

Are You Tired of Being Tired?

World Diabetes Day November 14, 2017 was celebrated by Diabetes Grey Bruce with an informative talk about sleep by Stephanie Dance. Stephanie is the Senior Manager of Corporate Operations for AccqCorp, which owns sleep labs in Owen Sound and Paris, Ontario. Stephanie discussed the stages of sleep, sleep hygiene and details of a sleep study. Here are some highlights from her talk.

There are 4 stages of sleep: Non REM 1 (N1), Non REM 2 (N2), Non REM 3 (N3) and REM (rapid eye movement). N3, which occurs before REM, is the most important stage of sleep, as growth and repair of the body happens during this time. We only spend about 20% of our sleep time in this stage, however, and spend 5% of time in N1, 50 % in N2, and 20% in REM (the dreaming stage).

Many hormones in our bodies are released based on our sleep patterns. When falling asleep, melatonin is produced to help the body relax, cortisol levels drop and leptin is released which signals that you don't need to eat. Around 4 am, melatonin wears off, cortisol increases and ghrelin is released, telling you to eat. If you are not hungry in the morning, perhaps you slept poorly and less grehlin was released. The regulation of these hormones is important in metabolism and might explain why weight loss is so hard for some people. A sleep study is one way to determine quality of sleep.

The effects of poor sleep are many. Sleep deprivation is linked to Type 2 diabetes, restless legs, depression, high blood pressure and an increase in the chance of a motor vehicle collision, due to impaired concentration and judgement. It also can cause coordination problems and memory issues.

Stephanie had many suggestions for getting ready for a good night's sleep. This area of study is called "Sleep Hygiene".

Routine before bed:

- Have a relaxing ritual – deep breathing, stretching exercises
- Have a regular bedtime and wake up time, even on weekends
- Don't nap during the day
- Limit stimulants like alcohol and caffeine – if you drinks 3 cups of coffee in the morning, the caffeine will still be in your system at midnight!
- Exercise daily – but as early in the day as possible, not in the evening
- Don't go to bed hungry – have a light snack if needed (carb and a protein – such as cheese and 2-3 crackers), not a full meal
- Don't take stress, worries, and your to-do list for tomorrow to bed – write things out in a notebook ahead of sleep time and leave it out of the bedroom
- If you can't get to sleep, get up and go sit in another dark room for 15 minutes to help with relaxation. You want to associate your bedroom with sleep, not anxiety.

In your bedroom:

- Minimize noise
- Cool temperature
- Darkness is good – use blackout blinds/curtains
- Hide your clock so the light doesn't bother you
- No TV or cell phones or tablets/computer

- No pets in bed
- Sleep alone if your partner's sleep habits bother you
- Use your bedroom for sleep and intimacy only

There are over 90 different sleep disorders. Obstructive sleep apnea (OSA) is a common sleep disorder. It occurs when pressure, perhaps due to a large neck, is against the pharynx of the throat, causing breathing to stop. This in turn can cause high blood pressure, as the heart has to work harder to try and get the person to breathe. If you snore and wake up feeling tired, it could be a sign that you need a sleep study. Ask your partner if you stop breathing in your sleep. To be screened for OSA, ask your health care practitioner to use the STOPBang quiz. It will rate your risk for OSA and determine if you need a sleep study. Only a doctor or nurse practitioner can refer you for a sleep study.

What is a sleep Study?

A sleep study is performed in a clinic where you are connected to electrodes to monitor your breathing, REM and Non REM stages. You will spend the night in the clinic, where a technologist will observe you sleeping.

Once all the data is gathered, you will return to the clinic for the results. You may be prescribed a Continuous Positive Airway Pressure (CPAP) machine and mask to wear at night to ensure that you are always breathing. Those who have these masks tend to report getting better

sleep, feeling less tired and having improvement in their overall wellbeing.

The sleep study is covered by OHP. Partial coverage for the cost of the CPAP machines is available through the Ministry of Health and Long Term Care Assistive Devices Program. Some private insurance companies will cover the remaining costs.

We thank Stephanie for sharing her expertise and informing our attendees about this interesting topic!