

Antiseizure Drug Selection for Generalized Seizures

Lamotrigine, valproic acid, and levetiracetam are currently considered the best initial choice for the treatment of primary generalized, tonic-clonic seizures. Topiramate, zonisamide, perampanel, phenytoin, carbamazepine, and oxcarbazepine are suitable alternatives, although carbamazepine, oxcarbazepine, and phenytoin can worsen certain types of generalized seizures. Valproic acid is particularly effective in absence, myoclonic, and atonic seizures. It is therefore commonly used in patients with generalized epilepsy syndromes having mixed seizure types. However, levetiracetam, rather than valproic acid, is increasingly considered the initial drug of choice for women with epilepsies having mixed seizure types given the adverse effects of valproic acid for women of childbearing age. Lamotrigine is also an alternative to valproate, especially for absence epilepsies. Ethosuximide is a particularly effective drug for the treatment of uncomplicated absence seizures, but it is not useful for tonic-clonic or focal seizures. Periodic monitoring of blood cell counts is required since ethosuximide rarely causes bone marrow suppression.

INITIATION AND MONITORING OF THERAPY

Because the response to any antiseizure drug is unpredictable, patients should be carefully educated about the approach to therapy. The goal is to prevent seizures and minimize the side effects of treatment; determination of the optimal medication and the optimal dose typically involves trial and error. This process may take months or longer if the baseline seizure frequency is low. Most antiseizure drugs need to be introduced relatively slowly to minimize side effects. Patients should expect that minor side effects such as mild sedation, slight changes in cognition, or imbalance will typically resolve within a few days. Starting doses are usually the lowest value listed under the dosage column in [Table 425-9](#). Subsequent increases should be made only after achieving a steady state with the previous dose (i.e., after an interval of five or more half-lives).