

Fluoxetine

FDA Indications:

(for children and adolescents):

Major Depressive Disorder (8 or older)

Obsessive compulsive Disorder (7 or older)

(for adults):

Panic Disorder

Bulimia

Binge Eating Disorder

Premenstrual Dysphoric Disorder

Bipolar Depression (in conjunction with olanzapine)

Treatment-resistant Depression (in conjunction with olanzapine)

Brand Names:

Prozac

Off-label Uses:

Social Anxiety Disorder

Post Traumatic Stress Disorder

Mechanism of Action:

Fluoxetine works by blocking the reuptake of serotonin into the presynaptic neurons by blocking the reuptake transporter protein located in the presynaptic terminal. Additionally, fluoxetine has actions on 5HTc as an antagonist. As an antagonist on the 5HT2c receptor, it disinhibits the release of both NE and DA (norepinephrine and dopamine). This results in the “activating” response people have to fluoxetine, in addition to improvements in concentration and attention.

Dosages and Formulations:

Dose:

20-80mg for depression/anxiety

60-80mg for bulimia

Dosage forms:

Capsules: 10mg, 20mg, 40g, 60g

Tablet: 10mg

Liquid: 20mg/5ml

Weekly Capsule: 90mg

How to dose:

Initial dose is 20mg (for younger kids could start at 10mg). Would increase dose every 4-6 weeks for response improvement. This medication should be dosed in the morning due to its potential activating effect.

Side Effects:

GI side effects (nausea, diarrhea, constipation, dry mouth), CNS effects (insomnia, sedation, agitation, headaches, dizziness), autonomic effects (sweating), sexual dysfunctions (men: delayed ejaculation, men and women: anorgasmia, decreased libido), due to HT2c effects can increase anxiety, agitation, or undesirable activation.

Clinical Pearls:

*Good first choice for those with atypical depression (hypersomnia, hyperphagia, low energy)

*Good for those who have some non-compliance (forget dose once in a while) as half-life is ~2 weeks; thus, skipping a dose will not cause any "withdrawal" effects

*May be less well-tolerated than other SSRIs for those with both anxiety and depression

References:

Stahl, S. M., Grady, M. M., & Muntner, N. (2021). Stahl's essential psychopharmacology: Prescriber's Guide. Cambridge University Press.