

## Selective Alpha-2 Blockers

Selective  $\alpha_2$  blockers are a class of drug which includes mirtazapine. This medication is indicated for depression treatment, though it has many off-label uses. It works by selectively blocking  $\alpha_2$  receptors, and having antagonist activity at 5-HT receptors, as well as other receptors. Mirtazapine has the side effects of sedation and increased serum cholesterol. A majority of patients develop weight gain while taking this drug as well.



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### Mirtazapine

#### Martha-pine

Mirtazapine is an atypical antidepressant that blocks presynaptic  $\alpha_2$  receptors and also has serotonin 5-HT<sub>2</sub> and 5-HT<sub>3</sub> receptor antagonist activity.

### Indications

#### Depression Treatment

##### Depressed-emo

Mirtazapine is indicated as a treatment for depression and other mood disorders.

### Mechanism of Action

#### Blocks Alpha2 Receptor

##### Afro (2) Tutu Block-guy blocking receptor

This drug works by blocking  $\alpha_2$  receptors, which in turn leads to enhanced adrenergic and serotonergic transmission.

#### Antagonist at 5-HT receptors

##### Ant-toga pouring out Silver-tonic at 5-HT receptor

This drug is generally defined as a selective  $\alpha_2$  adrenergic receptor antagonist but also has 5-HT receptor antagonist activity.

### Side Effects

#### Sedation

##### Sedation-dart

Sedation is a common side effect that may occur, possibly due to the blockade of 5-HT<sub>2</sub> and 5-HT<sub>3</sub> receptors.

#### Weight gain

##### Up-arrow Scale

This drug is a potent stimulator of appetite and may cause weight gain, especially in younger patients.

#### Increased Serum Cholesterol

##### Up-arrow Cholesterol-burgers

Mirtazapine has been associated with increases in serum cholesterol and triglyceride levels.