



Clinician Summary
Anti-epileptics for Conditions
Other than Epilepsy
June 2011

Based On DERP report of Oct 2008

Produced by:
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We have chosen to use the term valproate below as both valproic acid & sodium valproate are converted into the valproate ion in the GI tract and that is the molecular entity that is absorbed.

Conclusions:

Bipolar Disorder *Acute Mania*

Good evidence: valproate, carbamazepine, and lithium are comparable for acute manic/mixed episodes

No benefit: phenytoin, gabapentin, lamotrigine, oxcarbazepine, or topiramate for stabilization of acute manic/mixed episodes.

Bipolar Disorder *Maintenance*

Fair evidence: Lamotrigine, carbamazepine, and valproate are comparable to lithium for maintenance treatment of patients whose most recent episode was manic/mixed.

No benefit: gabapentin, oxcarbazepine, and phenytoin for maintenance therapy of manic/mixed bipolar disorder.

Bipolar Disorder

Rapid Cycling

Fair evidence: Valproate was comparable to lithium in relapse prevention

No benefit: Lamotrigine for relapse of rapid cycling bipolar disorder

Bipolar Depression

Fair Evidence: lamotrigine monotherapy effective over 7 to 10 weeks.

Fair evidence: lamotrigine and lithium were similar in time to intervention for any mood episode.

No benefit valproate for relapse prevention of depressive symptoms.

No benefit valproate or topiramate for acute bipolar depression.

Fibromyalgia, pain reduction

Fair evidence: Pregabalin and gabapentin have similar modest effectiveness; duration of effect is unknown

Migraine Prophylaxis

Good evidence: Topiramate and valproate are comparable and may be effective

Fair evidence: efficacy of carbamazepine and gabapentin

No benefit: lamotrigine and oxcarbazepine.

Chronic Pain

Fair evidence: topiramate and gabapentin for short term treatment

Harms

Fair evidence:

Increased risk of suicidal ideation with lamotrigine, topiramate, valproate, & carbamazepine.

Increased risk of Stevens-Johnson syndrome with valproate, phenytoin, and carbamazepine at ≤ 8 weeks.

Increased risk of birth defects: valproate, carbamazepine, lamotrigine, oxcarbazepine, phenytoin, and lamotrigine.

Common side effects: tremor, rash, diarrhea, nausea, headache, weight change and somnolence.

Black Box Warnings

Carbamazepine: Toxic Epidermal Necrolysis, Stevens-Johnson Syn, Agranulocytosis, Aplastic Anemia

Divalproex: hepatotoxicity (potentially fatal), teratogenicity, pancreatitis (life threatening)

Lamotrigine: serious rashes (life threatening), Stevens-Johnson syndrome

Valproic acid: hepatotoxicity (potentially fatal), teratogenicity, pancreatitis (life threatening)

Subgroups

Insufficient evidence: to determine any comparative differences for subgroups for any of the studied medications or indications.

Table 1. FDA-approved non-epilepsy indications for antiepileptic drugs

Generic name	Trade name(s)	Bipolar disorder	Fibromyalgia	Chronic pain	Migraine Prophylaxis
Carbamazepine	Tegretol [®] , Carbatrol ^{®b} , Equetro [®] ,	acute only			
Divalproex sodium ^a	Depakote ^{®b} , Epival ^{®c}	acute only			yes
Ethotoin ^b	Peganone [®]				
Gabapentin	Neurontin [®]				
Lamotrigine	Lamictal [®]	maintenance only			
Levetiracetam	Keppra [®]				
Oxcarbazepine	Trileptal [®]				
Phenytoin	Dilantin [®]				
Pregabalin	Lyrica [®]		yes		
Tiagabine ^p	Gabitril [®]				
Topiramate	Topamax [®]				yes
Valproic acid ^a	Depakene [®] , Depacon ^{®b} ,	acute only			yes
Zonisamide ^b	Zonegran [®]				

^a Also known as valproate.

^b Not available in Canada.

^c Canadian trade name.

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