



HOW DO I TEST FOR SLEEP APNEA?

In general, there are two types of sleep diagnostic testing: Overnight polysomnography (PSG) or level III sleep testing (portable monitoring). PSG requires a referral to a sleep centre. In some provinces, portable monitoring can be ordered directly by your family physician through a respiratory care company. In either case, it is important that your sleep testing and the care for the sleep disorder is overseen by a qualified sleep medicine specialist.

The PSG is a sophisticated test which monitors brain wave (EEG) activity, eye movements (EOG), muscle activity (EMG), and breathing effort. It requires a sleepover at a sleep centre, but can also be used to diagnose non-respiratory sleep disorders such as other types of sleep apnea, restless leg syndrome or narcolepsy.

Portable monitoring can be performed at home, but can only diagnose sleep apnea. It is used when sleep apnea is the suspected cause of sleepiness.

1. If there is a strong suspicion of sleep apnea, consider either level III testing (portable monitoring) or PSG.
2. If a non-respiratory sleep disorder is suspected (sleepiness without classic sleep apnea features), consider a referral for polysomnography, or a referral to a sleep centre.

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OK, I HAVE SLEEP APNEA, DO I NEED TREATMENT?

As mentioned, not all patients with sleep apnea require treatment. In general, only severe OSA results increased risk of hypertension, cardiovascular disease or diabetes. It is therefore recommended that all severe patients consider treatment.

Those with non-severe disease will benefit from treatment only if they have sufficiently severe symptoms (typically sleepiness) that they would consider treatment. However, it can be difficult to determine if sleepiness is caused by OSA rather than other factors.

Moreover, sleepiness can be underappreciated as many people get used to their symptoms. Sometimes the only way of deciding whether sleep apnea is causing symptoms is to try therapy.

Sleep apnea severity is measured by an apnea hypopnea index (AHI) or respiratory disturbance index (RDI); which reflect the number of times there is a breathing disturbance/ hour of sleep.

1. **Mild OSA (AHI 5-15): Treatment depends on the severity of symptoms**
2. **Moderate OSA (AHI 15-30): If symptomatic, you will likely have some symptom relief from treatment**
3. **Severe OSA: Treatment should be considered**

WHAT TREATMENTS ARE AVAILABLE?

1. Continuous Positive Airway Pressure (CPAP)

CPAP is the most effective treatment for sleep apnea and should be considered as the first treatment choice with severe OSA. It consists of a portable machine that blows pressurized air through a mask that is worn over the nose. The pressurized air holds the airway open, and thus prevents apneas.

2. Behaviour and lifestyle modification

Although easier said than done, weight loss is an extremely effective treatment. Patients have been cured of OSA after losing weight. Other options include: regular exercise, smoking cessation, avoidance of alcohol or sedatives before sleeping, and positional therapy (avoidance of sleeping on the back).

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Obstructive Sleep Apnea (OSA)

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Canadian Sleep
Society

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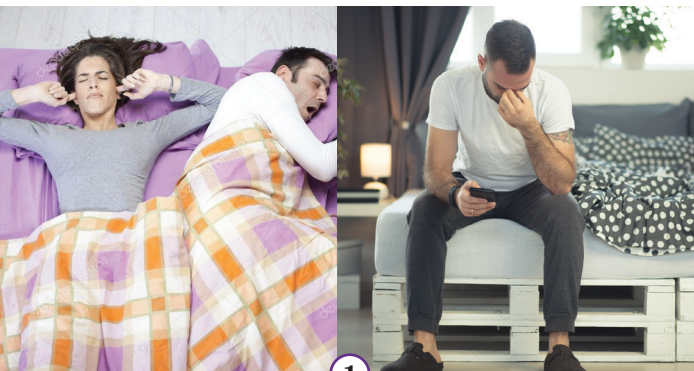


WHAT IS OBSTRUCTIVE SLEEP APNEA?

Obstructive sleep apnea (OSA) is a sleep disorder characterized by intermittent stoppage of breathing (apnea) during sleep. In children, it can result in a diminution of the airflow without complete stoppage. Sleep causes the pharyngeal (throat) muscles to relax, which can cause the airway to vibrate (snoring) or collapse (apnea). The effect is similar to sucking hard on a paper straw. The brain recognizes that the airway has collapsed, which results in an awakening from sleep arousal) and/or lowered oxygen levels (hypoxemia). Muscle strength is restored, the airway opens, and breathing resumes.

Although this can happen repeatedly throughout the night, arousals are typically short, so there may be no awareness of apnea or sleep disruption by the affected individual. However, if sleep apnea is sufficiently frequent, sleep becomes disrupted and daytime symptoms (sleepiness or non-restorative sleep) can occur.

In more severe sleep apnea, there can be an increased risk of high blood pressure, heart disease, diabetes, or stroke. In children, sleep apnea can result in physical, behavioural and learning consequences.



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DO I NEED TO BE TESTED?

OSA is very common and can occur in up to 30% of Canadians. If you are obese, experience nocturnal choking episodes, or have had someone tell you that you stop breathing during sleep (witnessed apnea), there is good chance you have sleep apnea.

However, only a minority of people have symptoms. Not everyone requires testing or treatment. Most of the time, testing is only required if you have symptoms (typically sleepiness), or problems that are related to sleep apnea such as high blood pressure etc. that are severe enough that you would like treatment.

However, severe sleep apnea may increase the risk of high blood pressure, heart disease and diabetes. If you have any of these conditions in addition to witnessed apneas or obesity; it may be worthwhile being tested for OSA.

In children who have parents with sleep apnea and any health problems or risk factors, may also need to be seen and/or tested. Sleepiness and fatigue are extremely common complaints.

There are many causes of fatigue (lack of energy). In contrast, sleepiness (risk of falling asleep inadvertently) is less common, and is often associated with a sleep disorder. Most of the time sleepiness can be explained by insufficient sleep/insomnia, stress, underlying medical or psychiatric conditions. However, if you have unexplained sleepiness, you may wish further testing. Consider testing if you experience the following:

- 1. Do you have unexplained sleepiness?**
- 2. Consider testing if you are obese, experience witnessed apneas or nocturnal choking episodes, nocturnal choking episodes AND have unexplained sleepiness**
- 3. Consider testing if you are obese, experience witnessed apneas or nocturnal choking episodes, AND have a history of hypertension, cardiac disease, and diabetes.**
- 4. Consider being assessed by a sleep physician to test if the sleepiness is still present despite treatment or a negative testing result.**

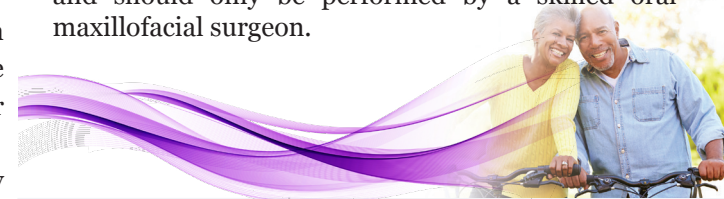
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3. Oral appliance

This is a dental device (similar to a mouthguard) which advances the lower jaw, thus creating a larger airway opening. The oral appliance is less effective than CPAP but some patients find it easier to tolerate than CPAP therapy; and it is more portable.

4. Surgery

The most commonly performed procedures are the ulopalatopharyngealplasty (UP3) or laser-assisted uvulopalatopharyngealplasty (LAUP). While these procedures may reduce snoring severity, neither are particularly effective at treating OSA. Mandibular advancement surgery can be curative in selected individuals; however, it is fairly major surgery, and should only be performed by a skilled oral maxillofacial surgeon.



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For more information visit www.canadiansleepsociety.com or email info@css-scs.ca

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National Campaign SLEEP ON IT!

This Canadian public health campaign is about sleep. It explains everything you need to know about sleep and it offers solutions to members of the public who suffer from sleep disorders.

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