

Sleep Email March 3, 2021

The importance of healthy sleep during this pandemic cannot be overstated. A good night's rest is essential for a strong immune system and healthy brain functioning. The average healthy adult requires 7 to 9 hours of sleep a night and an older adult (65 and older) requires 7 to 8 hours of sleep per night.

According to the Government of Canada, insufficient sleep is associated with obesity, type II diabetes, cardiovascular disease, depression, irritability, reduced well-being, and an increased risk of injuries, including a significant increased risk for motor vehicle accidents.

Public Health Canada states the following sleep statistics:

- 1 in 4 Canadians aged 18-34 are not getting sufficient sleep,
- 1 in 3 Canadians aged 35-64 are not getting sufficient sleep,
- 1 in 4 Canadians aged 65-79 are not getting sufficient sleep.

Roughly 10% of those statistics have sleep problems severe enough to cause distress during the daytime.



Insomnia is the most prevalent sleep disorder and affects a large proportion of the Canadian population. It is characterized by discontent with sleep and difficulties initiating or maintaining sleep, along with substantial distress and impairments to daytime functioning. In Canada, the estimated cost relative to insomnia is \$5010 per person, per year. Almost 90% of that cost is attributed to absenteeism and decreased productivity.

Unfortunately, sleep receives relatively little attention as part of a healthy lifestyle and lack of sleep is not generally considered a public health concern. Considering the negative impacts lack of sleep has on an individual, it should be considered a health priority when promoting healthy lifestyle components. Especially now with the pandemic, as sleep is critical to improved immune system functioning. There are numerous barriers to obtaining the recommended amount of sleep per day, from anxiety over the pandemic to chronic pain.

For more details and tips on how to get a good night sleep, see the attached document, along with the email attachment, especially with the impending time change coming up this weekend.



64-03-18-2136-Sleep-Adults-Infographi

Employee Health Hurdles

Sleep Document March 3, 2021

Overview:

Sleep is essential for our physical and emotional health, yet with all the pressures of modern society, more and more people are finding it hard to get the recommended amount of sleep. Short sleep duration and poor sleep quality are prevalent among Canadian adults. Getting sufficient sleep is critical to immune system functioning and is a key promoter of emotional wellness and mental health. Sufficient sleep helps you develop strategies to better cope with stress and anxiety and fight depression and negative emotions.

Sleep Hygiene Defined:

- Means having both a bedroom environment and daily routines that promote consistent, uninterrupted sleep.
- Keeping a stable sleep schedule,
- Making your bedroom comfortable and free of disruptions,
- Following a relaxing pre-bed routine, and
- Building healthy habits during the day can all contribute to ideal sleep hygiene.

How do Sleep Problems/ Loss Affect Health?

- Emotions can become counterproductive such as grumpy, sad, worried, and stressed.
- Thoughts will become difficult to concentrate, think clearly, cope with stress, make appropriate decisions, with an increased likelihood of errors.
- Behaviours will change as you are more likely to avoid your normal activities.
- Body sensations will become undesirable, as you may feel tired, drowsy, and/ or worn out.
- Increases the risk of obesity (decrease in specific hormones which promote excessive hunger)
- Increased daily blood pressure (increases the risk of heart disease and stroke)
- Affects how your body reacts to insulin, resulting in increased glucose levels and a subsequent increased risk of type II diabetes.
- Affects how your immune system responds to viruses and infections.
- Regarding safety, lack of sleep reduces reaction times when driving, resulting in more accidents. Lack of sleep also allows for a higher chance of being involved in a workplace accident.

Chronic long-term sleep loss can lead to persistent low-level inflammation throughout the body, which contributes to chronic medical conditions.

There are numerous barriers related to acquiring the appropriate amount of sleep for individuals:

Pandemic disruptions:

- Social distancing
- School closures
- Quarantines
- Working from home

These situations can make it difficult to adjust to a new schedule (or lack of a schedule). It may become difficult to keep track of days, as being stuck at home with low levels of natural light skews our melatonin production. If you are not working, you may tend to oversleep with a varied schedule.

Anxiety and Worry:

- Worrying about catching or spreading Covid-19
- Having close family members in high-risk/ vulnerable groups compounds the worry
- There is economic uncertainty as income and making ends meet is a struggle. Using up immediate savings to maintain households financially, can be a long-term struggle with future impacts.
- There are still many unknowns and questions related to the pandemic such as how long will the pandemic last, when will we be able to return to normal, will the vaccine be effective on variants?
- The simple uncertainty and subsequent racing mind creates an abundance of anxieties and sleep disruptions.

memory issues

During sleep, your brain forms connections that help you process and remember new information. A lack of sleep can negatively impact both short- and long-term memory.

trouble with thinking and concentration

Your concentration, creativity, and problem-solving skills aren't up to par when you don't get enough rest.

mood changes

Sleep deprivation can make you moody, emotional, and quick-tempered. Chronic sleep deprivation can affect your mood and lead to anxiety or depression, which may escalate.

accidents

Being drowsy during the day can increase your risk for car accidents and injuries from other causes.

weakened immunity

Too little sleep weakens your immune system's defenses against viruses like those that cause the common cold and flu. You're more likely to get sick when you're exposed to these germs.

high blood pressure

If you sleep less than five hours a night, your risk for high blood pressure increases.

risk for diabetes

A lack of sleep affects your body's release of insulin, a blood sugar-lowering hormone. People who don't get enough sleep have higher blood sugar levels and an increased risk for type 2 diabetes.

weight gain

With sleep deprivation, the chemicals that signal to your brain that you are full are off balance. As a result, you're more likely to overindulge even when you've had enough to eat.

low sex drive

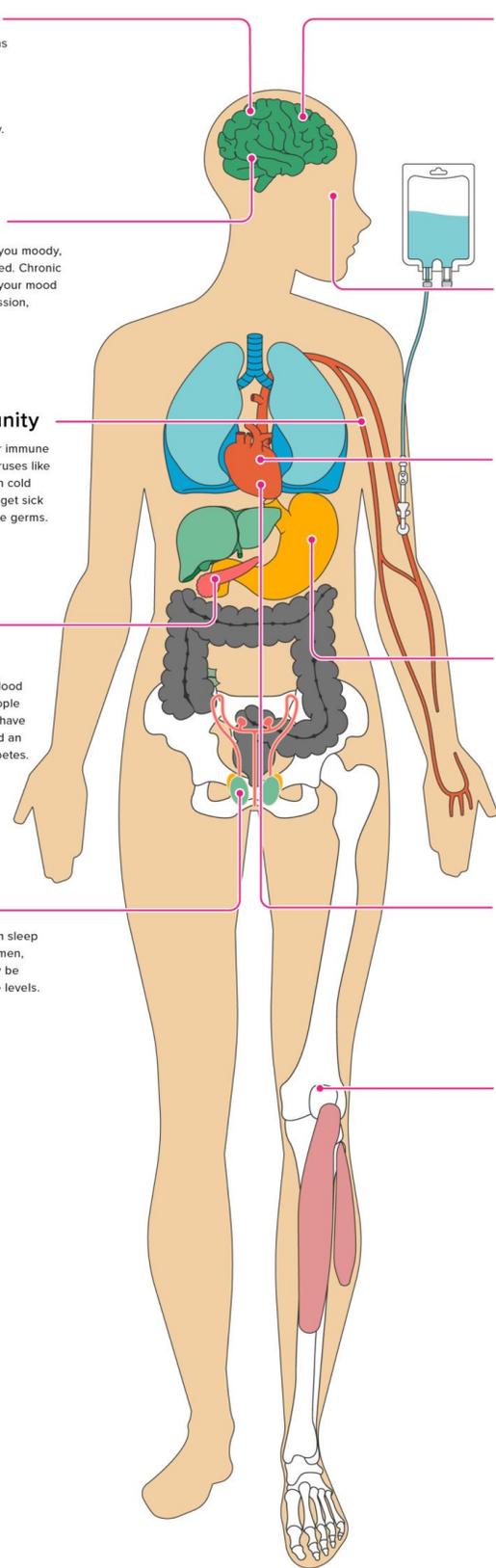
People who don't get enough sleep often have a lower libido. In men, this decreased sex drive may be due to a drop in testosterone levels.

risk of heart disease

Sleep deprivation may lead to increased blood pressure and higher levels of chemicals linked to inflammation, both of which play roles in heart disease.

poor balance

Lack of sleep can affect your balance and coordination, making you more prone to falls and other physical accidents.



Depression and Isolation

- This can be exacerbated by a loved one who is sick or has passed away related to Covid-19.
- This can also be compounded by isolation, which can cause significant sleep problems.

Researchers state that rates of depression have tripled, with an increase in alcohol and tobacco consumption, all of which disrupt normal sleep patterns.

Greater Family and Work Stress:

- Cancelled vacations/ trips, isolation from friends and family, an abundance of time spent at home.
- Work from home obligations, and
- Managing a house full of children and virtual schooling, etc.

All these events can increase stress levels within a household, resulting in further sleep disruptions.

Excess Screen Time

- Constantly checking news on your phone
- Zoom with family members and friends to maintain social contact
- Binge-watching Netflix
- Working from home

If these activities are later in the evening, the blue light from electronics has been identified as a melatonin disruptor, which will subsequently affect your sleep patterns.

Stress-Related Fatigue

- Chronic stress of the pandemic have caused numerous health effects to individuals including persistent headaches, memory lapses, digestive problems, and stress-related fatigue (constant state of weariness that develops over time).



Other Contributing Factors Related to Lack of Sleep:

- Lack of exercise (sit for hours at school, work, home)
- Medical problems such as restless leg syndrome, sleep apnea, and chronic pain
- Normal aging process (different sleep patterns emerge)
- Caffeine consumption too late in the day
- Work demands
- Social commitments
- Family dynamics

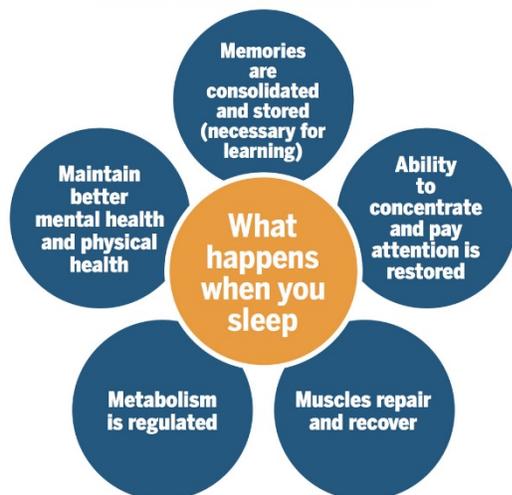
Importance of Sleep During the Pandemic:

Sufficient sleep increases the ability of your body to adapt and fight by,

- Strengthens your defenses (immunity),
- Heightens your brain functions (contributes to complex thinking, learning, memory, and decision-making)
- Enhances your mood (lack of sleep is associated with irritability, less energy levels, worsening feelings of depression)
- Improves mental health (lack of sleep is linked to anxiety disorders, bipolar disorder, post traumatic stress disorder)



WHAT HAPPENS WHEN YOU SLEEP



Sleep as You Age:

There is a misconception of needing less sleep as you age. Most of the time, sleep requirements in aging remain the same in terms of duration; however, changes are seen in “how” an “when”. Older adults, compared to younger adults may sleep the same duration, but sleep quality and sleep schedule may change. For example, adults over 60 may experience:

- Bedtimes and wake up times earlier than in their 40's.
- Less sleep during the night.
- Increased sleep needs during the day with a restful napping period.
- Lighter sleep, as reflected with frequent disruptions/ awakenings and less time in the deep sleep stage.
- Difficulty remaining asleep, especially in the second half of the night.

Other factors related to poor sleep and aging are cardiovascular disease, pulmonary disease, chronic pain, dementia, some medications, decreased social interactions, loss of a loved one, and half of menopausal women report sleep disturbances.

Daylight Savings Time and Sleep:

Daylight Saving Time is coming up this weekend and adjusting the time by an hour has noted troubled trends.

- There are increased incidences of heart problems,
- Mood disorders, and
- Motor vehicle collisions.
- Some individuals experience insomnia related to the time change.

In the subsequent weeks, you need to align your circadian rhythms, once again. Humans and mammals are guided by circadian rhythms in a 24-hour cycle that regulates sleep, which is largely dependent on light exposure. The transition to Day Light Savings Time causes circadian misalignment which contributes to sleep loss and sleep debt (cumulative effects of insufficient sleep). One study found that most people receive approximately 40 minutes less sleep on the Monday after time change.

Sleep Tips for DST:

- Practice good sleep hygiene (listed above)
- Establish a consistent routine that works 7 days a week, especially before time change.
- Gradually alter your bedtime, starting 2 to 3 days before time change and wake up 15-20 minutes earlier than usual.
- Spend some time outside since natural light is the driving force for your circadian rhythm.
- Nap in moderation and never exceed 20 minutes otherwise you may feel groggy.

Sleep Apnea:

Sleep apnea is defined as stopping breathing 10 to 30 seconds at a time and can occur up to 400 times a night. There is an estimated 5.4 million Canadians that are diagnosed with sleep apnea or are at high risk of developing it. Individuals that are overweight, older than 40 years of age, and men have an increased likelihood of developing sleep apnea.

There are 2 types of sleep apnea:

1. Obstructive apnea is the most common type of apnea where there is a blockage in the airway from either your tongue, tonsils, uvula, or fatty tissue. Approximately 9 out of ten individuals diagnosed with sleep apnea have this type of apnea.
2. Central sleep apnea is related to your central nervous system. The muscles you use to breathe do not receive the signal from the brain to breathe. Your brain either does not send the signal or the signal is interrupted along its pathway.

You need to visit your healthcare provider for a diagnosis of which type of sleep apnea you have.

Warning Signs of Sleep Apnea:

- Daytime sleepiness.
- Loud snoring followed by silent pauses.
- Gasping/ choking during sleep.
- Morning headaches.
- Irritability or mood changes.
- Poor concentration or memory loss.
- Fatigue.
- Lowered sex drive.
- Falling asleep while driving.



Untreated Sleep Apnea Can Cause:

Untreated sleep apnea can result in an increased risk of high blood pressure, heart failure/ attack, stroke, and increased likelihood of motor vehicle collisions.

It can also lead to depression, decreased sexual function, along with increased work-related injuries.

What Helps for Sleep Apnea?

- Stop all alcohol or sleep medications, as they tend to relax your muscles in the back of your throat.
- Implement healthy lifestyle choices such as, quit smoking, lose weight, exercise.
- Sleep on your side, not on your back.

Treatment for sleep apnea depends on your degree of sleep apnea, whether it be mild, moderate, or severe. The quiz below has a quiz and self-referral form if you feel you need to be tested.

Take the quiz and depending on your responses, self-refer for a sleep apnea test:

<https://medsleep.com/sleep-disorder-quiz/>

Strategy for Sleep Problems:

“Stimulus Control” Method

1. Go to bed when you feel sleepy, regardless of the time.
2. Use your bed for sleeping only (no computers, work, reading, etc.).
3. If you are unable to fall asleep in 10 to 20 minutes, get up and go to another room.
4. Use your alarm to get up at the same time everyday, regardless of whether it is a weekday, a weekend, or how much sleep you got.
5. Do not nap during the day.

The first night, you may feel it is not worth it. The second, third, and fourth night, as sleep deprivation occurs, it will cause your body to fall asleep more quickly. This technique takes about 2 weeks to undo the negative sleep patterns that you are experiencing, so stick with it.



Supplementary Strategies for Sleep:

- Wake up same time everyday.
- Eat a healthy, nutritious diet, with regular consistent meals.
- Avoid large meals in late evening and at night.
- Keep a regular schedule and routine, especially keep the same sleep cycle.
- Avoid/limit naps (10 to 45 min, best time is between 2 and 6 pm, but not after 6pm).
- Exercise, as a regular, moderate intensity exercise is known to improve sleep quality.
- Avoid exercising late in the evening as it can be a stimulus, interfering with sleep patterns.
- In Canada, consider Seasonal Affective Disorder and sit near natural light for 30 minutes in the morning.

Test your Knowledge:

<https://www.healthline.com/health/healthy-sleep/quiz-how-well-do-you-sleep#1>



Recommended books and resources:

<https://mysleepwell.ca/cbti/sleepwell-recommends/>

Sleep advice during the pandemic:

<https://mysleepwell.ca/>

<https://mysleepwell.ca/covid-19/>

References:

https://811.novascotia.ca/health_topics/sleep-apnea-2/

<https://www150.statcan.gc.ca/n1/pub/82-003-x/2017009/article/54857-eng.htm>

<https://www150.statcan.gc.ca/n1/pub/82-003-x/2018012/article/00002-eng.htm>

<https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/healthy-living/canadian-adults-getting-enough-sleep-infographic/64-03-18-2136-Sleep-Adults-Infographic-EN-Final-03.05.2019.pdf>

<https://www.canada.ca/en/public-health/services/chronic-diseases/sleep-apnea.html>

https://www.cscnweb.ca/admin/cms/images/large/sleep_aging_-_wsd-css_cscn_is_2019.pdf

<https://www.ementalhealth.ca/Canada/Insomnia-and-Sleep-Problems/index.php?m=article&ID=8918>

<https://www.heretohelp.bc.ca/wellness-module/wellness-module-6-getting-a-good-nights-sleep>

<https://www.sleepfoundation.org/circadian-rhythm/daylight-saving-time>

<https://www.sleepfoundation.org/covid-19-and-sleep>

<https://www.sleepfoundation.org/physical-health>

<https://www.sleepfoundation.org/sleep-guidelines-covid-19-isolation>