

# Teaching NeuroImage: Non-24-Hour Sleep-Wake Rhythm Disorder

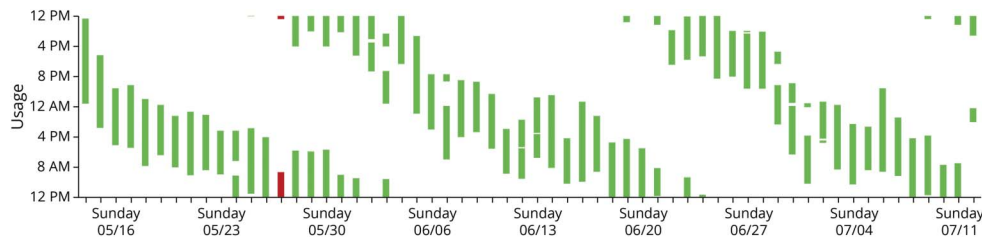
Alan R. Tesson, MD,\* Mir Mustafa Ali, MD,\* and Andrew R. Spector, MD

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## Correspondence

Dr. Tesson  
alan.tesson@duke.edu

**Figure** CPAP Adherence Report Demonstrating a Sleep Period That Begins Later Each Day



Each green bar represents 1 day of CPAP use with the top representing CPAP initiation, approximating sleep onset, and the bottom representing CPAP discontinuation, approximating end of sleep. The image produces a unique diagonal band appearance.

A 77-year-old woman with obstructive sleep apnea reported a lifelong difficulty with periods of severe nocturnal insomnia and daytime sleepiness. Wrist actigraphy, the diagnostic method of choice for circadian rhythm disorders, was not covered by insurance. A review of her CPAP data (Figure) demonstrated progressively later bedtimes with a period of greater than 24 hours, revealing the diagnosis of non-24-hour sleep-wake rhythm disorder. While common in unsighted individuals, non-24-hour sleep-wake rhythm disorder can occur in sighted people,<sup>1,2</sup> as was the case here. For patients on PAP therapy, adherence data can provide evidence of circadian rhythm disorders.

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## Disclosure

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\*These authors contributed equally to this work.

From the Department of Neurology (A.R.T., M.M.A., A.R.S.), Duke University, Durham, NC.

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## Appendix Authors

Name	Location	Contribution
<b>Alan R. Tesson, MD</b>	Department of Neurology, Duke University, Durham, NC	Drafting/revision of the manuscript for content, including medical writing for content, and analysis or interpretation of data
<b>Mir Mustafa Ali, MD</b>	Department of Neurology, Duke University, Durham, NC	Drafting/revision of the manuscript for content, including medical writing for content, and analysis or interpretation of data

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## Appendix (continued)

Name	Location	Contribution
<b>Andrew Robert Spector, MD</b>	Department of Neurology, Duke University, Durham, NC	Drafting/revision of the manuscript for content, including medical writing for content, and study concept or design

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## References

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