

Serotonergic Antidepressants

Selective Serotonin Reuptake Inhibitors (SSRIs) are one of the most important breakthroughs in psychiatry and have been used since the 1980's to treat conditions including depression, generalized anxiety disorder, post-traumatic stress disorder, social phobia, panic disorder, obsessive-compulsive disorder, irritability and bulimia.

Since 2011, newer versions of the SSRIs have been developed, called vortioxetine (trintellix) and vilazodone (viibryd). These medications cause similar changes in the brain as the SSRIs, but have additional effects on a receptor called 5-HT1A. This receptor is involved in the antianxiety benefits of the medicine buspirone (buspar). Buspirone is often used along with SSRIs to reduce anxiety or improve the sexual side effects that are so common with SSRIs. The 5-HT1A receptor is also involved in the antidepressant benefits of aripiprazole (abilify), lurasidone (latuda) and the antianxiety benefits of natural lavender.

Among these two medications, vortioxetine stands out as unique as it has evidence to improve not only depression but concentration as well. Both these agents have a lower risk of sexual side effects than the traditional SSRIs, and the risk of sexual side effects appears particularly low for vortioxetine.

How can serotonergic antidepressants help me?

How they will help you depends on your condition. In general, they reduce anxiety and depression by returning serotonin to its normal levels in the brain. Sometimes chronic stress can lower serotonin and cause those symptoms, other times serotonin falls for no clear reason. In either case, these medications can help.

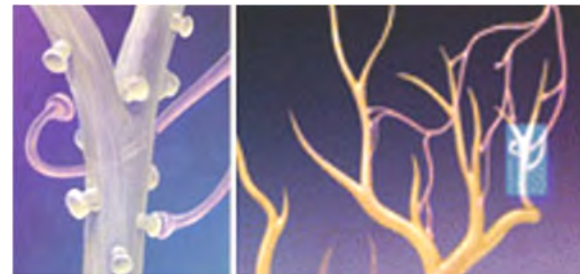
It usually takes 3-6 weeks to see their effects, although some people do respond sooner.

They do not change who you are, although they may allow you freedom to develop in ways that those emotions had prevented. Some people say that they feel more like their usual self, or are better able to deal with stress, after taking them. New research shows that these medications can prevent the

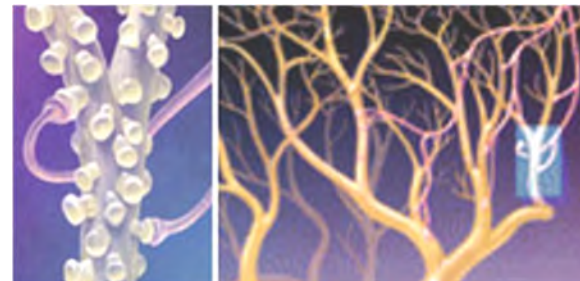
Key Points

1. Serotonin medicines work gradually over 3-6 weeks. Stomach side effects can happen in the beginning and are usually temporary
3. If your insurer requires authorization, contact us at auth@moodtreatmentcenter.com if needed.

damaging effects that stress and depression have on brain cells by enhancing brain growth in the hippocampus and amygdala, which are involved in mood and memory.



Before treatment: the effects of depression and stress have caused this nerve cell to shrink back like a tree with few branches.



After treatment: Antidepressant treatment has strengthened the roots and connections of the brain cell. The result is better communication within the brain and better stress management.

How should I take it?

Vilazodone (viibryd) should be taken with a full meal (otherwise it does not absorb well). Vortioxetine (trintellix) can be taken with or without food.

These medications can be taken morning or night, once per day. If the medicine makes you drowsy, it is best to take in the evening. Otherwise the morning may work best as they sometimes can disrupt sleep.

How long do I need to take it?

In general, the medicine should be taken at least 6-12 months after the symptoms resolve in order to prevent the problem from returning. That gives the brain time to build up habits of stability. Some people may need to take the medication longer to prevent the return of depression, especially if they have had 3 or more episodes of depression in their life.

What happens if I stop it?

Serotonergic antidepressants need to be stopped gradually to prevent withdrawal symptoms. These are flu-like symptoms that are unpleasant but not dangerous; examples include:

> Dizziness, nausea, lethargy, sensory changes (numbness, tingling, shock-like feelings), blurred vision, headache, vivid dreams, anxiety.

Withdrawal problems are less of an issue with vortioxetine as it comes out of your body gradually – over a week – after stopping it.

You cannot become addicted to serotonergic medications. In other words, if you stop the medicine, you will not crave it or be more likely to have depression or anxiety than before. In fact, treatment, either with psychotherapy or medication, allows the brain to reorganize itself in ways that help prevent future symptoms.

Can they cause harm?

Serotonergic antidepressants may worsen certain psychiatric conditions, such as bipolar disorder (manic-depression). If you notice these signs while taking them, call me:

> Feeling hyper, irritable, speeded up, giddy or “too happy”; decreased need for sleep, paranoid feelings, racing thoughts, high anxiety, talking fast.

People may also feel worse on these medications because of side effects (see below). For example, although they usually relieve anxiety, anxiety is also a rare side effect.

What side effects can I expect?

The following side effects are usually mild and often improve over time:

Nausea, vomiting, constipation, diarrhea, stomach distress, dry mouth, dizziness, headache, palpitations, tingling or numbness, sweating, drowsiness, vivid dreams, anxiety, yawning, blurred vision.

The following side effects may persist and can be treated or will go away if the medicine is stopped:

Decreased sex drive, delayed orgasm, tiredness or low motivation. They have mild blood-thinning effects, so you may notice increased menstrual flow or other bleeding. You may need to stop them if you undergo surgery.

The following side effects indicate that the medicine may need to be stopped; call me if they occur:

Agitation, intense mood swings, racing thoughts, insomnia, restless feelings like you can't stop moving.

Serotonin Syndrome: this condition is very rare but can be more common if they are taken with other antidepressants or with lithium, tryptophan, buspar, or St. John's Wort. It is caused by too much serotonin in the brain. Symptoms include fever, muscle jerks, diarrhea, sweats, racing heart,

stomach pain, confusion and mood swings. If this occurs, stop the medication and call me or go to your local emergency room.

All SSRIs may decrease bone strength in post-menopausal women.

An allergic reaction is possible with any medication. Symptoms include the following; stop the medication and call me if these occur: *Pounding heartbeat; swelling of the face, throat, tongue, lips, eyes, hands, feet, ankles, or lower legs; hoarseness; difficulty swallowing or breathing; hives; rash.*

Interactions

Recreational drugs: Although alcohol does not have dangerous interactions with SSRIs, drinking too much can prevent them from working. Recreational drugs can also prevent them from working.

Over the counter medicines: Do not take Saint John's Wort with serotonin medicines; this can cause Serotonin Syndrome (see above) and other interactions.

Prescribed medications: Do not take MAOI antidepressants (phenelzine, nardil, tranylcypromine, parnate, isocarboxazid, marplan, procarbazine, matulane, selegiline, eldepryl) with serotonin medications. Other medication interactions vary for each SSRI; talk to me or check with your pharmacist about other medicines you are taking.

Vortioxetine: Bupropion (Wellbutrin) can double blood levels of Vortioxetine; Rifampicin can lower Vortioxetine levels.

What should I do if I forget a dose?

Take the missed dose as soon as you remember it. However, if it is almost time for the next dose, skip the missed dose and continue your regular dosing schedule. Do not take a double dose to make up for a missed one. Do not take more than the prescribed daily amount in 24 hours.

How to store and dispose of medication

- Keep out of the reach of children.
- Store away from heat, direct light and damp places.
- To safely dispose of unwanted pills: Do not pour in the toilet or sink (it will enter the water supply). To prevent children or pets from eating it, mix unwanted pills in a bag with a little water and inedible trash (such as coffee grounds or kitty litter) and throw in the trash.

Quick facts

Generic (brand)	Sizes	FDA Approval, Typical doses
Vilazodone (viibryd) <i>Released</i> 1/21/2011	> Tabs: 10, 20, 40mg	Depression (40mg/d) <i>Note: must be taken with a full meal to absorb the dose</i>
Vortioxetine (trintellix) <i>Released</i> 9/30/2013	> Tabs: 5, 10, 20mg. Note this used to be called <i>Brintellix</i> .	Depression (20mg/d) <i>Note: Vortioxetine is specifically indicated in depression age 18-88.</i>

Affording the Medication

Vilazodone is generic, but vortioxetine is brand only and has a coupon programs to help you save. If we do not have them available you can print them through us.trintellix.com. Contact us at auth@moodtreatmentcenter.com if there is trouble with the price or you need authorization from your insurance.