



# SLEEP *DISORDERS*



# INSOMNIA

Insomnia is a common sleep disorder that makes it hard to fall asleep or stay asleep.

According to the Sleep Foundation and the CDC, most healthy adults need seven hours of sleep at night. Children and teenagers need more sleep to support growth and development.



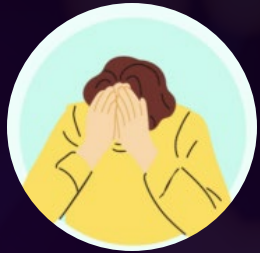
# SYMPTOMS OF INSOMNIA

- find it hard to go to sleep
- wake up several times during the night
- lie awake at night
- wake up early and cannot go back to sleep
- still feel tired after waking up
- find it hard to nap during the day even though tired
- feel tired and irritable during the day





# CAUSES OF INSOMNIA



- stress, anxiety, depression
- noise
- room that's too hot or cold
- shift work, lifestyle
- irregular sleep schedule



- alcohol, caffeine, nicotine
- recreational drugs
- some medications



- mental health disorders
- neurological disorders
- uncomfortable bed
- physical pain
- other sleep disorders



# TO HELP PREVENT INSOMNIA:

- Do not smoke or drink alcohol, tea or coffee at least 6 hours before going to bed
- Do not eat a big meal late at night
- Do not exercise at least 4 hours before bed
- Do not watch television or use devices, like smartphones, right before going to bed, because the bright light makes you more awake
- Do not nap during the day
- Do not sleep in after a bad night's sleep; stick to regular sleeping hours instead

# STEPS TO HELP SLEEP



- Go to bed and wake up at the same time every day.
- Relax at least 1 hour before bed. For example, take a bath or read a book.
- Make sure bedroom is dark and quiet – use curtains, blinds, an eye mask, or ear plugs if needed.
- Exercise regularly during the day.
- Make sure mattress, pillows, and covers are comfortable.





# RESTLESS LEG SYNDROME

Restless leg syndrome (RLS) is a condition characterized by a nearly irresistible urge to move the legs, usually in the evenings and at night.

- It typically occurs when sitting or lying down.
- It worsens with age and can disrupt sleep.



# SYMPTOMS OF RLS

Typically described as abnormal, unpleasant sensations in the legs or feet, usually on both sides of the body. Less commonly, the sensations affect the arms.

The sensations are described as:

- Crawling
- Creeping
- Pulling
- Throbbing
- Aching
- Itching
- Burning

The most consistent symptom is the desire to move the legs.





# NIGHTTIME LEG TWITCHING



Restless leg syndrome may be associated with another, more common condition called periodic limb movement of sleep, which causes legs to twitch and kick, possibly throughout the night while asleep.

# RISK FACTORS FOR DEVELOPING RLS

RLS can develop at any age, even during childhood. The disorder is more common with increasing age, and more common in women than men.

RLS usually isn't related to a serious underlying medical problem though sometimes accompanies other conditions, such as:

- Peripheral neuropathy
- Iron deficiency
- Kidney failure





# TREATMENT OF RLS – LIFESTYLE CHANGES



- Avoid stimulants in the evening (caffeine, tobacco, alcohol)
- Quit smoking
- Get regular daily exercise – though avoid exercising in the evening
- Follow good sleep habits
- Avoid medications that trigger symptoms or make them worse

During an episode:

- Massage the legs, walk, stretch
- Take a hot bath or apply hot compress to affected muscles
- Try relaxation exercises, such as yoga or tai chi

# MEDICATIONS USED TO TREAT RLS

## Dopamine agonists

- Requip, Mirapex
- Can cause drowsiness, nausea, dizziness.

## Sleep medicines

- Hypnotics such as zolpidem are sometimes prescribed for short-term use.
- May cause sleepiness during the day or a hungover feeling.

## Pain killers

- Mild opiate-based painkillers, such as codeine, may relieve pain associated with RLS.
- Gabapentin and pregabalin are sometimes prescribed.
- These can cause dizziness, tiredness, and headaches.





# MEDICATIONS KNOWN TO WORSEN RLS SYMPTOMS

## Antihistamines

- Such as Benadryl found in many cold, allergy, and OTC sleep aides.

## Anti-dizziness/anti-nausea medications

- Such as meclizine, Compazine, Phenergan, etc.

## Antidepressants

- Such as amitriptyline, Prozac, Lexapro, Effexor, etc.

## Antipsychotics

- Such as Haldol, etc.



# SLEEP APNEA

There are two types of sleep apnea:

- Obstructive sleep apnea (OSA)
- Central sleep apnea

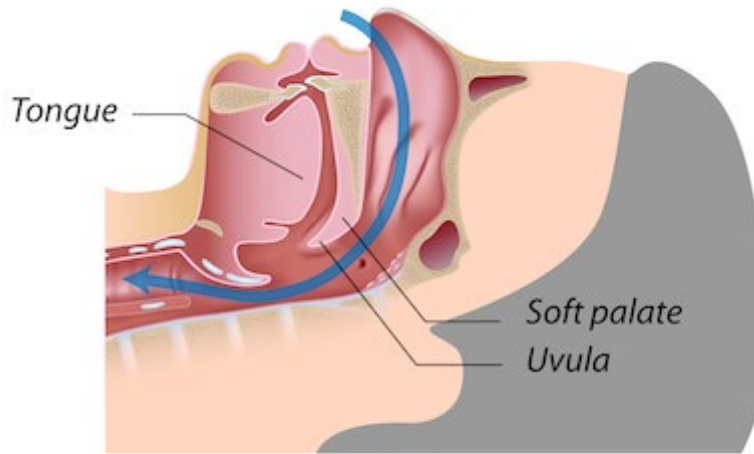
When someone has sleep apnea, air movement in and out of the lungs decreases or stops altogether. Sleep apnea can affect long term health.



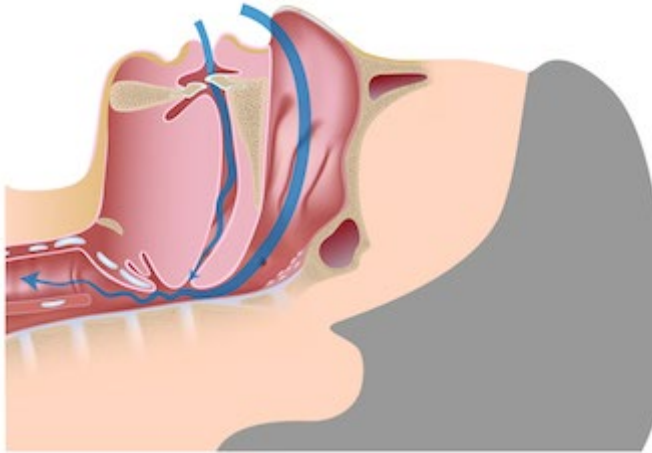


# OBSTRUCTIVE SLEEP APNEA

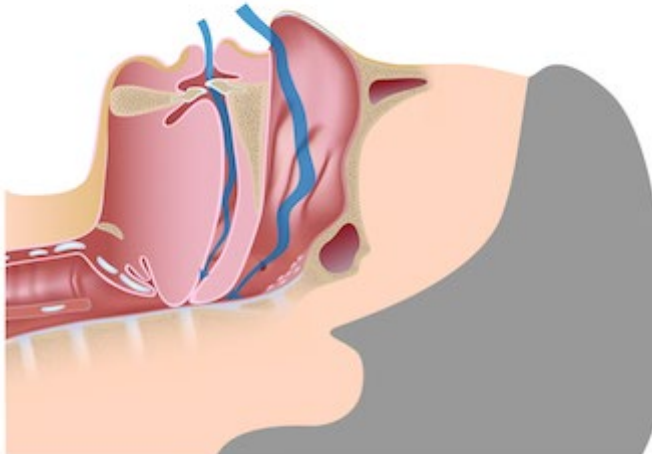
Normal breathing



Snoring - Partial obstruction of the airway



OSA - Complete obstruction of the airway

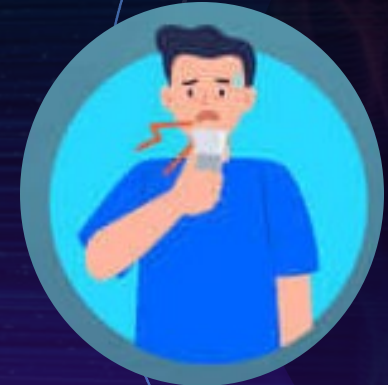


The throat is surrounded by muscles that control the airway during talking, swallowing and breathing. During sleep, these muscles can fall back into the throat, causing narrowing.

- The narrowing can cause snoring.
- Partial obstruction with decreased airflow is called hypopnea.
- If the muscles block the throat, no air passes. This is obstructive sleep apnea (OSA).

# SYMPTOMS OF OBSTRUCTIVE SLEEP APNEA

- snoring
- waking up during the night with shortness of breath or with a start, feeling unable to breath
- waking up with a headache and dry mouth or sore throat
- nocturia
- daytime sleepiness and fatigue
- lack of concentration during the day
- mood changes and memory loss





# CAUSES OF OSA



- Obesity: tissues/muscles are thicker and when they relax, have a higher chance of blocking the airway.
- Large tonsils block the airway and obstruct breathing.
- Genetic predisposition.
- Neuromuscular disorders such as MS where the muscles do not function the way they should.
- Age – prevalence increases with age.
- Heart or kidney disorders.
- Unhealthy lifestyles – smoking and drinking make the tongue and throat muscles relax further and cause obstruction.



# TREATMENT OF OSA

When sleep apnea is being caused by an underlying medical condition or lifestyle, that should be treated first to try cure the sleep disorder.

If the root cause is respiratory, then there are different treatment options available including:

- Breathing devices such as CPAP
- Mouth pieces or mouth guards
- Surgery
- Myofunctional therapy (facial therapy for muscles of the tongue, throat and face to reduce snoring)



# COMPLICATIONS OF OSA



Sleepiness and difficulty concentrating can lead to accidents.

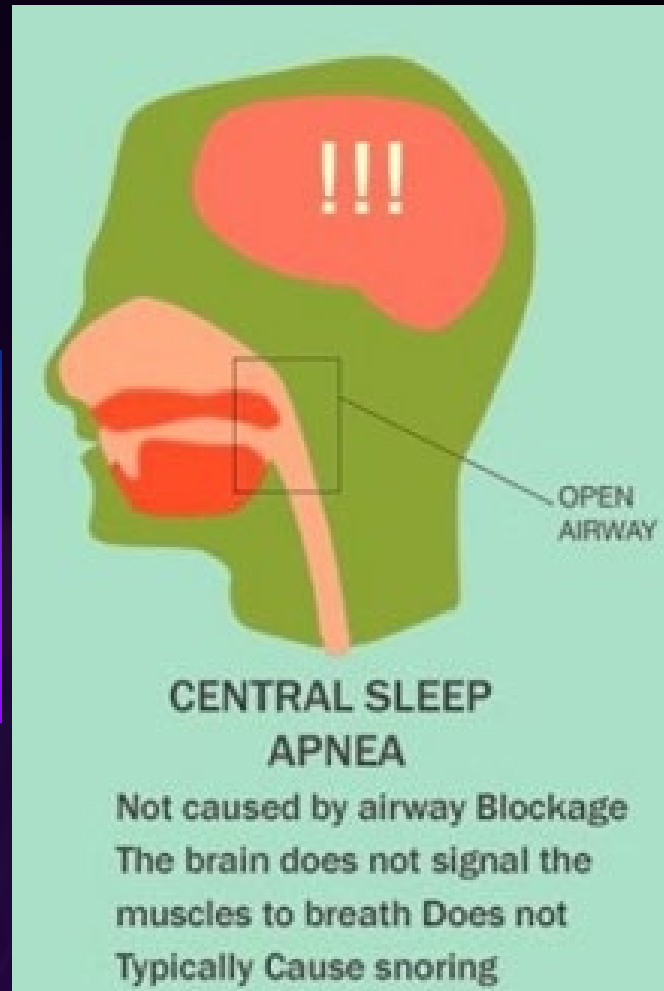
There is also an increased risk for:

- High blood pressure
- Heart disease and heart failure
- Abnormal heart rhythms
- Type 2 diabetes
- Depression



# CENTRAL SLEEP APNEA (CA)

CA is not due to an obstruction, but instead, the part of the brain which regulates breathing during sleep fails to send the proper signals to the muscles of breathing and the diaphragm, instructing them to inhale and exhale.



Without signals, the muscles are inactive, and the body stops breathing until oxygen levels fall. When this happens, low oxygen/high carbon dioxide “alarms” go off in the brain. Respiratory regulators then “wake up” and send new signals to the breathing muscles to start inhaling.



# SYMPTOMS OF CENTRAL SLEEP APNEA

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- morning headaches
- memory loss
- daytime sleepiness; chronic fatigue
- a pause in breathing; shortness of breath
- irritability, mood changes
- disrupted sleep, insomnia



# WHAT CAUSES CENTRAL SLEEP APNEA?



Several health conditions and situations can present with central sleep apnea, such as:

- Congestive heart failure
- Atrial fibrillation
- Stroke
- Sleeping at a high altitude
- The presence of a brain tumor
- Diseases of and injuries to the breathing center in the brain
- Parkinson's disease
- Kidney failure
- Severe arthritis with cervical spine degeneration near the base of the skull
- Use of certain medications, such as opioids, which can depress respiratory function

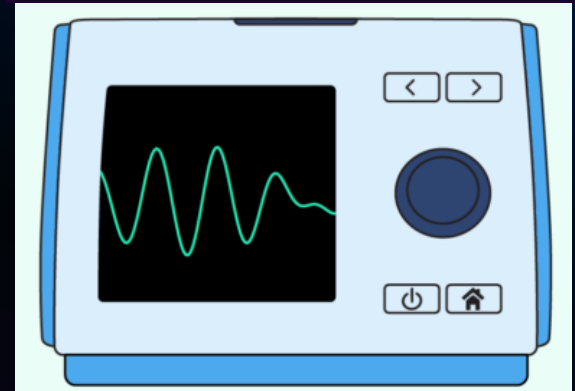
# TREATMENT OF CENTRAL SLEEP APNEA



Therapies include

- CPAP
- BiPAP
- Adaptive servo-ventilation
- Supplemental O<sub>2</sub> often needed
- Some drugs

## ASV MACHINES



Monitors breathing to maintain blood oxygen levels

Adjusts the pressure setting throughout the night



# SLEEPWALKING

Also known as somnambulism, sleepwalking involves getting up and walking around while in a state of sleep.

It is more common in children and is usually outgrown by the teen years.



# SLEEPWALKING BEHAVIOR

- Sleepwalking usually occurs one or two hours after falling asleep at night. It is usually a random, harmless event.
- Rarely it can involve unusual behaviors such as climbing out of a window.
- A sleepwalker's eyes are often open, but the person does not see in the same way as when awake.
- An episode can last for seconds to minutes but also can go on for 30 minutes or longer. Most episodes last for less than 10 minutes.





# SYMPTOMS OF SLEEPWALKING



- Getting out of bed and walking around
- Sitting up in bed, opening eyes, but still asleep
- Having a glazed expression
- Not responding or communicating during the episode
- Difficult to wake up while sleepwalking
- Being disoriented or confused when awakened
- Not remembering sleepwalking or any actions from the episode
- Having problems functioning during the day due to disturbed sleep or lack of sleep
- Having recurrent night terrors

# CAUSES OF SLEEPWALKING

What causes sleepwalking in adults and children is unknown, but there is a range of things that can trigger sleepwalking behaviors or even make it worse.

- Not getting enough sleep
- Stress and anxiety or other mental health issues
- Sickness, infections, or bad colds
- Certain medications, such as sedatives
- Drinking alcohol or taking drugs
- Having other sleep disorders such as sleep apnea or restless leg syndrome



# COMPLICATIONS OF SLEEPWALKING

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Sleepwalking can become unsafe if the behavior is repeated and it occurs extensively where the person could sustain an injury, These may include:

- Leaving the bedroom (through the window or door)
- Falling down the stairs
- Picking up heavy objects
- Bumping into things
- Using sharp objects such as knives
- Driving
- Acting violently
- Performing complex and dangerous tasks.





# TREATMENT

Some medications can help prevent sleepwalking including benzodiazepines, tricyclic antidepressants, and trazodone.

Other measures that may help include:

- ✓ Reducing stress, relaxation techniques.
- ✓ Avoid drinking alcohol and caffeine, particularly in the evening.
- ✓ Focus on health to avoid colds and other illnesses.
- ✓ Behavioral therapy and sleep hypnosis may help.



# SLEEP PROBLEMS



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2024