



# Arthritis Talks: Effective Sleep Management

Susan Johnston, Nurse Educator, OsteoArthritis Service Integration System , Vancouver

January 11, 2024



# Presenters



**Sian Bevan**

Chief Science Officer  
Arthritis Society Canada  
***(Moderator)***



**Susan Johnston**

Nurse Educator  
Vancouver, BC

# Webinar tips

- Use the **Q&A** section to ask the presenters your questions. Some of the questions will be chosen for the live question period at the end of the webinar.
- Click on the **Chat** box to connect with other participants and the Arthritis Society's chat moderator.
- If you have further issues, email [arthritistalks@arthritis.ca](mailto:arthritistalks@arthritis.ca)

The screenshot shows the Arthritis Society Canada webinar interface. At the top center is the Arthritis Society Canada logo. Below the logo are two buttons: 'Q&A' and 'Chat'. At the bottom left is an 'Audio Settings' button. At the bottom right is a red 'Leave' button. A yellow callout box at the top right points to a red icon in the top right corner of the interface, with the text 'Click on the red icon to exit out of the Q&A or Chat'. A yellow callout box at the bottom left points to the 'Audio Settings' button, with the text 'Click here to access your audio settings'. A yellow callout box at the bottom right points to the 'Chat' button, with the text 'Click here to chat or to submit a question'. On the right side, a 'Q&A' window is open, displaying a 'Welcome to Q&A' message and a text input field labeled 'Type your question here...'.

# Overview

[1]

**Understanding Sleep**



[2]

**Approaches to Managing Sleep**



[3]

**Questions**



# With thanks to our partners

Diamond Sponsor:



Gold Sponsor:



Silver Sponsor:



Bronze Sponsors:



Q

# Why do we need sleep?



# Importance of Sleep

- ▼ Body tissues/mechanisms are restored and repaired
- ▼ Immune functions are activated
- ▼ Body functions used during awake periods are rested
- ▼ Hormones are released for growth and development



Q

# What are the various stages of sleep and how do they affect your quality of sleep?





# Stages of Sleep

## ▼ Stage 1: Light Theta Wave Sleep

- Transition state

## ▼ Stage 2: True Light Theta Sleep

## ▼ Stage 3: Early Deep Slow Wave Sleep

## ▼ Stage 4: Deep Slow Wave Delta Sleep

- Stages 1-4 are non-REM sleep

## ▼ Stage 5: Rapid Eye Movement Sleep (REM)

- Lack of REM sleep causes moodiness, irritability, initiated or sustained chronic pain, and a decrease in clear thinking

# How Does Age Affect Sleep in Adults?

## ▼ **Between 20-40 years –**

- Stages 3 & 4 decline by about 50%

## ▼ **Between ages 40-65**

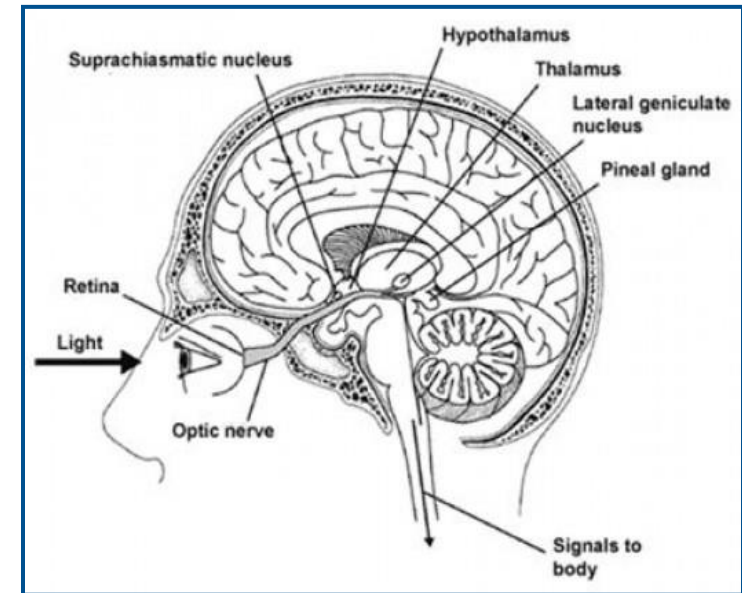
- Big drop in stage 3, REM sleep by approximately 20%
- More waking up during the night after 3 hours

## ▼ **65 and older**

- 5% drop in stages 3&4.
- Wake earlier, more likely to nap, more sensitive to noise during sleep

# What Regulates Sleep?

- ▼ Our internal body clock is also known as the **Circadian Rhythm**
- ▼ Exposure to sunlight or lack there of causes wakefulness or sleepiness.
- ▼ Exposure to electric light can affect this
- ▼ Sunlight causes hormone levels to rise (serotonin) and fall in the brain
  - Cortisol levels rise in the morning
  - Melatonin levels rise at night causing to you to fall and stay asleep (12-6 am)





# How can hormones, medications and substances affect your sleep?



# Hormones that Trigger Sleep

- ▼ Exercise builds adenosine in the brain until we feel sleepy
- ▼ Endorphins (feel good chemicals) are released during exercise and have a sedating effect when they drop.
- ▼ Hormones that maintain alertness
  - Dopamine and Histamine
- ▼ First half of the night, glucose metabolism is slower. If not sleeping well, glucose metabolism affected...this can stimulate appetite.

# Not Enough Sleep -> Hormones and Appetite



## Leptin:

- Appetite suppressant
- Often resistant in those that are obese



## Ghrelin:

- Controls appetite, hunger, and glucose regulation



## Cortisol:

- Increases with stress
- Increases belly fat
- Makes you hungry



**Increased food intake**



# Medications and disorders can disrupt sleep

## Medications:

- Steroids
- Inhalers
- Anti-hypertensives
- Thyroid hormone
- Cholesterol lowering drugs
- ADHD stimulants
- Antihistamines
- Tylenol #3

## Disorders:

- Heart disease
- Diabetes
- Thyroid disease
- Asthma/bronchitis
- Rheumatoid Arthritis
- Neurological disorders
- **Nocturia**
- **Sleep Apnea**
- Restless Leg Syndrome

## Nocturia (waking up to pee)

- ▼ 53% get up every night to pee
- ▼ **Getting up more than once per night is linked to daytime tiredness.**
- ▼ Often a symptom of bladder, prostate or sphincter control problems. See your doctor.



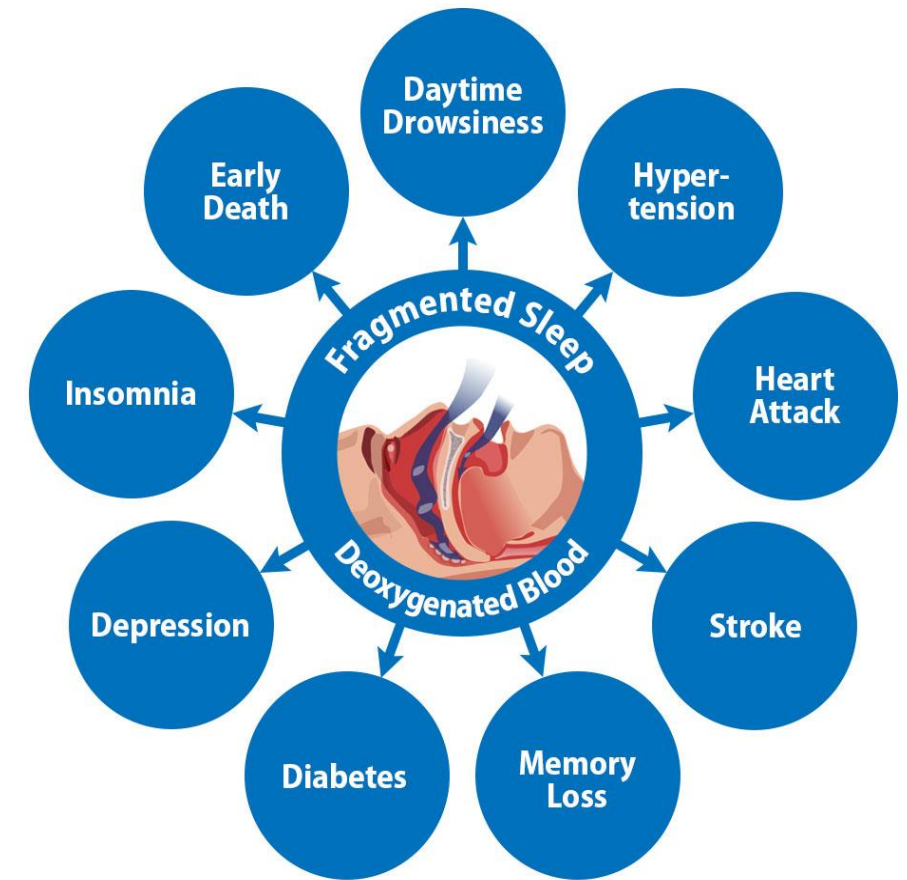


# Strategies to Manage Nocturia

- ▼ If you get up to pee during the night, try to drink your fluids earlier in the day
  - Only sips after dinner time
- ▼ Last caffeinated drink should be around 4pm.
- ▼ If you suffer from fluid retention, try putting your feet up after dinner
  - Limit salt in the diet

# Untreated Sleep Apnea and Risks

- ▼ During sleep breathing stops or pauses
- ▼ Untreated sleep apnea can increase health risks and complications for surgery
- ▼ Treatment:
  - Oral device
  - CPAP



# Substances that Interfere with Sleep

## ▼ Caffeine

- Stays in the bloodstream 3-7 hours
- Beware of chocolate, certain teas

## ▼ Alcohol

- Helps induce sleep but results in poorer quality sleep with increase doses
- Decreases REM sleep & makes you wake up more

## ▼ Smoking

- Nicotine is a powerful stimulant that disrupts sleep
- Quitting smoking often causes sleep disruption that improves long term



Q

# What are some things I can do to improve my sleep?



# Sleep Hygiene

- ▼ Reduce sleep during the day. Nap maximum 20 minutes.
- ▼ Bedtime routine
  - Sleep on a regular schedule
- ▼ Pain management
- ▼ Go to bed when you are sleepy not necessarily “tired”
- ▼ If awake and not asleep within about 20 minutes, get up and do something boring until sleepy. Do not stay in bed.
- ▼ When the alarm goes off in the morning, stay up, do not snooze



# Sleep Hygiene

- ▼ Eating late? Keep the meal small.
- ▼ Increase activity during the day
  - Exercising 4 times per week can help increase sleep by up to an hour/night!!!!
  - Do not exercise too close to bed. It can be too stimulating.
- ▼ Go to bed early and wake up early
  - Associated with better health indicators than going to bed late and waking up late



# Sleep Hygiene

## Environment:

- ▼ Find the right mattress, pillow and position for YOU!
  - Research supports that more expensive bedding tends to promote better sleep
- ▼ Sleep in a cool room
- ▼ Sleep in the dark or use a sleep mask
- ▼ Use earplugs
- ▼ Blue light from electronics suppresses melatonin!
- ▼ Keep pets out of the bed!



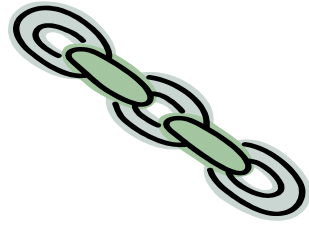
# Sleep Aids

- ▼ Sleep medications for short term use only!
  - Benzodiazepines/Zopiclone vs. Antidepressants
- ▼ Natural agents
  - L-tryptophan 1000mg – helps produce melatonin
  - Melatonin 3 mg at bedtime. For occasional use only
  - L-theanine 250-400mg at bedtime. Decreases anxiety and increases relaxation
  - Magnesium Bi-Glycinate (or any Mg+) at bedtime. Also try Epsom Salts (Magnesium Sulfate) in your evening bath or Magnesium Oil rubbed into legs. B-Complex at bedtime.
  - Calms Forte or Rescue Remedy – homeopathic, safe
  - Herbs - Chamomile, Lemon Balm, Passionflower, “Tranquil” herbal compound tea, Cannabis

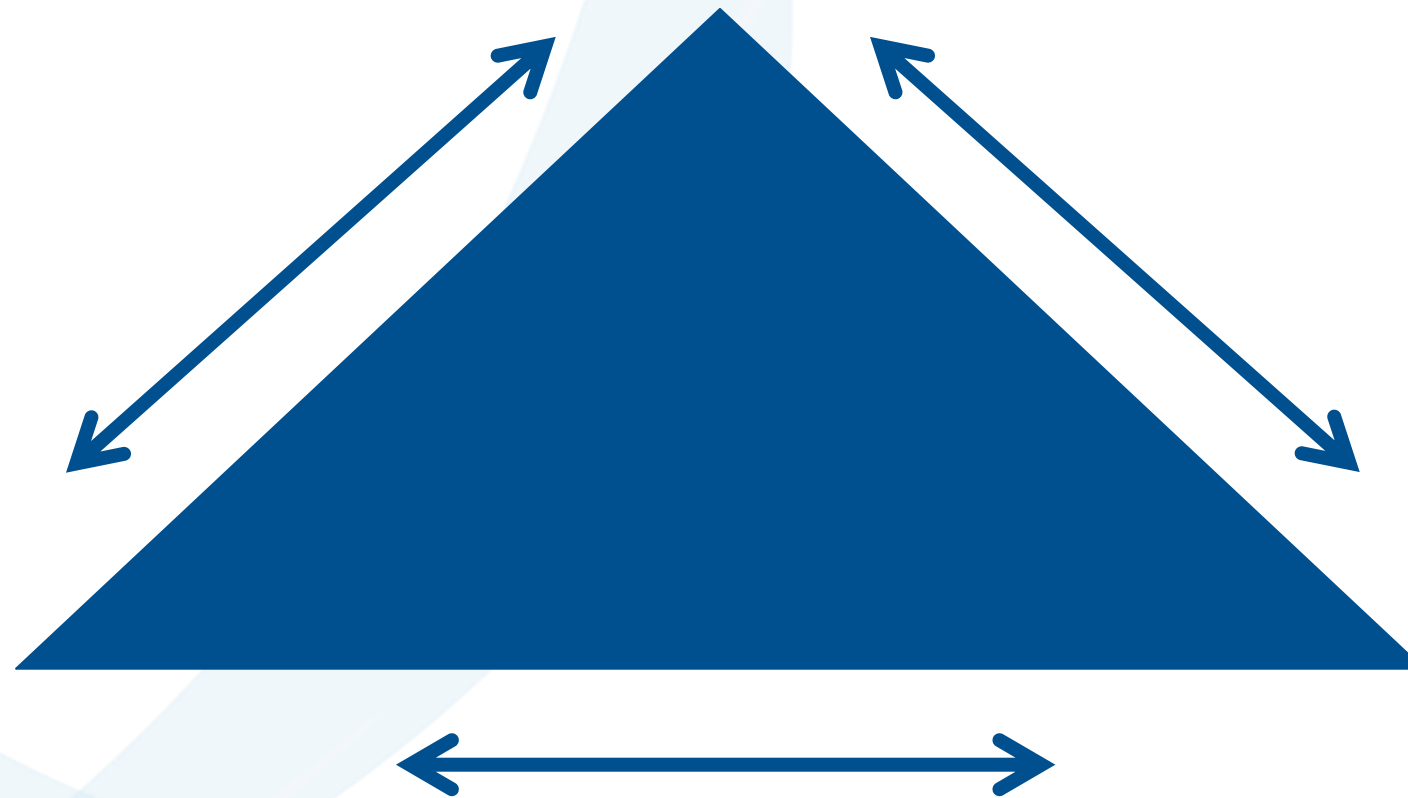




# Insomnia-Stress-Pain Connection



**Insomnia**



**Stress**

**Pain**

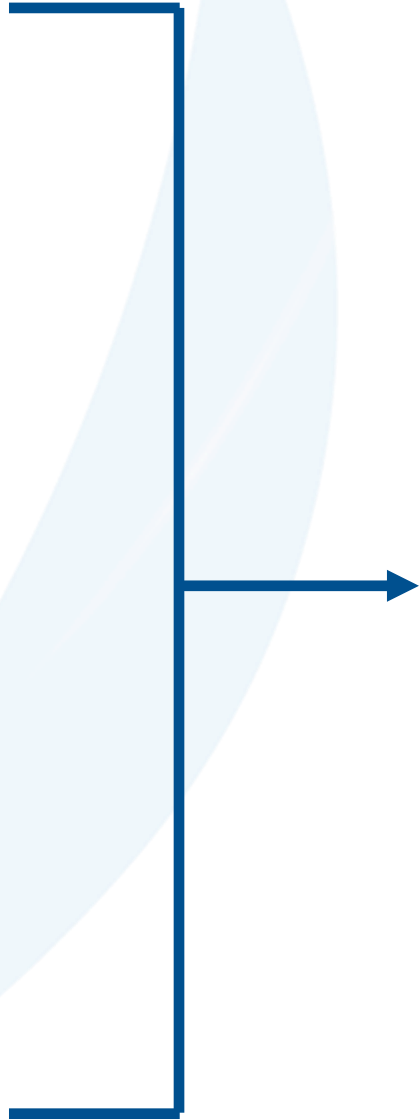
Pain Severity

Sleep Environment

Sleep Habits

Anxiety/Physical  
Arousal

Thoughts and  
Beliefs



Sleep Quality



You wouldn't let this  
happen to your phone.  
Don't let it happen  
to you either.

SELF CARE IS A PRIORITY.  
NOT A LUXURY.

Keep that charger on you



**Any final thoughts or recommendations?**




# Final thoughts

- ▼ Both stress and/or pain initiate the fight, flight, freeze response
- ▼ Unmanaged this can lead to mental and physical issues that can affect sleep
- ▼ Ideally all adult humans need one period of 3 hours of uninterrupted sleep and a total of 7-9 hours of sleep in a 24- hour period
- ▼ Managing all 3; pain, stress and sleep leads to a healthier, happier, longer life.

## Key tricks to a better sleep

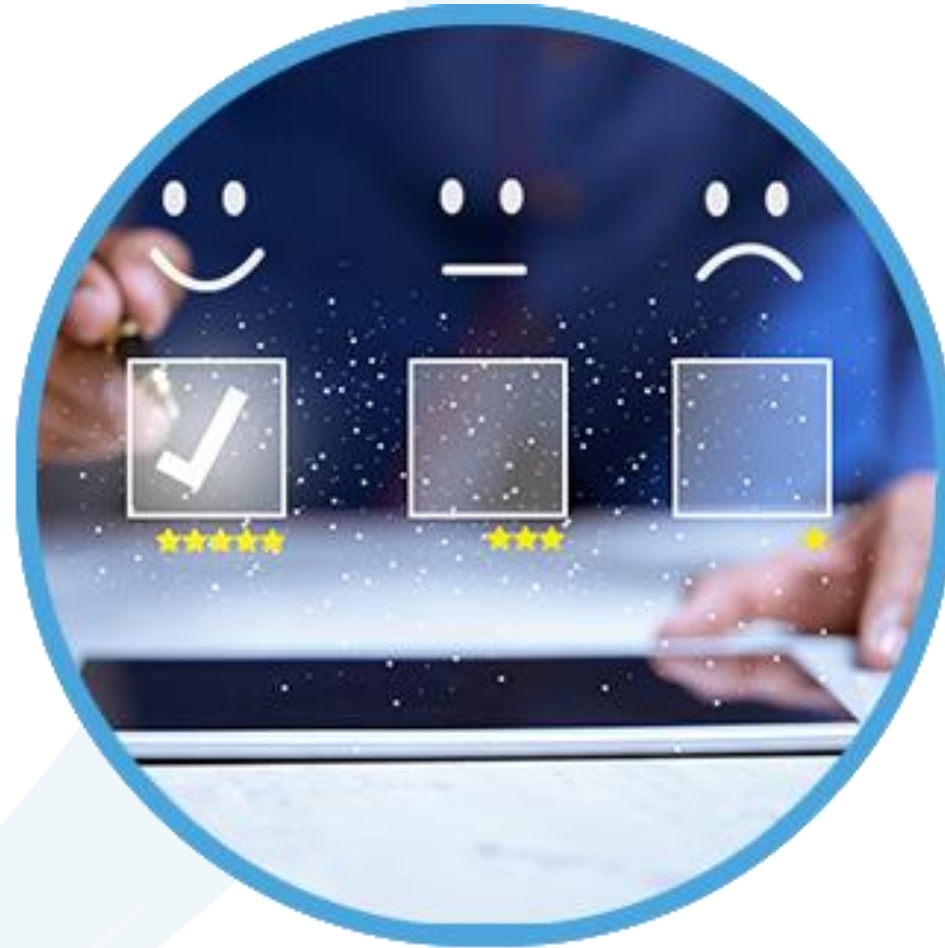
- Start a meditation practice
- Decrease stimulates
- Increase sunlight exposure during the day
- Be active during the day
- Have a bedtime routine
- Don't clock watch. If not asleep in 20 minutes, get up and do something boring until sleepy

when all  
else fails  
take a  
nap. 

# Questions



Tell us what you think...





# Upcoming Events

February



6 p.m. ET

*Arthritis Talks: Healthy Aging with Arthritis*  
featuring Juanit Fazari (physiotherapist)

## Learn about:

- Lifestyle adjustments that may slow the aging process
- How to remain independent as you age
- Maintaining strength when you have arthritis
- Fall prevention
- Utilizing your healthcare team to its potential as you age

## Register at:

Visit [arthritis.ca/ArthritisTalks](https://arthritis.ca/ArthritisTalks) or click the link in your email inbox

