

Sleep soundly (finally!)



APNEA AND SNORING KIT

FALL 2021

SLEEP HEALTH
CLINIC
— DR. LECHNER —
GENERAL DENTIST

514.739.6095 • SANTESOMMEILDRLECHNER.CA

OVERVIEW

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1. Introduction

Your healthcare professional has recommended a mandibular advancement orthotic to treat a snoring or an obstructive sleep apnea problem.

This information kit was produced by Dr Lechner Sleep Health Clinic in order to encapsulate the important information shared during your consultation in our offices. Here you can find, in one place, a wealth of information about your condition, our devices and our treatments, so that you may make the best decision for your overall well-being.

Have you decided to move forward with your apnea treatment? To ensure that you have read and understood the information contained in this document, your Dr Lechner Sleep Health Clinic healthcare professional will ask you to sign a consent form in order to book your next appointment to officially begin treatment.

If you have any questions at the end of your reading, we are always available to answer them with the professionalism and advice that you seek, in order to maintain your health through proper sleep and the peace of mind that you will enjoy for the rest of your life.

Happy reading!



2. Treatment overview

In Quebec, only a dentist can provide management of obstructive sleep apnea (OSA) with a mandibular advancement orthotic. Your treatment includes taking an impression, designing a mandibular advancement device with adjustments and check-ups, plus regular follow-ups, over a period of three to five years.



Before

To begin the treatments, you will have to request a consultation and diagnosis from a health professional such as a pulmonologist, your attending physician, an ENT doctor or other professional assigned to your file. You will need to have the results of a laboratory sleep study done within the past 5 years in your possession or send them to us. This test may be required again by your attending physician after the start of the advancement treatment, as a follow-up.

You will also need to ensure that your teeth are repaired before the initial impression is taken, since any changes to your teeth may require your current treatment to be temporarily discontinued and new orthoses manufactured at an additional cost.

Treatment

Your experienced sleep health dentist will first assess your dental health to determine if you are a potential candidate for an oral appliance. If so, they will take an impression of your teeth and take a panoramic X-ray of your mouth to order the right device for your condition. If necessary, your dentist

can also review your sleep apnea insurance coverage with you, provide you with information about the financing tools available, if necessary, and provide you with the invoices necessary to apply for a tax credit.

What will occur during visits

The proper conduct of a dental orthosis treatment for snoring or sleep apnea syndrome as well as determining the cost for this work requires the patient's full cooperation, that is to say you.

Beyond the initial visits to take measurements and check/adjust the oral appliance made specifically for you, you should schedule check-ups throughout your treatment (which are included in the overall cost of the treatment):

SCHEDULE	PURPOSE	PROFESSIONAL
1 week later	Control visit	Dr Lechner Sleep Health Clinic
1 month later	Quality control test	Dr Lechner Sleep Health Clinic
1 to 3 months later	Sleep test (optional)	Your attending physician
Every year (for 5 years)	Annual control visits*	Dr Lechner Sleep Health Clinic
Every 6 months	Examination and cleaning	Your attending dentist

*During the annual check-up, your sleep health professional will check the device's fit, reassess your symptoms and check your teeth's condition.

3. Advantages, risks and disadvantages



The *Collège des Médecins du Québec* describes obstructive sleep apnea (OSA) as the most common sleep-related breathing disorder. This anomaly is considered a chronic disease like asthma, diabetes or high blood pressure. (For an overview of the risks associated with your condition as such, see Section 4 on Problems and consequences of apnea).

As you probably already know, living with apnea can affect your state of health and your quality of life, even that of your family or those around you. Its treatment requires long-term management which, depending on the causes of your apnea, could involve various health professionals such as your family doctor, a general dentist, an otorhinolaryngologist (ENT), a pulmonologist, a respiratory therapist, a psychiatrist, etc. Our common goal is to provide you with complementary therapies and interventions in order to manage your problem over the long term.

You also have your part to play, and this is the most important. Being actively involved in managing your disease and adopting a healthy lifestyle and sleep habits will help you and your family enjoy life to the fullest.

However, and it is important to remember, this kit does not replace medical advice. Since any respiratory disorder represents a potential risk to everyone's health, your Dr Lechner Sleep Health Clinic healthcare professional will ask you for a prescription from an attending physician who has made an official diagnosis before agreeing to treat you with a mandibular advancement orthotic.

Benefits of dental appliances

Mild to moderate apneic patients are excellent candidates for mandibular advancement therapy, as dental appliances may be useful to treat their sleep apnea syndrome and/or snoring. By advancing the tongue or advancing the lower jaw during sleeping hours, oral appliance therapy for snoring and/or OSA can improve breathing, which has been shown to be effective in many studies.

However, there is currently no guarantee that this therapy will be effective for all patients. Many individual factors contribute to snoring and/or sleep apnea, including nasal obstruction, narrowness of the upper airways, excess weight, etc. Given these individual differences, dental appliances may not reduce snoring and/or apnea for all patients. In addition, some patients may not endure having the device in their mouth.

Even when therapy is effective, there may be a period of time before the device operates at its peak, during which time you may still experience symptoms related to your sleep-related breathing disorder. A post-adjustment polysomnography (a sleep study) is necessary to objectively ensure effective treatment. You will need to get it from your doctor.

Risks of dental appliances for some patients

Some patients may develop short-term side effects following treatment with dental appliances, such as excessive salivation or dryness, tenderness in the temporomandibular joint, sensitive teeth, difficulty swallowing (with the device in place), or a slight change in their bite, that is, the way the upper and lower teeth close when at rest.

Note that these side effects mostly decrease within an hour of removing the device each morning. Some cases may require dental adjustments or restorations. Most of these side effects are minor and resolve themselves, either over time or by making a minor adjustment to the device.

Long-term complications include certain changes, sometimes permanent, such as in occlusion, resulting from the movement of the teeth or the repositioning of the jaw joints. In rare cases, a prolonged change in occlusion or permanent pain in the temporomandibular joint could result in permanent removal of the device. If these complications are not reversible, dental restoration treatment or orthodontic intervention may be necessary, which is the patient's responsibility.

Monitoring the risks and adjustments

You must be monitored periodically by your dentist throughout your treatment to perform the usual dental examinations and cleanings. Your appliance should also be inspected once a year during a check-up with your treating professional, who will examine the appliance's fit and your dental condition. If an abnormality occurs between the check-ups, it is imperative to remove the prosthesis from your mouth and notify the clinic as soon as possible in order to make an appointment.

Important! Treating your sleep-related breathing disorder with dental appliance therapy is your decision. Like any medical or dental health treatment, it may not be effective for you. It is also your responsibility to report the onset of side effects. Failure to follow these guidelines may prolong or compromise the success of the chosen treatment. If a patient does not undergo regular dental and medical check-ups, the treating professional accepts no responsibility for the possibility of subsequent problems.

Device failure or discontinuation of treatment

Temporomandibular joint problems: If your bite changes after wearing the device or if a problem occurs with your temporomandibular joint (such as a cracking jaw), you should immediately stop wearing the prosthesis and call us to determine if treatment must be suspended.

Bruxism: If you have a problem with grinding your teeth, which is called bruxism, your appliance may

break more often, and your oral condition may force us to remove the prosthesis permanently.

Periodontitis: At the beginning of treatment, any patient suffering from periodontitis (gum disease) will be notified by our treating professional. Regular cleanings performed by a dentist are necessary, otherwise we will be required to remove the prosthesis to protect the patient's dental health.

Restorations, fillings, etc.: Any patient with multiple restorations is advised that, should wearing the prosthesis cause the breakage or loss of an existing restoration, the patient is responsible for replacing it.

4. Dental appliances and photos

Depending on your mouth's appearance and the condition of your teeth, there are various appliances to choose from that may be recommended by your Dr Lechner Sleep Health Clinic healthcare professional, as follows:

1. SomnoDent advancement orthosis
2. Panthera anti-snoring device
3. ProSomnus sleep device

Each type of device has its own features and benefits, as well as a price structure and warranties in the event of breakage or replacement that are unique to each company.

A morning repositioner may also be suggested for you. This dental appliance fits onto your lower teeth and is worn for 10 minutes after waking up, to reduce the risk of permanent advancement of the lower jaw. Just slip it into your mouth during your morning routine, when taking your shower, for example. You should then be able to effortlessly close your mouth or chew properly as often as possible and/or keep your jaw in your natural and comfortable position.

1. SomnoDent advancement orthosis

Worn during sleep, SomnoDent appliances are installed onto the upper and lower teeth. The appliance moves the lower jaw forward slightly, enabling the patient to keep their airways open for normal breathing. The SomnoDent range of appliances is adapted to each patient, in order to provide comfort, quality and performance.

These appliances are intended to treat night snoring and mild to moderate obstructive sleep apnea in patients 18 years of age or older whose teeth are no longer moving.



2. Panthera anti-snoring device

The Panthera is a Quebec-made anti-snoring device that is custom-designed by computer. It is worn every night and helps you keep your lower jaw forward in complete comfort. The diameter of your airway is thus increased, which facilitates the passage of air and eliminates the main reason for snoring and sleep apnea.



It is recommended to treat mild and moderate sleep apnea, or for severe sleep apnea if the patient cannot use a CPAP machine (see Section 10 about consent). It can also be practical as an alternate to a CPAP machine when circumstances do not allow using the latter, for example while traveling.

3. ProSomnus sleep device

ProSomnus Sleep Technologies designed this sleep device that is manufactured using digital technologies. It is comfortable and easy to use, and helps maintain the desired mandibular position throughout the night, without tongue interference, for effective treatment of sleep apnea. It is made of two components, and is one of the smallest mandibular advancement devices on the market. Ask your experienced dentist if this technology is right for you.



5. Problems and consequences of apnea

Is snoring really that bad?

Snoring and sleep apnea syndrome are two respiratory disorders caused by narrowing or obstruction of the upper airways, occurring during sleep. Snoring is an inspiratory noise created by a vibration of the soft tissues of the throat (uvula, soft palate, walls of the pharynx). The path taken by the air is too narrow and the snorer must make an effort to force the air to pass. In the majority of cases, snoring gets worse with time, age and weight gain.

As a general rule, the greatest inconvenience posed by snoring is limited to disturbing those around you, at home, when traveling, etc. On the other hand, very heavy snoring has been associated with medical conditions such as high blood pressure, so you should inform your doctor.

What is apnea?

In addition to the inspiratory noise, some snorers experience pauses in breathing, called apneas. Unlike simple snoring, obstructive sleep apnea is a serious medical condition. In fact, during apneic pauses, the upper airways are completely closed. These breathing interruptions, which can occur several times a night, lead to a severe drop in the level of oxygen in the blood and disrupted sleep. Depending on their severity, they can also result in various, somewhat serious side effects:

- Excessive drowsiness during the daytime
- Workplace or driving accidents
- Irregular heartbeat
- Stroke
- Diabetes and/or obesity
- Increased blood pressure
- Problems with memory, concentration and learning
- Choking or panting during sleep
- Depression, etc.

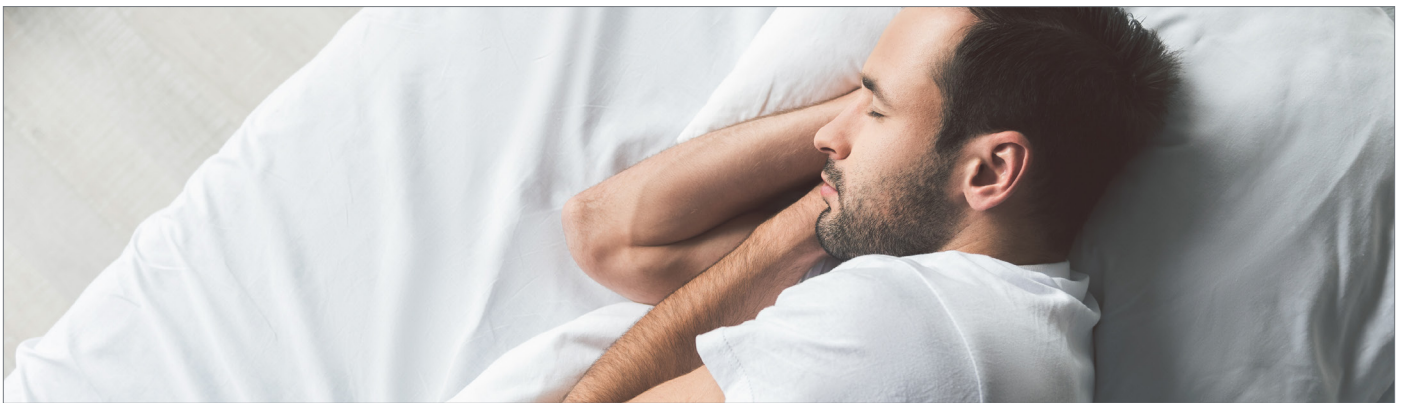
Since all respiratory disorders represent a potential health risk at any age, patients are advised to consult a physician in order to diagnose the causes of their apnea. Note that among snorers, only 5% of the population suffers from OSA. Did you know that even children can suffer from OSA? This can be associated with behavioural disorders or attention deficit disorder. Here are some signs to watch out for:

- Your child snores at night
- They breathe through their mouth while sleeping
- Their sleep is agitated
- They complain of headaches when they wake up
- At school or daycare, their teachers tell you that they fall asleep more often than other children

These signs may be due to other medical reasons or other issues, so it is best to consult to be sure.

Sleep tests

In order to establish a diagnosis of obstructive sleep apnea, your doctor will recommend one of two verification tests, depending on your state of health, either a laboratory polysomnography (PSG) or a cardiorespiratory sleep polygraphy outside the laboratory. Based on the data obtained, your doctor will recommend the treatment best suited to your condition, including a mandibular advancement orthosis. If so, your test results should be sent to your Dr Lechner Sleep Health Clinic healthcare professional at the beginning of treatment.



Other treatments for sleep-related breathing disorders

Beyond dental appliance treatment, other treatments are recognized for sleep-related respiratory disorders, including:

- **A CPAP:** continuous positive airway pressure machine including a mask that is worn at night.
- **Surgery,** such extraction of tonsils in children; correction of a malformation in the face or respiratory tract; or bariatric surgery in overweight people.
- **Healthy lifestyle and sleep habits:**

- Achieve and maintain a healthy weight
- Exercise regularly
- Limit the consumption of alcohol and sedatives
- Stop smoking
- Adopt a regular sleep routine (for our advice, see Section 7 - Other treatments and recommendations)

The risks and benefits of these alternative treatments should be discussed with your healthcare professional.

6. Appliance maintenance



Your dental appliance should be inspected once a year during a check-up, at which time our health and sleep professional will verify that the appliance is still properly adjusted and compliant. Your dental condition will also be examined. Please note that during the first year of your treatment, the costs of these visits are included in the price of the prosthesis. In subsequent years, a fee will be charged for each visit.

In order to keep your dental appliance in good condition and to avoid breakage or deformation, you are required to comply with certain basic maintenance and precautions, as well as safe storage and handling. Here is an overview of the recommended maintenance measures.

Daily:

- Each morning after use, clean the appliance thoroughly with an ordinary soft toothbrush in cold or lukewarm water, with an antibacterial liquid dish soap or an orthodontic appliance cleaner (e.g. Novadent Ultra Soft IP). **Do not use denture cleaners or Purell alcohol as these products are too harsh.**

Caution: Do not clean the appliance with hot or boiling water, as it can warp the resin material.

- Rinse the appliance thoroughly, and then place it in a container face down so that it can drain during the day.
- It is not necessary nor recommended to immerse the appliance into water. Water can stain the resin surface, leaving mineral deposits. Alcohol-based mouthwashes and bleach can penetrate the resin material and your appliance can absorb odours from cleaning solutions.
- You can use an ultrasonic cleaner every week. You will still need to follow the basic guidelines above.

Transportation and storage

- Always keep your appliance in a cool, dry place out of the reach of children and pets.
- This appliance is made of resin that should not be stored at temperatures exceeding 38°C or 100°F, such as in a car, under direct sunlight, etc.
- For air travel, wrap your appliance in paper towels, then place it in its container with the lid slightly open.

7. Other treatments and recommendations

Regular examinations and cleanings

Along with using a dental appliance to treat your apnea, your Dr Lechner Sleep Health Clinic healthcare professional will ask you to see your attending dentist every six months for your usual dental examinations and cleaning. If you don't have a family dentist, they'll be able to recommend one. It is very important to take care of your teeth during treatment. **In the absence of regular dental and medical check-ups, which could compromise the treatment's success, please note that your sleep health expert assumes no responsibility for the possibility of subsequent problems.**

Physiotherapy

During any therapy using dental appliances, we suggest follow-up physiotherapy to facilitate adaptation. You can also perform the following daily exercises to relax your mouth and tongue while exercising your temporomandibular joint.

Daily exercises

Research has shown that daily tongue and upper airway exercises can help remedy snoring and sleep apnea. It is recommended that you do these exercises every night, about 20 minutes before bedtime. To do these, you must be able to breathe through your nose. If you find that you are not getting enough air through your nose, talk to your doctor, dentist and/or our clinic professional.

1. Brush your tongue with your toothbrush, using a back-and-forth motion, both across the front of your tongue and the sides. Repeat five times.
2. Place the tip of your tongue behind your upper teeth, then slide your tongue back, rubbing your palate for three minutes.
3. Press your entire tongue against your palate and push upward, using suction, for one minute. Release and repeat twice.
4. Force the back of your tongue against the floor of your mouth, keeping the tip of your tongue

in contact with your lower front teeth, for one minute. Release and repeat twice.

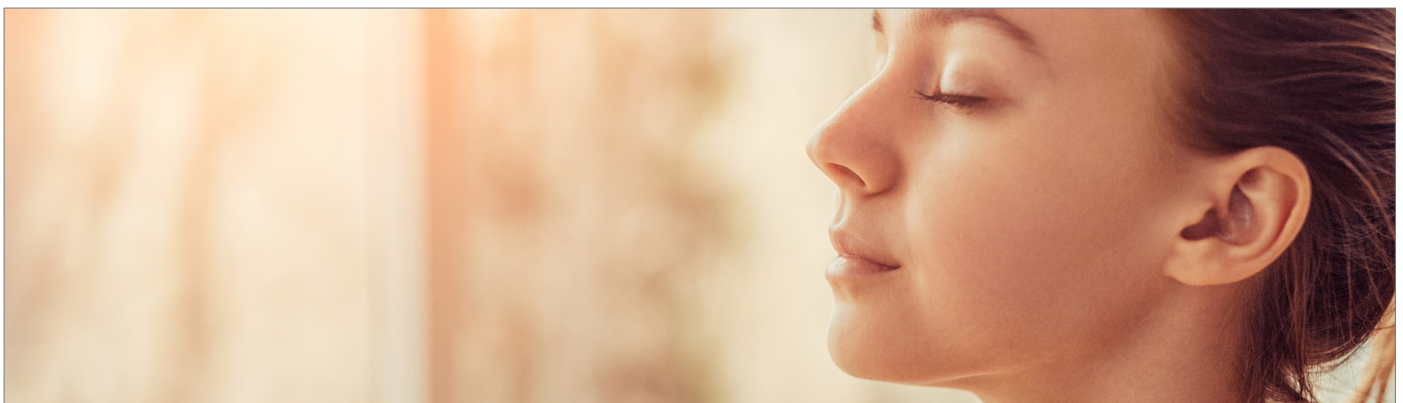
5. With your mouth open and your tongue on the floor of your mouth, say “Ahhh” for one minute. Repeat three times, relaxing between each time.
6. With your mouth closed, perform a sucking motion for three minutes.
7. Place your finger into your mouth and suck for three minutes.
8. a) Move your mouth to the left then to the right, 10 times per side. Release then repeat each set twice. b) Move your mouth to the left and hold this position for 10 seconds, then do the same to the right. Repeat six times.

Tips for better sleep

Creating winning conditions to ensure a good night's sleep can be a valuable contribution to the success of your OSA treatment. Here are several things you can gradually put into practice to help you do this.

1. Make sleep a priority. Adults should get 7-9 hours of sleep each night, and children 7-12 hours.
2. Try as much as possible to go to bed and get up at the same time each day. A regular sleep routine helps program your body clock.
3. Consume alcohol in moderation. Drinking a large amount of alcohol causes poor sleep quality and an increased frequency of waking up during the night.
4. Eat a healthy diet that will help you maintain a healthy weight, stabilize blood pressure, and lower cholesterol. As you read above, these are the health risks already associated with your sleep disorder.
5. Exercise regularly to encourage deeper sleep and to fall asleep faster. However, intense exercise should be avoided in the 2 hours before bedtime, as this could stimulate wakefulness.
6. Go to bed only when you are drowsy and truly ready to sleep.
7. If you suffer from anxiety, see a healthcare practitioner, as uncontrolled anxiety affects sleep.
8. Adopt a “pre-sleep” routine to help you relax and reduce stress, such as a hot bath, restful reading time, etc.
9. Don't solve your problems in bed. If necessary, make a “List of My Worries” before bed to help clear your mind and reduce your level of sleep anxiety.
10. Cut down on your nap times. If you need to take a nap to stay alert, limit it to 20 or 30 minutes no later than late afternoon.
11. Avoid falling asleep early in the evening by getting up and staying active if you are drowsy.
12. Control your exposure to light. Try to dim the lights right after dinner and limit computer or device use to the early evening hours.
13. Use your bed only for sleeping, to rest if you are sick or for intimate moments. Avoid working, watching TV, eating or other types of activities in bed.

14. Create an optimal sleeping environment that is soft, calm and comfortable. If necessary, consider blackout curtains to block the light or wear a blindfold.
15. Use a white noise machine if necessary to help block out sounds that may disturb you, so that you can fall asleep and stay asleep.
16. Maintain a moderate ambient temperature in your bedroom, as excessive heat may interfere with your sleep.
17. Turn or cover any clock or alarm so as not to see its face at night.
18. Avoid consuming caffeinated drinks during the day and minimize alcohol, specially at night.
19. Avoid smoking late into the evening, since nicotine often disrupts sleep.
20. Do not sleep with your pets. Dogs and cats can disturb your sleep.
21. To relax before bedtime, introduce muscle relaxation, deep breathing, or yoga exercises in the evening.
22. Avoid drinking more than necessary in the evening to minimize nightly visits to the bathroom.
23. Take a hot bath an hour or two before bedtime, as this will help you fall asleep more easily.
24. If you wake up and your mind fills up with thoughts, try counting backwards slowly from 500. Say each number slowly (in your head!), inhaling and exhaling completely between each number.
25. If you have been awake for more than 15 or 20 minutes, get up and do a calm, relaxing activity.
26. Talk to your doctor about any medications or supplements you are taking to assess how they may affect your sleep.
27. If you have a strong urge to move your legs at night, you may have another sleep disorder called Restless Leg Syndrome (RLS). It is treatable, so have it checked out!
28. If your partner also snores disturbingly loudly, suggest that they visit their doctor to analyze a potential sleep disorder.





8. Your personal checklist

Do you want to know more about OSA, oral advancement appliances and the various treatments available to you? There are many online resources to inform you. Your Dr Lechner Sleep Health Clinic dentist will also be happy to answer all your questions.

Your sleep healthcare professional may also recommend that you change certain lifestyle habits to improve your chances. For example, it is recommended that you do not smoke or drink alcohol within four hours of bedtime since alcohol and tobacco help loosen the soft tissues that interfere with breathing at night. Some of the following resources are here to help you change habits that may be affecting your treatment's success.

Dr Lechner Sleep Health Clinic:
www.santesommeildrlechner.ca/



Smoking cessation

Centre d'abandon du tabagisme (CAT) : www.jarrete.qc.ca

Alcohol and sleep

Éduc'alcool – Guide sur l'alcool et le sommeil: <http://educalcool.qc.ca/alcool-et-vous/sante/guide-sur-lalcool-et-le-sommeil/#.VxIBLvnhC00>

Sleep apnea

Association pulmonaire du Québec (APQ): <https://poumonquebec.ca/>

Fondation sommeil:

www.fondationsommeil.com

Health

Canadian Public Health Association (CPHA): www.cpha.ca

Snoring and sleep apnea

Ordre des dentistes du Québec (ODQ): www.maboucheensante.com

Risk factors

Fatigue at the wheel: <https://saaq.gouv.qc.ca/securite-routiere/>

Sleep and children

Naître et grandir: www.naitreetgrandir.com/fr/etape/1_3_ans/soins/

Panthera anti-snoring device

<https://pantheradental.com/fr/d-sad/>

SomnoDent advancement orthosis

<https://somnomed.com/>

ProSomnus sleep device

<https://prosomnus.com/>

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