as inadequate nutrition and hormonal disorders. Mostly the factors that affect sleep duration are noisy or bright light rooms, hot rooms more than normal, cold more than normal, smoky environment mostly from tobacco smoke, lack of oxygen, uncomfortable surroundings such as hard bed, uncomfortable pillow. Sometimes during the day specific food, drink or drugs that stimulate nerve activity which can also be the cause of insomnia. Even in passive smoking when the person is not smoking directly also has a negative effect on sleep.⁶

Treatment of Insomnia

Medicated and non-medicated treatments are available to treat insomnia such as:

1. CBT(cognitive behavioral theory)

2. Benzodiazepines
3. Z drugs
4. Antidepressants
5. Anticonvulsants
6. Selective histamine H1 Antagonist
7. Orexin antagonist
8. Non-selective Antihistamines.⁴

About 4.4 -- 4.8% of the world's total population is affected by insomnia. There are too many harmful side effects of drugs used in insomnia, so scientists are trying to create drugs that have an effect on the body's orexin system(multi-tasking neurons working on vital functions of the body). Daridorexant, a selective dual-orexin receptor antagonist (DORA), has shown positive results on humans during these studies. There is no harmful side-effect of this drug, so use of daridorexant use is considered safe.⁵

References

1. Krystal AD, Ashbrook LH, Prather AA. What Is Insomnia?. JAMA. 2021 Dec 21;326(23):2444-
2. Wołyńczyk-Gmaj D, Jakubczyk A, Trucco EM, Kobylński P, Zaorska J, Gmaj B, Kopera M. Emotional Dysregulation, Anxiety Symptoms and Insomnia in Individuals with Alcohol Use Disorder. International Journal of Environmental Research and Public Health. 2022 Feb 25;19(5):2700.
3. Humer E, Pieh C, Brandmayr G. Metabolomics in sleep, insomnia and sleep apnea. International journal of molecular sciences. 2020 Sep 30;21(19):7244.
4. Krystal AD, Prather AA, Ashbrook LH. The assessment and management of insomnia: an update. World Psychiatry. 2019 Oct;18(3):337-52.
5. Lin YH, Lin SH, Chen IM. The direct effect of cognitive behavioral therapy for insomnia on depression prevention and the mediation effect via insomnia remission. JAMA psychiatry. 2022 May 1;79(5):514-5.
6. Tahirova J, Roziklov N, Mamatkulova F, Shernazarov F. Insomnia problem causes of sleep disorder, help measures at home. Science and innovation. 2022;1(D8):521-5.