

What Causes Insomnia?



What keeps you up at night? Pondering deep questions? Excitement about a big trip? Or is it stress about unfinished work, an upcoming test, or a dreaded family gathering? For many people, this stress is temporary, as its cause is quickly resolved. But what if the very thing keeping you awake was stress about losing sleep? This seemingly unsolvable loop is at the heart of insomnia, the world's most common sleep disorder.

Almost anything can cause the occasional restless night - a snoring partner, physical pain, or emotional distress. And extreme sleep deprivation like jetlag can throw off your biological clock, wreaking havoc on your sleep schedule. But in most cases, sleep deprivation is short-term. Eventually, exhaustion catches up with all of us. However, some long-term conditions like respiratory disorders, gastrointestinal problems, and many others can overpower fatigue. And as

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sleepless nights pile up, the bedroom can start to carry associations of restless nights wracked with anxiety. Come bedtime, insomniacs are stressed. So stressed their brains hijack the stress response system, flooding the body with fight-flight-or-freeze chemicals. Cortisol and adrenocorticotrophic hormones course through the bloodstream, increasing heart rate and blood pressure, and jolting the body into hyperarousal. In this condition, the brain is hunting for potential threats, making it impossible to ignore any slight discomfort or nighttime noise. And when insomniacs finally do fall asleep, the quality of their rest is compromised.

Our brain's primary source of energy is cerebral glucose, and in healthy sleep, our metabolism slows to conserve this glucose for waking hours. But PET studies show the adrenaline that prevents sleep for insomniacs also speeds up their metabolisms. While they sleep, their bodies are working overtime, burning through the brain's supply of energy-giving glucose. This symptom of poor sleep leaves insomniacs waking in a state of exhaustion, confusion, and stress, which starts the process all over again. When these cycles of stress and restlessness last several months, they're diagnosed as chronic insomnia. And while insomnia rarely leads to death, its chemical mechanisms are similar to anxiety attacks found in those experiencing depression and anxiety. So suffering from any one of these conditions increases your risk of experiencing the other two.

Fortunately, there are ways to break the cycle of sleeplessness. Managing the stress that leads to hyperarousal is one of our best-understood treatments for insomnia, and good sleep practices can help rebuild your relationship with bedtime. Make sure your bedroom is dark and comfortably cool to minimize "threats" during hyperarousal. Only use your bed for sleeping, and if you're restless, leave the room and tire yourself out with relaxing activities like reading, meditating, or journaling. Regulate your metabolism by setting consistent resting and waking times to help orient your body's biological

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clock. This clock, or circadian rhythm, is also sensitive to light, so avoid bright lights at night to help tell your body that it's time for sleep. In addition to these practices, some doctors prescribe medication to aid sleep, but there aren't reliable medications that help in all cases. And over-the-counter sleeping pills can be highly addictive, leading to withdrawal that worsens symptoms. But before seeking any treatment, make sure your sleeplessness is actually due to insomnia. Approximately 8% of patients diagnosed with chronic insomnia are actually suffering from a less common genetic problem called delayed sleep phase disorder, or DSPD. People with DSPD have a circadian rhythm significantly longer than 24 hours, putting their sleeping habits out of sync with traditional sleeping hours. So while they have difficulty falling asleep at a typical bedtime, it's not due to increase stress. And given the opportunity, they can sleep comfortably on their own delayed schedule.

Our sleeping and waking cycle is a delicate balance, and one that's vital to maintain for our physical and mental wellbeing. For all these reasons, it's worth putting in some time and effort to sustain a stable bedtime routine, but try not to lose any sleep over it.