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Breath, Oral Posture & Sleep

The importance of sleep and breathing on overall health.

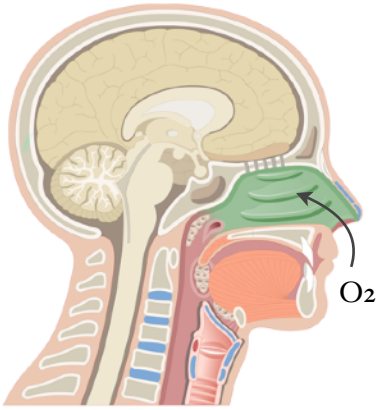
by Jennifer Blunston, Ph.D, Cert. BBM, PTS

"Sleep is the most single effective thing we can do to reset our brain and body health each day."

~Matthew Walker

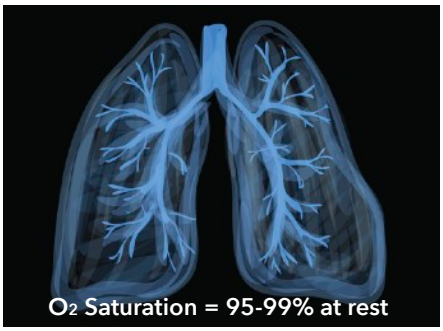
Proper sleep is the ***fundamental pillar of health*** and paramount to so many aspects of our life…It elevates mood, lowers blood pressure, optimizes cardiovascular health, improves memory & cognitive function, reduces stress & pain, bolsters immunity, reduces cancer risk, and improves fitness and performance. *(1)* We spend over one third of our lives asleep, so getting quality sleep matters.

Sleep enables us to be our best and allows us to exercise, eat proper nutrition, manage stress levels, nurture our mental & emotional well-being, and practice mindfulness each day. But it's a two-way street, and each of these factors can affect the quality of our sleep and recovery. The pieces of the puzzle that create ultimate wellness must all exist in harmonious balance. However, we must also consider that the *quality of our breathing, our airway health* and where our *tongue sits in your mouth* has a profound influence on our ability to enjoy deep sleep and rejuvenate the body.



Nasal breathing warms and humidifies the air, filters out viruses and pathogens, improves aerobic capacity, & is a reservoir for nitric oxide or NO gas. This mighty molecule acts to open up our airways & blood vessels, keeping our arteries healthy and improving oxygen gas exchange in our lungs. If you mouth breathe, you unfortunately by-pass all these benefits!

Breathe Light to Breathe Right



Signs of Over-Breathing

- Mouth Breathing
- Audible Breaths
- Regular Sniffing/Sighing
- Yawning with Deep Breaths
- Movement of Chest/Shoulders
- Heavy Breathing During Sleep
- Snoring
- Sleep Apnea (Holding Breath)
- Exercise Induced Asthma

Air Is The Most Important Nutrient

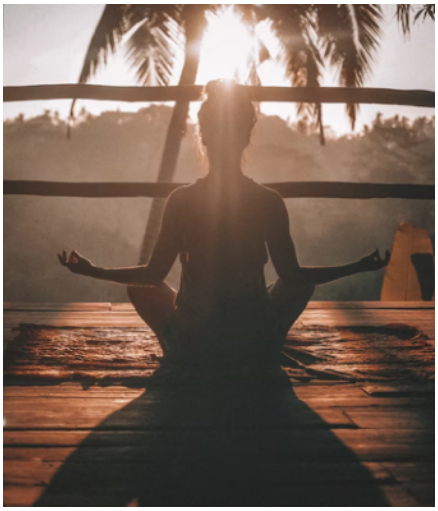
Every day, on average, we breathe over 25,000 breaths. Did you know that the *quantity* of air you breathe has an influence on your whole body and your health? We assume that the body automatically knows how to breathe properly, but unfortunately breathing is a *learned behaviour,* naturally woven into our lives. It is affected by unhealthy diets, chronic stress, asthma, anxiety, strong emotions, our modern environment and lifestyle. We should breathe deeply from our diaphragm and not our chest. Normal breathing is about ten breaths per minute though our nose. Our breath should be light, quiet, controlled and rhythmic, providing proper distribution of oxygen and proper regulation of our body chemistry. But here is the paradox: The amount of oxygen in your tissues and organs is not entirely dependent on O_2 in the blood. Contrary to the belief that taking big breaths is good for us, breathing in more oxygen has no added benefit since our bodies already carry a surplus of O_2. We typically exhale 75% O_2 at rest and 25% during exercise. *(2)*

The key variable that allows the release of O_2 from the hemoglobin in red blood cells to become metabolized by the body is actually ***carbon dioxide*** or CO_2. It's not just a waste gas! When we over-breathe, too much CO_2 is exhaled and this throws off the pH of our body. Carbon dioxide also relaxes the smooth muscles that surround the airways, arteries and capillaries. Fast breathing that is shallow or through the mouth lowers the CO_2 concentration in the blood, reduces the blood circulation throughout the body and constricts the carotid artery causing light-headedness, dizziness and fatigue. By simply breathing nasally, we can increase the oxygen uptake in our bodies by 10-20%!!! Breathing is one of the most powerful levers for regulating our stress levels and our autonomic nervous system, a control system that acts largely unconsciously without our knowledge or consent. It regulates

Autonomic Nervous System
"Window to Health"

Parasympathetic		Sympathetic
Relax		Action
Repair		High Alert
Build Muscle		Fast
Digest		Stress

Spend 80% Of Your Time in "Rest & Digest"



bodily functions such as heart rate, blood pressure, digestion, and respiratory rate to name few. We can tap into our ***parasympathetic nervous state*** *or "rest & digest"* with slow diaphragmatic breathing, which activates our ***vagus nerve,*** the largest of our cranial nerves that is responsible for transmitting sensory information between many organs and our brain. The health of our vagus nerve is critical as it plays a key role in the repair and recovery of our body.

When we breathe large volumes of air, or mouth breathe for extended periods of time, a biochemical change takes place resulting in a lower tolerance to carbon dioxide. With this lower set point, the brain keeps stimulating breathing to rid itself of what it *perceives* to be unnecessary excess of CO_2. The result is persistent over-breathing which puts our body in a constant state of heightened stress and ***sympathetic dominance***, the "fight or flight" mode of the autonomic nervous system. Research has shown that this chronic stress takes a toll on the body, producing stress hormones called cortisol and noradrenalin, which can delay the production of melatonin and sleep onset. If we sleep with our mouth open, the balance of CO_2 in our body becomes upset. There is decreased oxygen delivery to our brain and tissues. Further, we dry out our upper airways, disturb the pH of our body, and interfere with the quality of our sleep.

Although breathing is controlled by our autonomic nervous system, we can still ultimately control our breath since we have some ability to control the skeletal muscle of the diaphragm. Normalizing the breathing volume and reconditioning the body's tolerance to carbon dioxide by performing breath re-education exercises using *Buteyko Breathing* techniques can reduce our sensations of breathlessness at rest and during exercise. Improved breathing efficiency can be ultimately achieved by: practicing mindful breathing exercises, and avoiding big sighs and yawns. By breathing lightly only

Ideal Oral Posture

- Lips together at rest
- Tongue tip on the letter N "spot"
- Remainder of tongue on palate
- Teeth are lightly apart (1-2 mm)
- One Nasal Breath every 6 sec
- Balanced cervical posture
- Correct Swallowing stimulates the Vagus nerve!

Improper Oral Posture

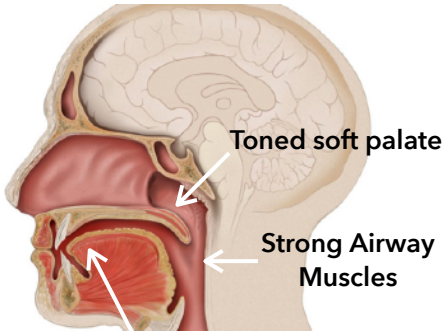
- Forward head
- Lips open with tongue down
- Receding chin
- Chest breathing
- Shoulder and neck pain
- Headaches
- Dental Problems
- Fatigue

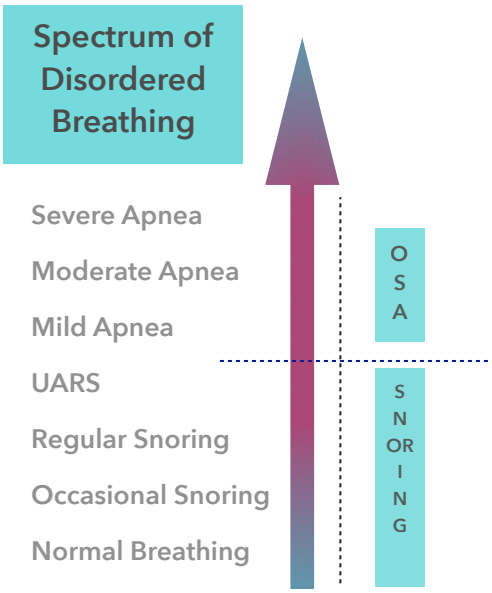
through the nose during the day and while asleep, we can learn to engage our diaphragm and enjoy a fully relaxed exhale. Further, by doing specific breath-holding exercises tailored to a client's individual health, and performing physical activity with efficient nasal breathing, our breathing can normalize and become more efficient. More recently, books like *"The Breathing Cure"* by Patrick McKeown *(3)* and *"Breath"* by James Nestor *(4)*, have truly highlighted how functional nasal breathing is the root to fostering good health, wellness and longevity. There is a breathing and sleep connection that determines how well our body can heal itself in the night. If our breathing during sleep is compromised, this can negatively impact sleep quality. One of the major contributors to chronic inflammation is sleep disordered breathing. But what causes this disordered breathing in the first place?

My Tongue Affects my Breath?

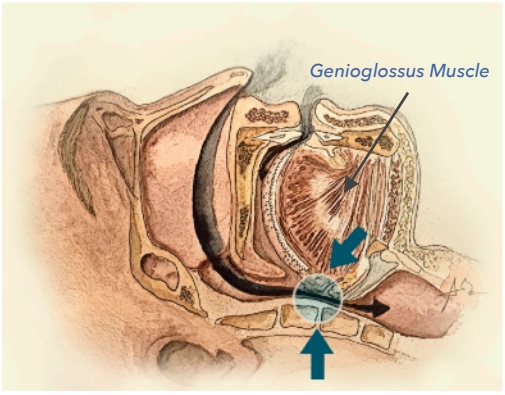
Breathing through our nose promotes ideal oral posture, including the proper growth and development of our jaws, teeth, and airway. When our tongue rests against our palate or the roof of the mouth, with the tip sitting just behind our front top teeth, it creates outward forces on our upper dental arch. When we breathe through our nose, this force is balanced by inward forces of the cheeks and closed lips. This creates a broad U-shaped palate, like the shape of our tongue, along with a healthy strong jaw, and a wide beautiful smile. The roof of the mouth is also the base of the sinuses. So when the palate is widened naturally with the tongue, our nasal passages are opened up and we can breathe better. Lips closed and tongue up is the foundation for a good airway!

Our tongue is the most flexible component of our respiratory system. If our teeth are crowded, and our palate is narrow, there is less room for our tongue, and this can compromise our airway. Unfortunately, our modern diet consists of soft,





Upper Airway Collapsibility



J. Clin. Med. 2019, 8, 1754 *(ref 8)*

A new therapeutic approach to OSA involves activating the genioglossus muscle, the main dilator muscle of the upper airway.

processed foods. Chewing fresh vegetables and hard foods as a child ensures that the muscles in our face and jaw become activated and strong. This essentially stimulates the proper horizontal growth of our face and jaw bones and is what contributes to a healthy airway and beautiful smile. *(5,6)*

Maladaptive habits, daily stress, nasal allergies, and exposure to environmental pollutants, has caused us to develop smaller jaws, and longer faces. *(7)* Mouth breathing has thus become more prevalent in our society. With nasal disuse, our noses become blocked even further, so the body compensates by positioning the head forward to ensure our airway is open and we can get enough oxygen. Further, when our tongue adopts a low-resting posture, the muscles in our face and throat become weakened and this can impact our quality of sleep.

Sleep Disordered Breathing

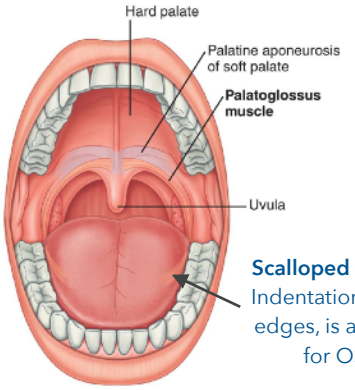
We all can recognize that sleep is important for physical and mental well-being, but unfortunately we take sleep for granted. Lifestyle choices, work demands, a rise in obesity, the insatiable need for electronic devices, and failure to make sleep a priority has created a sleep-deprived nation and it is taking a toll on our health. Many people feel unrefreshed even after a full night of sleep. It is estimated that over 170 million North Americans currently suffer from obstructive sleep apnea, with over 80% being undiagnosed.

Obstructive sleep apnea (OSA) is the cessation of breathing caused by the blockage of the airway, typically when soft tissue in the rear of the throat collapses and closes the airway during sleep. A deviated septum, receding chin, and enlarged tonsils or adenoids can put you at risk of developing OSA. Another variant of sleep disordered breathing is known as *upper airway resistance syndrome (UARS)*. This is characterized the narrowing of the airway without complete closure. Although UARS can not be easily detected by a sleep

Signs of Sleep Breathing Disorders

- Dry 👄 In The Morning
- Headaches
- Jaw Clicking or Pain
- Snoring/Gasping for Air
- Grinding/ClenchingTeeth
- Excessive Water Intake
- Daytime Fatigue or hyperactivity
- High Blood Pressure
- Receding Chin
- Insomnia
- Tongue-tie
- Rhinitis and Nasal Congestion
- GERD

Can you see the soft palate when you open up your mouth? If your tongue is blocking your airway, you may be at risk for developing sleep disordered breathing.



Scalloped tongue: Indentations along edges, is a marker for OSA

Tools to Improve Airway

- ✦ Clearing nasal passages
- ✦ Eliminate allergies/rhinitis
- ✦ Wearing Nasal dilators
- ✦ Elevate head of bed 4-6 inches
- ✦ Sleep on your side
- ✦ Breathing Re-education
- ✦ Orofacial Myofunctional Therapy
- ✦ Craniosacral Therapy

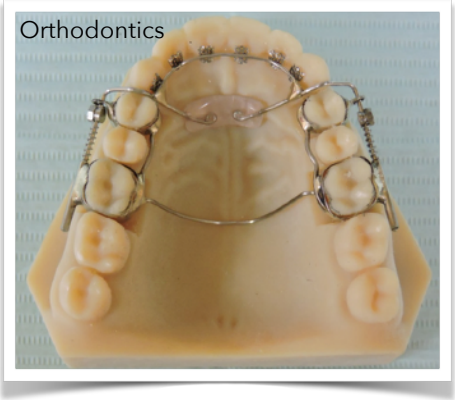
study known as a polysomnography, it can still be as detrimental due to the lack of proper airflow and oxygenation during sleep which causes excess fatigue. Even if you fall under the "occasional snoring" category, you should seek treatment. Years of cumulative sleep disordered breathing can take its toll. *(9)*

When we go into NREM deep sleep, the muscles in our body go into a "paralyzed" or relaxed state. Our airway is a collapsible tube, and when we breathe in, the negative pressure of inspiration can cause our airway to collapse. If we have improper tongue posture, our throat muscles may fail to keep this airway open. In addition, our tongue or soft palate may fall back into the airway and cause a partial blockage. If the body has a choice between sleeping and breathing, it's obvious which one it chooses! Every time someone holds their breath during sleep, the body becomes aroused to stimulate muscle activity in the throat to make the airway wider. The result is a a highly fragmented sleep, with little to no time spent in deep sleep which is crucial for repair and physical restoration. Sleep disturbances like apnea and upper airway resistance promote inflammation which speeds up the aging process. This puts us at risk for developing high blood pressure, heart disease, Alzheimers or dementia, diabetes, arthritis, anxiety and depression, and even some cancers. So how do we know if we have a sleep disorder? We can look for red flags or signs that point to unhealthy breathing in the night time, like excessive daytime fatigue, nasal congestion, morning headaches, jaw pain, insomnia, or snoring. Awareness is the key to finding a solution and treating sleep breathing disorders. Recent research is highlighting the efficacy of myofunctional therapy and restoration of nasal breathing as an adjunct therapy for the treatment of OSA, sleep disordered breathing and snoring. *(10, 11, 12)*

Treatment for Breathing Disordered Sleep

So how do we improve our ability to sleep, and what are the treatments for sleep disordered breathing?? The gold standard for the treatment of OSA is continuous positive airway pressure or CPAP, where a mask is placed over the mouth or nose and air is forced into the sleeper's throat to keep the airway patent. Unfortunately, the compliance rate is only 20% as the masks tend to dry out the mouth, irritate the facial skin, and cause abdominal discomfort.

Alternative options for treating sleep disordered breathing include wearing a custom-fit oral appliance. This dental appliance is similar to a mouth guard and works by holding the lower jaw froward just enough to keep the airway open, preventing the tongue and muscles in the throat from collapsing and blocking the airway. The American Academy of Sleep Medicine has approved oral appliance therapy as an appropriate treatment for patients diagnosed with mild to moderate sleep apnea. In addition, these appliances can be used for patients with severe OSA who cannot tolerate CPAP devices. Co-therapy is also a viable option as wearing an oral appliance can help patients reduce the pressure on their CPAP machine, thereby making it more comfortable to wear.



Remember that one of the most important factors in having a proper sleep is an unobstructed airway. Have an ear-nose-throat doctor (ENT) assess your airway, remove any enlarged adenoids or tonsils, eliminate nasal blockages, and correct a deviated septum. An appropriately trained dentist or orthodontist can evaluate the airway health and may recommend orthodontic treatment to promote improved craniofacial development, thereby creating room for the tongue, teeth etc. and allowing unimpeded airflow. Lastly, by restoring nasal breathing, and promoting proper tongue rest posture, we can improve the function, stability and strength of the upper airway dilator muscles which can prevent our airway

"Suction Hold" your tongue against your palate.
Can you hold this for 2 min?

Goals Of Myofunctional Therapy

- Eliminate oral habits
- Normalize breathing
- Develop a lip seal
- Attain palatal tongue rest posture
- Elevate back of the tongue
- Tone pharyngeal muscles
- Functional posture correction
- Proper chewing and swallowing

Say "Aaahhh"
Depress your tongue and tone the soft palate. Can you see all the way to the back?

from collapsing during sleep. Nasal breathing alone can engage the diaphragm which increases lung volume and causes a stiffening of our throat, recruiting over 20 muscles in the upper airway. But how do we do this?? The answer lies in orofacial myofunctional therapy.

We Can Change Our Brains

Over time, improper tongue posture and mouth breathing eventually leads to imbalances in the muscles of the face, tongue and throat. This adapted muscle memory often leads to dysfunctional patterns in chewing, swallowing, occlusion, and breathing. Some signs that you may have imbalances in your oral posture include: dry mouth, crowded teeth, headaches, jaw pain, lots of movement in your lower face on swallowing, inability to raise your tongue to the roof of your mouth, abdominal discomfort, and poor sleep. The good news, however, is that we have the power to change this. Orofacial myofunctional therapy (OMT) acts to evaluate, diagnose, and treat people who may have these functions altered or compromised. OMT consists of series of relatively simple therapeutic exercises, both isotonic and isometric in nature, given to the patient to assist in the re-patterning of the muscles of the face, tongue, and throat. This neuromuscular re-education involves repetition, and requires the right intensity and frequency to elicit change in our brains. As newly coordinated facial muscle patterns develop, orofacial functions are also restored. Treatment time can vary, but therapy is usually delivered over the course of several months to one year since time is needed to develop new neural connections in the brain. Additionally, practicing mindful breathing and engaging in specific breath exercises can help clients breathe nasally during both day and night, so as to improve overall wellness and sleep quality. *(2, 3)*

The Recipe for Good Sleep

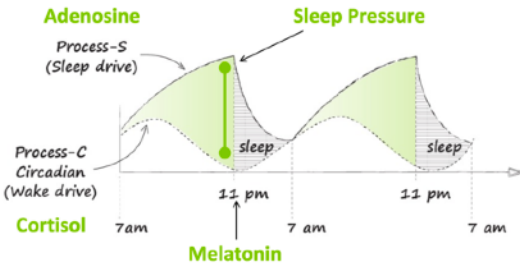
A good night's sleep is often hard to achieve for many people as we live in a very demanding and challenging world. However, there are simple steps we can take to improve the quality of our sleep. First, we must understand what the key ingredients are for sleep and then use that knowledge to our advantage. *(13)* Some key ingredients include the following:

1. Optimal Airway and Breathing
2. Strong Sleep Drive
3. Supported Circadian Health
4. Quiet Body and Mind
5. Comfortable Sleep Environment

First, we have already seen that light breathing through our nose, and proper oral rest posture is critical for a healthy airway while we sleep. In short, in order to have an ideal airway for sleeping, we must correct our daytime breathing, address any nasal congestion or airway blockages, and have proper oral rest posture.

Second, your body naturally generates "sleep pressure" known as ***Process-S*** or *sleep drive* from the time we wake up to the time we go to bed. This sleep drive is caused by the build up of adenosine in the brain over time due to digestion, cellular metabolism and exercise we do throughout the day. Adenosine inhibits neurotransmissions in the brain and calms the brain down so our mind is quiet and naturally ready for sleep. Ultimately, this is what causes us to yawn and feel sleepier as bedtime approaches. So the longer you are awake, the stronger your desire to sleep becomes. Taking naps, drinking more than 250 milligrams of caffeine in the day, and reduced exercise (like sitting most of the day) can interfere with the build up of our *sleep drive* and negatively impact our sleep quality.

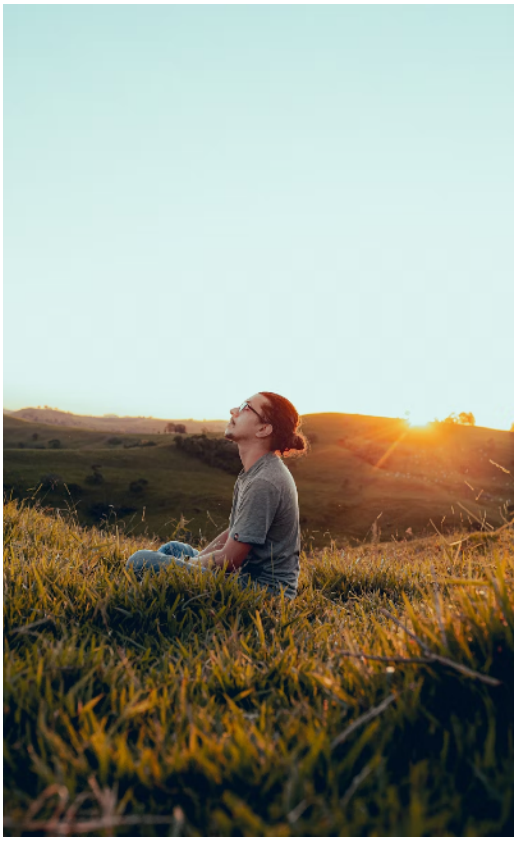
Why We Get Tired



Consistent Timing Is Crucial

Minimize Artificial Blue Lights

Thirdly, we need to honour our body's circadian rhythm- ***Process-C***, which is the natural rhythm that exists in the body and controls your sleep-wake cycle over a 24-hour period. Your brain has a master clock that receives signals from the light and darkness entering your eyes. These changes in exposure to light cues your body to produce hormones. *(14)* After sunset, the darkness onset promotes the production of melatonin for sleep, while the sun rising stimulates the production of cortisol, a stress hormone necessary for wakefulness. There is a dynamic process between our sleep drive and our circadian rhythm. Sleep is optimal when the distance between the ***Process-S*** curve (Sleep drive) and ***Process-C*** (Wake drive) is the greatest. This ensures our sleepiness outweighs any wakefulness! To guarantee this dynamic process is functioning, we can engage in activities that promote natural sleep. For example, by going to bed and waking at the same times every day, helps align our internal clock with the rise and fall of the sun. Ideally, 15 minutes or more in the day of natural sunlight outdoors will also cue our circadian rhythm to produce melatonin after sunset and ensure we feel sleepy as the night progresses. Current research suggests that with regards to overall health and longevity, a consistent sleep schedule is more important than the total number of hours of sleep one gets each night. So sleeping 6 hours consistently every night is actually more beneficial than sleeping 8 hours inconsistently throughout the week. Irregular sleep patterns lends itself to being exposed to light at different times, to eating sporadically, and to irregularly timed physical activity–all of which can negatively impact our circadian rhythms. *(15)* Avoiding screens with blue light, and bright overhead-indoor lighting will also help prevent the suppression of melatonin production needed to fall asleep. Lastly, having at least 12 hours of a fast between dinner and breakfast will ensure our circadian rhythm is optimized. *(12)*



Fourth, having a quiet body and mind is paramount for quality deep sleep. Our stress levels in the day can impact our ability to relax and unwind in the evening since our cortisol remains high. People will sometimes comment that they feel "Tired but wired" and struggle to fall asleep at night. Reducing our stress levels by practicing slow breathing, taking soothing baths, or meditation & yoga techniques, can all calm our minds and bodies by stimulating our *vagus nerve*. It is also important to create a sleep-inducing atmosphere in your bedroom, thus avoid doing anything in your bedroom besides sleep and intimacy. Behaviours like watching TV, scrolling social media, working at a desk, or eating in the bedroom can make you associate your bed with anxiety, alertness, or wakefulness.

Lastly, create a sanctuary so your bedroom personifies relaxation, peace and sleep. It is important to have your space as quiet and dark as possible. A cooler room temperature will help induce deep sleep and optimize the production of melatonin. Create a cozy atmosphere with a soft colour palate, dim lamps, breathable linens, a comfortable mattress, fresh air, and supportive pillows that align your neck & spine. *(16)*

Be An Advocate For Your Health

We are all on our own journey, striving to be our best and live long, full lives. With a new-found awareness of how you breath, how consistently you sleep, and what ideal oral posture should look like, you can take steps to achieve your best self. Be an advocate for your health and if you suspect that you, a loved one or a friend of yours may be suffering from sleep disturbances, altered breathing, or a myofunctional disorder, seek guidance and treatment from the appropriate allied health professional. In order to correct our sleeping, we must first address how we are breathing in the day, and how our daily routine affects the quality of our sleep. Remember that your health doesn't get better by chance, it gets better by change!

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Sleep Better.

Feel Better.

www.myofunctionalfitness.ca

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Sleep Disordered Screening Questionnaire

1	❒ I have been told that I snore	19	❒ I wake up earlier in the morning than I would like to
2	❒ I have been told I stop breathing while asleep	19	❒ I lie awake for more than 30 min before I fall asleep
3	❒ I have high blood pressure	20	❒ When I'm angry or surprised, I feel like my muscles go limp
4	❒ Friends say I'm grumpy/irritable	21	❒ I often feel like I am in a daze
5	❒ I have fallen asleep while driving	22	❒ I have experienced vivid dreamlike scenes in the day
6	❒ My heart pounds or beats irregularly in the night	23	❒ I have fallen asleep in social settings like movies or at a party
7	❒ I have morning headaches	24	❒ I have trouble at work due to sleepiness
8	❒ I have awoken gasping for breath	25	❒ I have dreams soon after falling asleep or during naps
9	❒ I am overweight	26	❒ I have sleep attacks during the day no matter how hard I try to stay awake
10	❒ I seem to be losing my sex drive	27	❒ I have episodes where I feel paralyzed during my sleep or on awakening
11	❒ I often feel sleepy & struggle to stay alert	28	❒ Other than when exercising, I still experience muscle tension in my legs
12	❒ I frequently wake with a dry mouth	29	❒ I have noticed that parts of my legs jerk during sleep
13	❒ I have difficulty falling asleep	30	❒ I have been told I kick at night while asleep
14	❒ Racing thoughts prevent me from sleeping	31	❒ When trying to go to sleep, I feel an aching or crawling sensation in my legs
15	❒ I anticipate a problem with sleep several nights per week	32	❒ I experience leg pain and cramps at night
16	❒ I wake up in the night and can't go back to sleep	33	❒ I can't keep my legs still at night and/or I just have to keep moving them to feel comfortable
17	❒ I worry about things and have trouble relaxing	34	❒ Even though I slept during the night, I still feel sleepy in the day.

SCORING

Look At The # of Boxes You Have Checked Off

Q 1-12: Three or more boxes suggest symptoms of sleep apnea, a disorder where you stop breathing in the night

Q 13-19: Three or more boxes suggest symptoms of insomnia, a persistent inability to fall asleep or stay asleep

Q 20-27: Three or more boxes suggest symptoms of narcolepsy, a disorder marked by uncontrollable sleep attacks

Q 28-34: Three or more boxes suggest symptoms of Periodic Limb Movement Disorder (arm/leg jerks)/Restless Leg syndrome (legs feel uncomfortable at night)

*If you suspect that you have a sleep disorder, seek guidance from a qualified allied health professional such as your family doctor, sleep physician or dentist. Sleep testing is the only way to determine if you have a sleep disorder so you can take the necessary steps to treat it.

Weekly Sleep Log

Name:_____

Date: Week of _____	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
What time did you go to bed?							
What time did you turn the lights out to go to sleep?							
How long did it take to fall asleep? (1/2 hour, 1 hour, etc)							
How many times did you wake up last night?							
What was your final wake up time this morning?							
What time did you actually get out of bed?							
How many hours did you sleep last night?							
Sleep Medications (indicate dose)							

BEARS Sleep Screeing Tool

BEARS is divided into 5 major sleep domains (B=Bedtime Issues, E=Excessive Daytime Sleepiness, A=Night Awakenings, R=Regularity and Duration of Sleep, S=Snoring) and helps clinicians evaluate potential sleep problems in children 2 to 18 years old. Each sleep domain has a set of age-appropriate "trigger questions" for use in the clinical interview. The screen is free to use.

	TODDLER/PRESCHOOL (2-5 YEARS)	SCHOOL-AGED (6-12 YEARS)	ADOLESCENT (13-18 YEARS)
BEDTIME PROBLEMS	Does your child have any problems going to bed? Falling asleep?	Does your child have any problems at bedtime? (P) Do you have any problems going to bed? (C)	Do you have any problems falling asleep at bedtime? (C)
EXCESSIVE DAYTIME SLEEPINESS	Does your child seem overtired or sleepy a lot during the day? Does he/she still take naps?	Does your child have difficulty waking in the morning, seem sleepy during the day or take naps? (P) Do you feel tired a lot? (C)	Do you feel sleepy a lot during the day? In school? While driving? (C)
AWAKENINGS DURING THE NIGHT	Does your child wake up a lot at night?	Does your child seem to wake up a lot at night? Any sleepwalking or nightmares? (P) Do you wake up a lot at night? Have trouble getting back to sleep? (C)	Do you wake up a lot at night? Have trouble getting back to sleep? (C)
REGULARITY AND DURATION OF SLEEP	Does your child have a regular bedtime and wake time? What are they?	What time does your child go to bed and get up on school days? Weekends? Do you think he/she is getting enough sleep? (P)	What time do you usually go to bed on school nights? Weekends? How much sleep do you usually get? (C)
SNORING	Does your child snore a lot or have difficult breathing at night?	Does your child have loud or nightly snoring or any breathing difficulties at night? (P)	Does your teenager snore loudly or nightly? (P)

(P) Parent-directed question (C) Child-directed question

Source: *A Clinical Guide to Pediatric Sleep: Diagnosis and Management of Sleep Problems" by Jodi A. Mindell and Judith A. Owens; Lippincott Williams & Wilkins*

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