



INSOMNIA AS A

SYMPTOM

Insomnia is defined as a sleep disorder in which a person might have trouble falling asleep, staying asleep and waking up too early. It usually includes tiredness during the day, concentration and memory problems and sometimes anxiety and depression. Insomnia can exist on its own as a disorder or it can be a symptom of another disorder.

Insomnia can be caused by these neurological and emotional disorders, among others:

- sleep apnea
- nasal and sinus allergies
- chronic pain
- anxiety
- depression
- restless leg syndrome
- medications

Sleep apnea

Sleep apnea occurs when your airway becomes blocked during sleep. The airway closes which causes you to wake up briefly to take a breath, often without realizing it. This can happen hundreds of times a night, causing you to have a severely disrupted sleep cycle.

It is estimated that between 40% to 60% of people with insomnia also have sleep apnea. A review was published in the Singapore Medical Journal in 2005 that looked at the causes of insomnia. 106 participants were studied in a sleep clinic. Around 42.5% of patients had obstructive sleep apnea (OSA).

What happens during obstructive sleep apnea?

OSA happens when there is an actual blockage of the airway, or even just narrowing. When you sleep, the muscles around the airways relax, creating a “floppy” airway. The airway can become blocked while you are breathing in but there is usually enough pressure to open the airway during exhalation. The blocked airway while breathing in can cause obstructive sleep apnea.

Sleep fragmentation is caused by sleep-relaxed breathing disorders (SRBD). When you have an SRBD, your airway will close partially or fully many times during the night. As your airway closes and you struggle for breath, it wakes up your brain which causes

your sleep to get chopped up. Sometimes the feeling of choking can cause anxiety which makes it difficult to fall back asleep.

What causes an insomniac to wake up at night?



A high percentage of people with obstructive sleep apnea (OSA) also suffer from insomnia. Some groups of researchers say that the majority of insomnia sufferers have obstructive sleep apnea. When you have obstructive sleep apnea, pharmacotherapy will not work for insomnia, sleep-aids cannot open your airway.

You can tell that your sleep medication is not working for you when you:

- have tried several sleep aids
- wake up frequently during the night
- are drowsy during the day
- your sleep is not restorative.

What are some indicators of obstructive sleep apnea (OSA)?

Sleep disordered breathing occurs while you are asleep and includes:

- Dry-mouth - Because you are struggling to breath, you open your mouth to get more oxygen, the air passing in and out dries out your mouth
- Morning headaches - A build-up of carbon dioxide can occur in the brain, causing vasodilation and pressure on the arteries in the brain
- Getting up in the night to pee
- Snoring
- Waking up gasping for breath

People with insomnia often believe they are having mental health problems like depression and anxiety but, in fact, they have obstructive sleep apnea. People with insomnia are statistically more likely to be suffering from obstructive sleep apnea than psychiatric conditions.



In 2014 the Mayo Clinic published a study of 1210 participants with insomnia disorder. 899 participants (74.3%) that were taking over-the counter or prescription sleep-aids found no relief from the medications. If you have insomnia from sleep-apnea,

medications will not help, only CPAP treatment can help by opening your airways.

CPAP machine

The best treatment for sleep apnea is a CPAP machine. CPAP stands for Continuous Positive Airway Pressure. It is a small machine that pushes oxygen through your constricted nasal passages so that airways remain open. Using a CPAP machine, you should be able to breathe continuously. A steady air pressure should occur which keeps the tissues in your throat open, which prevents snoring.

The entire set-up consists of a small machine that sits by your bed. CPAP machines nowadays are quite small. The machine is basically a pump that pushes air through a tube to a mask that you place over your nose and mouth. The face mask element is strapped to your head.

A CPAP machine can feel awkward at first but the benefits outweigh the initial discomfort. There are so many harmful effects from having obstructive sleep apnea and insomnia that it is worth the effort of trying it out at least to see if it works for you. Imagine finding a cure for snoring, anxiety, depression, daytime drowsiness, high blood pressure, troubles falling asleep and snoring all in one go. The CPAP machine does this for many people. Talk to your doctor about having a sleep study done to see if you have obstructive sleep apnea. If you do, look into trying out a CPAP machine.

Allergies and Insomnia

Food Allergies

Food allergies can cause insomnia, generally because of the discomfort they create. Wheat allergies and lactose intolerance can result in upset stomach, swelling and itching, all of which can make it hard to fall asleep.

When eating something you are allergic to, histamine goes into your brain, disrupting neurotransmitters. Histamine in the brain throws the biochemical pathways out of whack, which causes insomnia.

Some common food sensitivities and allergies that cause insomnia:

- Foods that contain gluten such as: rye, wheat flour, white flour and oats
- The whey protein and lactose in dairy

- Processed food



Food allergies cause the immune system to set off a bunch of inflammatory processes that can affect many different parts of the body, which can drastically affect the ability to sleep:

- Clashes with hormones such as estrogen which can make PMS worse and cause pain, bloating and irritability.
- Sinus congestion
- Inflammation of the skin, causing problems such as rashes and itchiness
- Headaches and migraines caused by the vasodilation of capillaries in the brain
- Inflammation that interferes with neurotransmitter synthesis
- Increase of adrenal gland cortisol
- Inflammation of the gastrointestinal track, which can keep you awake with the discomfort of conditions like: irritable bowel syndrome, Chron's disease, acid reflux, diarrhea, bloating, constipation and gas
- Inflammation of joints and tissues

Hay fever

According to medical studies there is a connection to insomnia and hay fever. People with hay fever are twice as likely to suffer insomnia than people who have no allergies. Conditions such as allergic rhinitis, with symptoms including: itching, sneezing and runny nose, cause you to take a longer time to fall asleep. They are more likely to wake up in the night, nap during the day and get tired easily, all of which are symptoms of insomnia.



The hay fever is a result of an allergen causing an allergic reaction in the mucous membrane in the nasal passages. The lining expands and cuts down on the flow of oxygen into your system. The result is that you gasp for air, cough and sneeze which makes it very difficult to fall asleep.

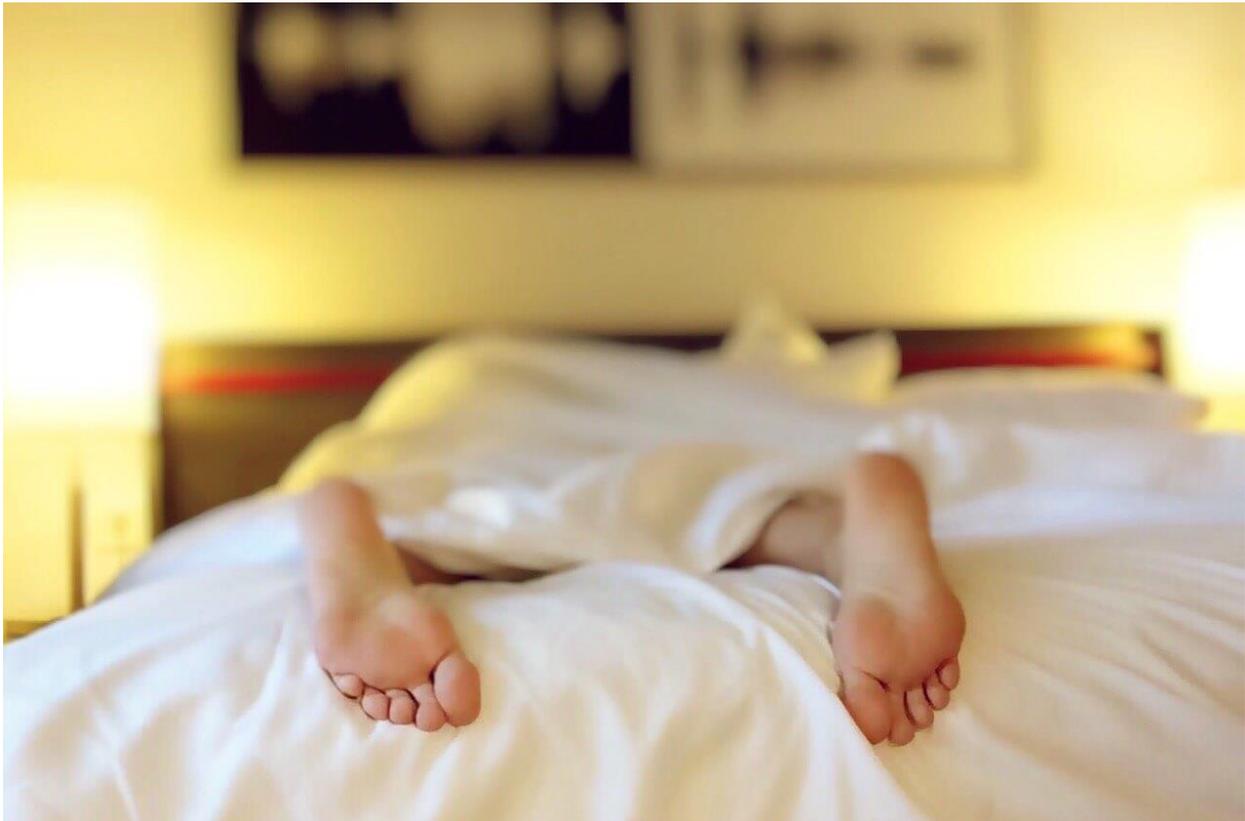
To treat allergies that create insomnia, talk to your health care professional about what might be the source of the allergy; is it dairy, dust, hay fever, gluten sensitivity or something else? Pinpoint the exact allergy and seek help from there. You can avoid the

source or use medication to treat it if it is unavoidable. If you cannot pinpoint the source, see an allergist who can run blood and skin tests to figure out what is troubling you specifically.

Restless Leg Syndrome

Restless leg syndrome (RLS) is a neurological condition that affects 1 in 10 people at some point in their lives. It is the overwhelming need to move the legs while at rest and the discomfort of it causes insomnia. RLS sufferers on average get less than 5.5 hours of sleep a night. The feeling of it can be anywhere between just uncomfortable all the way up to painful.

A recent study was done that showed that patients with restless leg syndrome had very elevated glutamate levels. The more disturbed sleep a person had, it turned out, the higher their glutamate levels. Fortunately, drugs are now available that reduce glutamate levels. It is possible that both restless leg syndrome and insomnia can be treated at the same time.



Depression and Anxiety

Chronic insomnia can cause anxiety and depression. However, anxiety and depression can cause insomnia. Anxiety, depression and insomnia seem to be so closely correlated that they can be a vicious cycle. Studies show that insomnia can lead to anxiety and depression. People with chronic insomnia should not only be treated for insomnia, but also be closely monitored for the development of anxiety and depression. Chronic insomnia can be a symptom of mental health problems. Upon detection of insomnia, look closer for emotional disorders which could improve early detection. Treating chronic insomnia can reduce your risk of developing a mental or emotional disorder.



In general, a person with an anxiety disorder will have trouble falling asleep but they will then sleep soundly through the night. Someone with depression can fall asleep easily but they will sleep lightly and wake up throughout the night.

There are several ways to reduce your anxiety and, thereby, your insomnia. Exercise, meditation, music, extra hours devoted to sleep, talk therapy, cognitive behavior therapy and following a routine can all reduce anxiety and potentially improve symptoms of insomnia. Another helpful tip is that, if you can't fall asleep in the first 15 minutes of going to bed, get up and do something else until you feel sleepy. It will not help you to

lay in bed feeling more and more frustrated at your inability to sleep.

Chronic Pain

Chronic pain is a very common cause of insomnia. In fact, 50% to 80% of people who suffer from chronic pain also experience sleep disorders such as insomnia, which makes sleep elusive. To make matters worse - chronic pain harms your sleep cycle and having a damaged sleep cycle can aggravate your chronic pain. Also, chronic pain can cause mental and emotional distress, another huge factor in insomnia.

One way that chronic pain might reduce your ability to fall asleep is that it is good to have a quiet environment to fall asleep in. This causes difficulty because, in a quiet environment, there are no distractions from the pain. Patients often report that the best way for them to manage the pain during the day is to find distractions from it such as reading, socializing, listening to music and watching TV. At night, when those distractions are unavailable, the perception of the pain becomes worse as they lay quietly with nothing else to think about. The longer they lay in bed, exposed to the pain, the worse the situation becomes. Another unfortunate factor is that a patient will feel distress at the thought of yet another painful night, waiting for exhaustion to overpower the pain, which makes the situation worse.

Opioids are often used to treat chronic pain but the down side is that they can disrupt the sleep cycle and prevent a patient from getting into a deep sleep. Opioids can also cause sleep-related breathing problems.

Waking up several times in the night is common for chronic pain patients. A sufferer might experience many “microarousals” per hour of sleep which leads to waking up. This causes a massive intrusion into the sleep cycles, leading to non-restorative sleep. This in turn can cause worse pain the next day, tiredness, low mood and lowered energy levels.

Options for treatment vary but one thing is known - treating insomnia can reduce your chronic pain. The first step is to rule out any other conditions that might also be aggravating the insomnia. Look for complications such as PTSD, depression, medications or other sleep disorders such as restless leg syndrome. Once those have been investigated and eliminated, it is time to work on the chronic pain. If a condition, such as sleep apnea, is damaging your sleep you need to treat it first. Treating the sleep apnea will improve your sleep and thereby, reduce the chronic pain.

Many physicians will work to aid the chronic pain holistically before using medications as a sleep aid. One treatment is CBT-I, which is cognitive behavior therapy - insomnia. It encompasses changing thoughts and behaviors regarding sleep. This type of therapy is often the preferred source of helping with chronic pain and sleep because there are no side effects that can come along with sleep aid medication and it is a long-term solution.

Chronic pain certainly causes insomnia. Also factor in the anxiety and depression that chronic pain causes, resulting in the deck stacked against you. But painful and sleepless nights can be reduced by talking to your doctor about all the symptoms you are experiencing. Keep a sleep journal to record the hours you sleep, if you are waking up in the night, daytime napping, emotions and the pain you are experiencing. These things combined can help you get some relief from the pain and insomnia.

Medications



Many types of medications cause insomnia. Since insomnia causes health problems on its own, it might be a good idea to reevaluate the medications you are taking.

Sometimes, because sleep is so important, you might want to talk to your doctor about altering your dose, switching to a different medication, or exploring an alternative treatment. The side effects of the insomnia medication might be worse than the condition you have been prescribed the medication for.

Here is a list of some types of medications that might be causing your insomnia:

Alpha - blockers

Alpha-blockers are prescribed to treat conditions including benign prostatic hyperplasia (BPH), high blood pressure and Raynaud's disease. Alpha-blockers can be muscle relaxants and work to keep blood vessels open. Rapid eye movement (REM) sleep can be decreased and losing out on REM sleep can drastically increase daytime sleepiness.

Beta-blockers

Arrhythmias and hypertension are often treated with beta-blockers. The hormone adrenaline is blocked which lowers blood pressure and slows heart rate. Beta-blockers are also prescribed to treat tremors, glaucoma and migraines. They reduce your melatonin, which is a hormone that regulates your sleep cycle and keeps you asleep throughout the night. A simple way to combat this problem is to try a nightly dose of melatonin which is available over the counter.

Corticosteroids

Allergic reactions, rheumatoid arthritis, lupus and inflammation of the blood vessels are all often treated with corticosteroids. Corticosteroids can cause both insomnia and unpleasant dreams. One potential way to reduce the negative impact of this medication is to ask your doctor if you can take it in the morning.

SSRI antidepressants

Moderate to severe depression can be treated with selective serotonin-reuptake inhibitors (SSRI). SSRIs can cause insomnia, agitation and impulsivity for some. Up to as many as 80% of individuals on SSRIs have reported struggling with insomnia at some point and to some degree during their treatment. It's important to talk to a doctor if you are on SSRIs and you are experiencing insomnia as insomnia can severely exacerbate your depression. Altering dosage, switching medication or adding in melatonin at bedtime might be something to talk to your doctor about.

ACE inhibitors

Congestive heart failure and high blood pressure are often treated with Angio-converting enzyme (ACE). ACE inhibitors increase the body's levels of a peptide called bradykinin. A third of patients on ACEs develop a dry hacking cough because of the bradykinin and the cough can go on all hours of the day and night. ACE inhibitors can also cause achy joints, diarrhea and leg cramps. If you are taking ACE inhibitors, consider talking to your doctor about switching to a benzothiazepine calcium channel blocker.

There are many more medications that cause insomnia. If you are experiencing insomnia and you think it might be linked to a medication you are on, do further research on your own and also talk to your doctor or pharmacist. It is hard to maintain a high quality life if you are suffering from insomnia so it is worth the effort to consider changing or altering the medications you are taking for a separate condition.

To reduce your chances of being kept awake with insomnia and get a better night's sleep, there are some pointers that all sleep experts agree on. Some of them include:



- Don't look at your clock. Seeing the time can reinforce the fact that you are not getting enough sleep which can cause anxiety. Turn the clock so that you can't see it. Only look at the clock if you are keeping a sleep journal.
- Make sleeping a priority and schedule in 7 to 9 hours of it.
- Exercise can contribute greatly to a good night's sleep.
- Develop a routine that incorporates your favorite relaxing activities. For example, listen to soft music in the bath 30 minutes before you plan on shutting out the lights.
- Do not partake in any stimulating activities right before bed such as watching shows or working.
- Adjust your sleeping environment so that it is exactly how you like it. In general, experts recommend that it should be quiet, cool and dark. Use a fan or some form of white noise to drown out sound.

As you search for a solution to your problems with insomnia, first look into the possibility that you have obstructive sleep apnea. Statistically that is the most common cause of insomnia. If you believe you have OSA, look in to having a sleep study done at a sleep clinic to see if you should be using a CPAP machine. If OSA is not the problem, then keep an eye out for other sleep problems such as; allergies, restless leg syndrome, depression, anxiety, chronic pain and the medications you are taking. Keep a sleep journal to show to your doctor or a sleep specialist. It is worth it to investigate these conditions and the effect they are having on your quality of sleep because insomnia can cause so many health problems on its own.