

Treatment Guidelines for Mood Stabilizers in Children and Adolescents

--Medications are off-label for the treatment of bipolar disorder in children and adolescents. As research in this population is limited, recommendations are based, in part, on medications for children with seizure disorders and adults with bipolar disorder.

Generic Name*	Trade Name (Preparations Available, mg)	Starting Dose (mg/day, bid or tid)	Titration	Target dose (mg/day, bid or tid)	Therapeutic Serum Level	Adverse Events	Lab Tests**	Levels of Evidence***	FDA Approval
Lithium (Li)	Li carbonate (150, 300, 600); Li citrate elixir (8 mEq [300 mg]/5 mL) Sustained release forms: Lithobid (300); Eskalith (450)	<25 kg: 300 25-40 kg: 600 >40 kg: 900	↑ 300 mg/d Q 3-5 days	Based on serum level 0.6-1.2 mEq/L & response: <25 kg: 600 25-40kg: 750-900 >40 kg: 1200 (Therapeutic index is narrow)		<i>Common:</i> ataxia, fatigue, tremor, acne, hair loss, hypothyroidism, polydipsia, nausea, diarrhea, weight gain, polyuria <i>Rare:</i> hypothyroidism, hepatic toxicity	CBC, BUN, creatinine, UA (BL & Q 6 months), TFTs (BL & Q 6 months), EKG, serum Li level 12 hrs. after dose (Q 1-2 wks until stable, then Q 1-2 months)	A, B	BD: >12 y.o.
Valproic Acid (Divalproex Sodium)	Depakene (125, 250, 500); Depakote (125, 250, 500)	<25 kg: 250 25-40 kg: 375 >40 kg: 500	↑ 10 mg/kg/d Q 3 days	Based on serum level 50-120 mg/L & response: <25 kg: 500 25-40 kg: 750 >40 kg: >1000		<i>Common:</i> sedation, hair loss, nausea, vomiting, weight gain, muscle weakness <i>Rare:</i> hepatic toxicity, pancreatitis, polycystic ovary, thrombocytopenia	CBC & LFTs (BL, months 1 & 2, then Q 4-6 months), serum levels (5 days to reach steady state) 8-12 hrs. after dose	B, C	BD: Adults (acute) SZ: >10 y.o.
Carbamazepine	Tegretol (100, 200); Tegretol XR (100, 200, 400)	<25 kg: 100 25-40 kg: 200 >40 kg: 400	↑ 100 mg Q 5 days	Based on serum level 8-11 mg/L & response: <25 kg: 400 25-40 kg: 800 >40 kg: 1200		<i>Common:</i> CYP inducer (↓ levels of certain psych meds), dizziness, drowsiness, rash, headache, diplopia, nausea, leukopenia <i>Rare:</i> hepatic toxicity (esp. <10 y.o.), bone marrow suppression, agranulocytosis	CBC, LFTs, blood levels (Q wk. to adjust dosage, then Q 3-6 months), eye exams, UA, BUN	B, C	SZ: children/adults
Lamotrigine	Lamictal (25, 100, 200)	12.5 qd >40 kg: 25	↑ 25 mg Q 7-15 days	Based on response: 75-400	N/A	<i>Common:</i> ataxia, dizziness, somnolence, headache, diplopia, nausea, vomiting <i>Rare:</i> Stevens-Johnson syndrome (potentially life-threatening rash)	CBC, LFTs, monitor plasma levels during dose adjustments	C	BD: adults (maintenance) SZ: children / adults (adjunctive)
Topiramate	Topamax (25, 100)	>40 kg: 12.5-25	↑ 25 mg Q 3-7 days	50-400	N/A	<i>Common:</i> CYP inducer (↓ levels of certain psych meds), cognitive diffs (dulling, word retrieval, attention), sedation, dizziness, emotional lability, weight loss	Serum bicarbonate levels	C, F	SZ: >2 y.o. (adjunctive); >10 y.o.
Oxcarbazepine	Trileptal (150, 300, 600)	8-10 mg/kg/d 20-29 kg: 160-300 30-39 kg: 300-400 >40 kg: 400+	↑ 5 mg/kg/d Q 3 days	20-29 kg: 600-1200 30-39 kg: 900-1500 >39 kg: 900-2100	N/A	<i>Common:</i> ataxia, dizziness, fatigue, somnolence, tremor, diplopia, nausea, vomiting, dyspepsia	Monitor for hyponatremia, serum sodium levels	D, E	SZ: >2 y.o. (adjunctive); >4 y.o.
Gabapentin	Neurontin (100, 300, 400)	>12 y.o.: 300 3-12 y.o.: 5-10 mg/kg/d	↑ up to 300 mg/d Q 3-5 days	Based on response: >12 y.o.: 900-1800 3-12 y.o.: 25-35 mg/kg/d	N/A	<i>Common:</i> ataxia, sedation, somnolence, asthenia, behavioral disinhibition at high doses	Creatinine clearance (for those with renal problems)	F	SZ: >3 y.o. (adjunctive)

BD=bipolar disorder; BL=baseline; BUN=blood urea nitrogen; CBC=complete blood cell count; EKG=electrocardiogram; LFT=liver function test; SZ=seizure disorders; TFT=thyroid function test

*Medications ordered by strength of evidence supporting their use in children and adolescents with bipolar disorder. **If not otherwise specified, lab tests should be performed at baseline and periodically thereafter. ***A=efficacy in child/adolescent placebo-controlled, randomized clinical trials; B=efficacy in adult randomized clinical trials; C=positive results in open child/adolescent trials and retrospective analysis; D=child/adolescent case reports; E=no different than placebo in child/adolescent studies; F=not helpful in controlled adult studies

Adapted from: Kowatch & DelBello MP (2006); Kowatch et al. (2005); Martin et al. (2003); McClellan et al. (2007); PDR (2007).