# Benign Focal Epilepsies in Children

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EPILEPSY BOARD REVIEW MANUAL

Contributors:

Natanya M. Mishal, MD
Clinical Neurology Fellow, Department of Neurosciences, University of California San Diego/Rady Children's Hospital, San Diego CA

Sonya G. Wang, MD
Assistant Professor, Department of Neurosciences, University of California San Diego/Rady Children's Hospital, San Diego CA

Statement of Editorial Purpose

The Epilepsy Board Review Manual is a study guide for trainees and practicing physicians preparing for board examinations in epilepsy. Each manual reviews a topic essential to the current management of patients with epilepsy.

Note from the Publisher

This publication has been developed without involvement of or review by the American Board of Psychiatry and Neurology.

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Natanya M. Mishal, MD, and Sonya G. Wang, MD

INTRODUCTION

Epilepsy has classically been defined as 2 or more unprovoked seizures occurring more than 24 hours apart. In 2013, the International League Against Epilepsy (ILAE) expanded the definition to also include those with a diagnosis of an epilepsy syndrome and patients with 1 unprovoked (or reflex) seizure and a probability of further seizures similar to the general recurrence risk (at least 60%) after 2 unprovoked seizures, occurring over the next 10 years.¹

The ILAE 2010 revised classification system divides seizures into 3 groups based on clinical and electroencephalography (EEG) data: generalized, focal, and unknown (which includes epileptic spasms).² Generalized seizures rapidly engage bilaterally distributed networks, whereas focal seizures originate in discretely localized or more widely distributed subcortical or neocortical structures limited to 1 hemisphere.

Previously defined as “simple” or “complex,” focal-onset seizures can either occur with preserved or impaired consciousness. Focal seizures are further categorized on the basis of clinical manifestations, including focal motor activity and motor automatisms, sensory symptoms, autonomic changes, and higher cortical or psychic symptoms such as “deja-vu” or affective changes. Generalized seizures involve impaired consciousness and may be convulsive, with bilateral motor manifestations, or nonconvulsive, as in the case of absence seizures (Table 1).²

An epilepsy syndrome is characterized by a complex of clinical features, signs, and symptoms including, for example, age of onset, seizure semiology, EEG findings, and outcome.³ Symptomatic-focal or localization-related epilepsy, now replaced with the terms structural/metabolic in the revised classification system, refers to epilepsy resulting from brain injury (eg, due to trauma, stroke, or infection), immune-mediated causes, or structural disease (such as cortical dysplasias, neoplasms, or vascular malformations).² In contrast, benign or idiopathic focal epilepsies are a group of electroclinical syndromes that occur in otherwise healthy and developmentally normal children and are characterized by focal onset seizures in the absence of underlying structural brain abnormalities. The term benign implies that the seizures are easily treated (or require no treatment at all), that there is spontaneous remission prior to adulthood, and that there is a lack of neurologic sequelae in the majority of patients.⁴ This last point is not always entirely true, as some children have mild neuropsychological impairment even with classic syndrome findings, as will be discussed below.

This group of benign focal epilepsies includes benign childhood epilepsy with centrotemporal spikes, Panayiotopoulos syndrome, Gastaut-type idiopathic childhood occipital epilepsy, and photosensitive occipital lobe epilepsy. There are several less well-defined and rarer syndromes, including childhood epilepsy with affective symptoms, benign childhood epilepsy with parietal spikes and frequent giant somatosensory-evoked poten-