



Neuro Café:  
Sleep  
27<sup>th</sup> September 2023



# Sleep disorders

- Sleep disorders are conditions that result in changes in the way that you sleep, affecting your overall health, safety and quality of life.
- Sleep deprivation can affect your ability to function, to drive safely and increase your risk of other health problems.
- Some of the signs and symptoms of sleep disorders include:
  - excessive daytime sleepiness,
  - irregular breathing
  - increased movement during sleep
  - irregular sleep and wake cycle
  - difficulty falling asleep.



Sleep is critical

# Sleep is a pillar of human health.

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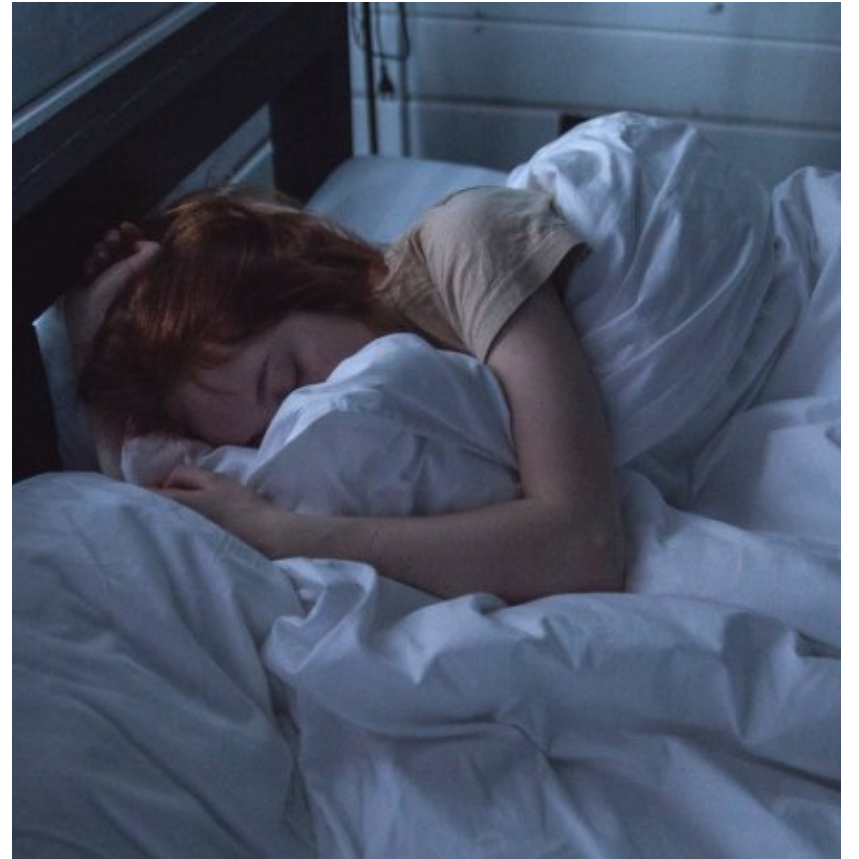
- **Sleep is essential to health.** It is a critical pillar of health, like nutrition and physical activity
  - Sleep helps support memory and learning
  - Sleep helps clear waste from the brain and promote brain health
  - Sleep supports brain health, and brain health supports sleep
  - Sleep supports immune health, and immune health supports sleep
  - Sleep helps the immune system to clear bacteria and viruses
  - Sleep helps to recycle old cells and maintain our bodies and energy levels
  - Sleep health is unevenly distributed across populations and is an important target for improving health equity



# Importance of sleep

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- Sleep is really important to regulate the 3 M's
  - mood
  - memory and
  - metabolism.
- Remember the 'right' amount of sleep – is personal to you and the amount of sleep you need changes over the course of a lifetimes.
- The key question to ask “when you wake up do you feel refreshed?” If the answer's “yes,” you're probably sleeping enough for you.
- It is very common with many neurological conditions for sleep to become affected when it is often a critical time for sleep to be good



# Symptoms Of SLEEP DISORDERS



Difficulty falling asleep

Haphazard sleeping patterns



Increased movement during sleep

Short sleep duration



Excessive daytime sleepiness

Making frequent errors



Daytime tiredness

Irregular breathing patterns



Fatigue and dizziness

Experiencing headaches



Experiencing irritability

Mental disorders



Slow responses during social interactions



# Common neurologic disorders that are accompanied by sleep problems and disorders

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- Alzheimer's disease and other dementias
- Epilepsy
- Neuromuscular disorders
- Parkinson's disease & movement disorders
- Stroke

In addition, obstructive sleep apnoea, which is the most commonly treated sleep disorder, is a risk factor for stroke, cognitive impairment and poor seizure control.

# Common sleep difficulties experienced by people with neurological conditions

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- Insomnia
- Excessive daytime sleeping (EDS)
- Restless leg syndrome
- Sleep related breathing disorders
- Parasomnias & night time hallucinations
- Circadian Rhythm Sleep Disorders





# Insomnia

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- Insomnia describes not being able to fall or stay asleep.
- Insomnia is common in many long-term neurological conditions
- Sleep can be disturbed by neurological symptoms such as
  - Pain
  - Stiffness/ spasticity
  - Tremor
  - Restless leg / clonus
  - Needing to go to the toilet lots at night
- Some medications can act as stimulants and keep you awake
- CBT can help insomnia

# Excessive day time sleeping (EDS)

- Primary symptom of EDS constant fatigue throughout the day – even just after waking from full nights sleep
- Other symptoms can include:
  - Irritability
  - Anxiety
  - Decreased appetite
  - Slowed cognition or speech
  - Memory problems
  - Restlessness
- Common post stroke initially, but normally decreases after first few weeks, however for about 30% can last > 6 months
- Medications (especially dopamine agonists PD meds) can cause EDS
- Medications can help but should not be first thing to try



# Restless leg syndrome

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- Restless legs syndrome is an overwhelming desire to move your legs when you're awake. It happens mainly when you're resting, usually in the evening and at night.
- Symptoms can include
  - tingling,
  - burning
  - itching
  - throbbing in your legs.
- To get some relief you could try:
  - massaging your legs
  - relaxation exercises, such as yoga or tai chi
  - taking a warm bath in the evening
  - applying a hot or cold compress to your legs
  - walking and stretching
  - Stay hydrated
- Some people may be advised to increase iron levels by taking a supplement or eating iron-rich foods, such as dark green vegetables, prunes or raisins.
- Magnesium oil spray on the legs has helped some users
- Supplements such as Iron, Vitamin B complex, folic acid and Calcium can also help
- Medication can treat moderate or severe symptoms of restless legs.



# Sleep-related breathing disorders

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- Sleep related breathing disorders affect breathing while we sleep and are characterized by disruptions of normal breathing patterns that only occur in our sleep.
- Sleep apnoea is a common sleep related breathing disorder where a person momentarily stops breathing while asleep. This makes them wake up, take a few breaths and go back to sleep again. The person has no memory of this happening, as it's so brief, but it disturbs their sleep.
- Symptoms include
  - loud snoring,
  - choking noises while asleep &
  - excessive daytime sleepiness.



# Parasomnias & night time hallucinations

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- Parasomnias are abnormal movements or behaviours that happen when you're asleep.
- They also occur as you're waking up or when light sleep changes to deep sleep (REM sleep).
- During deep sleep people with this sleep disorder may move their arms and legs vigorously, possibly injuring themselves or their bed partner.
- Parasomnia is more common in people with Parkinson's.
- If you or your bed partner notice any unusual behaviour during sleep, you should discuss this with your GP or specialist team
- Night-time hallucinations can be a side effect of medication so discuss with your specialist team.





# Circadian Rhythm Sleep Disorders

- Sleep-wake cycle refers to the 24 hour daily sleep pattern which consists of approximately 16 hours of daytime wakefulness and 8 hours of night-time sleep
- The sleep-wake cycle is controlled by the body's circadian rhythm and natural tendency to return to what is stable (sleep homeostasis/ balance ).
- Sleep disorders can develop naturally, as in the case of extreme night owls, or they can be brought on by working an overnight schedule, jet lag or side of effect of meds
- Neurological disorders can alter one's natural circadian rhythm

# Moods & feelings impact on sleep

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- Sleep and mood are closely connected; poor or inadequate sleep can cause irritability and stress, while healthy sleep can enhance well-being.
- Chronic insomnia may increase the risk of developing a mood disorder, such as anxiety or depression.
- Studies have shown that even partial sleep deprivation has a significant effect on mood.
- University of Pennsylvania researchers found that subjects who were limited to only 4.5 hours of sleep a night for one week reported feeling more stressed, angry, sad, and mentally exhausted. When the subjects resumed normal sleep, they reported a dramatic improvement in mood.







# Practice good sleep hygiene

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- It's not just the quantity of sleep you have but also the quality.
- Have a rest or nap during the day if you need to but try to keep it to 20-30mins.
- Try to stick to a regular night-time routine
- Don't stay up too late.
- Avoid eating heavy meals late in the evening if you can.
- If you are feeling fatigued it can be tempting to use caffeine or alcohol as a pick me up. However, too much caffeine or alcohol can disrupt sleep.



# Food & drink & sleep

- Make sure your diet limits caffeine in food and drinks. Try and avoid caffeine from late afternoon.
- Plan to eat dinner three hours before you go to bed.
- Make sure you're not hungry before bedtime. On the other hand, avoid heavy meals that can cause poor sleep.
- Avoid alcoholic drinks 4-6 hours prior to bedtime. Alcohol helps you fall asleep, but your sleep can then be restless.



# BEST FOODS THAT HELP YOU SLEEP

[www.health.com](http://www.health.com)



Oily fish



Almonds



Milk



Chamomile tea



Tart cherry  
juice



Kiwi fruit



Greek yogurt



Legumes



Bananas



Research has found that certain nutrients may play an underlying role in short and long sleep duration.

For longer and better quality sleep it's important to have lycopene (found in red and orange-coloured foods), carbohydrates, vitamin C, selenium (found in nuts, meat and shellfish), and more lutein/zeaxanthin (found in green, leafy vegetables that are rich in stress reducing calcium).

# Environmental tips for sleep

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- Keep your bedroom dark and at a comfortable cool & pleasant temperature (around 16°C to 18°C)
  - Blackout curtains are a great way to ensure darkness or try an eye mask
- Prevent and avoid noises that can be heard at night
  - Ear plugs can help some
- Reserve your bedroom for sleep, so your mind associates it with activities that lead to sleep.
- Try to avoid things like watching television or using laptops or tablets in bed
- Try to reduce clutter and furniture and keep your bedroom tidy.
- Reducing the time in bed you spend awake



# Relaxing mind and body for sleep

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- **Run yourself a bath**
- **Get creative with scents**
  - Lavender
  - Camomille
  - Bergamot
  - Sandalwood
- **Practice progressive muscle relaxation**
- **Relaxation breathing**
- **Complete cognitive strategies to distract from stress**
  - Naming tasks
  - Counting
  - Story telling
- **Write it down.** Spend five to ten minutes each night writing down what's on your mind and what you're doing about it.
- **Meditation**
- **Fresh bed sheets**



# Bright Light Therapy

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- Light therapy can help relieve sleep issues associated with insomnia, circadian rhythm sleep disorders, jet lag, seasonal affective disorder, and depression.
- Light therapy is exposure to a light source that's brighter than typical indoor light, but not as bright as direct sunlight.
- It involves using a light box for a specific length of time and at the same time every day. You can do it from the comfort of your home.





# Medications

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- Sleeping tablets can help in the short term (up to three or four weeks) in some situations e.g.
  - if you have a short spell of insomnia due to severe stress, such as a bereavement, or after surgery
  - if you have temporary insomnia caused by a change in environment or circumstances, such as being in hospital

## Rebound insomnia

- Sleeping tablets may cause rebound insomnia. This is when your insomnia symptoms briefly become much worse when you try to stop taking the sleeping tablets, but GP will support a plan to manage this.

# Melatonin

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- Melatonin is a hormone that occurs naturally in your body. It helps control your sleep patterns.
- You can take a manmade version of melatonin for short-term sleep problems (insomnia). It makes you fall asleep quicker and less likely to wake up during the night.
- Melatonin is mainly prescribed for adults aged 55 or over, to help for short-term sleep problems.
- Usually take Melatonin for 1 to 4 weeks.
- It is reported not to be suitable if you have rheumatoid arthritis, multiple sclerosis or lupus or any other autoimmune condition



# Chase away restless nights with exercise.

A well-timed workout can lead to better sleep.



## Exercise & sleep

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- Regular exercise is profoundly beneficial to your sleep. People who exercise regularly report better sleep quality than those who don't.
- Physical activity can increase the amount of time we spend in deep sleep, the most restorative sleep stage.
- Fitness can also reduce sleep onset time, allowing you to fall asleep faster once your head hits the pillow.
- Exercise increases sleep duration, boosting the number of hours you are able to sleep and decreasing the time spent lying awake in the middle of the night.

#MoveItMonday

MoveItMonday.org

**MOVE IT  
MONDAY!**



# Exercises for better sleep

- *Resistance exercises:* [Studies](#) have shown that resistance exercises can improve sleep. These include weightlifting, squats, push-ups, and lunges.
- *Yoga:* Yoga has a number of benefits that can improve sleep. It can increase mindfulness and encourage [meditation](#), putting you in a more peaceful mental state for sleeping. The deep rhythmic breathing and intentional movement can also aid with sleep.
- *Moderate intensity aerobic activities:* Activities such as brisk walking, water aerobics, and semi-hilly bike rides get your heart rate up without activating chemicals that can keep you from falling asleep.
- The next time you are struggling to find motivation to exercise, think about it this way: ***you are giving yourself the gift of a good night's sleep.***





# Apps to aid sleep

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- Calm
- Headspace
- Pzizz
- Sleep Reset
- Sleep Cycle
- Sleep Easy
- Better Sleep Relax Melodies
- Oura
- Ten percent happier

## Sleep snapshot

# Family & carers sleep

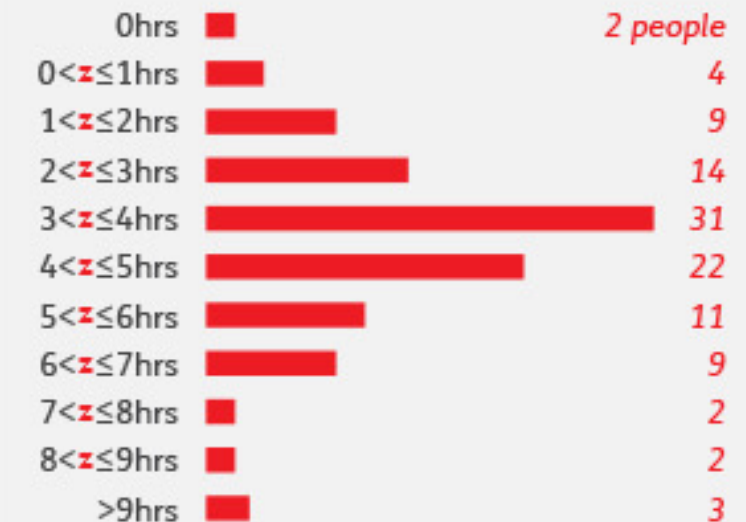
- Sleep and night-time problems are very common among carers of people living with neurological conditions
- Sleep and night-time problems are almost twice as common among [carers of people with Parkinson's](#) than in the general population.
- It may be difficult sometimes, but it's important for family & carer's to have good sleeping habits too as this will positively impact on their health, wellbeing and general quality of life.

**4 hrs 26 mins**



Average amount of sleep of carers who responded to our Facebook survey on 13 November 2014.

Sleep distribution of 109 carers surveyed:



“ Years of caring, always being on the alert, ears always ready to hear a sound, has messed up my sleep patterns. Now average 3-4 hours a night. It's impacting my health. - Alice ”

# More support for sleep

- <https://www.parkinsons.org.uk/information-and-support/sleep-and-parkinsons>
- <https://www.saebo.com/blog/sleep-stroke-key-faster-recovery/>
- <https://www.hda.org.uk/media/1180/ot-clinical-tips-for-hd-sleep-routine-and-management.pdf>
  
- **Insomniacs**
- Insomniacs was formed to offer a reference point on how to overcome insomnia, sleeping problems and sleep disorders. Their website has case studies and expert guidance on dealing with sleep issues. **www.insomniacs.co.uk**
- **British Snoring and Sleep Apnoea Association**  
A not-for-profit organisation dedicated to helping snorers and their bed partners improve their sleep. There's information on causes and treatments on their website and they also have a helpline.
- **01737 245 638 www.britishsnoring.co.uk**
- **Sleep Apnoea Trust**
- The Sleep Apnoea Trust aims to improve the lives of sleep apnoea patients, their partners and their families. They publish a regular newsletter, run a helpline and have information on sleep apnoea and lists of support groups.
- **0845 038 0060 www.sleep-apnoea-trust.org**

# More support for sleep cont...

- Re:sleep by Sleepyhead Program:
  - Sleep retraining programme led by specialist Stephanie Romiszewski
  - Paid course
  - <https://re-sleep.com>
- [Cognitive Behavioral Therapy for Chronic Insomnia: A Systematic Review and Meta-analysis](#)
- [The effect of acceptance and commitment therapy on insomnia and sleep quality: A systematic review.](#)