

HOSPITAL PHYSICIAN®

NEUROLOGY BOARD REVIEW MANUAL

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The *Hospital Physician Neurology Board Review Manual* is a peer-reviewed study guide for residents and practicing physicians preparing for board examinations in neurology. Each manual reviews a topic essential to the current practice of neurology.

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Sleep Medicine for the Neurologist

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Sleep Medicine for the Neurologist

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INTRODUCTION

Between 50 and 70 million Americans suffer from sleep disorders annually. These disorders account for an estimated \$16 billion in medical costs and over \$50 billion in indirect costs, including accidents, litigation, property destruction, hospitalization, and death.¹⁻³ Neurologists must have a good understanding of general sleep medicine since sleep disturbance and primary sleep disorders have been recognized as significant comorbid health concerns in stroke, epilepsy, neuromuscular disorders, movement disorders, neurodegenerative diseases, and headaches.⁴⁻¹² Patients who present with a sleep complaint can be divided into those with difficulty acquiring good quality sleep and those suffering from excessive daytime sleepiness (EDS). Common primary sleep disorders resulting in EDS include insufficient sleep, sleep-disordered breathing (SDB), circadian rhythm disturbance, narcolepsy, and idiopathic hypersomnolence. Common primary sleep disorders resulting in poor sleep quality include primary insomnia, restless legs syndrome (RLS), SDB, parasomnias, circadian rhythm disturbance, and periodic limb movement disorder (PLMD). Regardless of the sleep disorder, a thorough sleep history is pivotal to making the proper diagnosis and developing the most appropriate treatment plan for the individual (**Table 1**).

This manual reviews the diagnostic and therapeutic considerations surrounding sleep disorders in the context of 2 sleep disorder cases neurologists are likely to encounter in practice.

CASE 1: A 53-YEAR-OLD WOMAN WITH DAYTIME SLEEPINESS

INITIAL PRESENTATION AND EVALUATION

 A 53-year-old woman with a history of heavy snoring and EDS that has progressed over the last few years is referred by her primary care provider for a consultation with a general neurologist. She reports going to bed between 1 and 3 AM and is usually able

to fall asleep in less than 5 minutes. She reports 2 to 3 awakenings during the night for reasons that are unclear to her. She awakens at 6 AM with the use of an alarm clock. She reports obtaining 4 to 6 hours of sleep overall per night and always feels unrefreshed upon awakening. She takes scheduled naps throughout the day that are usually several minutes in length, after which she usually feels refreshed upon awakening. She has been snoring for at least 4 years per report from her significant other. Her score on the Epworth Sleepiness Scale is 21 out of a maximum of 24 (normal ≤ 10), which is suggestive of pathological sleepiness (**Table 2**).¹³ She reports episodes of sleep paralysis that have increased in frequency over the last month. Moreover, she reports episodes of her tongue becoming weak and feeling as though she loses muscle tone when laughing. These events have been occurring since her early teens but have progressively worsened over time. However, these episodes are not associated with loss of consciousness, rhythmic movements, or bowel or bladder incontinence. On occasion, she sees “shadows” in her bedroom as she is falling asleep. Her past medical history is significant for depression only. She is postmenopausal. She denies any childhood sleep disorders. She currently works as a computer analyst 5 days a week (4 PM to 12 AM). She consumes at least 3 cups of caffeine-containing drinks throughout the day. She reports having a great deal of stress related to her work and home life. To help her relax at bedtime, she watches TV or works on the computer. She is a smoker and has 3 to 4 alcoholic drinks per month. Her family medical history is remarkable only for her father who snores.

On review of systems, the patient reports difficulty with irritability, memory, and concentration as well as chronic musculoskeletal pains. She reports a weight gain of approximately 10 lb over the past year (body mass index [BMI] > 25 kg/m²). Her current medication list includes venlafaxine hydrochloride only. Her examination is remarkable for micrognathia and mild retrognathia. The oropharynx is crowded and shallow and her neck is short and thick. Examination of the extremities shows no signs of clubbing or cyanosis, although trace pitting edema bilaterally to the mid calves is noted.

- What are potential causes for this patient’s EDS?