

Serotonin toxicity, also known as serotonin syndrome, is a potentially life-threatening condition can occur when there is an excessive amount of the neurotransmitter, serotonin, in the body. Symptoms of serotonin toxicity involve a spectrum of mental status changes, neuromuscular and autonomic hyperactivity. The symptoms can range from mild to severe and can present as agitation, confusion, sweating, fever, rapid heart rate, muscle stiffness, tremors, and seizures. In severe cases, serotonin toxicity can lead to coma or even death.

**Serotonin toxicity possible but may be less likely to occur*

Blue fonts are drugs frequently used in hospice

Examples of Medications with Effects on Serotonin				
Increases Serotonin Synthesis	Inhibits Serotonin Metabolism	Inhibits Serotonin Reuptake	Stimulates Serotonin Release	
Nutritional Supplements Tryptophan 5-hydroxytryptophan Sympathomimetics/Anesthetics Cocaine	Amphetamines MDMA ("ecstasy" or "mollie")	Anorectics Sibutramine	Amphetamines Amphetamine Dextroamphetamine Benzphetamine Dexfenfluramine Dextroamphetamine Fenfluramine Lisdexamfetamine MDMA ("ecstasy" or "mollie") Methamphetamine Antidepressants Mirtazapine*	
		Antidepressants, Other Nefazodone Trazodone* Vilazodone Vortioxetine		
Activate Serotonin Receptors Anxiolytics Buspirone*	Migraine Meds, Triptans Almotriptan Eletriptan Frovatriptan Naratriptan Rizatriptan Sumatriptan* Zolmitriptan	Antidepressants, SSRI Citalopram Escitalopram Fluoxetine Fluvoxamine Paroxetine Sertraline		
Hallucinogens Lysergic acid diethylamide (LSD)		Antidepressants, Tricyclic Amitriptyline* Clomipramine Desipramine Doxepin Imipramine Nortriptyline Protriptyline Trimipramine		
Muscle Relaxants - Central-Acting Cyclobenzaprine				Dopaminergic Agent Levodopa Mixed Opioid Agonist-Antagonist Nalbuphine Mood Stabilizer/ Antimanic Agents Lithium*
Opioid Agonists Alfentanil Fentanyl Meperidine				
Serotonin/5ht2c Receptor Agonist Lorcaserin				
Other Serotonin Effects	MAO Inhibitors Isocarboxazid Linezolid Phenelzine Tranylcypromine Tedizolid	Antiemetics, Serotonin/5HT3 Receptor Antagonists: Dolasetron Granisetron Ondansetron* Palonosetron		Opioid Agonists Buprenorphine* Butorphanol Codeine* Meperidine Morphine* Opium Oxycodone* Dihydrocodeine Hydrocodone Hydromorphone Oxycodone Remifentanyl Sufentanyl Tramadol
Antipsychotics: Serotonin-Dopamine Agonists (SDAs) Ziprasidone Risperidone Paliperidone Iloperidone Lurasidone				
	Antipsychotics: Multi-Acting Receptor - Targeted (MARTA) Clozapine Olanzapine Quetiapine Azenapine	Muscle Relaxants Metaxalone		
Nutritional Supplements St. John's Wort (Hypericum perforatum)		Opioid Agonists Levorphanol Meperidine Methadone Pentazocine Tapentadol Tramadol		

Resources

1. Adapted from TOXED The Clinician's Toxicology Resource [Article Link](#)
2. Clinical pharmacology of atypical antipsychotics: an update, Mauri, M.C. et. al.; EXCLI Journal 2014 accessed at [Article Link](#)
3. Essential Psychopharmacology, second edition; Stahl, Stephen
4. *Foong, A. et. al., Canadian Family Physician, October 2018 Volume 64: Demystifying serotonin syndrome (or serotonin toxicity)