Sleep in ME/CFS and FM

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Outline

- Sleep-related symptoms
- Commonly associated sleep disorders
- Considerations for having a sleep study
- Types of sleep studies and limitations
- Treatment for sleep-related signs and symptoms

Sleep-related Symptoms

Night-time Symptoms

- Difficulties initiating sleep
- Difficulties maintaining sleep
- Early morning awakenings

Daytime Symptoms

- Non-restorative Sleep
- Excessive daytime sleepiness (?)
- Symptoms of sympathetic instability (cold hands/feet, orthostasis, low blood pressure)
- GI discomfort

Why should we be interested in sleep in ME/CFS or FMS?

- Induced fragmentation of sleep can cause fatigue and somatic pain[1]
- Sleep deprivation and selective REM or SWS deprivation can reduce the pain threshold[2]
- FMS is associated with ↑SL, ↓SE, ↓SWS/REM sleep, ↑Motor activity, ↑ alpha intrusion, ↑ CAPs [3].
- ↑ Overnight SNS activity[4]

1. Modofsky,H. Psychosomat Med. 1975; Lentz, MJ. J Rheumatol. 1999. 2. Onen, SH. J Sleep Res. 2001. 3. Adler, GK Am J Med. 1999. 4. McMillan, DE. Sleep. 2004.

Why should we be interested in sleep in ME/CFS or FMS?

- 80% of CFS patients will perceive ↓ sleep quality[1], light/superficial sleep, thought rumination, and external/internal sensitivity affecting sleep [2].
- There is significant overlap of symptoms between sleep disorders and poor sleep and ME/CFS and FMS

1. Unger,ER. BMC Neurol.2004. 2. Cote, KA. J Rheumatol. 1997.

What are frequently associated sleep disorders?

- Restless Legs Syndrome and Periodic Limb Movements in Sleep[1,2].
- Obstructive Sleep Apnea/UARS[3].
- Psychophysiologic insomnia.
- Delayed Sleep Phase Syndrome
- Inadequate Sleep Hygiene.

1.. Yunus, MB. BMJ. 1996. 2. Tayag-Kier, CE. Pediatrics. 2000. 3. May, KP. Amer Jour Med. 1993.

Why have diagnostic testing?

- Screen for or rule-out primary sleep disorders that can also cause fatigue and daytime sleepiness.
- To offer supportive evidence of ME/CFS or FMS.
- Possibility of objective evidence of reversibility of abnormalities

Types of sleep testing

Take-home sleep testing

- Quick testing option; cheaper testing option
- Only looks at sleep-related breathing disorders
- Does not rule-out sleep-related breathing disorders

In-lab Sleep Testing

- More accurate
- More comprehensive – more than OSA
- Sleep quality parameters
- May provide evidence of ME/CFS or FMS

Avenues for sleep testing

- Hospital-based testing
- Sleep medicine clinics
- Home respiratory care companies
- Dental offices

Major considerations in treating sleep disorders in ME/CFS or FMS

- Treat accompanying sleep disorders
- CBT and sleep hygiene for insomnia has been proven superior to usual care in improving pain and fatigue in FMS
- Sleep medications may allow for initial subjective improvement, but does not improve pain.

Cognitive Behavioral Therapy for Insomnia

ORIGINAL INVESTIGATION

Behavioral Insomnia Therapy for Fibromyalgia Patients

A Randomized Clinical Trial

Jack D. Edinger, PhD; William K. Wohlgemuth, PhD; Andrew D. Krystal, MD; John R. Rice, MD

Background: Insomnia is common and debilitating to fibromyalgia (FM) patients. Cognitive-behavioral therapy (CBT) is effective for many types of patients with insomnia, but has yet to be tested with FM patients. This study compared CBT with an alternate behavioral therapy and usual care for improving sleep and other FM symptoms.

Methods: This randomized clinical trial enrolled 47 FM patients with chronic insomnia complaints. The study compared CBT, sleep hygiene (SH) instructions, and usual FM care alone. Outcome measures were subjective (sleep logs) and objective (actigraphy) total sleep time, sleep efficiency, total wake time, sleep latency, wake time after sleep onset, and questionnaire measures of global insomnia symptoms, pain, mood, and quality of life.

Results: Forty-two patients completed baseline and continued into treatment. Sleep logs showed CBT-treated patients achieved nearly a 50% reduction in their nocturnal wake time by study completion, whereas SH therapy– and usual care–treated patients achieved only 20% and 3.5% reductions on this measure, respectively. In addition, 8 (57%) of 14 CBT recipients met strict subjective sleep improvement criteria by the end of treatment compared with 2 (17%) of 12 SH therapy recipients and 0% of the usual care group. Comparable findings were noted for similar actigraphic improvement criteria. The SH therapy patients showed favorable outcomes on measures of pain and mental well-being. This finding was most notable in an SH therapy subgroup that self-elected to implement selected CBT strategies.

Conclusions: Cognitive-behavioral therapy represents a promising intervention for sleep disturbance in FM patients. Larger clinical trials of this intervention with FM patients seem warranted.

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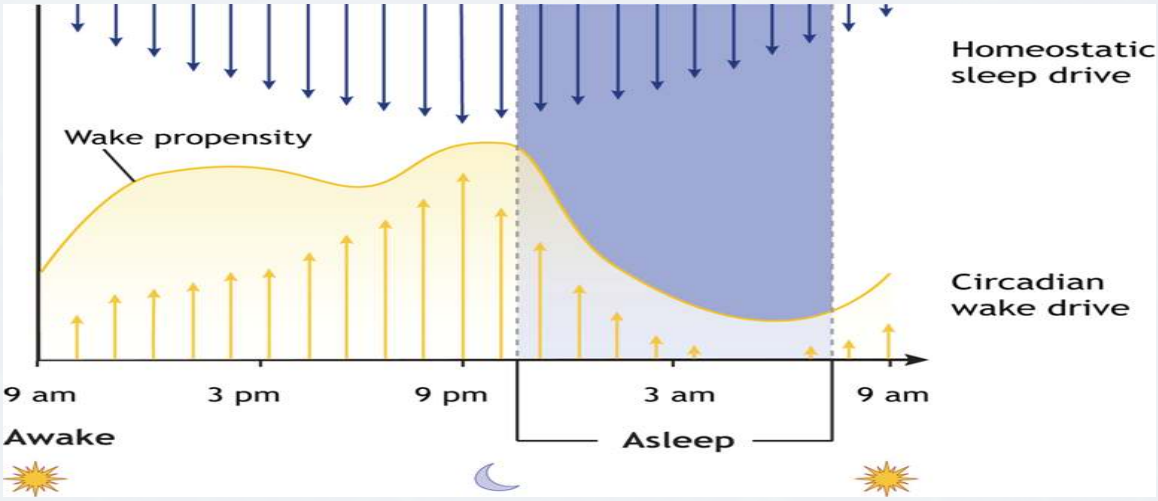
Sleep Drive and Alertness



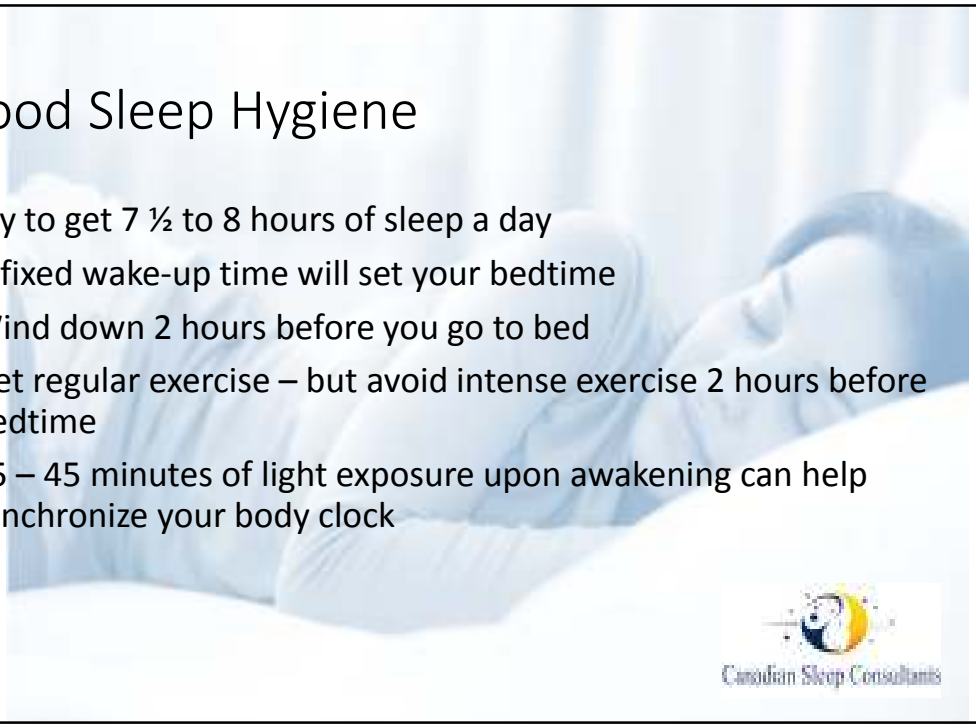
Stimulus control

- Do not go to bed until you are sleepy. Wait for the urge to fall asleep and do not respond to fatigue.
- Separate resting activities with sleeping activities
- Get out of bed after 20 minutes of perceived time if you haven't fallen asleep.

Sleep Consolidation

- Fix your wake-up time to your desired time. Do not fall into the trap of sleeping in. This will encourage desynchronized sleep that is of lesser quality.
- Set your "total time in bed" to no more than 30 minutes more than the amount of sleep you get per night. *We are removing wake time and not sleep.*
- Set your "earliest bedtime" by counting back from your desired wake-up time.
- Keep schedule for 7 days. You may move your bedtime back by 15-30 minutes every week if you are sleeping solidly.

Good Sleep Hygiene



- Try to get 7 ½ to 8 hours of sleep a day
- A fixed wake-up time will set your bedtime
- Wind down 2 hours before you go to bed
- Get regular exercise – but avoid intense exercise 2 hours before bedtime
- 25 – 45 minutes of light exposure upon awakening can help synchronize your body clock

Good Sleep Hygiene

- Stop smoking or avoid smoking 4 hours before bedtime
- Avoid caffeine 6 hours before bedtime
- Try not to snack or drink water 1 hour before bedtime

Why CBT for insomnia is effective?

- Sleep quality is more important than sleep amount for both energy and pain.
- Night time sleep is more restorative than daytime sleep. The goal should be more synchronized sleep.
- Insomnia generating behaviors encourage fragmented sleep.