# Fluoxetine (Prozac)

Fluoxetine (Prozac) is a selective serotonin reuptake inhibitor (SSRI). Serotonin is a neurotransmitter that is involved in transmission of nerve impulses. SSRIs maintain mental balance in the brain by decreasing the reuptake of serotonin back into the presynaptic cell. This results in an increase of serotonin in the synaptic cleft which can bind to postsynaptic receptors and create more transmissions.

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## Mechanism of Action

**Inhibits Reuptake of Serotonin**
Inhibiting-chains on Silver-tonic Reuptake-tube
Fluoxetine (Prozac) selectively inhibits the reuptake of serotonin. The reuptake inhibition increases the available amount of serotonin, which is a monoamine neurotransmitter. Depression stems from a deficiency of this neurotransmitter (serotonin).

## Indications

**Depression**
Depressed-emo
SSRI's are primarily indicated for depression, which is believed to be caused by a deficiency of freely available serotonin in the brain. Fluoxetine is also indicated for use in Obsessive Compulsive Disorder, Panic Disorder and Premenstrual Dysphoric Disorder. Many other SSRI's are also indicated for additional uses in Generalized Anxiety Disorder, Post Traumatic Stress Disorder and Social Phobias.

## Side Effects

**Sexual Dysfunction**
Limp-weiner
A common side effect of SSRI’s is anorgasmia. These medications are sometimes used for the treatment of premature ejaculation because of this common side effect.

**CNS Stimulation**
CNS-brain with Stim-mule drink
Increased serotonin levels in some patients have an elevated response which may cause headache, nervousness, anxiety or insomnia. Some side effects are often alleviated by advising the patient to take the medication with food in the morning.

**Weight Changes**
Delta Scale
Many patients may initially have weight loss while taking this medication. However, a side effect after long term treatment is weight gain.

**Serotonin Syndrome**
Silver-tonic Savage
Serotonin syndrome is a rare but serious side effect of any medication that increases the availability of serotonin. It can be remembered by the mnemonic HARM for Hypertension, Autonomic Instability (delirium), Rigidity (muscles) and Myoclonus (muscle jerking). Other signs and symptoms include headache, hyperthermia, sweating, and agitation.

## Contraindications

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**No MAO-Is**

Caution-tape Mao with Inhibiting-chains

Patients should not take monoamine oxidase inhibitors (MAO-Is) concurrently with SSRIs, as this increases the available pool of serotonin in the brain and increases the risk of developing serotonin syndrome.

**No Anticoagulants / Antiplatelets**

Caution-tape Ant-tie-clogs and Ant-tie-plates

SSRI’s decrease aggregation of platelets and increase GI bleeding risk up to 3 times. Patients should be advised to avoid anticoagulants and antiplatelets while taking these medications.

## Considerations

**Suicide Risk**

Risk of Suicidal-jumper

Patients taking SSRIs may experience side effects, such as violent behavior, mania or aggression, which can increase suicidal thoughts or actions. Suicide risk increases during the initial phase of starting on the medication because as the patient starts to feel better they may have enough energy to carry out the suicide.

**Delayed Onset of Action**

Delayed On-switch

SSRIs most often take 1-3 weeks for therapeutic effects to occur with some patients taking up to 6 weeks. Recent studies suggest longer response times in patients with comorbid conditions or severe depression. Patients should be educated not to expect immediate effects of the medication.

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