SAFELY WEANING OFF SSRIS

A Comprehensive Guide with Key Steps and Strategies

Weaning off SSRIs (Selective Serotonin Reuptake Inhibitors) is a process that should be done carefully and gradually, with the guidance of a practitioner, to allow the brain time to adjust to the changes. Many factors come into play, such as how long someone has been on the medication and at what dose.

When someone has been using an SSRI for more than a few months or at a higher dose, there's a risk that their serotonin levels may become lower over time, as the brain has become accustomed to the medication. That's why it's crucial to approach weaning off the medication very slowly, allowing the brain to recalibrate.

Below, we'll explore the key steps and considerations when a person is considering weaning off an SSRI, including how to support serotonin production naturally and what to expect throughout the process. Every person's experience is unique, so understanding these details can make the transition smoother and safer.

How does an SSRI work?

SSRIs (Selective Serotonin Reuptake Inhibitors) work by stopping the brain from reabsorbing serotonin, our feel-good neurotransmitter, too quickly. This doesn't actually increase serotonin production; instead, it creates the illusion of having more serotonin by keeping it in the brain for longer. Over time, this can trick the brain into producing less serotonin naturally, creating a feedback loop where serotonin levels decrease.

Caution When Combining SSRIs with Serotonin-Boosting Supplements

While there are ways to boost serotonin, such as using supplements like tryptophan or 5-HTP (5-hydroxytryptophan), it's important to exercise caution when combining them with SSRIs, particularly 5-HTP. These supplements should only be used under the guidance of a healthcare provider, starting with the lowest possible dose and focusing on upstream options when possible (e.g., tryptophan is preferable to 5-HTP because the body can use it in multiple ways beyond serotonin production, whereas 5-HTP is only converted into serotonin).

This caution is necessary because using both SSRI medications and serotonin-boosting supplements can lead to dangerously high serotonin levels, a condition known as serotonin syndrome. Symptoms include a rapid heart rate, agitation, and confusion, and it's crucial to recognize these signs early.

Unfortunately, people can be prescribed these medications with all sorts of pre-existing levels of serotonin. And it's important to remember that anxiety and depression can have many causes, not just low serotonin. Therefore, if someone is taking an SSRI, it is generally safer to address these other factors contributing to their symptoms, such as diet, stress, gut health and lifestyle.

Testing & Supporting Serotonin Levels Naturally

The ultimate goal should be to help individuals get enough nutrients, especially amino acids from food and the ability to digest and absorb them, to support healthy serotonin levels naturally, so they don't need long-term support from supplements and/or medications.

Organic acid testing, which includes measuring serotonin's breakdown products like 5-HIAA, can provide some insights into how much serotonin the body is using. Theoretically, while one is using an SSRI drug, the level of urinary 5-HIAA (5-hydroxyindoleacetic acid, a metabolite of serotonin) should be significantly and clinically high. Their serotonin is likely depleted if this level is mid-normal or even low. However, because serotonin is also found in some foods, it's important to avoid those foods for several days before testing to get a more accurate result.

How is Serotonin Made & What Role Does It Play?

Tryptophan is an essential amino acid from food that the body converts into 5-HTP, which is then turned into serotonin. However, it's important to note that only a small percentage (typically 1-3%) of absorbed tryptophan is used for serotonin production, as most (about 95%) is broken down through the kynurenine pathway. You can learn more about tryptophan here.

Serotonin is essential for many functions in the body, including:

- Feelings of calm and happiness
- Sleep
- Gut motility and function
- Pain perception
- Craving management
- Impulse control (when deficient, it can promote addictive behavior)

Serotonin is produced from tryptophan as follows:

1. Tryptophan is converted to 5-HTP by the enzyme tryptophan hydroxylase (TPH1 or TPH2), with iron and BH4 as cofactors. TPH1 activity produces serotonin in the gut (accounting for over 90% of the body's serotonin) and also in the pineal gland. Gut-derived serotonin is partially modulated by gut microbes but does not cross the blood-brain barrier. TPH2 activity produces serotonin in the central nervous system, which affects mood, anxiety, and food intake.
2. 5-HTP is converted to serotonin (5-HT) by the enzyme 5-HTP decarboxylase, with vitamin B6 as a cofactor.
3. Serotonin is stored in neuronal vesicles and released from serotonergic nerve terminals into the synapse as needed.
4. The breakdown of serotonin (5-HT) into 5-HIAA involves the enzymes MAO and ALDH. As mentioned earlier, 5-HIAA is an indirect measure of serotonin levels in organic acids urine testing. However, since 5-HIAA can come from all sources, including serotonin-rich foods, it's important to avoid those foods for several days before testing to prevent confounding results.

Tryptophan vs. 5-HTP

In light of cofactors and their relationship with other neurotransmitters, there are pros and cons in using serotonin support with one precursor over the other.

Using tryptophan:

- Pros:
  - Since it is similar to what we would absorb from food, tryptophan is generally safer.
  - Because tryptophan is an essential amino acid that the body uses for multiple purposes (not just serotonin synthesis), there is value in going upstream to boost the body's overall supply of tryptophan, which allows the body, in its natural wisdom, to decide how to use it.
- Cons:
  - A lack of iron might render it less effective (e.g. in someone with iron-deficiency anemia).
  - Low estrogen states (e.g. menopause) will lower the activity of tryptophan hydroxylase, making tryptophan less effective.
  - The effect may be more subtle since tryptophan can also be used for other purposes.
- Dosing:
  - A typical adult starting dose of l-tryptophan supplementation would be ~500 mg, taken once or twice daily on an empty stomach.

Using 5-HTP:

- Pros:
  - 5-HTP is a more direct way to ensure the body will use the supplemental precursors to make serotonin.
  - It also bypasses barriers to serotonin synthesis. (e.g. insufficient iron and other nutrients, low estrogen levels, and genetic impairment of TPH enzymes)
- Cons:
  - The risk of producing too much serotonin is much higher with 5-HTP than with tryptophan and can increase the risk of serotonin syndrome.
  - Caution is advised using 5-HTP in those with elevated cortisol, especially at night (when you might consider using 5-HTP to boost melatonin for sleep). Too much 5-HTP can exacerbate cortisol, especially in higher doses. When elevated cortisol is not an issue, 5-HTP may be quite effective for addressing depression, insomnia, and emotional eating/cravings.
- Dosing:
  - A typical adult starting dose is 50 mg 5-HTP taken once or twice daily on an empty stomach and, after 2-3 weeks, titrating upward up to 200mg if needed very slowly.
  - 5-HTP (like tryptophan) will still need Vitamin B6 as a cofactor. A high-quality B-complex (preferably with the P5P form of B6) will help to ensure the conversion of 5-HTP to serotonin.

Causes of Low Serotonin

There are many causes of low serotonin in modern society, so also think upstream to address these factors:

- Low tryptophan due to:
  - Inadequate dietary protein
  - Maldigestion/malabsorption (especially suboptimal stomach acid due to age, H. pylori overgrowth, PPI drug use)
  - A shifting of greater tryptophan usage for the kynurenine pathway (e.g. due to ongoing infection, inflammation, lipopolysaccharides)
- Low iron
- Low B4 (biopterin) availability (recycling of which is enhanced by adequate folate status)
- Low B6 levels (e.g. genetic variants, inadequate activation due to suboptimal B2 levels, oral estrogen-containing medication such as oral contraceptive pills)
- Low estrogen levels
  - Estrogen is necessary for the production of serotonin
  - An increase in estrogen levels around the time of ovulation often improves mood, and lower levels during menses can have the opposite effect
- Increased activity of MAO enzymes (e.g., genetic variants, reuptake inhibitor drug use such as SSRI/SNRI)

It's also important to consider that any supplement or medication that increases the level or activity of serotonin may also upregulate the body's breakdown of not only serotonin but also other monoamine neurotransmitters via increased activity of the MAO enzyme. In this way, efforts to increase serotonin may decrease levels/activity of dopamine, epinephrine, and/or norepinephrine. Therefore, for any longer-term, ongoing serotonin support (especially via 5-HTP), consider the opportunity to support precursors for these other neurotransmitters via tyrosine or l-dopa support.

Guidelines for Safely Weaning Off SSRIs: Slow Tapering and Essential Support

Every person is different, and there isn't one single plan that works for everyone when it comes to stopping an SSRI. However, it's crucial to work with your practitioner to reduce the dosage very slowly over time so that the brain can adjust to the medication withdrawal. This is especially important for people who have been on a higher dose or who have used the medication for a long time. Reducing the dose too quickly—such as by cutting it in half—can lead to uncomfortable withdrawal symptoms. It's important to set the right expectations, as most people will experience some side effects during withdrawal. It's also important to know that withdrawal symptoms aren't permanent and are just a part of the transition.

This article may be helpful in designing a plan. One approach to gradually stopping SSRIs involves using a "hyperbolic dose reduction curve", where larger reductions are made at the beginning, followed by smaller, more gradual reductions as the dose gets lower. This method usually takes longer than most people expect—anywhere from 3 to 9 months, or even longer—but it helps minimize withdrawal symptoms.

Guidelines for Safely Weaning Off SSRIs: Slow Tapering and Essential Support

Here are a few things that can help individuals while they're gradually reducing their dosage:

- **Support system:** Make sure there is a strong support network in place before starting the tapering process. Ideally, at least one person other than your practitioner should know about the plan and be ready to provide emotional support if symptoms arise. Encourage self-care activities that can bring comfort during withdrawal, such as prayer, meditation, time with pets, nature walks, or enjoyable hobbies.
- **Dose stability:** Before reducing the dose each time, it is important to ensure the individual is stable. This means:
  - They are no longer experiencing withdrawal symptoms
  - They have not had an increase in symptoms such as anxiety or depression
- **Nutrients for serotonin:** Make sure the person has enough of the nutrients needed to make serotonin, such as tryptophan and iron.
- **B vitamins:** A multivitamin or B-complex with methylated B vitamins, especially B6 (in the form of P5P), can support serotonin levels.
- **5-HTP:** Once the SSRI dose is reduced, 5-HTP (along with B vitamins) may be introduced to support serotonin levels. Starting with 50 mg in the morning, the dosage can be increased slowly with each reduction in SSRI dosage. The goal is to proceed very gradually to avoid producing excessive serotonin, which can lead to serotonin syndrome or overload. This condition may cause symptoms such as a rapid heart rate, agitation, and confusion, so it's important to monitor for these signs.
- **Avoid stimulants:** Reduce or avoid stimulants like caffeine, dark chocolate, and sugar.
- **Balanced diet:** A low-glycemic, anti-inflammatory diet rich in protein and healthy fats (like omega-3s) can help keep blood sugar levels steady, which can reduce anxiety.
- **Magnesium:** Test RBC magnesium to assess cellular sufficiency of magnesium. Levels should be in the upper third of the reference range.
- **Sleep and stress management:** Support good sleep habits and stress reduction techniques. As the brain returns to normal mood function, people often experience a wider range of emotions and may need new coping mechanisms to handle emotions that the medication may have previously numbed. Consider practices like:
  - Sleep Hygiene Fundamentals
  - Stress Realities & Reduction
  - Gratitude Journaling
- **Melatonin:** If needed, melatonin (e.g. 1 mg liposomal or extended-release) can be used about an hour before bed to support sleep.

Once the dose is as low as possible, taking it every other day before completely stopping can be an option.

If withdrawal symptoms become too severe, slowly increasing the 5-HTP dose by 50 mg at a time may be considered. It's important to allow a few weeks or longer for stabilization before making any further changes to the SSRI dosage. The time required to fully taper off the medication varies depending on multiple factors, but a slower approach is generally safer and more manageable. The process should not be rushed.

Finally, timing is very important. It's best to start tapering when there's a strong emotional support network in place and other life stresses are minimal.

Final Remarks

Weaning off SSRIs is a complex and highly individualized process that requires time, patience, and support. It's essential to work closely with a healthcare provider to create a tailored plan that gradually reduces the dosage, allowing the brain to adjust. With the right approach—slow tapering, proper nutrition, emotional support, and self-care—a person can minimize withdrawal symptoms and improve the chances of a smooth transition. This process should never be rushed, and ensuring a solid support system and managing stress are key to a successful outcome. If done correctly, weaning off SSRIs can be a positive step toward restoring natural serotonin balance and improving overall well-being.