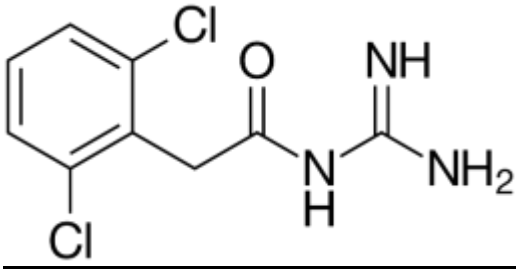
Guanfacine



Brands:
- Tenex
- Intuniv (Extended Release)

Mechanism of Action
- Centrally acting alpha 2A agonist.

FDA-Approved uses:
- Attention Deficit Hyperactivity Disorder (Intuniv, ages 6 to 17, adjunct and monotherapy)
- Has central actions on postsynaptic alpha 2A receptors in the prefrontal cortex
- The prefrontal cortex is thought to be responsible for modulation of attention, impulse control, and planning.
- Reduces sympathetic outflow from the CNS

Off-Label Uses in Pediatric Use:
- Post-Traumatic Stress Disorder, Insomnia, Oppositional Defiant Disorder, Pervasive Developmental Disorder, Motor Tics
- Hypertension

Dosing and Formulation:
- Extended Release:
  - 1-4 mg/day (ages 6-12)
  - 1-7 mg/day (ages 13-17, off-label/exceeds FDA-approved maximum)
- Immediate Release:
  - 1-2 mg/day (often dosed at bedtime to minimize daytime somnolence)

How Long it Takes to Work
- For ADHD, can take a few weeks to see maximum therapeutic benefits
- Effects are fairly consistent over a 24-hour period
- Blood pressure may be lowered within 60 minutes of administration; greatest reduction seen after 2-4 hours.
- Mild sedation effects more prominent 1-2 hours after administration

Metabolism/Elimination

- Metabolized by CYP450 3A4
- Half Life
    - Immediate Release: 17 hours
    - Extended Release: 18 hours

Side effects

- Sedation, dizziness
- Abdominal pain, nausea
- Fatigue, weakness
- Hypotension (dose-related)
- Dry mouth, constipation

Life-Threatening Side Effects

- Sinus bradycardia

Monitoring

- Blood pressure and pulse (baseline, following dose increases, and periodically during treatment)

Special Considerations:

- For children and adolescents with comorbid ADHD and Tourette syndrome, whose tics worsen with stimulant treatment, guanfacine may improve both the ADHD symptoms and tics.
- Can be particularly helpful in targeting aggressive, impulsive, and oppositional behaviors associated with ADHD
- Can help improve "rebound" irritability and hyperactivity when stimulants are wearing off
- May have less sedation and hypotension than clonidine
- The extended-release formulation is often more tolerable than the immediate release formulations, due to less sedation at medication peak.

References:

http://www.neiglobal.com/Members/NEIPrescribeWeb/tabid/448/Default.aspx

http://online.lexi.com.proxy.lib.mcw.edu/lco/action/doc/retrieve/docid/patch_f/7012?cesid=3oap73y3T0r&searchUrl=%2Flco%2Faction%2Fsearch%3Fq%3Dguanfacine%26t%3Dname%26va%3Dguanfacine#pha