



Health Issues in The Workplace

Welcome to Challenge Yourself: Sleep Tight, the third and last issue of the three-part Challenge Yourself series. The goal of this series is to provide you with information, resource links, and practical tips on how to make healthy choices and take preventative actions to promote and support your health, and the health of those you care about.

This Health Issues Newsletter focuses on the importance of sleep on our health and well-being; exploring the link between sleep and various conditions including gut health, mental health, and menopause. In addition, this issue discusses factors that can affect sleep, and provides strategies for you to improve your sleeping habits. Currently, poor sleeping habits are associated with an increased risk of developing chronic conditions such as diabetes, heart disease, high blood pressure, stroke, and mental health issues; all of which can contribute to poor sleep. However, poor sleeping habits are not restricted to individuals with these chronic conditions; anyone can suffer from poor quality and/or quantity of sleep.

The good news is that there are various lifestyle changes and sleep hygiene strategies that can be followed to help just about everyone sleep better. Individuals who experience ongoing sleep problems should consult their primary healthcare provider.

Coming soon! Watch for the upcoming initiative to learn about mental health awareness, and how to create and promote safe environments within the workplace and beyond.

Key references:

National Sleep Foundation. (n.d.). Sleep.org by the National Sleep Foundation. Retrieved April 19, 2016, from The National Sleep Foundation

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How much is enough?

Quality sleep each night is essential for overall health and wellness. Lack of adequate sleep can affect more than just your level of fatigue during the day. In fact, research has found a positive relationship between lack of sleep, and issues such as obesity, and mental health (National Sleep Foundation, 2015).





How Much Do We Need?

Sleep needs depend on age and gender. For example, children and pregnant women require more sleep on average than most adults. The table below outlines the amount of sleep recommended across the lifecycle.

Figure 1: Table of Recommended Hours of Sleep by Age Category

Age	Recommended Hours of Sleep
Newborn (0-3 months)	14-17 hours
Infant (4-11 months)	12-15 hours
Toddler (1-2 years)	11-14 hours
Pre-school (3-5 years)	10-13 hours
School Age (6-13 years)	9-11 hours
Teenager (14-17 years)	8-10 hours
Adult (18-64 years)	7-9 hours
Older Adult (65+ years)	7-8 hours

Table 1. Sleep Duration Recommendations by Age Group
(National Sleep Foundation, 2015)

Babies Need the Most Sleep

Babies, infants, and children require more sleep each day to support their rapid growth and development. This age group often shows signs of sleepiness by becoming more active instead of “winding down” as adults typically do. Children are also susceptible to sleep disorders, so it is important to monitor your child’s sleep patterns and consult a pediatrician if needed. If your child isn’t getting enough sleep, chances are you aren’t either.

Let Your Teens Get Their Sleep

Like children, teenagers are also growing and require more sleep than adults. Inadequate sleep at night can lead to poor performance at school, and may contribute to car crashes in new drivers who are tired behind the wheel. Poor sleep patterns can also make teenagers more prone to acne and skin problems, and promote unhealthy eating habits.

Adults and Older Adults

Despite popular belief, sleep needs do not change from adulthood to older adulthood. However, the amount of time spent in the deeper stages of sleep tends to decline.



Adults and older adults also report higher levels of insomnia – difficulty falling or staying asleep even when given the chance to do so. If you feel tired throughout the day, you aren't getting the sleep you need.

Taking steps to help ensure everyone is getting enough sleep is important to the overall health and well-being of your family. So, make the effort and help everyone get the sleep they need.

Key Reference:

National Sleep Foundation. How much sleep do we really need? 2015. Retrieved January 4, 2016 from <https://sleepfoundation.org/how-sleep-works/how-much-sleep-do-we-really-need>

Sleep and Shift Work

Approximately 28% of employed Canadians do not work a regular daytime shift. Instead, they work night, evening and rotating shifts. For these workers, the most common complaint is lack of sleep. Shift work has been found to interrupt sleep patterns and prevent individuals from getting a good quality sleep. As an important part of our overall health and well-being, it is necessary for adults to get no less than seven hours of sleep in a 24-hour period.

Shift Work and Poor Sleep.

Health risks associated with shift work are common but not well understood. However, they are thought to be related to the disruption of circadian rhythms; the physical, mental, and behavioral changes that follow an approximate 24-hour cycle. Shift work can interfere with this cycle, resulting in an irregular sleep schedule, poor quality sleep, and disruptions to family and social life. Shift workers are at risk for developing "shift-work disorder", a circadian rhythm sleep-wake disorder that can cause chronic sleep deprivation, and an accumulation of "sleep debt" over time. Lack of quality sleep is not just an inconvenience, it is associated with adverse safety and performance outcomes. Fatigue causes a reduction in reaction time, attention, and decision-making ability, increasing the risk of occupational and workplace injuries. Lack of Sleep is Expensive. American data suggest that the cost of poor sleep is on average \$1,967 a year per employee. In fact, it is estimated that sleep-related disorders cost employers \$60 billion in lost productivity, industrial injuries, and medical expenses a year.

The good news is there are things that shift workers can do to improve their sleep:

- Control your environment. Eliminate noise and light where you sleep by using ear plugs, eye masks, or dark shades on the bedroom windows. Minimize interruptions by asking your family and friends to not disturb you.
- Keep a regular sleep schedule. Try to stick to the same bedtime and wake time schedule, even on days off.
- Choose carefully what you eat and drink. Avoid eating a heavy meal, and drinking alcohol and caffeine close to bedtime. Try to eat three regular meals spaced evenly over the course of normal waking hours, as they serve as time cues for your body clock.



- Exchange ideas. Speak with your colleagues on ways to cope with the lack of sleep associated with shift work. Set up a chat group at work so that you can discuss these issues and learn from each other.

Lack of sleep is a key problem related to shift work. This is a significant issue due to the importance of sleep and its impact on health. It may not be possible to control your work schedule, but it is possible to take steps to improve the quality and quantity of sleep you get.

Key Reference National Sleep Foundation. (N.D.) Shift Work Disorder-Symptoms.

[Retrieved from The National Sleep Foundation website.](#)

The Relationship Between Menopause and Sleep

The unique biological stages of women's lives are known to have an impact on sleep. In particular, the perimenopause stage (the menopausal transition), and the menopause stage may disrupt sleep patterns for women. Many studies have shown that sleep disturbances are more commonly reported in women than men in general, affecting 30% of pre-menopausal women. This increases to 50% of women during perimenopause and post-menopause.

How Menopause May Affect Sleep

The effects of menopause on sleep largely stem from changes in levels of hormones produced by the ovaries (i.e., estrogen and progesterone). Hormones are responsible for starting, stopping, speeding up, or slowing down physical and chemical processes across body systems. During perimenopause, reduced hormone production and irregular changes of hormone levels may affect body temperature regulation, leading to hot flashes, sweating, or shivering (vasomotor [VM] symptoms) which can disturb sleep. Such fluctuations in hormone levels may also interfere with the balance of arousing chemicals in the brain that help us stay awake (e.g., serotonin), and sleep-inducing chemicals that help us fall asleep (e.g., melatonin). It is not uncommon for women to experience depression, anxiety, and panic disorders during menopause-which can negatively impact sleep. Prolonged poor sleep can also cause daytime fatigue which can worsen depression and make it harder to fall or stay asleep.

Other Factors Which May Affect Sleep

General Quality of Sleep: Women who sleep poorly before entering perimenopause are more likely to experience sleep disturbances during perimenopause.

The Natural Aging Process: As women age, their circadian rhythm (the body's physical, mental and behavioural 24-hour clock) changes. This may lead to shortened sleep times and early morning awakening.

Co-Existing Factors: Other factors that occur simultaneously with menopause may contribute to poor sleep (e.g., physical and mental health conditions; weight gain; use of certain medications; pain from musculoskeletal disorders).

Treatment Options That May Help

Hormone therapy may help improve sleep regulation and reduce VM symptoms.

Estrogen hormone therapy has proven to be effective in helping some women not



wake up as often and have shorter wake episodes compared to women without therapy.

For some women, mind-body therapies such as yoga and Tai-Chi have shown to be more effective than hormone therapy to improve their sleep, mood, and reduce VM symptoms.

Due to the negative effects of poor sleep quality on our health and wellbeing, sleep should be a priority. Women who experience poor sleep prior to and during menopause should speak to their healthcare providers to make a plan for better sleep.

Key Reference

Shaver, J.L. and Woods, N. F. (2015). Sleep and menopause: A narrative review. *Menopause: The Journal of the North American Menopause Society*, 22(8), 899-915. doi: 10.1097/gmc.0000000000000499

Sleep and Gut Health

It is well documented that gastrointestinal (GI) conditions can affect sleep quality. The most common GI condition is Gastroesophageal Reflux Disease (GERD) which affects 13% of Canadians. Unfortunately, the mechanism underlying the relationship between GERD and sleep is still unclear. Nevertheless, two in five people with GERD have difficulty sleeping, and 43% feel tired and/or worn out (The Canadian Society of Intestinal Research, 2009).

How might GERD affect sleep?

Heartburn is the most common symptom of GERD. It is a condition where stomach acid travels backwards (refluxes) into the esophagus, causing a burning and uncomfortable sensation. When heartburn happens during sleep, the uncomfortable sensation can cause people to wake up. However, recent research suggests that reflux may actually happen when we wake up in the middle of sleep. Waking up during sleep is normal, but the timing of when an individual with GERD falls back to sleep may affect the ability to clear out the reflux from the esophagus; this causes burning sensations and sleep disruptions. Unfortunately, research is still ongoing, but managing heartburn is still your best bet to a good night's sleep.

Manage heartburn and sleep better:

The main things that someone can do to prevent and manage nighttime heartburn is to achieve and maintain a healthy body weight, as well as pay close attention to when and what they eat before going to bed. Other things to keep in mind close to bedtime include:

- Allowing time for digestion. Aim to have your last meal of the day two to three hours before bedtime. Also avoid eating large amounts of food and do not lie down for at least 45 to 60 minutes after eating.
- Limiting or avoiding trigger foods. Keep a food and symptoms journal to help you figure out what your trigger foods are. Common trigger foods include: spices, peppermint, chocolate, citrus juices, tomato, garlic, and high fat foods.

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- Using gravity to assist. Prop yourself up, or use adjustable bed raisers to raise the head of your bed six to eight inches. This can help prevent acid from refluxing into the esophagus.
- Avoiding alcohol and caffeine. They increase acid release which can lead to reflux.

GERD, and its main symptom heartburn, can have a negative effect on the quantity and quality of sleep. In addition to the tips above, if you suffer from GERD consult your healthcare provider to find out what else you can do to manage your condition as well as to rule out a more serious underlying condition.

Reference:

Canadian Society of Intestinal Research. (2009). The acid related disease patient experience: Canada. Harris Interactive research report. Gastrointestinal Society, c2015.

Sleep Hygiene

If it's taking you too long to fall asleep or if you can't sleep throughout the night, it may be time to evaluate your sleeping habits. It is important to maintain a regular sleep-wake schedule, as sleep quality affects overall health, and also helps to prevent or manage sleep problems and disorders.

The term "sleep hygiene" refers to a number of various practices that are recommended to have normal quality sleep and full alertness while awake (Irish et al., 2015). Sleep hygiene is important for everyone, from infants to adults. The most telling signs of poor sleep hygiene are sleep disturbances and sleepiness when awake. If you are experiencing trouble sleeping, evaluate your sleep routine and follow the tips below.

Tips to help you fall asleep quickly and have a restful sleep:

During Awake-Time:

1. Be physically active. It promotes good sleep; but beware, for some individuals, strenuous activity before bedtime may actually keep you awake.
2. Eat right. A balanced diet helps to promote good sleep. However, eating too much before bed or going to bed hungry may affect your ability to fall and stay asleep.
3. Avoid naps if possible. This could disturb your normal sleep pattern.
4. Limit caffeine. Consuming caffeine within four to six hours of bedtime can prevent you from getting a restful sleep.
5. Don't drink alcohol. Consuming alcohol four to six hours before bedtime has a negative effect on your quantity and quality of sleep.

Bedtime:

1. The right space. Having the right space will help you fall asleep. The bedroom should be quiet, clean, and comfortable.
2. Stick to a bedtime routine. This signals the body that it's time to sleep.
3. Take a bath/shower. A hot bath raises body temperature and makes you sleepier.



4. The bed is not an office. Don't watch TV, study, or do work on your bed as this may keep you up.
5. Write it down. Planning for tomorrow by writing things down may be a great way to help you fall asleep. It gets your thoughts on paper instead of thinking about them through the night.
6. Relax. If you're not falling asleep quickly, get up and do something relaxing and/or that makes you tired such as reading a book. Try to avoid watching TV, paying bills, or surfing the net as these are stimulating activities.

Use trial and error to see which tips work best for you and stick with them. Sleeping well is worth the extra effort.

Key References:

Thorpy, M. (2003). Make Insomnia Go Away, SleepMatters, National Sleep Foundation.

Irish LA, Kline CE, Gunn HE, Buysse DJ, Hall MH. The role of sleep hygiene in promoting public health: review of empirical evidence. [Review]. Sleep Medicine Reviews 2015 Aug;22:23-36.

Sleep Affects Your Mental Health

Getting a good sleep can some days seem almost impossible, leaving you tossing and turning for hours and waking up restless and tired. When sleeplessness becomes a regular occurrence they can have serious effects on your mood and overall mental well-being. Research has shown that adequate sleep is necessary to keep our bodies and brains functioning well. Poor or inadequate sleep can cause irritability and stress while healthy sleep can enhance well-being.

How Does Poor Sleep Affect Me?

When you don't get enough sleep, nearly every part of your mental functioning is affected. It can leave you feeling irritable, grumpy, sad, anxious, and/or stressed. These emotions can make just being at work very difficult, not to mention the challenges that it poses to being productive. Regular sleep issues also have a direct impact on concentration and memory, making it very difficult to think clearly and make important decisions. Another dangerous effect that sleep deprivation can have is delayed reaction time. Whether this occurs during the commute to work or while at work, a delayed reaction time can have serious safety implications for yourself and others. Additionally, feelings of tiredness, drowsiness, and mental wear-out can lead to further impact on your work-life balance.

Pull Out: The relationship between stress and mental health is quite complex. Research shows that sleep disturbances such as insomnia, can lead to the development of mental health conditions. On the other hand, stress and other existing mental health conditions such as depression, anxiety, or post-traumatic stress disorder can also make it very difficult to fall asleep.

How Can I Get A Better Sleep?

There are many simple steps that you can take to ensure that you get adequate, restful sleep. For starters, try to establish a regular, relaxing bedtime routine and stick to it the best you can. Try not to watch TV, use the computer or your phone for





two hours before going to bed. Do something that relaxes you instead such as reading a book, listening to soft music, or just winding down. Turning your clock away from you can also help because waking up middle of the night and seeing how many hours you have left before you have to wake up can often cause more anxiety. If you feel that you may have an underlying mental health concern that is affecting your ability to sleep or if you have questions about your sleep patterns it is important to share your concerns with your healthcare provider.

References

Meerlo P, Havekes R, Steiger A. Chronically restricted or disrupted sleep as a causal factor in the development of depression. [Review]. *Current Topics in Behavioral Neurosciences* 2015;25:459-81.

Websites + Resources

Canadian Mental Health Association: Improving Mental Health:

The Sleep Foundation: Sleep & Depression

Canadian Sleep Society

National Sleep Foundation

Healthy Sleep

Harvard Medical School

American Sleep Association