
MIRTAZAPINE (Remeron) Fact Sheet [G]

Bottom Line:

Mirtazapine tends to cause weight gain and sedation, but no sexual dysfunction or GI side effects, and thus is particularly useful in depressed patients with anxiety or insomnia, those who have had sexual side effects with other antidepressants, and those who may benefit from appetite stimulation (eg, elderly, cancer patients).

FDA Indications:

Major depression.

Off-Label Uses:

Panic disorder; PTSD; generalized anxiety disorder; insomnia; nausea; appetite stimulant; methamphetamine use disorder.

Dosage Forms:

- **Tablets (G):** 7.5 mg, 15 mg, 30 mg, 45 mg.
- **Orally disintegrating tablets (Remeron SolTab, [G]):** 15 mg, 30 mg, 45 mg.

Dosage Guidance:

Start 15 mg QHS, ↑ by 7.5 or 15 mg/day every one to two weeks. Max 45 mg/day. Best given at bedtime.

Monitoring: Weight.

Cost: \$

Side Effects:

- Most common: Somnolence, increased appetite, weight gain.
- Serious but rare: Agranulocytosis or severe neutropenia (with or without infection) reported very rarely.
- Pregnancy/breastfeeding: Considered relatively safe.

Mechanism, Pharmacokinetics, and Drug Interactions:

- Noradrenergic (via central presynaptic alpha-2 adrenergic receptor antagonist activity) and specific serotonergic (via postsynaptic 5-HT₂ and 5-HT₃ antagonist effects) antidepressant.
- Metabolized primarily through CYP1A₂, 2D₆, and 3A₄; t_{1/2}: 20–40 hours.
- Avoid use with MAOIs. Caution with inducers of 1A₂ or 3A₄ (eg, carbamazepine), which could reduce efficacy of mirtazapine.

Clinical Pearls:

- One large meta-analysis reported that mirtazapine has a faster onset of action than other antidepressants.
- Rumor has it that higher doses of mirtazapine may be paradoxically less sedating than lower doses. However, there is no empirical support for this theory, which is based on the fact that mirtazapine has increased noradrenergic effect relative to antihistaminergic effect at higher doses.
- The strategy of adding mirtazapine to venlafaxine (sometimes called “California Rocket Fuel” and a combination used in the STAR*D trial) was a promising one but has failed to show benefit in a handful of newer larger studies.
- Two small studies in men with methamphetamine use disorder have shown promising effects of mirtazapine 30 mg nightly in reducing methamphetamine use.

Fun Fact:

Esmirtazapine, the *s*-enantiomer, was under development for the treatment of insomnia and hot flashes associated with menopause, but the company pulled the plug in 2010.