

# HOSPITAL PHYSICIAN®

## NEUROLOGY BOARD REVIEW MANUAL

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## Epilepsy: Case Studies

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**Cover Illustration by Jean Gardner**

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## Epilepsy: Case Studies

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### I. INTRODUCTION

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Epilepsy, typically defined as a syndrome of recurrent, unprovoked seizures, is a disruption of normal human activities, thoughts, perceptions, and emotions caused by a malfunction in the electrical activities of the brain. Human functions are regulated by orderly electrical discharges in the nerve cells in the brain. When these discharges are disrupted, they become chaotic and unregulated, and seizures can then occur. Most seizures affect consciousness or awareness. Clinical features may be as severe as a convulsion or as mild as a single jerk or stare. However, the spectrum of clinical features varies widely from patient to patient.

It is estimated that 1% of the population up to 24 years of age will develop more than 1 unprovoked seizure and will be diagnosed with epilepsy. The incidence increases to 3% up to 74 years of age and 4.4% up to 85 years.<sup>1</sup> When a diagnosis of epilepsy is made, it is important to determine what types of seizure(s) the patient has had and whether a treatable cause can be identified. Identifiable causes may include those of vascular, congenital, traumatic, neoplastic, degenerative, or infectious origin. Heredity may also be a key factor. Approximately 66% of all patients have no identifiable cause for their seizures. At the time of referral, it must be decided whether therapy should be started.

Treatment may be initiated by a neurologist or a primary care physician. A primary care physician may treat a patient initially. If success is obtained with the first drug initiated, the patient may not need referral to a neurologist. In many cases, however, if problems arise

with side effects or efficacy of the first drug, the patient is then referred to a neurologist. As more treatment options become available and patients become more educated about their condition, referral to a specialist may occur earlier.

This review discusses the types of seizures, classifications of epilepsy syndromes, risk of recurrence, women's issues, and the most current treatments. Two case studies are presented to highlight special problems and appropriate treatment for patients with epilepsy.

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### II. CASE PATIENT 1

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#### PRESENTATION

Patient 1 is a 27-year-old woman who comes to your office after being seen in the emergency department because of her first tonic-clonic seizure. A careful history reveals that for the past 2 years she has been experiencing frequent brief episodes of déjà vu, typically lasting 10 to 15 seconds. She recalls having this same sensation before the tonic-clonic seizure. She recalls several episodes in the past several months of finding herself in unfamiliar surroundings and wondering how she had gotten there. She notes that most of her déjà vu episodes tend to cluster around her menses and that she was just beginning her most recent menstrual cycle when the tonic-clonic seizure occurred. She denies substance abuse and says she has not had any alcohol in the past 4 months. The only medication she is taking is oral contraceptive therapy. She was started on phenytoin in the emergency department and is now referred to you for continued care.