JPP October 2021

7 days of sertraline

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Day 1: Investigation of tametraline psychoactive compounds led to the discovery of [#sertraline](https://twitter.com/search?q=%23sertraline) in the USA in 1983; not licensed until 1991. Indicated for the treatment & prevention of major depressive episodes, panic disorder, social anxiety disorder, OCD, PTSD. Advantages of [#sertraline](https://twitter.com/search?q=%23sertraline) include being well-tolerated compared to some older SSRIs, with fewer pharmacokinetic drug-drug interactions

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Day 2; Oral once daily dose (if >sleepiness take in evening) 50-200mg/day depression & OCD; 25-50mg/day panic or social anxiety disorders & PTSD. Children OCD 6-12, 25-50mg/day (can be ↑); 13-17 50mg/day titrate as required. Unlicensed for depression age 12-17, as children are more prone to suicidal thoughts

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Day 3: Kinetics [#sertaline](https://twitter.com/search?q=%23sertaline): Extensive 1st pass metabolism includes CYP3A4 & 2C19 breakdown. Half-life 22-36 hours; active metabolite prolongs t½ to 4 days. Renal excretion. Not affected by age or renal impairment, but prolonged t½ in hepatic impairment means caution & avoid if severe. Use of [#sertraline](https://twitter.com/search?q=%23sertraline) in pregnancy carries risk of birth defects & also withdrawal syndrome in the newborn

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Day 4: MOA for [#sertraline](https://twitter.com/search?q=%23sertraline). This SSRI increases/stabilises brain serotonin levels. The inhibition of re-uptake of serotonin leads to neurotransmitter accumulation & increased signaling across the synapse. This is believed to elevate mood & improve sleep & energy.

(cont) It can take several weeks for [#sertraline](https://twitter.com/search?q=%23sertraline) to impact depression, but some symptoms can improve sooner, such as anxiety. Some research indicates improving anxiety may be a key mechanism of action for this drug

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Day 5: Adverse drug effects: Common include chest pain, GI effects, sweating, dizziness, bleeding risk (inhibits platelet aggregation); Uncommon/rare hallucinations, seizure, diabetes, serotonin syndr (NOT exhaustive). Caution elderly re hyponatraemia. Many ADEs resolve in few weeks

ADEs(cont)Increased risk of suicidal ideation is ‘uncertain’ but cannot be ruled out; highest risk is in early stages of SSRI treatment in under 25yrs.Withdrawal issues can occur as adjust to reduced serotonin levels: SSRI discontinuation syndrome causes chills, insomnia,nightmares,suicidal thoughts. Can lead to rebound symptoms.

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[2d](https://twitter.com/reesprescribe/status/1447638132451594266)

Day 6: DDIs: All SSRIs, St John’s wort, some opioids can lead to serotonin syndrome, cardiovascular medicines re arrthymias. Increased risk bleeding all anti-platelets/anti-coagulants,NSAIDs. Hyponatraemia with diuretics. Avoid grapefruit juice & other potent CYP3A4 inhibitors as ↑ exposure to [#sertraline](https://twitter.com/search?q=%23sertraline)

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Day 7: [#sertraline](https://twitter.com/search?q=%23sertraline) does not cause as much weight gain as some SSRIs, but the reason for this is unclear. SSRI weight gain in general may be linked to better appetite & increased energy when mood improved. Also changes to sodium control/water retention can lead to weight gain

CPD: in addition to the tweets, read the BNF section on Antidepressant drugs, as well as the monograph on sertraline. The SPC for sertraline contains useful information about undesirable effects and drug interactions.

<https://bnf.nice.org.uk/treatment-summary/antidepressant-drugs.html>

<https://bnf.nice.org.uk/drug/sertraline.html>

<https://www.medicines.org.uk/emc/product/12370/smpc#PRODUCTINFO>

1. All SSRIs are derived from tricyclic antidepressants

TRUE or FALSE

1. Sertraline is an SSRI associated with less weight gain compared to other SSRI agents

TRUE or FALSE

1. Sertraline has the longest half-life of all the SSRIs which means withdrawal issues are unlikely

TRUE or FALSE

1. Sertraline is licensed for use for obsessive compulsive disorder in adults and children

TRUE or FALSE

1. What is the mechanism of action for sertraline?
2. It reduces serotonin in the brain
3. It reduces serotonin levels in peripheral nerves
4. It increases serotonin levels in the brain
5. Increases serotonin and dopamine levels in the brain
6. Sertraline is likely to take effect within the first few days

TRUE or FALSE

1. Why is there a caution for use in the elderly?
2. More likely to get addicted
3. Problematic with co-morbidities
4. Many drug-drug interactions
5. Can affect electrolyte levels
6. Grapefruit juice can prevent sertraline from having an anti-depressant effect

TRUE or FALSE

1. Which of the following is a rare adverse drug event?
2. Thrombocytopenia
3. Anxiety
4. Dry mouth
5. Yawning
6. SSRI discontinuation syndrome can cause rebound depression

TRUE or FALSE