

# Sleep & Pain: Quality not just Quantity

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# Typical Sleep Cycle



BP = Blood Pressure

# Sleep and Pain

	<b>"Normal"</b>	<b>Pain patients</b>
<b>Stage 2</b>	<b>45-55%</b>	<b>65-75%</b>
<b>REM</b>	<b>20-25%</b>	<b>10-15%</b>
<b>SWS</b>	<b>15-25%</b>	<b>&lt;5%</b>

**Often more fragmented sleep**

# Medications

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Benzodiazepines (ex. lorazepam, alprazolam, clonazepam)

Hypnotics (ex. zolpidem, eszopiclone, zaleplon)

OTC – Anti-histamines

All of the above alter sleep architecture

- Decrease REM
- Decrease Deep Sleep / Slow Wave Sleep
- Increase Alpha-Delta intrusions

Anti-depressants (e.g. trazadone)

Herbals

Melatonin

New class of sleep meds- based on orexin peptide...

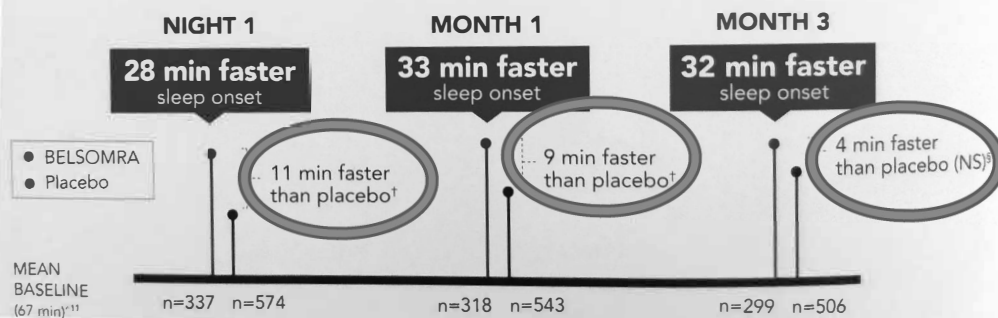
# Sleep meds-not that effective

Improvements in sleep onset  
(WASO) from baseline

Sleep onset (LPS) not significant at month 3.

BELSOMRA 15 mg or 20 mg vs placebo, as measured by polysomnography<sup>2</sup>

Change from baseline at:



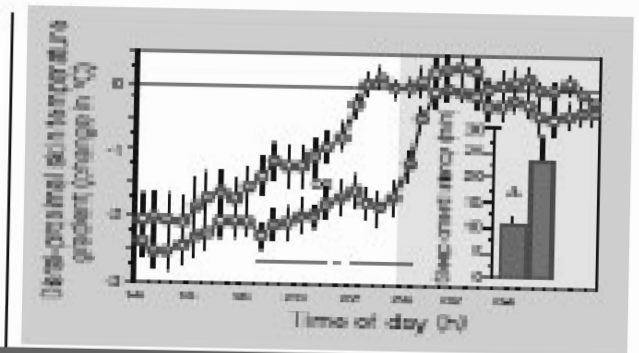
Physiology

Warm feet promote the rapid onset of sleep

Works as well as...socks

Kurt Kräuchi, Christian Cajochen,  
Esther Werth, Anna Wirz-Justice

NATURE | VOL 401 | 2 SEPTEMBER 1999 | www.nature.com





# Sleep!



Create a bedtime routine



# Occasional difficulty sleeping...

- 1) Get up for a set time (30 minutes-1 hour) and do something else, then try again
- 2) If nervousness related, prepare for tomorrow (pack lunches, write to-do list)
- 3) Don't exercise 30 min before bed, but mild stretching might help
- 4) Warm showers/baths
- 5) Progressive Muscle Relaxation/Meditation
- 6) Aroma therapy
- 7) Noise Machines
- 8) Consider alternative bedding/pillows



# More Advanced: CBT-I

1. Sleep psychoeducation
2. Absolute adherence to sleep hygiene
3. Sleep log
4. Sleep Scheduling (Time in Bed vs. Time Asleep)
5. Reduce sleep cognitive distortions
6. Turn clock toward wall
7. Daytime light therapy
8. Shift workers

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I wonder how long it takes for this  
normal sleep tendency to kick in?



# Resources

## CBT-I Manuals:

<https://aims.uw.edu/nyscc/training/sites/default/files/CBTi%20Manual.pdf>

<https://www.med.unc.edu/neurology/wp-content/uploads/sites/716/2018/05/jdedingrCBTManual.pdf>

[https://www.mirecc.va.gov/docs/visn6/Improve Your Sleep Self-Guided Approach for Veterans with Insomnia-March-2017.pdf](https://www.mirecc.va.gov/docs/visn6/Improve%20Your%20Sleep%20Self-Guided%20Approach%20for%20Veterans%20with%20Insomnia-March-2017.pdf) (self directed-but requires a free app)

## Previously shared resources:

- American Psychological Association: <https://www.apa.org/topics/pain>
- Wachholtz, A.B. *Clinical Health Psychology: Using Medical Information to Improve Treatment Outcomes*. Cognella Press. <https://titles.cognella.com/clinical-health-psychology-9781516537013>
- Chronic Pain Therapy Manual for veterans: [https://www.va.gov/painmanagement/docs/cbt-cp\\_therapist\\_manual.pdf](https://www.va.gov/painmanagement/docs/cbt-cp_therapist_manual.pdf)
- UK National Health Service Patient Workbook <https://www.nhs.uk/media/2872/20170913painmanwb.pdf>
- Benuto, L.T. *Toolkit for Counseling Spanish-Speaking Clients*, Chpt 8 – Chronic Pain <https://www.springer.com/gp/book/9783319648781>

