

## Anticonvulsants

Drug/Use	Action	Side Effects	Interactions	Nursing Implications
<p>Phenytoin (DILANTIN)</p> <p><b>DOC: tonic clonic seizures</b></p> <p>Not for absence seizures</p>	<ul style="list-style-type: none"> <li>-Decr. excitability by suppressing Na influx</li> <li>-Decr. focal activity in CNS</li> <li>-Decr. spread of seizure process</li> <li>-Decr. abnormal hyperactivity</li> </ul>	<ul style="list-style-type: none"> <li>-gingival hyperplasia</li> <li>-acne, hirsutism</li> <li>-GI problems</li> <li>-hypersensitivity</li> <li>-Vit K, folic acid deficiencies</li> <li>-agranulocytosis</li> <li>-dysrhythmias &amp; hypotension</li> <li>-teratogenic</li> <li>-nystagamus</li> </ul>	<ul style="list-style-type: none"> <li>-highly protein-bound</li> <li>-saturable hepatic metabolism</li> <li>-induces its own metabolism (autoinducible)</li> <li>-decr. by carbamazepine</li> </ul>	<ul style="list-style-type: none"> <li>-monitor levels; 10-20 ug/ml normal</li> <li>-feeding tube- off 1hr before dose, on 30 min after dose</li> <li>-good oral hygiene</li> <li>-dose w/ meals; incr vit D foods</li> <li>-can cause folic acid deficiency—fatigue, weakness, fainting HA</li> <li>-caution diabetics about monitoring blood sugar</li> <li>-urine may turn brownish or pink</li> <li>-don't change brands of drug</li> <li>-check labs—CBC, liver &amp; kidney function, albumin</li> <li>-slow IV push-irritating; <b>saline only</b></li> </ul>
<p>Barbiturates, Phenobarbital</p> <p>-All seizures except absence</p>	<ul style="list-style-type: none"> <li>-enhances GABA activity by acting like GABA;</li> <li>-incr. seizure threshold</li> </ul>	<ul style="list-style-type: none"> <li>-sedation, drowsiness agitation, confusion (child and elderly)</li> <li>-physical dependence; toxicity</li> </ul>	<ul style="list-style-type: none"> <li>-enzyme inducer</li> </ul>	<ul style="list-style-type: none"> <li>-safety, tolerance may develop</li> <li>-gradual withdrawal</li> </ul>
<p>Carpamazepine (TEGRETOL)</p> <p>-Not for absence seizures</p> <p>-trigeminal neuralgia</p> <p>-bipolar disorders</p> <p>-tonic clonic seizures</p>	<ul style="list-style-type: none"> <li>-decr. excitability by suppressing Na influx</li> <li>-works at synapses-decr. Na currents</li> <li>-prevents spread of seizures</li> </ul>	<ul style="list-style-type: none"> <li>-vertigo, dizziness</li> <li>-drowsiness, N/V</li> <li>-aplastic anemia—immunosuppressed</li> </ul>	<ul style="list-style-type: none"> <li>-forms an active metabolite</li> <li>-autoinducible</li> <li>-decr. effects w/: phenytoin</li> <li>ethosuximide, barbiturates</li> <li>valproate</li> <li>-potential toxicity w/: cimetidine (TAGAMET), INH, lithium, erythromycin, verapamil</li> </ul>	<ul style="list-style-type: none"> <li>-monitor blood studies: 8-12 ug/ml (therapeutic), CBC, hepatic/renal—every 3-6 mos.</li> <li>-caution about photosensitivity (Stevens-Johnsons syndrome)</li> <li>-decr. birth control effectiveness</li> <li>-can incr. blood sugar levels -diabetic teaching</li> </ul>
<p>Ethosuximide (ZARONTIN)</p> <p><b>DOC: absence seizures</b></p> <p>-used in combo therapy</p>	<ul style="list-style-type: none"> <li>-suppresses electrical activity assoc. w/ simple absence seizures</li> <li>-decr. Ca channel currents</li> </ul>	<ul style="list-style-type: none"> <li>-GI problems—epigastric pain &amp; hiccups</li> </ul>	<ul style="list-style-type: none"> <li>-no protein binding</li> <li>-no effects of P450</li> <li>-incr effects by phenytoin</li> <li>-incr effects by valproic acid</li> <li>-decr effects by carbamazepine</li> </ul>	<ul style="list-style-type: none"> <li>-avoid alcohol &amp; CNS depressants</li> <li>-monitor blood; CBC, hepatic &amp; renal</li> <li>-may take w/ food</li> <li>-monitor weight-weekly basis</li> </ul>
<p>Valproic acid (DEPAKENE, DEPAKOTE)</p> <p>-migraine HA, manic depression</p> <p>-simple &amp; complex absence</p> <p>-tonic clonic seizures</p>	<ul style="list-style-type: none"> <li>-enhances GABA activity by incr. bioavailability of GABA</li> <li>- exact mechanism unknown</li> </ul>	<ul style="list-style-type: none"> <li>-GI-N/V, diarrhea; will decr. after time—enteric coating helps</li> <li>-tremors</li> <li>-wt gain; irregular menses</li> <li>-hepatotoxicity</li> <li>-decr. platelets</li> </ul>	<ul style="list-style-type: none"> <li>-highly protein bound</li> <li>-enzyme inhibitor</li> <li>-pregnancy Category D</li> </ul>	<ul style="list-style-type: none"> <li>-monitor of toxicity-RUQ pain, persistent N/V</li> <li>-monitor serum levels</li> <li>-blood level &amp; toxicity -don't correlate</li> <li>-<b>Don't</b> chew tablets or dilute elixir</li> <li>-may take w/ food; monitor weight</li> <li>-avoid alcohol &amp; CNS depressants</li> </ul>
<p>Benzodizaepines (ATIVAN, VALIUM)</p> <p><b>DOC: status epilepticus</b></p>	<ul style="list-style-type: none"> <li>-enhances GABA activity</li> <li>-inhibits nerve impulses</li> </ul>	<ul style="list-style-type: none"> <li>-CNS: drowsiness, fatigue</li> <li>lethargy</li> </ul>	<ul style="list-style-type: none"> <li>-VALIUM has long half-life</li> </ul>	<ul style="list-style-type: none"> <li>-monitor VS, ventilatory support</li> <li>-monitor labs</li> <li>-ATIVAN, slow IV push</li> </ul>

