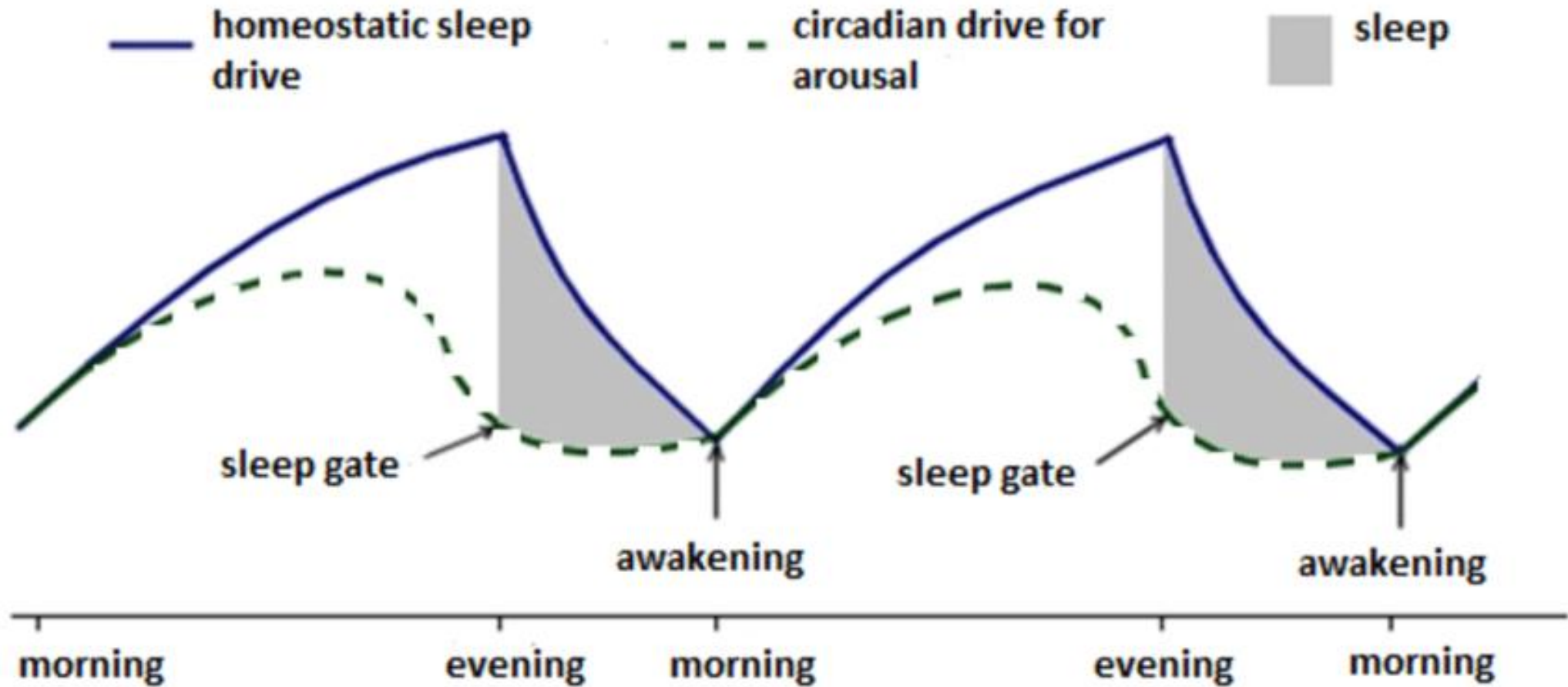


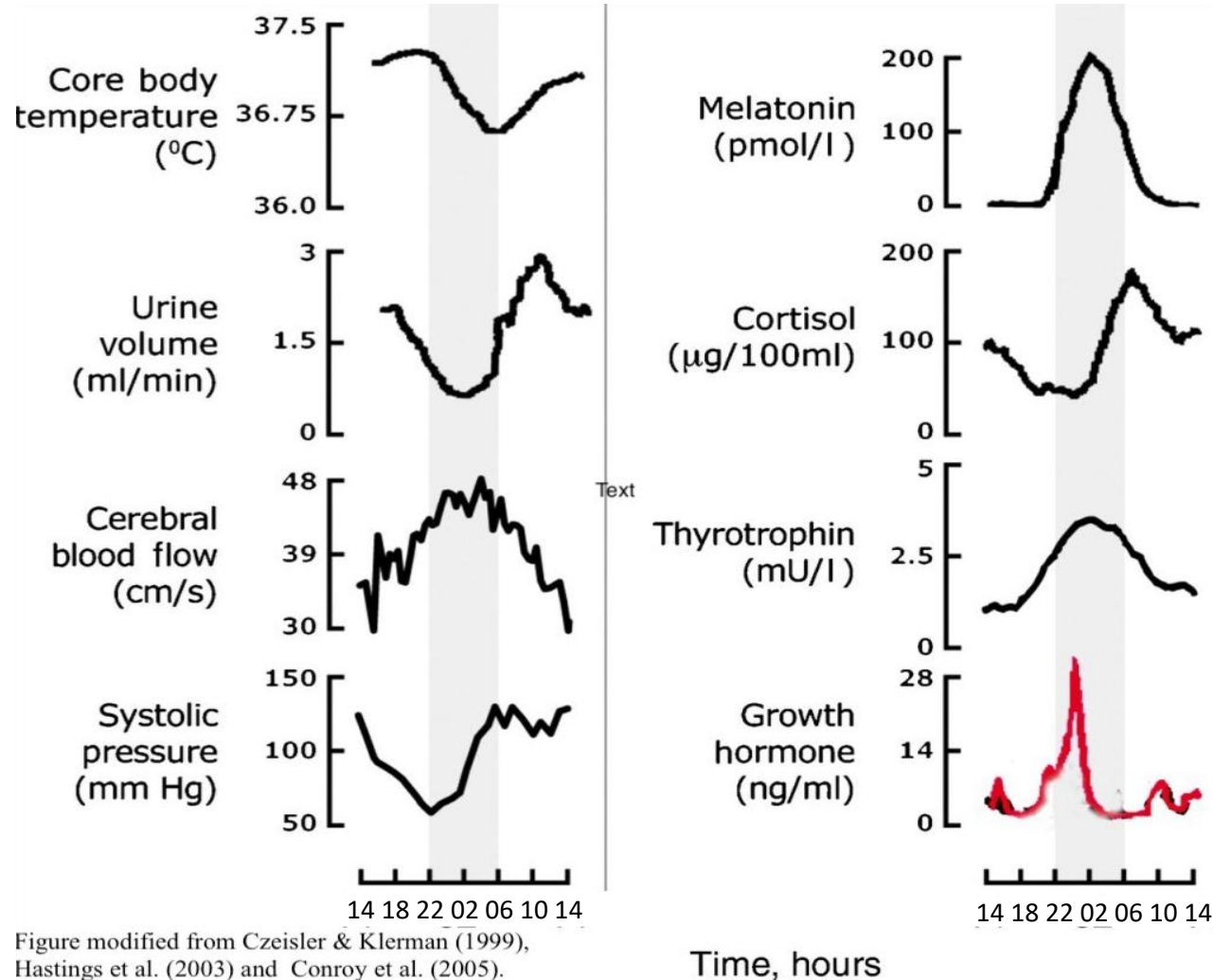
# Understanding Sleep and How It Can Go Wrong

**Dr Rania Ward** MPharm, PhD, PGDip, MSc  
**Principal Pharmacist for Sleep Medicine**  
rania.ward@nhs.net

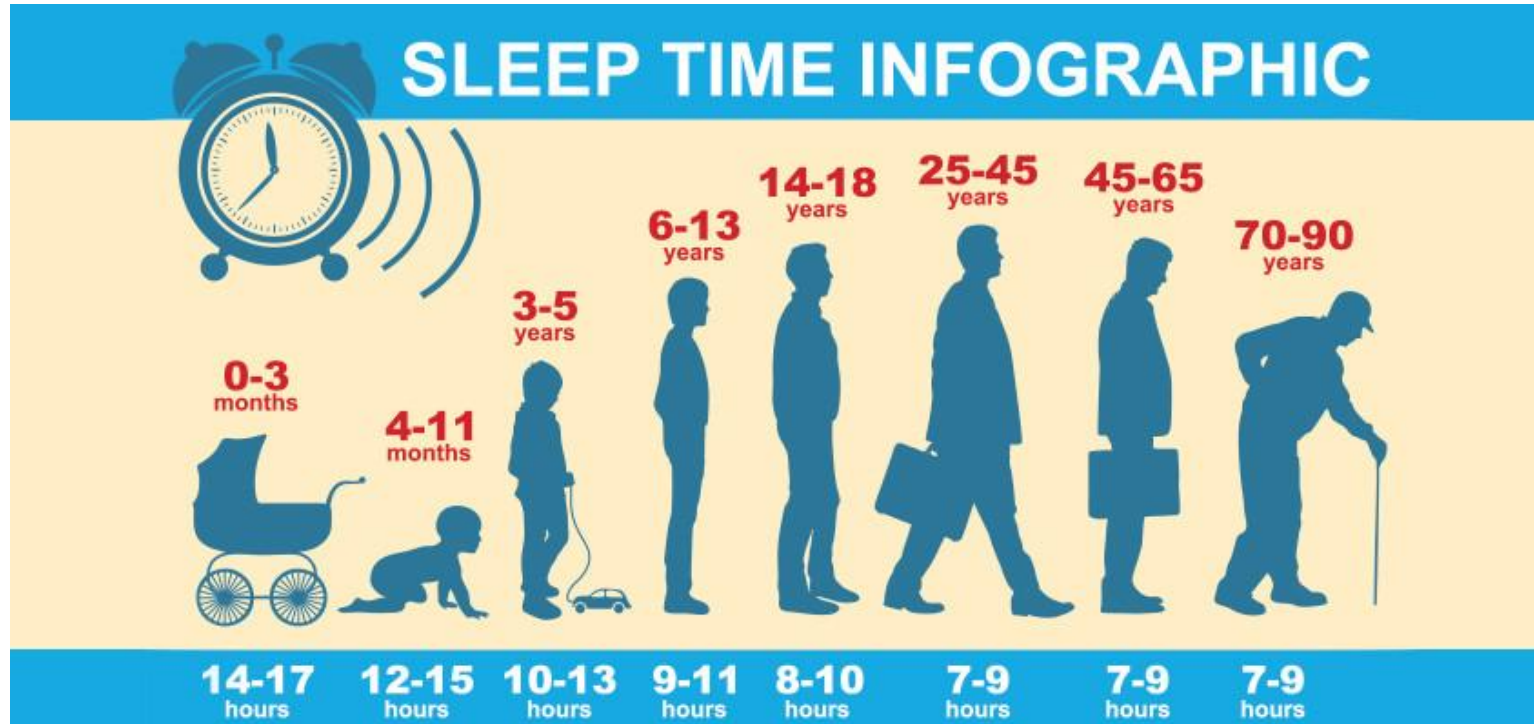
# Sleep is part of a 24-hour cycle of two processes



# What happens when we sleep?



# What is considered as “normal” sleep?



Global Average 7-9 hours

Quality and quantity are both important

Main message: obtain enough sleep to feel restored

1. The Sleep Foundation <https://www.sleepfoundation.org/how-sleep-works/how-much-sleep-do-we-really-need>

2. Watson NF, Badr MS, Belenky G, et al. Recommended amount of sleep for a healthy adult: a joint consensus statement of the American Academy of Sleep Medicine and Sleep Research Society. *Sleep*. 2015;38(6):843–844.

# Insomnia Classification

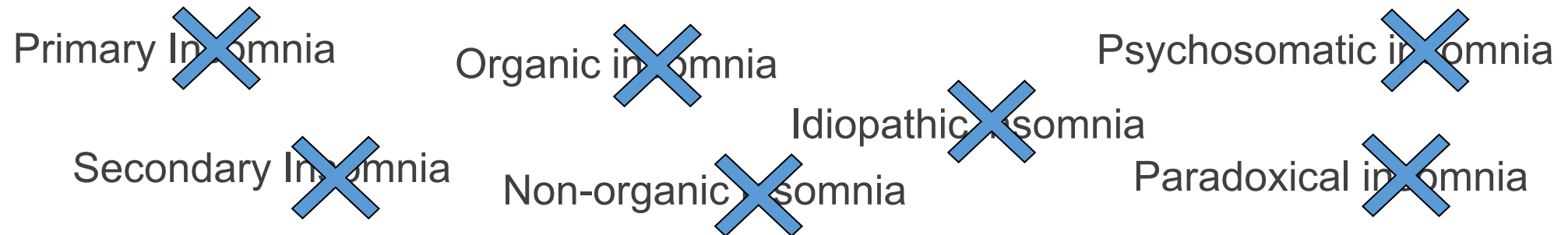
- 3 components reference the term insomnia

Persistent sleep difficulty

Adequate opportunity to sleep

Daytime dysfunction

- From the International Classification of Sleep Disorders (ICSD) 3<sup>rd</sup> Edition



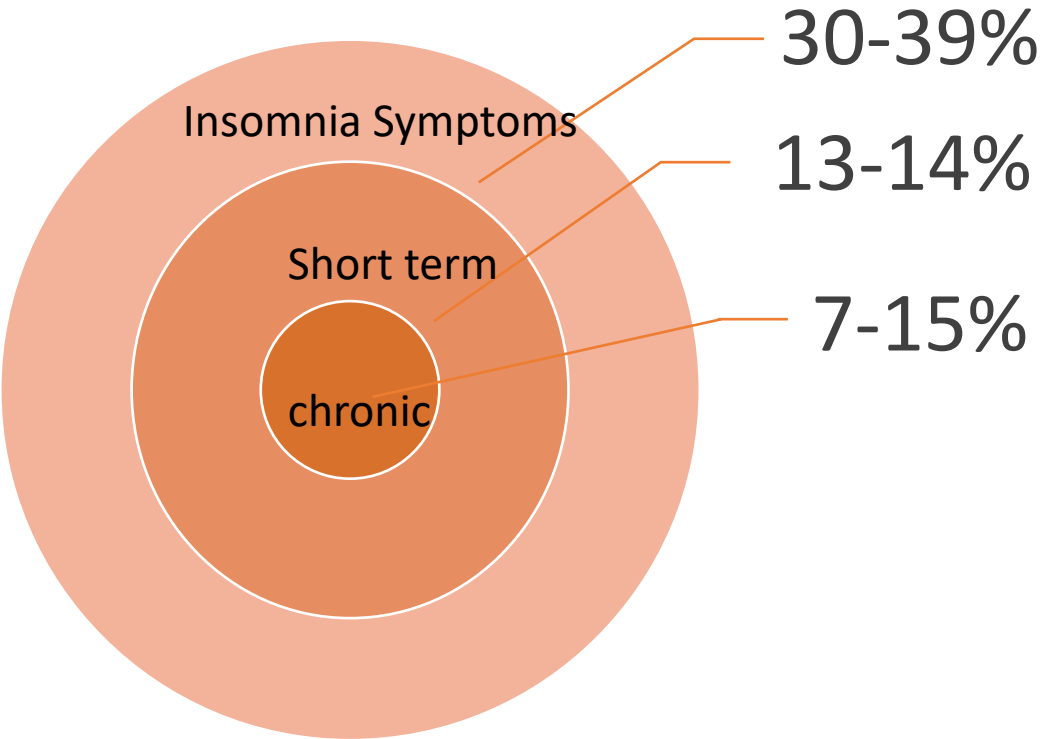
- **Short-term Insomnia Disorder**

< 3 months

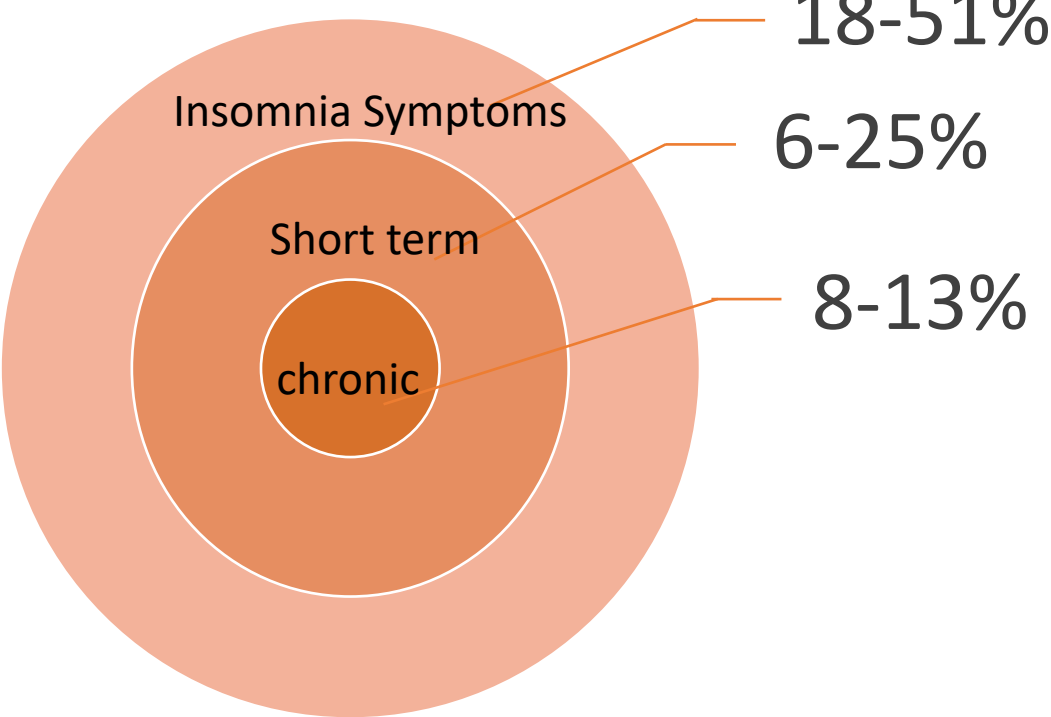
- **Chronic Insomnia Disorder**

> 3 months

# Insomnia prevalence in the UK



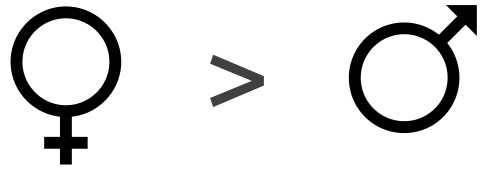
UK



Other Western Countries

Hafner M et al, RAND 2016. *Why sleep matters — the economic costs of insufficient sleep: A cross-country comparative analysis* | RAND. Available at: [https://www.rand.org/pubs/research\\_reports/RR1791.html](https://www.rand.org/pubs/research_reports/RR1791.html) Accessed 06 September 2023.

# Chronic Insomnia demographics



- Medical or psychiatric or substance disorders
- Lower socioeconomic status
- Occur at any age but more commonly diagnosed in older adults likely due to



Sleep  
continuity



# The 3-P model explains the clinical course of chronic insomnia<sup>1</sup>

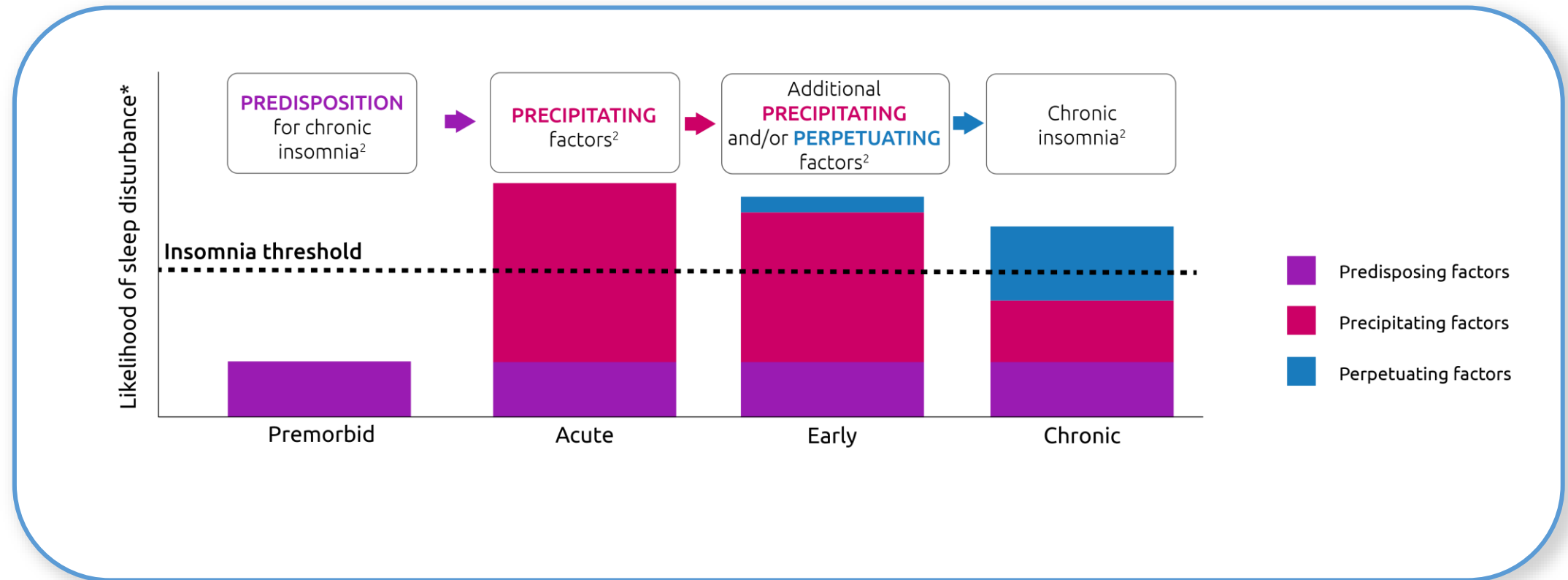


Diagram courtesy of Idorsia pharmaceuticals adapted from 1. Spielman AJ, et al. *Psychiatr Clin North Am.* 1987;10:541–553; 2. Drake CL, Roth T. *Sleep Med Clin.* 2006;1:333–349..

# Main take away message for treating insomnia

**Increase the sleep pressure**

&/OR

**Reduce the Wake Drive**

