SLEEP AND PARKINSON’S DISEASE

Everything Parkinson’s Webinar
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We will talk about:

- Stages of sleep
- What is the relationship between sleep and Parkinson’s?
- What are the sleep problems for people with Parkinson’s disease?
  - How are they diagnosed?
  - What are the treatment options?
Sleep and Parkinson’s:

- Connected in complex ways we do not yet completely understand.
- Improves health and wellbeing
- Reduces stress
- Improves memory and mood
- Replenishes levels of neurotransmitters such as dopamine
- Clears out toxic build up in the brain

- Some studies suggest that changes in sleep may be one of the early signs of Parkinson’s.
- 2 out 3 people with PD may have sleeping issues. This could be due to chemical changes in the brain, medications, depression or anxiety, and other PD symptoms.
Sleep Cycle:

A Typical 8 Hour Sleep Cycle

- awake
- stage 1
- stage 2
- stage 3
- stage 4

Hours after going to bed

REM stages occur periodically throughout the cycle.
Rapid eye movement (REM) Sleep Behavior Disorder (RBD)

• A sleep disorder in which the patient physically acts out vivid, often unpleasant dreams with vocal sounds and sudden, often violent arm and leg movements during REM sleep — sometimes called dream-enactment behavior.
• The body is normally limp during REM sleep other than eye movements.
• The dreamer is acting in self defense or defense of others.
• This can occur years before PD is diagnosed.
• Does not typically disrupt the patient’s sleep.
• Can be dangerous to spouse or bed partner.
RBD Signs and Symptoms

• Kicking, punching, flailing in response to a violent dream.
• Noises, such as talking, shouting, emotional outcries or even cursing
• Often remember the dream.
• Usually does not get out of bed.
RBD Diagnosis

• Evaluation by movement disorders specialist, neurologist or sleep specialist
• Talking with bed partner
• Performing a sleep study to distinguish from other sleep issues
RBD Treatments

• Physical Safeguards:
  ➢ Padding the floor near the bed
  ➢ Removing dangerous objects from the bedroom, such as sharp items and weapons
  ➢ Placing barriers on the side of the bed
  ➢ Moving furniture and clutter away from the bed
  ➢ Protecting bedroom windows
  ➢ Possibly sleeping in a separate bed or room from your bed partner until symptoms are controlled
  ➢ Sleeping on sleeping bags
RBD Treatment

• Melatonin
  - Natural sleep hormone
  - Causes mild drowsiness.
  - It is usually well-tolerated with few side effects.
RBD Treatment

• **Clonazepam (Klonopin).**

• This is a prescription medication, often used to treat seizures and more commonly used for anxiety.

• the traditional choice for treating REM sleep behavior disorder, by slowing down the processes of the brain which helps suppress the acting out behavior from occurring.

• Can cause daytime sleepiness, decreased balance and worsening of sleep apnea.
Restless Leg Syndrome (RLS)

• A condition that causes an unpleasant or uncomfortable sensation in the legs resulting in an irresistible urge to move them
• Typically occurs in the evening or at bedtime
• Usually worse when patient are lying or sitting
• Eased by movement such as walking, pacing, or jiggling legs.
• More common in PD patients
RLS Triggers

- Alcohol
- Nicotine
- Caffeine
- Certain medications for mental health and colds and allergies.
RLS Diagnosis

- Evaluation by a movement disorders specialist, neurologist or sleep specialist.
- Check for iron deficiencies
- Sleep study
RLS Treatment

• Treat underlying conditions such as iron deficiency.
• Treat only if it is bothersome.
• Consider stopping medications that make condition worse such as anti-depressants or anti-histamines.
• Avoid nicotine, alcohol, sugar intake, and caffeine, especially in evenings.
RLS Treatment

• Medications:
  - Medications that increase dopamine in the brain such as ropinirole (Requip), rotigotine (Neupro), or pramipexole (Mirapex); watch for side effects such as sleep attacks and compulsive behaviors, augmentation.
  - Gabapentin (Neurontin, Horizant)
  - Pregabalin (Lyrica)
RLS Treatment

- Opioids (Tramadol, Codeine, Oxycodone, Hydrocodone)
  - Caution as these can cause disorientation and constipation.
- Muscle relaxants and sleep medications
Insomnia

• A sleep disorder where one has a problem with either falling asleep or staying asleep.
• Sleep onset insomnia is the inability to fall asleep within 30 minutes at bedtime.
• Sleep fragmentation is repeated short sleep interruptions.
Insomnia Causes

• Difficulty changing positions in bed
• Rigidity or wearing off of meds at night
• Anxiety and depression
• Nocturia (frequent urination at night)
• Naps during the day
• Restless legs syndrome
• Sleep apnea
• Possible disruption of body clock
• Pain
Sleep Hygiene

• Establish a bedtime routine.
• Consistent sleep schedule.
• Plan for at least 7 hours of sleep.
• Avoid naps longer than 20 minutes during the day and avoid napping later in the day.
• If you do not fall asleep after 20 minutes, get out of bed.
• Avoid eating 3 hours before bedtime.
Sleep hygiene, continued

• Avoid caffeine 8 hours prior to sleep.
• Avoid consuming alcohol before bedtime.
• Avoid fluids close to bedtime.
• Complete any aerobic exercises at least 3 hours before bedtime.
• Make your bedroom a quiet and relaxing sanctuary.
• Obtain a few minutes of daylight outdoors as soon as you wake up, or spend at least 30 minutes outside throughout the day.
• Limit light exposure in the evenings.
Sleep hygiene, continued

• Cognitive-behavioral therapy for insomnia
• Books on sleep:
  – *Say Goodnight to Insomnia* by Gregg Jacobs
  – *The Insomnia Workbook: A Comprehensive Guide to Getting the Sleep You Need* by Stephanie Silberman
• Sleep stories on apps such as Calm, Headspace and Insight Timer.
• Management of urinary symptoms
Insomnia treatment

• Long-acting Levodopa
• Rotigotine 24-hour patch (Neupro)
• Deep brain stimulation
• Melatonin
• Management of anxiety and depression
• Occasionally use of other options such as orexin antagonists or melatonin receptor agonists
Obstructive Sleep Apnea

• Not necessarily common in PD, however it is common in the general population.
• It is a potentially serious sleeping disorder that causes breathing to repeatedly stop and start during sleep.
• It occurs when the muscles in the throat intermittently relax and block the airway.
• The most common sign of OSA is snoring.
OSA

• Obstructive sleep apnea
OSA

• Blockage of air during sleep can cause oxygen saturation in the blood to drop.
• Leads to frequent short awakenings through the night.
• Effects can be similar to sleep deprivation or lack of sleep
• Can have daytime sleepiness.
• Snoring is not normal.
Sleep Study

• Polysomnography
OSA Treatment

• Weight loss
• Avoid alcohol or sedatives
• Continuous Positive Airway Pressure (CPAP) device
• Mandibular advancement device (MAD)
• Positioning device if OSA is mainly supine
• Inspire
Excessive Daytime Sleepiness

• Daytime sleepiness related to PD may arise for many reasons, including getting a poor night’s sleep or the use of dopaminergic medications, especially dopamine agonists like pramipexole (Mirapex), ropinirole (Requip) and rotigotine (Neupro).

• OSA

• Consider mental health issues such as depression.

• Can occur naturally in advanced stages of PD
EDS Treatments & Recommendations

• Establish good sleep hygiene and utilize the sleep recommendations.
• Participate in activities outside the home. They may help provide stimulation to prevent daytime dozing.
• Do NOT drive while sleepy if you experience excessive daytime sleepiness. Motor vehicle accidents increase during periods of drowsiness and may be associated with sudden onset of sleep (sleep attacks).
• Talk to your doctor about possibly decreasing the dosage of dopamine agonists if you experience daytime sleepiness or sleep attacks.
• Talk to your doctor about stimulants like caffeine, modafinil (Provigil) and methylphenidate (Ritalin).
In Summary

• Sleep is very important and can directly impact the quality of our life.
• Most sleep conditions can be treated.
• Watch for the common sleep conditions in Parkinson’s disease such as REM sleep behavior disorder, Restless leg syndrome, Insomnia, Obstructive sleep apnea and daytime sleepiness.
• Talk to your provider if you experience these conditions.
Are you asleep??!

• Thank you for your attention. May you establish and experience good sleep and have a restful day.