ADVERSE EVENTS ASSOCIATED WITH COMMON INTERVENTIONS (Part 4 of 5)

<u>A general note:</u> This table is intended to be non-exhaustive (it does not cover, e.g., every medication used by healthcare providers or every adverse event that any given medication might cause). According to U.S. government statistics in November 2021, there were over 20,000 prescription drug products approved by the Food and Drug Administration (FDA) for marketing, and the FDA was overseeing more than 6,700 different medical device product categories (source: <u>https://www.fda.gov/about-fda/fda-basics/fact-sheet-fda-glance</u>). This table does not provide medical advice and is not a substitute for advice from a medical professional. Please also independently verify that information in this table remains up-to-date. The table was last updated on February 28, 2023.

Categories: Cardiovascular, Endocrine/Metabolic, Gastrointestinal, Genetic, Hematological, Oncological, Immunological, Microbiological, Musculoskeletal, Neurological, Ophthalmological, Psychiatric, Renal/Urological, Reproductive, Respiratory, Surgical, Toxicological

| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|--------------------------|--|---|--|--|
| Neurological | | | | |
| Amantidine | Parkinson's disease, side effects of medications used to treat PD (<u>https://medlineplus.gov/</u> <u>druginfo/meds/a682064.html</u>). | Orthostatic hypotension, syncope, peripheral edema, dizziness, delusions, hallucinations, falls, xerostemia, constipation, livedo reticularis, neuroleptic malignant syndrome, psychosis, suicidal ideation, CNS depression (<u>https://www.ncbi.nlm.nih.gov/books/NBK499953/#article-17425.s5</u>). | Adamantan antiviral, dopaminergic antiparkinsonism agent (<u>https://www.drugs.com/</u> <u>amantadine.html</u>). | FDA category C for pregnancy (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK499953/</u> <u>#article-17425.s5</u>). |
| Baclofen (Lioresal) | Multiple sclerosis, spinal cord injury or disease (https://www.drugs.com/baclofen.html). | Black box warning—hypermetabolic state resulting from abrupt withdrawal, sedation, confusion, muscle weakness, vertigo, nausea, neuropsychiatric impairment, hypotension, peripheral edema, dyspnea, hypoventilation, pneumonia, seizures, insomnia, pain, speech alteration, depression, agitation, constipation, diarrhea, urinary frequency, incontinence, acute urinary retention, impotence, tremor, weakness, amblyopia, uritcaria, pruritus, seizures and hallucinations with abrupt discontinuation (<u>https://www.ncbi.nlm.nih.gov/books/NBK526037/#article-18092.s5</u>). | Skeletal muscle relaxant, antispasmodic (<u>https://</u> www.drugs.com/baclofen.html). | Gradual dose reduction recommended to prevent withdrawal symptoms (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK526037/</u> <u>#article-18092.s5</u>). |
| Benztropine (Cogentin) | Parkinson's disease, Parkinson-like symptoms caused by certain medicines (<u>https://</u> www.drugs.com/mtm/benztropine.html). | Fever, rash, general weakness, lethargy, insomnia, nausea, vomiting, headache, drowsiness, insomnia, paresthesia, xerostomia, mydriasis, myasthenia, heatstroke, heat intolerance, hyperthermia, visual hallucinations and delirium, confusion and toxic psychosis, depression, worsening of pre-existing psychotic symptoms, blurred vision, cycloplegia, impairment of memory, dry mouth, parotitis, dysuria, UTI, sinus tachycardia, constipation, numbness of fingers, toxic megacolon, paralytic ileus, ocular hypertension (<u>https://www.ncbi.nlm.nih.gov/books/NBK560633/#article-18221.s5</u>). | Anticholinergic antiparkinson agent (<u>https://www.drugs.com/</u> <u>mtm/benztropine.html</u>). | Can mask symptoms of bladder obstruction and benign prostatic hypertrophy (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK560633/</u> <u>#article-18221.s5</u>). |
| Bromocriptine (Parlodel) | Hyperprolactinemia, noncancerous tumor of the pituitary gland (<u>https://www.drugs.com/mtm/bromocriptine.html</u>). | Nausea, vomiting, dizziness, hypotension, headache, fatigue, psychosis, fibrosis, cardiovascular incidents (<u>https://www.ncbi.nlm.nih.gov/books/NBK555948/#article-18634.s5</u>). | Dopaminergic antiparkinsonism agent, prolactin inhibitor (<u>https:// www.drugs.com/mtm/</u> <u>bromocriptine.html</u>). | Contraindicated as treatment in patients with type I diabetes, syncope, psychosis (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK555948/</u> <u>#article-18634.s5</u>). |
| Cladribine (Mavenclad) | MS in adults (<u>https://www.drugs.com/mtm/</u> <u>cladribine.html</u>). | Lymphopenia, infections, headaches, increased risk for herpetic infections or complications, nasopharyngitis, rashes, alopecia (<u>https://www.ncbi.nlm.nih.gov/books/NBK545307/#article-49962.s5</u>). | Antimetabolite (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>cladribine.html</u>). | Side effects delayed approval of this drug in Europe and the U.S. (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK545307/</u> <u>#article-49962.s5</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|---|---|---|--|---|
| Dantrolene (Dantrium, Revonto, Ryanodex) | Spinal cord injury, stroke, cerebral palsy, MS (https://www.drugs.com/mtm/dantrolene.html). | Skeletal muscle weakness, dyspnea, respiratory muscle weakness, decreased inspiratory capacity, black box warning for liver toxicity and overt hepatitis (https://www.ncbi.nlm.nih.gov/books/NBK535398/ #article-20255.s5). | Skeletal muscle relaxant (<u>https:// www.drugs.com/mtm/</u> <u>dantrolene.html</u>). | Liver function should be evaluated before administering the oral drug and should be monitored throughout the course of treatment (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK535398/</u> #article-20255.s5). |
| Deutetrabenazine (Austedo) | Involuntary movements caused by Huntington's disease, tardive dyskinesia (<u>https://</u> <u>www.drugs.com/mtm/deutetrabenazine.html</u>). | Diarrhea, constipation, dry mouth, tiredness, pain or burning with urination, bruising, upper respiratory infection, fever, sweating, confusion, fast or irregular heartbeat, severe muscle stiffness, shaking, difficulty moving or keeping balance, falls, irregular or rapid heartbeat, fainting (<u>https://medlineplus.gov/druginfo/meds/a617022.html#side-effects</u>). | VMAT2 inhibitor (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>deutetrabenazine.html</u>). | May increase the risk of depression or suicidal thoughts (<u>https://</u> <u>medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a617022.html#side-</u> <u>effects</u>). |
| Entacapone (Comtan) | End-of-dose "wearing off" symptoms of Parkinson's disease (<u>https://medlineplus.gov/</u> <u>druginfo/meds/a601236.html</u>). | Dizziness, diarrhea, upset stomach, movements that cannot be controlled, stomach pain, drowsiness, difficulty breathing, hallucinations, high fever, confusion, muscle stiffness, weakness with or without fever (<u>https://medlineplus.gov/druginfo/meds/a601236.html#side-effects</u>). | Dopaminergic antiparkinson agent; Inhibitor of COMT; Helps levodopa and carbidopa reach the brain (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>entacapone.html, https://</u> <u>medlineplus.gov/druginfo/meds/</u> <u>a601236.html</u>). | Helps control symptoms of PD but does not cure it (https://medlineplus.gov/ druginfo/meds/ <u>a601236.html#side-</u> effects). |
| Erenumab (Aimovig) | Prevention of migraine in adults (<u>https://www.drugs.com/mtm/erenumab.html</u>). | Allergic reaction, severe constipation, severe headache, blurred vision, pounding in neck or ears, constipation, pain or swelling or redness where injected (<u>https://www.drugs.com/mtm/erenumab.html#side-effects</u>). | CGRP inhibitor (<u>https://</u> www.drugs.com/mtm/ erenumab.html). | Not known whether this drug will harm an unborn baby (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>erenumab.html#side-</u> <u>effects</u>). |
| Levetiracetam (Keppra) | Partial-onset seizures, juvenile myoclonic epilepsy, primary generalized tonic-clonic seizures (https://www.webmd.com/drugs/2/ drug-17855-4019/levetiracetam-oral/ levetiracetam-oral/details, https:// medlineplus.gov/druginfo/meds/a699059.html). | Sedation, fatigue, mood swings, headache, agitation, irritability, aggression, depression, memory loss, confusion, paresthesia, decline in cognition, increased suicide risk, psychosis, hallucinations, suicidal thoughts, cardiovascular effects, GI effects, infections, hypersensitivity reactions, hematologic effects, liver toxicity (https://www.ncbi.nlm.nih.gov/books/NBK499890/#article-24231.s5). | Anticonvulsant, decreases abnormal excitement in the brain (https://medlineplus.gov/druginfo/ meds/a699059.html). | May enhance CNS- depressant effects of alcohol, cannabis, and other drugs (<u>https://</u> www.ncbi.nlm.nih.gov/ books/NBK499890/ #article-24231.s5). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|-----------------------|--|--|--|---|
| Levodopa/carbidopa | Parkinson's disease (<u>https://www.mayoclinic.org/</u> <u>drugs-supplements/carbidopa-and-levodopa-</u> <u>oral-route/proper-use/drg-20095211</u>). | Allergic reaction, uncontrolled muscle movements in the face, worsening of tremors, severe or ongoing vomiting or diarrhea, confusion, hallucinations, unusual changes in mood or behavior, depression, suicidal thoughts, severe nervous system reaction, falling asleep during normal daytime activities, increased sexual urges, unusual urges to gamble, darkened bodily fluids, jerky or twisting muscle movements, headache, dizziness, low blood pressure, sleep problems, strange dreams, dry mouth, muscle contractions, nausea, vomiting, constipation (https://www.drugs.com/mtm/carbidopa-and-levodopa.html#side-effects). | Levodopa changes to dopamine in the brain, carbidopa prevents breakdown of levodopa in the bloodstream and can reduce levodopa side effects (nausea, vomiting) (<u>https://</u> <u>www.webmd.com/drugs/2/</u> <u>drug-3394-41/carbidopa-</u> <u>levodopa-oral/carbidopa-</u> <u>levodopa-oral/details</u>). | Dangerous drug interaction possible with MAO inhibitor (<u>https:// www.drugs.com/mtm/</u> <u>carbidopa-and-</u> <u>levodopa.html#side-</u> <u>effects</u>). |
| Milnacipran | Fibromyalgia (<u>https://medlineplus.gov/druginfo/</u> meds/a609016.html). | Nausea, vomiting, constipation, stomach pain, weight loss, dry mouth, extreme facial warmth and/or redness, headache, blurred vision, extreme tiredness, lack of energy, loss of appetite, sexual problems, pain or swelling of the testicles, difficulty urinating, rash, itching, fever, sweating, confusion, fast or irregular heartbeat, severe muscle stiffness or twitching, nausea, vomiting, diarrhea, hallucinations, confusion, difficulty concentrating, memory problems, sweating, fever, diarrhea, dizziness, uncontrollable shaking, severe muscle stiffness, weakness, unsteady walking that may cause falling, seizures, fainting, coma, fast or irregular heartbeat, difficulty breathing, pain in upper right part of stomach, yellowing of skin or eyes, dark urine, unusual bleeding or bruising, nosebleeds, tiny red spots under the skin (https://medlineplus.gov/druginfo/meds/a609016.html#side-effects). | SNRI (<u>https://medlineplus.gov/</u> druginfo/meds/a609016.html). | This drug belongs to the same class of medications as many antidepressants, but it is not used to treat depression (<u>https://medlineplus.gov/druginfo/meds/a609016.html#side-effects</u>). |
| Phenytoin (Dilantin) | Seizures (not all types) (<u>https://www.drugs.com/phenytoin.html</u>). | Rash, sedation, peripheral neuropathy, phenytoin encephalopathy, psychosis, locomotor dysfunction, hyperkinesia, megaloblastic anemia, decreased bone mineral content, SJS, toxic epidermal necrolysis, immunoglobulin A deficiency, gingival hyperplasia, DRESS syndrome, cardiovascular collapse, hypotension, arrhythmias, hydantoin syndrome in newborns, purple glove syndrome (<u>https://www.ncbi.nlm.nih.gov/books/NBK551520/#article-27122.s5</u>). | Group I antiarrhythmic; Hydantoin anticonvulsant; Slows brain impulses that cause seizures (<u>https://www.drugs.com/</u> phenytoin.html). | Use during pregnancy can cause serious abnormalities (<u>https:// www.healthline.com/</u> <u>health/drugs/phenytoin-</u> <u>oral-capsule</u>). |
| Pramipexole (Mirapex) | Parkinson's disease, restless leg syndrome (https://www.drugs.com/mtm/pramipexole.html). | Patients with RLS: nausea, somnolence, fatigue, headache; Early PD without levodopa: nausea, dizziness, constipation, asthenia, hallucinations, somnolence, sleep attacks; Advanced PD with levodopa: Accidental injury, dream abnormalities, confusion, constipation, asthenia, somnolence, dystonia, gait abnormality, hypertonia, dry mouth amnesia, orthostatic hypotension, dyskinesia, extrapyramidal symptoms, hallucinations (https://www.ncbi.nlm.nih.gov/books/NBK557539/#article-27592.s5). | Dopaminergic antiparkinsonism agent (<u>https://www.drugs.com/</u> <u>mtm/pramipexole.html</u>). | Adverse effects are attributed to peripheral and central dopaminergic stimulation; Sudden onset of sleep may lead to road traffic accidents (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK557539/</u> <u>#article-27592.s5</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|---|--|--|--|--|
| Primidone (Mysoline) | Grand mal seizures, complex partial seizures, focal seizures (<u>https://www.healthline.com/health/</u> <u>drugs/primidone-oral-tablet</u>). | Suicidal thoughts, sedation, drowsiness, ataxia, diplopia, nystagmus, dizziness, vertigo, epigastric pain, megaloblastic anemia, respiratory depression, polyuria, skin rash, facial edema, hypersensitivity reactions, agranulocytosis, thrombocytopenia (<u>https://www.healthline.com/health/drugs/primidone-oral-tablet</u> , <u>https://www.ncbi.nlm.nih.gov/books/NBK562297/#article-27742.s5</u>). | Barbiturate anticonvulsant (<u>https://www.drugs.com/mtm/</u> primidone.html). | Newborns of mothers taking primidone have demonstrated a coagulation defect; FDA pregnancy category D drug (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK562297/</u> <u>#article-27742.s5</u>). |
| Rasagiline (Azilect) | Parkinson's disease (<u>https://www.webmd.com/</u> <u>drugs/2/drug-144380/rasagiline-oral/details</u>). | Mild headache, joint or neck pain, heartburn, nausea, vomiting, stomach pain, constipation, diarrhea, loss of appetite, weight loss, flu-like symptoms, fever, sweating, red or swollen or itchy eyes, dry mouth, swollen gums, unsteadiness or wobbliness or lack of coordination, involuntary or repeated body movements, lack of energy, sleepiness, abnormal dreams, depression, pain or burning or numbness or tingling in the hands or feet, rash, bruising or purple discoloration on skin, severe headache, blurred vision, seizures, chest pain, SOB or difficulty breathing, confusion, unconsciousness, slow or difficult speech, dizziness or faintness, weakness or numbness of arm or leg, hallucination, extreme restlessness, difficulty thinking clearly or understanding reality (https://medlineplus.gov/druginfo/meds/ a606017.html#side-effects). | MAO inhibitor (<u>https://</u> <u>www.webmd.com/drugs/2/</u> <u>drug-144380/rasagiline-oral/</u> <u>details</u>). | Can interact with many drugs (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>rasagiline.html</u>). |
| Riluzole (Exservan, Rilutek, Tiglutik) | ALS (https://www.drugs.com/mtm/riluzole.html). | Weakness, dizziness, dry mouth, mouth numbness, difficulty falling asleep or staying asleep, drowsiness, swelling, fast heart rate, hives, rash, itching, difficulty breathing or swallowing, dry cough, nausea, stomach pain, vomiting, extreme tiredness, unusual bleeding or bruising, loss of appetite, pain in upper right part of the stomach, yellowing of the skin or eyes, dark urine, signs of infection, muscle or joint pain, headache (<u>https://</u> <u>medlineplus.gov/druginfo/meds/a696013.html#side-effects</u>). | CNS agent (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>riluzole.html</u>). | Not a cure for ALS, but may delay its progression (https://www.drugs.com/ mtm/riluzole.html). |
| Rizatriptan (Maxalt) | Migraine (<u>https://www.drugs.com/mtm/</u> rizatriptan.html). | Drowsiness, dizziness, tiredness, upset stomach, vomiting, diarrhea, muscle pain or cramps, tremors, flushing, dry mouth, tightness or pressure or pain or heaviness in the chest or throat or neck or jaw, rapid or pounding or irregular heartbeat, SOB, breaking out in cold sweat, lightheadedness, slow or difficult speech, weakness or numbness of arm or leg, sudden or severe stomach pain, bloody diarrhea, paleness or blue color of fingers and toes, pain or burning or tingling in hands or feet, difficulty breathing or swallowing, swelling, rash, itching, changes in vision (https://medlineplus.gov/druginfo/meds/a601109.html#side-effects). | Antimigraine agent (<u>https:// www.drugs.com/mtm/</u> rizatriptan.html). | Treats headaches that have already begun, does not prevent headaches (<u>https://www.drugs.com/</u> <u>mtm/rizatriptan.html</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|-----------------------------------|---|---|---|--|
| Ropinirole (Requip) | Movement disorders (<u>https://www.healthline.com/health/drugs/ropinirole-oral-tablet</u>). | Nausea, vomiting, stomach pain, heartburn, gas, diarrhea, constipation, decrease in appetite, weight loss, dizziness, drowsiness, tiredness, weakness, headache, sweating or flushing, confusion, difficulty remembering or concentrating, anxiety, uncontrolled or sudden body movements, shaking of part of body that cannot be controlled, decreased sensitivity to touch, frequent or urgent need to urinate, difficulty urinating or pain when urinating, difficulty achieving or maintaining an erection, back or muscle or joint pain, pain or burning or numbness or tingling in the hands or feet, swelling, dry mouth, hallucinations, feeling unusually suspicious of others, confusion, aggressive or unfriendly behavior, having strange thoughts or beliefs that have no basis in reality, agitation, fainting, chest pain, slow or fast or irregular heartbeat, rash, hives, itching, SOB, difficulty swallowing or breathing, double vision or other changes in vision, fibrotic changes in the lungs and heart valves (however not known whether this is caused by the medication) (https://medlineplus.gov/druginfo/meds/ a698013.html#side-effects). | Dopaminergic antiparkinsonism agent (<u>https://www.drugs.com/</u> <u>mtm/ropinirole.html</u>). | Requip and Requip XL discontinued for business reasons, not due to safety (<u>https://</u> <u>www.healthline.com/</u> <u>health/drugs/ropinirole-</u> <u>oral-tablet</u>). |
| Selegiline (Eldepryl, Zelapar) | Parkinson's disease (<u>https://www.drugs.com/</u> <u>mtm/selegiline.html</u>). | Hypertensive crisis (when patient consumes tyramine), sudden sleep episodes, orthostatic hypotension, arrhythmias, mental status alteration, hallucinations, extrapyramidal symtpoms, dyskinesia, serotonin syndrome, xerostomia, constipation, headaches, dizziness, insomnia, nausea (<u>https://www.ncbi.nlm.nih.gov/books/NBK526094/#article-28854.s5</u>). | Dopaminergic antiparkinsonism agent, MAO inhibitor (<u>https:// www.drugs.com/mtm/</u> <u>selegiline.html</u>). | Abrupt cessation not advisable due to risk of antidepressant and antiparkinsonian discontinuation syndromes (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK526094/</u> <u>#article-28854.s5</u>). |
| Sumatriptan (Imitrex) | Migraine headache (<u>https://medlineplus.gov/</u> druginfo/meds/a601116.html). | Non-coronary vasospastic reactions, CNS events, mild sedative effects, significant increase in EEG alpha power, worsened OCD, transient rise in blood pressure, transient stinging at injection site, angle-closure glaucoma, injection site reaction, dysgeusia, nasal discomfort, sumatriptan-induced reversible vasoconstriction syndrome, sensations or tightness or pain or pressure or heaviness in the precordium or throat or neck or jaw (of non-cardiac origin) (<u>https://www.ncbi.nlm.nih.gov/books/NBK470206/</u> #article-29679.s5). | Selective serotonin receptor agonist (<u>https://medlineplus.gov/</u> druginfo/meds/a601116.html). | Adverse reactions are dose-dependent (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK470206/</u> <u>#article-29679.s5</u>). |
| Tetrabenazine (Xenazine) | Hungtington's chorea (<u>https://www.drugs.com/</u> <u>mtm/tetrabenazine.html</u>). | Nausea, diarrhea, vomiting, decreased appetite, headache, pain or burning with urination, bruising, difficulty speaking or being understood, fever, sweating, confusion, fast or irregular heartbeat, severe muscle stiffness, difficulty moving or keeping balance, muscle stiffness, irregular heartbeat, SOB, restlessness (https://medlineplus.gov/druginfo/meds/ a618009.html#side-effects). | VMAT2 inhibitor (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>tetrabenazine.html</u>). | May increase risk of depression or suicidal thoughts (<u>https://</u> <u>medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a618009.html#side-</u> <u>effects</u>). |

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|--|---|--|---|--|
| Tizanidine (Zanaflex) | Spasticity (<u>https://www.drugs.com/</u> <u>tizanidine.html</u>). | Drowsiness, blurred vision, asthenia, constipation, dyskinesia, nervousness, hallucination, rhinitis, xerostomia, dizziness, severe liver toxicity and liver failure, anaphylaxis, exfoliative dermatitis, severe hypotension, QT interval prolongation, severe bradycardia, SJS, refractory hypokalemia, potassium wasting nephropathy, tachycardia, rebound hypertension, increased spasticity (https://www.ncbi.nlm.nih.gov/books/NBK519505/ #article-30226.s5). | Skeletal muscle relaxant (<u>https://</u> www.drugs.com/tizanidine.html). | Withdrawal symptoms more likely to occur when discontinuing abruptly (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK519505/</u> <u>#article-30226.s5</u>). |
| Tolcapone (Tasmar) | Parkinson's disease (<u>https://www.drugs.com/</u> <u>mtm/tolcapone.html</u>). | Nausea, postural hypotension, dyskinesia, diarrhea, urine discoloration, drowsiness, insomnia, hallucinations, dizziness, headaches, depression, fatigue, hepatic dysfunction, increased liver enzymes, risk of acute liver failure (black box warning for liver toxicity) (<u>https://www.ncbi.nlm.nih.gov/books/NBK560593/#article-30239.s5</u>). | Dopaminergic antiparkinsonism agent, COMT inhibitor (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>tolcapone.html, https://</u> <u>www.ncbi.nlm.nih.gov/books/</u> <u>NBK560593/#article-30239.s5</u>). | Used in combination with levodopa and carbidopa (https://medlineplus.gov/ druginfo/meds/ a698036.html). |
| Topiramate (Topamax) | Seizures in adults and children at least 2 years old, migraine headaches in adults and teenagers at least 12 years old (<u>https://www.drugs.com/</u> <u>mtm/topiramate.html</u>). | CNS effects, endocrine/metabolic effects, respiratory effects (infection), fever, flushing, paresthesia, dysgeusia, acute myopia, secondary angle- closure glaucoma, oligohidrosis, hyperthermia, metabolic acidosis, suicidal behavior and ideation, influence on spatial memory but no significant effect on learning process, fetal toxicity, increased risk of recurrent malformations in future pregnancies, hyperammonemia, encephalopathy, kidney stones, paresthesia, hepatotoxicity (<u>https://www.ncbi.nlm.nih.gov/books/NBK554530/#article-30267.s5</u>). | Carbonic anhydrase inhibitor, anticonvulsant (<u>https:// www.drugs.com/mtm/</u> <u>topiramate.html</u>). | FDA approval in 1996 for epilepsy (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK554530/</u>). |
| Trihexyphenidyl (Artane, Trihexane) | Parkinson's disease (<u>https://</u> www.ncbi.nlm.nih.gov/books/NBK519488/). | Confusion, delirium, ocular effects, CNS effects, impaired sweating, dry mouth, abdominal discomfort, nausea, urinary retention, constipation, tachycardia, allergic reactions, fatal hyperthermia, severe anhidrosis, tolerance (https://www.ncbi.nlm.nih.gov/books/NBK519488/ #article-30611.s5). | Anticholinergic antiparkinson agent (<u>https://www.drugs.com/</u> <u>mtm/trihexyphenidyl.html</u>). | AEs generally seen as dose-dependent but decreasing over time (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK519488/</u> <u>#article-30611.s5</u>). |
| Vigabatrin (Sabril, Vigadrone) | Infantile spasms, refractory complex partial seizures (<u>https://www.ncbi.nlm.nih.gov/books/</u> <u>NBK557579/#article-59092.s5</u>). | Insomnia, drowsiness, hypotonia, behavioral changes, MRI changes, visual disturbances (<u>https://www.ncbi.nlm.nih.gov/books/NBK557579/</u> <u>#article-59092.s5</u>). | GABA analog (<u>https://</u> www.drugs.com/vigabatrin.html). | In contrast to peripheral vision, central vision remains mostly unaffected (<u>https://www.ncbi.nlm.nih.gov/books/NBK557579/</u> #article-59092.s5). |
| Ophthalmological | | | | |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|-------------------------------------|---|--|--|--|
| Acetazolamide (Diamox) | Glaucoma, edema in congestive heart failure, seizures, altitude sickness (<u>https://</u> <u>www.drugs.com/mtm/acetazolamide.html</u>). | Fatigue, nausea, vomiting, abdominal pain, diarrhea, paresthesia, black stools, decreased libido, tinnitus, taste alteration, depression, bitter or metallic taste, risk of developing metabolic acidosis or hyponatremia or hypokalemia, kidney stones, SJS, aplastic anemia, agranulocytosis, toxic epidermal necrolysis, fulminant hepatic necrosis, fatigue, abdominal pain (https://www.ncbi.nlm.nih.gov/books/NBK532282/#article-17077.s5). | Carbonic anhydrase inhibitor, anticonvulsant (<u>https:// www.drugs.com/mtm/</u> <u>acetazolamide.html</u>). | Known to interact with certain antibiotics, sodium bicarbonate, salicylates (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK532282/</u> <u>#article-17077.s5</u>). |
| Apraclonidine (lopidine) | Glaucoma (https://www.webmd.com/drugs/2/ drug-1546-8030/apraclonidine-ophthalmic-eye/ apraclonidine-solution-0-5-ophthalmic/details). | Red or swollen or itchy or teary eyes, eye discomfort, feeling of something in the eye, irregular or slow or pounding heartbeat, blurred vision, pale eyes, dry eyes, widened pupils, raised eyelids, lack of usual coordination, lack of energy, sleepiness, difficulty falling asleep or staying asleep, unusual dreams, dizziness, headache, depression, irritability, pain or burning or tingling in the hands or feet, changed sense of taste or smell, dry mouth, nausea, vomiting, stomach pain, constipation, diarrhea, dry or burning nose, chest heaviness or burning, skin redness, rash, itching, feeling hot, clammy or sweaty palms, decreased sexual desire, fainting, swelling, SOB (<u>https://medlineplus.gov/druginfo/meds/a608005.html#side-effects</u>). | Ophthalmic glaucoma agent; Decreases amount of fluid in the eye (<u>https://www.drugs.com/cdi/</u> <u>apraclonidine.html, https://</u> <u>www.webmd.com/drugs/2/</u> <u>drug-1546-8030/apraclonidine-</u> <u>ophthalmic-eye/apraclonidine-</u> <u>solution-0-5-ophthalmic/details</u>). | Available as 0.5% eye drops or 1% eye drops (https:// www.mayoclinic.org/ drugs-supplements/ apraclonidine- ophthalmic-route/proper- use/drg-20062024). |
| Bimatoprost (Lumigan) | Glaucoma (<u>https://www.drugs.com/cdi/</u> bimatoprost-eye-drops.html). | Conjunctival hyperemia, eye pruritus, dry eye syndrome, burning irritation, pigmentation of eyelid margins, visual disturbances, eye pain, foreign body sensation, prostaglandin-associated periorbitopathy, herpetic keratitis, alteration of iris pigmentation, cystoid macular edema, skin hyperpigmentation, ocular irritation, eyelid erythema, development of re-exacerbation of anterior non-granulomatous uveitis (<u>https://www.ncbi.nlm.nih.gov/books/NBK576421/#article-140421.s5</u>). | Ophthalmic glaucoma agent (https://www.drugs.com/cdi/ bimatoprost-eye-drops.html). | Not FDA approved for children under 16 years old (<u>https:// www.goodrx.com/</u> <u>lumigan/what-is</u>). |
| Brimonidine (Alphagan P, Lumify) | Glaucoma, eye redness (<u>https://www.drugs.com/</u> <u>cdi/brimonidine-ophthalmic.html</u>). | Itchy or irritated or red or stinging or burning eyes, dry eyes, watery or runny eyes, red or swollen eyelids, sensitivity to light, blurred vision, headache, drowsiness, difficulty falling asleep or staying asleep, dry mouth, runny nose or other cold symptoms, cough, sore throat, flu-like symptoms, pain or pressure in the face, heartburn, rash, difficulty breathing, seeing specks or flashes of light, blind spots, fainting, dizziness, nausea (https://medlineplus.gov/druginfo/meds/a601232.html#side-effects). | Ophthalmic glaucoma agent; Lowers pressure in the eyes, alpha adrenergic agonist, decreases fluid in the eyes (<u>https://www.drugs.com/cdi/</u> <u>brimonidine-ophthalmic.html,</u> <u>https://medlineplus.gov/druginfo/</u> <u>meds/a601232.html#side-effects</u>). | Available as a milder OTC version for treating red eye (<u>https://</u> <u>www.goodrx.com/</u> <u>brimonidine/what-is</u>). |
| Carbachol | Reduction of intraocular pressure after cataract surgery, induction of miosis during surgery (https://go.drugbank.com/drugs/DB00411). | Eye injury after cataract surgery, flushing, sweating, upset stomach, bladder cramps, headache, veil or curtain appearing across part of vision, diarrhea, stomach cramps or pain, vomiting, fainting, flushing or redness of face, frequent urge to urinate, increased sweating, irregular heartbeat, SOB, wheezing, tightness in chest, unusual tiredness or weakness, watering of mouth, blurred vision or change in near or distance vision, eye pain, stinging or burning of the eye, headache, irritation or redness of eyes, twitching of eyelids (https://www.goodrx.com/miostat/what-is#side-effects). | Ophthalmic glaucoma agent; Muscarinic agonist (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>carbachol.html, https://</u> <u>go.drugbank.com/drugs/</u> <u>DB00411</u>). | Discovered in 1932, FDA approval in 1972 (<u>https://go.drugbank.com/drugs/ DB00411</u>). |

Categories: Cardiovascular, Endocrine/Metabolic, Gastrointestinal, Genetic, Hematological/Oncological, Immunological, Microbiological, Musculoskeletal, Neurological, Ophthalmological, Psychiatric, Renal/Urological, Reproductive, Respiratory, Surgical, Toxicological

| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|------------------------------|--|--|--|---|
| Cyclopentolate Ophthalmic | Used for pupil dilation and cycloplegia before eye examination (<u>https://medlineplus.gov/druginfo/meds/a616014.html#side-effects</u>). | Stinging or burning or discomfort in the eye, itching or redness of the eye, redness or swelling or other symptoms of pink eye, drowsiness, rash, fever, difficulty urinating, decreased sweating, dry mouth; Usually in children: problems with coordination, restlessness, hallucinations, hyperactivity, changes in behavior, seizures, mental confusion, failure to recognize people; In infants: bloating of abdomen (https://medlineplus.gov/druginfo/meds/a616014.html#side-effects). | Blocks receptors in the eye to temporarily relax or provide short- term paralysis of the eye muscles (<u>https://medlineplus.gov/druginfo/</u> <u>meds/a616014.html#side-effects</u>). | Effects last up to 24 hours, sometimes last several days; Patients with dark eye color may require increased dose (https://medlineplus.gov/ druginfo/meds/ a616014.html#side- effects). |
| Echothiophate iodide | Glaucoma, accommodative esotropia (<u>https://www.webmd.com/drugs/2/drug-6982/</u> echothiophate-iodide-ophthalmic-eye/details). | Allergic reaction, changes in eyesight, eye pain, very bad eye irritation, fast or slow heartbeat, heartbeat that does not feel normal, diarrhea, inability to control bladder, increased salivation, muscle weakness, increased sweating, SOB (https://www.drugs.com/cdi/echothiophate-iodide.html#side-effects). | Ophthalmic glaucoma agent; Shrinks the pupil, decreases fluid in the eye (<u>https://</u> www.drugs.com/cdi/ echothiophate-iodide.html, <u>https://www.webmd.com/drugs/</u> 2/drug-6982/echothiophate- iodide-ophthalmic-eye/details). | Should not be used by patients with uveitis or angle-closure glaucoma (https://www.drugs.com/ <u>mtm/echothiophate-</u> iodide-ophthalmic.html). |
| Latanoprost (Xalatan) | Glaucoma (<u>https://medlineplus.gov/druginfo/</u> meds/a697003.html). | Changes to eyelashes, changes to eye color, eyelid edema, blurred vision, dry eyes, itching, redness, conjunctival hyperemia, worsened intraocular inflammation, macular edema, reactivation of herpetic keratitis, superficial punctate keratopathy, contact dermatitis/allergic conjunctivitis, iris cyst (<u>https://www.goodrx.com/latanoprost/what-is</u> , <u>https://</u> www.ncbi.nlm.nih.gov/books/NBK540978/#article-37245.s5). | Prostaglandin eye drop; Prostaglandin F2 alpha analog (<u>https://www.goodrx.com/</u> <u>latanoprost/what-is</u> , <u>https://</u> <u>www.ncbi.nlm.nih.gov/books/</u> NBK540978/#article-37245.s5). | FDA approval in 2019 for open-angle glaucoma and ocular hypertension (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK540978/</u> #article-37245.s5). |
| Olopatadine (Pataday) | Itchy eyes caused by allergies (<u>https://</u> www.healthline.com/health/drugs/olopatadine- ophthalmic-solution#about). | Blurred vision, burning or stinging in the eyes, dry eyes, abnormal sensation in the eyes, headache, changes in the way food tastes, eye pain or itching, severe irritation in the eye, change in eyesight (<u>https://www.healthline.com/</u> <u>health/drugs/olopatadine-ophthalmic-solution#side-effects</u>). | Ophthalmic antihistamine, ophthalmic decongestant (<u>https:// www.drugs.com/mtm/</u> olopatadine-ophthalmic.html). | Eye drops (<u>https://</u> www.healthline.com/ health/drugs/olopatadine- ophthalmic- solution#about). |
| Psychiatric | | | | |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|--|--|---|---|--|
| Alprazolam (Xanax) | Anxiety disorders, panic disorders, anxiety caused by depression (<u>https://www.drugs.com/</u> <u>alprazolam.html</u>). | Drowsiness, tiredness, dizziness, insomnia, memory problems, poor balance or coordination, slurred speech, trouble concentrating, irritability, diarrhea, constipation, increased sweating, headache, nausea, vomiting, upset stomach, blurred vision, appetite or weight changes, swelling, muscle weakness, dry mouth, stuffy nose, loss of interest in sex, worsening depression, hypomania, decreased mental alertness, neonatal sedation and withdrawal syndrome (<u>https://www.ncbi.nlm.nih.gov/books/NBK538165/</u> <u>#article-17404.s5</u>). | Benzodiazepine (<u>https://</u> www.drugs.com/alprazolam.html). | Should be avoided in patients with pulmonary disease, given increased risk of respiratory depression, low blood pressure, and death (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK538165/</u> #article-17404.s5). |
| Amitriptyline (Elavil, Endep, Vanatrip) | Depression (<u>https://www.drugs.com/</u> <u>amitriptyline.html</u>). | Weight gain, GI symptoms, xerotstomia, dizziness, headache, somnolence, orthostatic hypotension, sedation, heart rate variability, slow intracardiac conduction, arrhythmias, QTc prolongation, blurred vision, dry mouth, urinary retention, tachycardia, acute angle glaucoma, confusion, delirium, sedation, increased appetite, weight gain, confusion, abnormalities in liver function tests, increased risk of bone fracture, bone marrow suppression, increase risk of suicidal ideation and behavior in young adults, mania (https://www.ncbi.nlm.nih.gov/books/NBK537225/#article-17465.s5). | Tricyclic antidepressant (<u>https:// www.drugs.com/</u> <u>amitriptyline.html</u>). | Can decrease seizure threshold in dose- dependent manner (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK537225/</u> #article-17465.s5). |
| Amoxapine | Asendin (<u>https://www.drugs.com/mtm/</u> amoxapine.html). | Insomnia, palpitations, tachycardia, hypotension, constipation, hypomanic states in patients with underlying bipolar disorder, painful ejaculations, increased risk of seizures in patients with epilepsy and elderly patients; Especially in elderly population: sedation, insomnia, dry mouth, delirium, Parkinsonism symptoms, prolonged QTc interval (<u>https://www.ncbi.nlm.nih.gov/books/NBK540980/#article-17473.s5</u>). | Tricyclic antidepressant (<u>https://www.drugs.com/mtm/</u> amoxapine.html). | Part of the second- generation of tryicyclic dibenzoxazepine antidepressants (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK540980/</u> <u>#article-17473.s5</u>). |
| Amphetamine salts (Adderall) | ADHD, narcolepsy (<u>https://perks.optum.com/</u> <u>blog/amphetamine-salts-why-you-might-need-</u> <u>them/</u>). | Loss of appetite, weight loss, dry mouth, stomach upset/pain, nausea/ vomiting, dizziness, headache, diarrhea, fever, nervousness, trouble sleeping, increased blood pressure, blood flow problems in the fingers or toes, unusual wounds on fingers or toes, mental/mood/behavior changes, uncontrolled movements, continuous chewing movements, tooth-grinding, outbursts of words or sounds, changes in sexual ability or desire, frequent or prolonged erections, SOB, chest/jaw/left arm pain, fainting, severe headache, fast/pounding/irregular heartbeat, seizures, swelling, extreme tiredness, blurred vision, weakness on one side of the body, trouble speaking, confusion, serotonin syndrome/toxicity, fast heartbeat, hallucinations, loss of coordination, severe dizziness, severe nausea/ vomiting/diarrhea, twitching muscles, unexplained fever, unusual agitation/ restlessness, allergic reaction, rash, itching/swelling especially of the face/ tongue/throat, severe dizziness, trouble breathing (<u>https://</u> www.webmd.com/drugs/2/drug-63163/adderall-oral/details). | CNS stimulant (<u>https:// www.drugs.com/</u> <u>amphetamine.html</u>). | Misuse or abuse of amphetamine may cause serious and possibly fatal heart and blood pressure problems; Long-term use may lead to dependence and withdrawal (<u>https:// www.webmd.com/drugs/</u> <u>2/drug-63163/adderall- oral/details</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|-------------------------|--|---|--|--|
| Aripiprazole (Abilify) | Schizophrenia, mania and mixed episodes in bipolar disorder, depression, autism, Tourette's disorder (<u>https://medlineplus.gov/druginfo/meds/</u> <u>a603012.html</u>). | Akathisia, resting tremor, shuffling gait, acute dystonic reactions, oculogyric crises, opisthotonos, tardive dyskinesia, galatorrhea, gynecomastia, sexual dysfunction, amenorrhea, off-cycle bleeding, somnolence, nausea, vomiting, akathirisa, lightheadedness, SAIDH, hyponatremia, compulsive or uncontrollable urges to engage in sex or gambling or binge eating or shopping, neuroleptic malignant syndrome, liver function abnormalities and jaundice, seizures, agranulocytosis, FDA boxed warning—increased risk of cerebrovascular events and death in elderly patients with psychosis related to major neurocognitive disorder, suicidal thoughts among children or adolescents or young adults (https://www.ncbi.nlm.nih.gov/books/NBK547739/#article-17815.s5). | Atypical antipsychotic (<u>https:// www.drugs.com/</u> aripiprazole.html). | Similar AEs compared to typical and atypical antipsychotics, though degree of extrapyramidal symptoms and metabolic syndromes are less due to receptor specificity (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK547739/</u> #article-17815.s5). |
| Atomoxetine (Strattera) | ADHD (<u>https://www.drugs.com/mtm/</u> atomoxetine.html). | Boxed warning—suicidal ideation in children and adolescents, headache, insomnia, hyperhidrosis, xerostomia, delayed ejaculation and priapism, nausea, decreased appetite, abdominal pain, vomiting, palpitations, cold extremities, prolonged QTc interval on ECG, increased diastolic blood pressure, systolic hypertension, syncope, orthostatic hypotension, tachycardia, fatigue, dizziness, depression, disturbed sleep, irritability, jitteriness, abnormal dreams, chills, paresthesia, anxiety, hostility (children and adolescents), emotional lability, agitation, restlessness, seizures, excoriation, rash, pruritus, urticaria, flushing, weight loss, hot flashes, increased thirst, menstrual disease, dyspepsia, anorexia, dysgeusia, flatulence, urinary retention, dysmenorrhea, dysuria, pollakiuria, testicular pain, urinary frequency, tremor, muscle spasm, weakness, blurred vision, conjunctivitis, decreased libido, ejaculatory disorder, liver toxicity (<u>https://</u> <u>www.ncbi.nlm.nih.gov/books/NBK493234/#article-17954.s5</u>). | Adrenergic uptake inhibitor (<u>https://www.drugs.com/mtm/</u> <u>atomoxetine.html</u>). | Clinicians should perform a risk-benefit analysis before starting patients on this drug (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK493234/</u> <u>#article-17954.s5</u>). |
| Buprenorphine (Subutex) | Opioid addiction (<u>https://www.drugs.com/</u> <u>buprenorphine.html</u>). | CNS depression, hypotension, QT prolongation, lowered seizure threshold, nausea, vomiting, drowsiness, dizziness, headache, memory loss, sweating, dry mouth, miosis, orthostatic hypotension, sexual side effects, urinary retention (<u>https://www.ncbi.nlm.nih.gov/books/NBK459126/</u> #article-18708.s5). | Opioid, narcotic analgesic (<u>https://www.drugs.com/</u> buprenorphine.html). | This drug is only a partial opioid agonist and has mild addictive potential, but it can be misused (https://www.ncbi.nlm.nih.gov/books/NBK459126/#article-18708.s5). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|--|--|---|---|--|
| Buprenorphine/naloxone (Suboxone, Zubsolv, Bunavail) | Addiction (<u>https://www.drugs.com/mtm/</u> <u>buprenorphine-and-naloxone-oral-</u> <u>sublingual.html</u>). | Allergic reaction, slowed or stopped breathing or death, problems with teeth or gums, weak or shallow breathing, breathing that stops during sleep, lightheadedness, confusion, loss of coordination, extreme weakness, blurred vision, slurred speech, liver problems, high levels of serotonin, low cortisol, opioid withdrawal, dizziness, drowsiness, blurred vision, feeling drunk, trouble concentrating, withdrawal symptoms, tongue pain, redness or numbness in the mouth, nausea, vomiting, constipation, headache, back pain, fast or pounding heartbeats, increased sweating, sleep problems (https://www.drugs.com/suboxone.html#side-effects). | Narcotic analgesic combination (<u>https://www.drugs.com/mtm/</u> <u>buprenorphine-and-naloxone-</u> <u>oral-sublingual.html</u>). | Serious breathing problems possible in older adults, those who are debilitated or having wasting syndrome or chronic breathing disorders (<u>https://</u> <u>www.drugs.com/</u> <u>suboxone.html#side-</u> <u>effects</u>). |
| Bupropion (Wellbutrin) | Major depressive disorder, seasonal affective disorder, smoking cessation (<u>https://</u> <u>www.drugs.com/bupropion.html</u>). | Tachycardia, rhinitis, pharyngitis, insomnia, headache, agitation, dizziness, diaphoresis, weight loss, constipation, dry mouth, nausea, tremor, blurred vision, lower seizure threshold, potential of worsening suicidal ideation (https://www.ncbi.nlm.nih.gov/books/NBK470212/#article-18709.s5). | Smoking cessation agent (<u>https://</u> <u>www.drugs.com/bupropion.html</u>). | Removed from the market from 1986 through 1989 due to epileptic seizure occurrence (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK470212/</u> <u>#article-18709.s5</u>). |
| Buspirone (Buspar) | Anxiety (<u>https://www.drugs.com/buspirone.html</u>). | Dizziness, abnormal dreams, ataxia, confusion, dizziness, drowsiness, excitement, headache, nervousness, numbness, outbursts of anger, paresthesia, blurred vision, tinnitus, chest pain, nasal congestion, diaphoresis, skin rash, diarrhea, nausea, sore throat, musculoskeletal pain, tremor, weakness, hepatic effects (isolated cases of serum enzyme elevations without jaundice), sleepwalking, QT prolongation in patients with preexisting cardiac disorders (<u>https://www.ncbi.nlm.nih.gov/books/NBK531477/#article-18731.s5</u>). | Anxiolytic, sedative, hypnotic (<u>https://www.drugs.com/</u> <u>buspirone.html</u>). | Shown to help relieve adverse sexual effects of SSRIs when given as augmenting agent (<u>https://</u> www.ncbi.nlm.nih.gov/ books/NBK531477/ #article-18731.s5). |
| Carbamazepine (Tegretol) | Bipolar disorder (<u>https://www.drugs.com/</u> <u>carbamazepine.html</u>). | Dizziness, drowsiness, ataxia, nausea, vomiting, black box warning—severe dermatologic reactions, SJS, toxic epidermal necrolysis, maculopapular eruptions, DRESS syndrome, black box warning—agranulocytosis and aplastic anemia, CNS depression, hepatotoxicity, confusion, renal toxicity, suicidal ideation, hyponatremia, increased risk of delirium in elderly population, urinary retention, increased intraocular pressure, constipation, exacerbation of heart failure, cardiac dysfunction in healthy patients, homocysteinemia, teratogenesis (relatively low teratogenic effect in comparison with Valproic acid), increased frequency of generalized convulsions in patients with mixed seizure disorder that includes atypical absence seizures (https://www.ncbi.nlm.nih.gov/books/NBK482455/#article-18838.s5). | Dibenzazepine anticonvulsant (<u>https://www.drugs.com/</u> <u>carbamazepine.html</u>). | Studies have indicated strong association between genetic variant and SJS/toxic epidermal necrolysis in patients of Han Chinese ancestry (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK482455/</u> #article-18838.s5). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|--------------------------|--|---|---|--|
| Chlordiazepoxide | Anxiety, agitation caused by alcohol withdrawal (https://medlineplus.gov/druginfo/meds/ a682078.html). | Fatigue, sedation, depression, dizziness, ataxia, slurred speech, weakness, confusion, forgetfulness, nervousness, hyperexcitability, pain at injection site, mania, weight gain, hallucination, hypotension, skin eruptions, menstrual irregularity, dry mouth, hyper-salivation, blood dyscrasias, renal dysfunction, hepatic dysfunction, respiratory depression (<u>https://www.ncbi.nlm.nih.gov/books/NBK547659/#article-41623.s5</u>). | Benzodiazepine (<u>https://</u> www.drugs.com/mtm/ chlordiazepoxide.html). | May be habit forming (<u>https://medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a682078.html</u>). |
| Chlorpromazine | Schizophrenia, psychotic disorders, mania, bipolar disorder (<u>https://medlineplus.gov/</u> <u>druginfo/meds/a682040.html</u>). | Dry mouth, dizziness, urine retention, blurred vision, constipation, risk of angle-closure glaucoma in the elderly, sedation (due to blockade of histamine H1 receptors), increased prolactin level, decreased libido, gynecomastia, galactorrhea, erectile dysfunction, priapism, irregular menstruation, oligomenorrhea, amenorrhea, galactorrhea, hypotension, headache, corneal deposits, lens opacity, prolonged QT interval, cholestatic jaundice, drug-induced hepatotoxicity, increased ALT, extrapyramidal side effects, neuroleptic malignant syndrome (https://www.ncbi.nlm.nih.gov/books/NBK553079/#article-19440.s5). | Typical antipsychotic, neuroleptic, first-generation antipsychotic; Produces antipsychotic effect by post-synaptic blockade of D2 receptors in the mesolimbic pathway; Antiemetic effect due to combined blockade of H1, D2, M1 receptors in the vomiting center (<u>https://</u> <u>www.ncbi.nlm.nih.gov/books/</u> NBK553079/#article-19440.s5). | Highly lipid-soluble and stored in body fats, very slow to be removed from the body; Blocking D2 receptors in the nigrostriatal pathway is responsible for extrapyramidal side effects (https:// www.ncbi.nlm.nih.gov/ books/NBK553079/ #article-19440.s5). |
| Citalopram (Celexa) | Depression, major depressive disorder (<u>https://www.drugs.com/citalopram.html</u>). | Drowsiness, insomnia, dizziness, headache (dose dependent), diaphoresis, nausea, vomiting, xerostomia, constipation, diarrhea, ejaculation disorder (dose dependent), myocardial infarction, prolonged QT interval, torsades de pointes, hemorrhage, cerebrovascular accident, suicidal ideation, suicide, induction of mania, serotonin syndrome, SIADH, hyponatremia, impotence, fatigue, somnolence, insomnia, sweating, yawning, discontinuation syndrome, black box warning—suicidality and worsening depression in children and adolescents and young adults (<u>https://www.ncbi.nlm.nih.gov/books/NBK482222/#article-19573.s5</u>). | SSRI (<u>https://www.drugs.com/</u> <u>citalopram.html</u>). | Significant drug interactions (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK482222/</u> <u>#article-19573.s5</u>). |
| Clomipramine (Anafranil) | OCD (<u>https://www.drugs.com/mtm/</u> <u>clomipramine.html</u>). | Nausea, weight gain, increased appetite, sedation, dry mouth, constipation, urinary retention, blurred vision, headache, dizziness, fatigue, hypotension, anxiety, restlessness, sweating, blue-green urine, sexual dysfunction, arrhythmia, tachycardia, QTc prolongation, orthostasis, seizures, paralytic ileus, hyperthermia, hepatic failure, increased intraocular pressure, mania induction, activation of suicidality, adverse effects on fetus or infant due to maternal use (https://www.ncbi.nlm.nih.gov/books/NBK541006/ #article-42905.s5). | Tyricyclic antidepressant; serotonin reuptake inhibitor with stronger affinity for serotonin transporter than other TCAs and S-Rls (<u>https://www.drugs.com/ mtm/clomipramine.html, https:// www.ncbi.nlm.nih.gov/books/ NBK541006/#article-42905.s5</u>). | First FDA approved medication for OCD, in 1989 (<u>https://</u> www.ncbi.nlm.nih.gov/ books/NBK541006/ #article-42905.s5). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|--------------------------------------|--|--|---|---|
| Clonazepam (Klonopin) | Absence seizures, Lennox-Gastaut syndrome, panic disorder, agoraphobia (<u>https://</u> <u>www.drugs.com/clonazepam.html</u>). | Lethargy, fatigue, sedation, drowsiness, motor impairment, blurred vision, confusion, irritability, loss of libido, lack of motivation, psychomotor agitation, hallucination, worsening of depression, short-term memory loss, anterograde amnesia (especially with high doses), personality changes, behavioral disturbance, ataxia, increased frequency of seizures, thrombocytopenia, dysphoria, paradoxical disinhibition (elderly especially prone to this side effect), suicide, psychosis, incontinence, depression, sexual dysfunction (https://www.ncbi.nlm.nih.gov/books/NBK556010/#article-19617.s5). | Benzodiazepine anticonvulsant (<u>https://www.drugs.com/</u> <u>clonazepam.html</u>). | AEs derive from activity as CNS depressant, like other benzodiazepine drugs (<u>https://</u> www.ncbi.nlm.nih.gov/ books/NBK556010/ #article-19617.s5). |
| Clonidine (Kapvay) | ADHD (<u>https://www.drugs.com/clonidine.html</u>). | Abdominal pain, headache, hypotension, fatigue, nausea, emotional instability, constipation, xerotstomia, diarrhea, sexual dysfunction, dizziness, sedation, angioedema, depression, hypersensitivity, atrioventricular block, bradycardia, syncope, severe hypotension, rebound hypertension and withdrawal given abrupt discontinuation (<u>https://www.ncbi.nlm.nih.gov/books/NBK459124/#article-19618.s5</u>). | Agonist on alpha-adrenergic and imidazoline receptors (<u>https:// www.ncbi.nlm.nih.gov/books/</u> <u>NBK459124/#article-19618.s5</u>). | FDA approved in 2010 for treatment of ADHD in children (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK459124/</u> <u>#article-19618.s5</u>). |
| Clozapine | Schizophrenia in adults after other treatments have failed, reduction of suicidal behavior risk in schizophrenia and similar disorders (<u>https://</u> <u>www.drugs.com/clozapine.html</u>). | Agranulocytosis, clozapine-induced myocarditis, significant weight gain, type 2 diabetes, diabetic ketoacidosis, increased lipid levels, lowered seizure threshold in patients with or without epilepsy (usually dose-dependent), sialorrhea, increased platelet adhesion and aggregation, constipation, ileus, bowel obstruction, bowel ischemia, dysphagia, orthostatic hypotension, sedation, tachycardia, sexual dysfunction, urinary retention (https://www.ncbi.nlm.nih.gov/books/NBK535399/ #article-19641.s5). | Atypical antipsychotic (<u>https://</u> www.drugs.com/clozapine.html). | Clinicians must place patients taking clozapine on a national registry (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK535399/</u> <u>#article-19641.s5</u>). |
| Desipramine (Norpramin) | Depression (<u>https://medlineplus.gov/druginfo/</u> meds/a682387.html). | Increased risk for suicide, orthostatic hypotension, cardiac abnormalities, seizures, ocular crisis, fractures, heart block, arrhythmias, sudden death, blurred vision, constipation, tachycardia, confusion, dry mouth, urinary retention, delirium, ocular crisis, increased risk for dementia, increased risk of osteoporotic fracture, acute hepatitis, bone marrow toxicity, sexual dysfunction, seizures, sedation, tremors, diaphoresis (<u>https://www.ncbi.nlm.nih.gov/books/NBK470581/#article-20405.s5</u>). | Tricyclic antidepressant (<u>https://www.drugs.com/mtm/</u> <u>desipramine.html</u>). | Orthostatic hypotension is a common reason for discontinuation (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK470581/</u> <u>#article-20405.s5</u>). |
| Desvenlafaxine (Kedezla, Pristiq) | Major depressive disorder (<u>https://</u> www.drugs.com/mtm/desvenlafaxine.html). | Abdominal pain, decreased appetite, headache, nausea, diarrhea, dizziness, cough; Abruptly stopping this drug can cause irritability, nausea, headaches (<u>https://www.ncbi.nlm.nih.gov/books/NBK534829/</u> #article-40547.s5). | Serotonin-NE reuptake inhibitor (<u>https://www.drugs.com/mtm/</u> <u>desvenlafaxine.html</u>). | Necessary to monitor for increased suicidal ideation (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK534829/</u> #article-40547.s5). |

Categories: Cardiovascular, Endocrine/Metabolic, Gastrointestinal, Genetic, Hematological/Oncological, Immunological, Microbiological, Musculoskeletal, Neurological, Ophthalmological, Psychiatric, Renal/Urological, Reproductive, Respiratory, Surgical, Toxicological

| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|------------------------|--|---|---|--|
| Diazepam (Valium) | Anxiety disorders, alcohol withdrawal symptoms, muscle spasms and stiffness, seizures (<u>https://www.drugs.com/diazepam.html</u>). | Respiratory depression, dependence and abuse, benzodiazepine withdrawal syndrome, suicidality, cardiovascular collapse, bradycardia, hypotension, syncope, paradoxical CNS stimulation, sedation, fatigue, confusion, anterograde amnesia, depression, ataxia, irritability, disinhibition, local injection site reaction, headache, tremor, dystonia, urinary retention, incontinence, nausea, constipation, diplopia, changes in libido, rash, menstrual irregularities, ALT and/or AST elevation (https://www.ncbi.nlm.nih.gov/books/NBK537022/#article-20488.s5). | Benzodiazepine anticonvulsant (<u>https://www.drugs.com/</u> <u>diazepam.html</u>). | Drug interactions may cause increased or decreased levels of diazepam (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK537022/</u> <u>#article-20488.s5</u>). |
| Donepezil (Aricept) | Alzheimer's disease (<u>https://www.drugs.com/</u> <u>mtm/donepezil.html</u>). | GI effects, insomnia, muscle cramps, fatigue, anorexia, bradycardia, heart block, syncopal episodes, hypertension, edema, EKG abnormalities, hypotension, nightmares, neuroleptic malignant syndrome, rhabdomyolysis (https://www.ncbi.nlm.nih.gov/books/NBK513257/#article-20656.s5). | Cholinesterase inhibitor (<u>https://www.drugs.com/mtm/</u> <u>donepezil.html</u>). | Not a cure for Alzheimer's disease, some patients taking this drug have improved mental function, some have unchanged or worsening mental function (https://www.drugs.com/mtm/donepezil.html). |
| Doxepin | Depression, anxiety (<u>https://medlineplus.gov/</u> druginfo/meds/a682390.html). | Sedation, somnolence, significant increase in weight, orthostatic hypotension, dry mouth, constipation, dizziness, lightheadedness, tachycardia, prolonged QT interval, black box warning—possible increase in suicidality (<u>https://www.ncbi.nlm.nih.gov/books/NBK542306/</u> <u>#article-43596.s5</u>). | Tricyclic antidepressant; Antagonizes histamine, adrenergic, and muscarinic receptors (<u>https://</u> <u>medlineplus.gov/druginfo/meds/</u> <u>a682390.html</u> , <u>https://</u> <u>www.ncbi.nlm.nih.gov/books/</u> <u>NBK542306/#article-43596.s5</u>). | Different adverse effects based on receptor antagonized (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK542306/</u> <u>#article-43596.s5</u>). |
| Duloxetine (Cymbalta) | Major depressive disorder in adults, general anxiety disorder in adults and children at least 7 years old, diabetic neuropathy in adults, chronic muscle or joint pain (<u>https://www.drugs.com/</u> <u>duloxetine.html</u>). | Suicidality, serotonin syndrome, liver toxicity, mania, syncope, SIADH, hyponatremia, headache, drowsiness, fatigue, nausea, xerostomia, abdominal pain, weight loss, weakness, insomnia, dizziness, change in libido, diaphoresis, constipation, decreased appetite, tremor, diarrhea, erectile dysfunction (https://www.ncbi.nlm.nih.gov/books/NBK549806/ #article-20751.s5). | SSNRI (<u>https://www.drugs.com/</u> <u>duloxetine.html</u>). | FDA pregnancy category C (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK549806/</u> #article-20751.s5). |
| Escitalopram (Lexapro) | Depression, anxiety disorder (<u>https://</u> medlineplus.gov/druginfo/meds/a603005.html). | Insomnia, sexual dysfunction, nausea, increased sweating, fatigue, somnolence, QT prolongation, serotonin syndrome, SSRI-induced SAIDH, hyponatremia, anorexia, vomiting, fatigue, headache, altered mental status, seizures, coma, QT prolongation, torsades de pointes, serotonin syndrome, drug withdrawal if abruptly stopped (<u>https://www.ncbi.nlm.nih.gov/books/</u> <u>NBK557734/#article-60.s5</u>). | SSRI (<u>https://medlineplus.gov/</u> druginfo/meds/a603005.html). | Lower toxicity profile than older antidepressants, but still associated with significant adverse effects (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK557734/</u> <u>#article-60.s5</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|-----------------------|--|---|--|---|
| Eszopiclone (Lunesta) | Insomnia (<u>https://www.drugs.com/mtm/</u> eszopiclone.html). | Headache, pain, daytime drowsiness, lightheadedness, dizziness, loss of coordination, nausea, vomiting, heartburn, unpleasant taste, dry mouth, unusual dreams, decreased sexual desire, painful menstrual periods, breast enlargement in males, hives, rash, itching, swelling, difficulty breathing or swallowing, feeling that the throat is closing, hoarseness (<u>https://medlineplus.gov/druginfo/meds/a605009.html#side-effects</u>). | May increase GABA in the brain (https://www.healthline.com/ health/drugs/eszopiclone-oral- tablet#about). | Some patients taking this drug have gotten out of bed and driven cars, prepared and eaten food, had sex, made phone calls, sleep-walked, or engaged in other activities while not fully awake, and were unable to remember what they had done (<u>https://</u> <u>medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a605009.html#side-</u> <u>effects</u>). |
| Ethosuximide | Absence seizures in adults and children (<u>https://www.drugs.com/mtm/ethosuximide.html</u>). | GI effects, drowsiness, lethargy, insomnia, hiccups, headache, SJS, agranulocytosis, aplastic anemia, systemic lupus erythematosus (<u>https://www.ncbi.nlm.nih.gov/books/NBK544244/#article-21395.s5</u>). | Anticonvulsant (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>ethosuximide.html</u>). | Rate of adverse effects with this drug is less than with most other enzyme- inducing antiepileptic drugs (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK544244/</u> <u>#article-21395.s5</u>). |
| Fluoxetine (Prozac) | Major depressive disorder, bulimia nervosa, OCD, panic disorder, PMDD (<u>https://www.drugs.com/</u> <u>fluoxetine.html</u>). | Insomnia, nausea, diarrhea, anorexia, dry mouth, headache, drowsiness, anxiety, nervousness, yawning, decreased libido, decreased arousal, bruising, bleeding, hyperhidrosis, seizures, induction of mania, rare activation of suicidal ideation and behavior (especially in teens), weight gain or loss, decreased orgasm, muscle weakness, tremors, pharyngitis, anxiety, agitation, activation, cognitive slowing or apathy (<u>https://www.ncbi.nlm.nih.gov/books/NBK459223/#article-21850.s5</u>). | SSRI (<u>https://www.drugs.com/</u> f <u>luoxetine.html</u>). | Sometimes used with olanzapine (Zyprexa) to treat manic depression caused by bipolar disorder, or to treat depression after at least 2 other medications have failed (<u>https://</u> <u>www.drugs.com/</u> <u>fluoxetine.html</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|------------------------|--|--|--|---|
| Fluphenazine | Schizophrenia (<u>https://www.drugs.com/mtm/</u> fluphenazine.html). | Sedation, dry mouth, dry eyes, blurred vision, constipation, orthostasis, dizziness, hypotension, urinary retention, rebound tachycardia, weight gain, extrapyramidal symptoms, resting tremor, shuffling gate, acute dystonic reactions, oculogyric crises, opisthotonos, tardive dyskinesia, glactorrhea, gynecomastia, sexual dysfunction, amenorrhea, off-cycle bleedings, neuroleptic malignant syndrome, liver function abnormalities, jaundice, seziures, agranulocytosis, black box warning—increased risk of cerebrovascular events and death in elderly patients with psychosis related to major neurocognitive disorder, allergic reactions, electrocardiogram abnormalities, QT prolongation, T-wave abnormalities (<u>https://</u> www.ncbi.nlm.nih.gov/books/NBK459194/#article-21851.s5). | Antagonizes postsynaptic D2 receptors in mesolimbic, nigrostriatal, and tuberoinfundibulnar neural pathways (<u>https://</u> <u>www.ncbi.nlm.nih.gov/books/</u> <u>NBK459194/#article-21851.s5</u>). | Adverse effect profile similar to other first- generation or other typical antipsychotics (https:// www.ncbi.nlm.nih.gov/ books/NBK459194/ #article-21851.s5). |
| Fluvoxamine | OCD in adults and children at least 8 years old (https://www.drugs.com/mtm/fluvoxamine.html). | Drowsiness, dry mouth, nausea, vomiting, diarrhea, stomach pain, constipation, indigestion, gas, change in taste, stuffy nose, decreased appetite, sweating, difficulty falling asleep or staying asleep, weight loss, nervousness, sexual problems, dizziness, fever, confusion, fast or irregular heartbeat, severe muscle stiffness or twitching, agitation, hallucination, loss of coordination, nausea, vomiting, diarrhea, pain, burning, numbness, tingling in the hands or feet, shaking in part of the body that cannot be controlled, headache, difficulty concentrating, memory problems, confusion, weakness, unsteadiness, rash, hives, swelling, slowed or difficult breathing, seizures, loss of consciousness, unusual bleeding or bruising, bloody nose, vomiting blood or material that looks like coffee grounds, red blood in stool or black and tarry stools; In children: decreased appetite, weight loss (https://medlineplus.gov/druginfo/meds/a695004.html#side-effects). | SSRI (<u>https://www.drugs.com/</u> <u>mtm/fluvoxamine.html</u>). | Mental health may change in unexpected ways while taking fluvoxamine (<u>https://</u> <u>medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a695004.html</u>). |
| Fosphenytoin | Seizures (<u>https://www.drugs.com/mtm/</u> fosphenytoin.html). | Nystagmus, dizziness, pruritus, drowsiness, ataxia, pelvic pain, tachycardia, tongue disorder, paresthesia, dysarthria, vertigo, diplopia, deafness, severe hypotension, cardiac arrhythmias, toxic epidermal necrolysis, SJS, purple glove syndrome, hematopoietic reactions, bleeding disorder in neonates (when exposed to phenytoin in utero), hyperphosphatemia, exacerbation of porphyria, fetal hydantoin syndrome, hyperglycemia, angioedema, DRESS syndrome, liver toxicity, U.S. boxed warning—severe hypotension and cardiac arrhythmia (<u>https://www.ncbi.nlm.nih.gov/books/NBK560745/</u> <u>#article-21936.s5</u>). | Hydantoin anticonvulsant (<u>https://www.drugs.com/mtm/</u> fosphenytoin.html). | Adverse effects more associated with IV administration than IM administration (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK560745/</u> <u>#article-21936.s5</u>). |
| Gabapentin (Neurontin) | Partial seizures, nerve pain from shingles and restless leg syndrome (<u>https://www.drugs.com/gabapentin.html</u>). | Suicidality, depression, SJS, anaphylaxis, angioedema, erythema multiforme, rhabdomyolysis, withdrawal seizure or symptoms if discontinued abruptly, ataxia, dizziness, fatigue, somnolence, fever, nystagmus, peripheral edema, hostility and hyperkinesia (pediatric), nausea, vomiting, tremor, asthenia, diplopia, diarrhea, xerostomia, infection, amblyopia, headache, constipation, weight gain, abnormal thinking, amnesia, back pain, impotence, depression (<u>https://www.ncbi.nlm.nih.gov/</u> <u>books/NBK493228/#article-22015.s5</u>). | GABA analog (<u>https://</u> <u>www.drugs.com/</u> gabapentin.html). | First discovered in the 1970s, received FDA approval in 1993, available generically in the U.S. since 2004 (https:// www.ncbi.nlm.nih.gov/ books/NBK493228/ #article-22015.s5). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|----------------------|---|---|---|---|
| Galantamine | Mild to moderate Alzheimer's type dementia (https://www.drugs.com/mtm/galantamine.html). | Sinus bradycardia, AV block, loss of appetite, nausea, vomiting, diarrhea, weight loss, acute generalized exanthematous pustulosis, erythema multiforme, SJS, prolonged neuromuscular blocking effects of blocking agents, may cause or worsen bladder outflow obstruction, headache, dizziness, generalized seizures, bronchospasm, depression, anxiety, nightmares, tremor, somnolence, syncope, lethargy, abdominal discomfort, abdominal pain, dyspepsia, muscle spasms, fatigue, asthenia, malaise, fall, laceration, dehydration, dysgeusia, hypersomnia, paresthesia, blurred vision, retching, hyperhidrosis, rhinorrhea, muscle weakness, palpitations, supraventricular extrasystole, flushing, hypotension, Pisa syndrome (https://www.ncbi.nlm.nih.gov/books/NBK574546/#article-139168.s5). | Cholinesterase inhibitor (<u>https://www.drugs.com/mtm/</u> galantamine.html). | Adverse effects rare except for GI side effects, a consequence of cholinergic pharmacological properties (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK574546/</u> <u>#article-139168.s5</u>). |
| Guanfacine (Intuniv) | ADHD (<u>https://www.drugs.com/mtm/</u> guanfacine.html). | Sleepiness, drowsiness, dizziness, headache, irritability, low blood pressure, nausea, stomach pain, dry mouth, constipation, decreased appetite, very low blood pressure or heart rate, fainting (<u>https://nami.org/About-Mental-Illness/Treatments/Mental-Health-Medications/Types-of-Medication/Guanfacine-(Intuniv)</u>). | Central alpha 2A-adrenergic receptor agonist (<u>https:// www.healthline.com/health/</u> guanfacine-adhd). | Some symptoms may improve within days of starting this drug, but it may take several weeks to notice the full benefit of the medication (<u>https://</u> <u>nami.org/About-Mental- Illness/Treatments/ Mental-Health- Medications/Types-of- Medication/Guanfacine- (Intuniv)</u>). |
| Haloperidol (Haldol) | Schizophrenia, Tourette syndrome (<u>https://www.drugs.com/mtm/haloperidol.html</u>). | Extrapyramidal symptoms, anticholinergic effects, sedation, weight gain, erectile dysfunction, oligomenorrhea, amenorrhea, orthostatic hypotension, tachycardia, palpitation, agitation, generalized anxiety, cerebral edema, new-onset depression, dizziness, euphoric mood, headache, sleeplessness, poikilothermia, restlessness, generalized weakness, confusion, anorexia, constipation, dyspepsia, ileus, decreased gag reflex, lens opacities (with prolonged use), ECG changes, photosensitivity reaction, generalized pruritus, diarrhea, GI distress, blood dyscrasia, ejaculatory problems, seizure, cholestatic jaundice, priapism (https://www.ncbi.nlm.nih.gov/books/NBK560892/#article-22504.s5). | Antipsychotic (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>haloperidol.html</u>). | Extrapyramidal symptoms due to blockade of dopamine pathway in the brain (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK560892/</u> <u>#article-22504.s5</u>). |
| Imipramine | Depression, enuresis in children (<u>https://www.webmd.com/drugs/2/drug-8664/</u> imipramine-oral/details). | Dizziness, sedation, confusion, delirium, seizures, increased appetite, weight gain, blurred vision, constipation, tachycardia, confusion, dry mouth, urinary retention, delirium, narrow-angle glaucoma, cardiac arrhythmia, Gl upset, mild elevation of liver enzymes, sexual dysfunction, diaphoresis, bone marrow suppression, orthostatic hypotension, serotonin syndrome, worsened suicidal ideation (patients under 24), precipitation of manic or mixed episode in patients with bipolar disorder (https://www.ncbi.nlm.nih.gov/books/NBK557656/#article-23380.s5). | Tricyclic antidepressant (<u>https://www.webmd.com/drugs/2/drug-8664/imipramine-oral/details</u>). | Cardiac arrhythmia is the leading cause of death in TCA overdose (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK557656/</u> <u>#article-23380.s5</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|-------------------------------|---|---|---|---|
| Isocarboxazid (Marplan) | Depression, anxiety, panic, phobias (<u>https://</u> www.drugs.com/mtm/isocarboxazid.html). | Dry mouth, constipation, diarrhea, weakness, extreme tiredness, forgetfulness, decreased sexual ability, frequent or painful or difficult urination, headaches, fast or pounding heartbeat, chest pain, sweating, fever, chills, cold or clammy skin, dizziness, tightness in chest or throat, stiff or sore neck, nausea, vomiting, fainting, blurred vision, sensitivity to light, wide pupils, yellowing of the skin or eyes, uncontrollable shaking of a part of the body, sudden jerking of a part of the body, seizures, numbness or burning or tingling in the arms of legs (https://medlineplus.gov/druginfo/meds/a605036.html#side-effects). | MAOI (<u>https://www.drugs.com/</u> mtm/isocarboxazid.html). | Mental health may change in unexpected ways while taking isocarboxazid (<u>https://</u> <u>medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a605036.html#side-</u> <u>effects</u>). |
| Lamotrigine (Lamictal) | Seizures, bipolar disorder (<u>https://</u> <u>www.healthline.com/health/drugs/lamotrigine-</u> <u>oral-tablet#highlights</u>). | Life-threatening rash, SJS, toxic epidermal necrolysis, multi-organ sensitivity, hemophagocytic lymphobistiocytosis, blood dyscrasias, suicidal behavior or ideations, aseptic meningitis, status epilepticus, sudden unexplained death in epilepsy, nausea, vomiting, chest pain, back pain, xerostomia, edema, dysmenorrhea, weight changes, constipation, abdominal pain, pain, weakness, insomnia, drowsiness, dizziness, ataxia, diplopia, headache, anxiety, irritability, visual disturbances (https://www.healthline.com/health/drugs/lamotrigine-oral-tablet, https://www.ncbi.nlm.nih.gov/books/NBK470442/#article-24015.s5). | Anticonvulsant, antiepiletic drug; Reduces glutamate (<u>https://</u> <u>www.healthline.com/health/drugs/</u> <u>lamotrigine-oral-tablet#about</u>). | Discontinuation of lamotrigine may not prevent a rash from becoming life-threatening (https:// www.ncbi.nlm.nih.gov/ books/NBK470442/ #article-24015.s5). |
| Levomilnacipran (Fetzima) | Major depressive disorder (<u>https://</u> www.drugs.com/mtm/levomilnacipran.html). | Nausea, constipation, excessive sweating, vomiting, sexual problems, decreased appetite, rash, hives, swelling, difficulty breathing or swallowing, hallucinations, confusion, memory problems, difficulty concentrating, agitation, fever, sweating, confusion, fast or irregular heartbeat, severe muscle stiffness or twitching, loss of coordination, diarrhea, unsteady walking that may cause falling, seizures, fainting, coma, abnormal bleeding or bruising, difficulty urinating or inability to urinate, rapid or pounding or irregular heartbeat (https://medlineplus.gov/druginfo/meds/a613048.html#side-effects). | SNRI (<u>https://www.drugs.com/</u> mtm/levomilnacipran.html). | Mental health may change in unexpected ways while taking levomilnacipran (<u>https:// medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a613048.html</u>). |
| Lisdexamfetamine (Vyvanse) | ADHD in adults and children at least 6 years old (<u>https://www.drugs.com/mtm/</u> <u>lisdexamfetamine.html</u>). | Sleepiness, dizziness, headache, dry mouth, constipation, diarrhea, nausea, weight loss, slow or difficult speech, weakness or numbness of an arm or leg, seizures, hallucinations, believing things that are not true, feeling unusually suspicious of others, mood swings, motor or verbal tics, hives, rash, swelling, blurred vision or other vision problems, paleness or blue color of fingers or toes, numbness or pain or sensitivity to temperature in fingers or toes, unexplained wounds appearing on fingers or toes, sudden death or heart attack or stroke (especially in patients with heart defects or serious heart problems); In children and teenagers: possible sudden death (especially in children: slowed growth or weight gain (https://medlineplus.gov/druginfo/meds/a607047.html#side-effects). | CNS stimulant (<u>https://www.drugs.com/mtm/</u> lisdexamfetamine.html). | Lisdexamfetamine can be habit-forming (<u>https://</u> <u>medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a607047.html#side-</u> <u>effects</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|---------------------------------|--|--|--|---|
| Lithium (Lithobid, Eskalith) | Manic episodes of bipolar disorder (<u>https://www.drugs.com/lithium.html</u>). | Bradycardia, flattened or inverted T waves, heart block, sick sinus syndrome, confusion, memory problems, new or worsening tremor, hyperreflexia, clonus, slurred speech, ataxia, stupor, delirium, coma, seizures (rarely), nephrogenic diabetes insipidus with polyuria and polydipsia, leukocytosis, aplastic anemia, diarrhea, nausea, euthyroid goiter, hypothyroid goiter, acne, rash, weight gain, encephalopathic syndrome similar to neuroleptic malignant syndrome (patients on haloperidol and lithium) (https://www.ncbi.nlm.nih.gov/books/NBK519062/ #article-24349.s5). | Antimanic agent (<u>https://</u> <u>www.drugs.com/lithium.html</u>). | Lithium-induced weight gain more common in women than men (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK519062/</u> <u>#article-24349.s5</u>). |
| Lorazepam (Ativan) | Anxiety (<u>https://www.webmd.com/drugs/2/</u> <u>drug-8892-5244/lorazepam-oral/lorazepam-oral/</u> <u>details</u>). | CNS and respiratory depression (dose-dependent), respiratory failure, seizures, suicidality, dependency and abuse, tachycardia, hypotension, syncope, blood dyscrasias, jaundice, paradoxical reaction, hyperactive and aggressive behavior, gangrene (intra-arterial), withdrawal symptoms if abruptly discontinued after long-term use, cognitive deficits, behavioral changes, paradoxical agitation, propylene glycol toxicity when using parenteral formulation in high doses (hyponatremia and metabolic acidosis), sedation, dizziness, asthenia, ataxia, local injection site reaction, hypoventilation with IV use, hypotension, fatigue, amnesia, confusion, disinhibition, irritability, libido changes, menstrual irregularities, diplopia, dysarthria, appetite changes, constipation, incontinence, urinary retention, dystonia, AST and ALT elevation, acute liver injury (cholestatic pattern) (https://www.ncbi.nlm.nih.gov/books/NBK532890/#article-24422.s5). | Benzodiazepine anticonvulsant, antiemetic (<u>https://</u> www.drugs.com/lorazepam.html). | High risk for abuse and addiction (<u>https://</u> <u>www.webmd.com/drugs/</u> <u>2/drug-8892-5244/</u> <u>lorazepam-oral/</u> <u>lorazepam-oral/details</u>). |
| Melatonin | Jet lag, sleep cycle adjustment in the blind, shift- work sleep disorders, insomnia (<u>https://</u> <u>www.drugs.com/melatonin.html</u>). | Drowsiness, daytime sleepiness, headaches, nausea, excessive sedation with benzodiazepines or zolpidem (<u>https://www.ncbi.nlm.nih.gov/books/</u> <u>NBK534823/#article-35398.s5</u>). | Anxiolytic, sedative, hypnotic, nutraceutical (<u>https://</u> www.drugs.com/melatonin.html). | Relatively non-toxic, some mild side effects with higher doses and extended-release formulations (https:// www.ncbi.nlm.nih.gov/ books/NBK534823/ #article-35398.s5). |
| Memantine (Namenda) | Moderate to severe dementia of the Alzheimer's type (<u>https://www.drugs.com/mtm/</u> <u>memantine.html</u>). | Dizziness, headache, confusion, diarrhea, constipation, fatigue, pain, hypertension, weight gain, hallucinations, confusion, aggressive behavior, vomiting, abdominal pain, urinary incontinence, abnormal gait, cerebral infarction, cerebrovascular accident, intracranial hemorrhage, seizure, somnolence, tardive dyskinesia, bradyarrhythmia, heart failure, myocardial infarction, peripheral edema, syncope, tachycardia, weight change, loss of appetite, nausea, anemia, liver failure, hepatitis, acute renal failure, UTI, bronchitis, pneumonia, upper respiratory tract infection, rash, SJS, arthralgia, falling injury, influenza-like symptoms, neuroleptic malignant syndrome (https://www.ncbi.nlm.nih.gov/books/NBK500025/ #article-24945.s5). | NMDA receptor antagonist; Prevents over-activation of glutamine receptors (<u>https:// www.ncbi.nlm.nih.gov/books/</u> <u>NBK500025/#article-24945.s5</u>). | Based on understanding of Alzheimer's disease as being caused by overstimulation of glutamate (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK500025/</u> <u>#article-24945.s5</u>). |

Categories: Cardiovascular, Endocrine/Metabolic, Gastrointestinal, Genetic, Hematological/Oncological, Immunological, Microbiological, Musculoskeletal, Neurological, Ophthalmological, Psychiatric, Renal/Urological, Reproductive, Respiratory, Surgical, Toxicological

| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|-------------------------------|--|---|---|--|
| Methylphenidate (Concerta) | ADD, ADHD, narcolepsy (<u>https://www.drugs.com/</u> methylphenidate.html). | Stroke, heart attack, or sudden death in patients with high blood pressure, heart disease, or a heart defect (<u>https://www.drugs.com/</u> <u>methylphenidate.html</u>). | CNS stimulant (<u>https://</u> www.drugs.com/ methylphenidate.html). | May be habit forming (https://www.drugs.com/ methylphenidate.html). |
| Midazolam (Versed) | Relaxation before minor surgery, dental work, or another medical procedure (<u>https://</u> <u>www.drugs.com/mtm/midazolam.html</u>). | Hiccoughs, cough, nausea, vomiting, thrombophlebitis, thrombosis, pain on injection, anterograde amnesia, drowsiness, ataxia, falls, confusion, residual hangover effect, hypotension, tachycardia, midazolam infusion syndrome, respiratory depression, paradoxical effects in individuals with history of alcohol abuse and aggressive behavior, withdrawal syndrome, tolerance, status epilepticus (with sudden discontinuation); Long-term use associated with lasting memory deficits that are only partially reversible after discontinuing the drug; Use of drug during third trimester of pregnancy: benzodiazepine withdrawal syndrome in neonates (https://www.ncbi.nlm.nih.gov/books/NBK537321/#article-25118.s5). | Benzodiazepine (<u>https://www.drugs.com/mtm/</u> <u>midazolam.html</u>). | Water-soluble, rapid onset (<u>https://</u> www.ncbi.nlm.nih.gov/ books/NBK537321/ #article-25118.s5). |
| Mirtazapine (Remeron) | Major depressive disorder in adults (<u>https://www.drugs.com/mirtazapine.html</u>). | Drowsiness, weight gain, xerotstomia, increased serum cholesterol, constipation, increase in appetite, sedation, thrombocytopenia, bone marrow suppression, neutropenia, hypertriglyceridemia, acute pancreatitis (rare but life-threatening ADR), transient alterations of liver function tests, rare acute liver injury (<u>https://www.ncbi.nlm.nih.gov/books/NBK519059/</u> #article-25185.s5). | Tetracyclic antidepressant (<u>https://www.drugs.com/</u> <u>mirtazapine.html</u>). | Not known if this drug is safe and effective for use to treat major depressive disorder in children (https://www.drugs.com/ mirtazapine.html). |
| Naltrexone (Vivitrol) | Alcohol dependence, opioid use disorder (<u>https://www.drugs.com/naltrexone.html</u> , <u>https://www.samhsa.gov/medications-substance-use-disorders/medications-counseling-related-conditions/naltrexone</u>). | GI irritation, clinically insignificant increase in blood pressure; In patients with opioid use disorder: headache, anxiety, low energy, joint and muscle pain, nervousness, abdominal pain/cramps, difficulty sleeping, nausea, vomiting, loss of appetite, constipation, diarrhea, increased energy, increased thirst, feeling down, dizziness, irritability, delayed ejaculation, skin rash, chills, withdrawal syndrome, depression, suicidality (<u>https://www.ncbi.nlm.nih.gov/books/NBK534811/#article-25519.s5</u>). | Blocks euphoric, sedative effects of opioids; Binds and blocks opioid receptors (<u>https://</u> <u>www.samhsa.gov/medications-</u> <u>substance-use-disorders/</u> <u>medications-counseling-related-</u> <u>conditions/naltrexone</u>). | Not recommended for patients under 18 years of age (<u>https://</u> <u>www.samhsa.gov/</u> <u>medications-substance-</u> <u>use-disorders/</u> <u>medications-counseling-</u> <u>related-conditions/</u> <u>naltrexone</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|----------------------------------|---|---|--|---|
| Nortriptyline (Pamelor) | Depression (<u>https://www.drugs.com/</u> nortriptyline.html). | Black box warning—increased risk of suicide in adolescents and children and young adults with major depressive disorder and multiple other psychiatric disorders; Drowsiness, xerostomia, dizziness, constipation, blurred visions, palpitations, tachycardia, impaired coordination, increased appetite, nausea/vomiting, diaphoresis, weakness, disorientation, confusion, restlessness, insomnia, anxiety/agitation, urinary retention, urinary frequency, rash, urticaria, pruritus, weight gain, libido changes, impotence, gynecomastia, galactorrhea, tremor, hypo/hyperglycemia, paraesthesia, photosensitivity, orthostatic hypotension, HTN, syncope, ventricular arrhythmias, AV block, MI, stroke, paralytic ileus, glaucoma, increased IOP, agranulocytosis, leukopenia, thrombocytopenia, hepatitis, angioedema, EPS symptoms, ataxia, tardive dyskinesia, hallucinations, psychosis exacerbation, hypomania/mania, exacerbation of depression, suicidality, serotonin syndrome, SIADH, hyperthermia, seizures, cardiac arrhythmias, widened QRS complex, withdrawal symptoms (<u>https://</u> www.ncbi.nlm.nih.gov/books/NBK482214/#article-25988.s5). | Tricyclic antidepressant (<u>https://www.drugs.com/</u> <u>nortriptyline.html</u>). | Not recommended for use by children (<u>https:// www.drugs.com/</u> <u>nortriptyline.html</u>). |
| Olanzapine (Zyprexa) | Schizophrenia, bipolar disorder (<u>https://medlineplus.gov/druginfo/meds/a601213.html</u>). | Boxed warning—increased mortality risk in elderly patients with dementia who present with symptoms of psychosis, weight gain, metabolic dysfunction (https://www.ncbi.nlm.nih.gov/books/NBK532903/ #article-26143.s5). | Atypical antipsychotic (<u>https://www.drugs.com/mtm/</u> olanzapine.html). | Increased mortality risk in elderly patients with dementia is due to increased risk of heart failure, sudden death due to cardiac causes, pneumonia (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK532903/</u> <u>#article-26143.s5</u>). |
| Oxazepam (Serax) | Anxiety, alcohol withdrawal (<u>https://</u> medlineplus.gov/druginfo/meds/a682050.html). | Increased risk of serious or life-threatening breathing problems, sedation, or coma if used with other medications (<u>https://medlineplus.gov/druginfo/meds/a682050.html</u>). | Benzodiazepine (<u>https://</u> www.drugs.com/mtm/ oxazepam.html). | May be habit forming (<u>https://medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a682050.html</u>). |
| Paroxetine (Paxil, Brisdelle) | Depression, including major depressive disorder; Panic disorder, OCD, anxiety disorders, PTSD, PMDD; Hot flashes related to menopause (Brisdelle brand) (<u>https://www.drugs.com/</u> <u>paroxetine.html</u>). | Drowsiness, dry mouth, loss of appetite, sweating, sleep disturbance, sexual side effects, discontinuation syndrome, withdrawal symptoms, psychiatric effects, extrapyramidal symptoms, dizziness, headache, tremor, SIADH, weight gain, edema, chest pain, palpitations, tachycardia, vasodilation, alopecia, eczema, photosenstivity, pruritus, constipation, diarrhea, nausea (<u>https://www.ncbi.nlm.nih.gov/books/NBK526022/</u> #article-26693.s5). | SSRI (<u>https://www.drugs.com/</u> paroxetine.html). | Not FDA approved for children or adolescents under 18 years, but clinicians may use it off- label in this group (https:// www.ncbi.nlm.nih.gov/ books/NBK526022/ #article-26693.s5). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|--------------------------------------|---|--|--|---|
| Phenelzine | Depression (<u>https://medlineplus.gov/druginfo/</u> meds/a682089.html). | Orthostatic hypotension, constipation, dry mouth, change in weight, anorgasmia/impotence, nausea, weight gain, drowsiness, dizziness, hypertensive crisis (tyramine interaction), intracranial hemorrhage, serotonin syndrome, exacerbation of psychosis or depression, toxic delirium, hepatic necrosis, lupus-like syndrome, suicidality, seizures, ataxia, withdrawal symptoms if stopped abruptly, possible vitamin B6 deficiency (https://www.ncbi.nlm.nih.gov/books/NBK554508/#article-27111.s5). | MAOIs (<u>https://medlineplus.gov/</u> druginfo/meds/a682089.html). | MAO is widely distributed throughout the body, so inhibition can have various effects (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK554508/</u> <u>#article-27111.s5</u>). |
| Pentobarbital (Nembutal) | Seizures, intracranial pressure control, insomnia, pre-anesthesia, induction of medical coma (https://www.ncbi.nlm.nih.gov/books/ NBK545288/). | CNS effects, hallucinations, headache, insomnia, nausea, vomiting, liver toxicity, megaloblastic anemia, angioedema, local injection site reactions, laryngospasm, bronchospasm, apnea, hyperkinesia (<u>https://www.ncbi.nlm.nih.gov/books/NBK545288/#article-44601.s5</u>). | Barbiturate (<u>https://</u> www.drugs.com/cdi/ pentobarbital.html). | Faster brain penetration and shorter half-life than phenobarbital (<u>https:// www.ncbi.nlm.nih.gov/</u> books/NBK545288/). |
| Phenobarbital (Solfoton, Luminal) | Seizures, anxiety, withdrawal symptoms in addiction (<u>https://medlineplus.gov/druginfo/</u> <u>meds/a682007.html</u>). | Coma, decreased effort to breathe, low blood pressure, incoordination, impaired balance, drowsiness, withdrawal symptoms if stopped abruptly, agitation, somnolence, confusion, CNS depression, hyperkinesia, ataxia, nervousness, nightmares, psychiatric disturbance, thinking abnormality, insomnia, anxiety, hallucinations, dizziness, apnea, hypoventilation, hypotension, bradycardia, syncope, nausea, vomiting, constipation, exfoliative dermatitis, toxic epidermic necrolysis, SJS, headache, hypersensitivity reaction, injection site reaction, liver damage, megaloblastic anemia; With long-term use: irritability, loss of appetite, achiness in the bones or joints or muscles, depression, liver damage (https://www.ncbi.nlm.nih.gov/books/NBK532277/#article-27112.s5). | Barbiturate (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>phenobarbital.html</u>). | Adverse effects impact geriatric patients to a greater degree, newer anti epileptics preferred in this population (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK532277/</u> <u>#article-27112.s5</u>). |
| Pimozide (Orap) | Motor or verbal tics caused by Tourette's disorder (https://medlineplus.gov/druginfo/meds/ a686018.html). | Weakness, dizziness, feeling unsteady, having trouble keeping balance, dry mouth, increased saliva, diarrhea, constipation, unusual hunger or thirst, changes in posture, nervousness, changes in behavior, difficulty tasting food, sensitivity to light, changes in vision, decreased sexual ability in men, blank facial expression, shuffling walk, unusual or slowed or uncontrollable movements of any part of body, restlessness, speech problems, changes in handwriting, rash, fever, muscle stiffness, falling, confusion, sweating, fast or irregular heartbeat, neck cramps, tightness in throat, difficulty breathing or swallowing, tongue that sticks out of mouth, fine worm-like tongue movements, uncontrollable rhythmic face or mouth or jaw movements, life-threatening irregular heartbeat (https://medlineplus.gov/druginfo/meds/ a686018.html#side-effects). | Antipsychotic (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>pimozide.html</u>). | Should only be used to treat people who cannot take other medications (https://medlineplus.gov/ druginfo/meds/ a686018.html). |
| Pregabalin (Lyrica) | Fibromyalgia, diabetic neuropathy, herpes zoster, spinal cord injury (<u>https://www.drugs.com/pregabalin.html</u>). | Somnolence, dizziness, blurred vision, difficulty with concentration/ attention, dry mouth, edema, weight gain, physical dependence with chronic use; Following abrupt discontinuation: insomnia, nausea, headache, anxiety, nervousness, irritability, hyperhidrosis, diarrhea (<u>https://</u> www.ncbi.nlm.nih.gov/books/NBK470341/#article-27618.s5). | GABA analog (<u>https://</u> www.drugs.com/pregabalin.html). | FDA approval in 2004 as an anti-epileptic drug (https://www.drugs.com/ pregabalin.html). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|-----------------------|--|---|--|---|
| Prochlorperazine | Anxiety, upset stomach, schizophrenia (<u>https://www.drugs.com/cdi/prochlorperazine-</u> <u>tablets.html</u>). | Extrapyramidal symptoms, anticholinergic side effects, antihistaminic side effects, can lower the seizure threshold, prolonged QTc interval, cardiac conduction abnormalities, orthostatic hypotension, hyperprolactinemia, amenorrhea, breast enlargement, sexual dysfunction, leukopenia, agranulocytosis, cholestatic jaundice, fatty liver, neuroleptic syndrome, negative effects on melanocytes; In children: sedation, extrapyramidal symptoms, seizure, tardive dyskinesia, neuroleptic malignant syndrome, autonomic failure (<u>https://www.ncbi.nlm.nih.gov/books/NBK537083/</u> #article-27768.s5). | Phenothiazine antiemetic, phenothiazine antipsychotic; First-generation antipsychotic (https://www.drugs.com/cdi/ prochlorperazine-tablets.html, https://www.ncbi.nlm.nih.gov/ books/NBK537083/ #article-27768.s5). | Side effects are high in children, should not be used by patients under age 2, patients over 2 years old should consider alternatives such as ondansetron (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK537083/</u> <u>#article-27768.s5</u>). |
| Quetiapine (Seroquel) | Schizophrenia, bipolar disorder, depression (https://www.medicalnewstoday.com/articles/ guetiapine-oral-tablet). | Increased risk of death in seniors with dementia, risk of suicidal thoughts and behaviors in young patients, neuroleptic malignant syndrome, somnolence, orthostatic hypotension, dizziness, stroke, myocarditis, coronary heart disease (<u>https://www.medicalnewstoday.com/articles/ quetiapine-oral-tablet</u> , <u>https://www.ncbi.nlm.nih.gov/books/NBK459145/</u> #article-28152.s5). | Atypical antipsychotic; Mechanism not fully clear, may regulate dopamine and serotonin (https://www.drugs.com/ guetiapine.html, https:// www.medicalnewstoday.com/ articles/quetiapine-oral- tablet#about). | Least likely of atypical antipsychotics to cause extrapyramidal symptoms (https:// www.ncbi.nlm.nih.gov/ books/NBK459145/ #article-28152.s5). |
| Ramelteon (Rozerem) | Insomnia (<u>https://www.goodrx.com/ramelteon/what-is</u>). | Angioedema, suicidal thoughts or behaviors, dizziness, sleepiness, fatigue, nausea, worsening insomnia, dizziness, sleepiness, unusual drowsiness, body aches or pain, change in taste, chills, cough, difficulty breathing, difficulty moving, discouragement, ear congestion, fatigue, feeling sad or empty, fever, general feeling of discomfort or illness, irritability, joint pain, loss of appetite, loss of interest or pleasure, loss of taste, loss of voice, muscle aching or cramping, muscle pain or stiffness, nasal congestion, nausea, pain in joints, runny nose, shivering, sleeplessness, sneezing, sore throat, sweating, swollen joints, trouble concentrating, trouble sleeping, inability to sleep, unusual tiredness or weakness, vomiting (https://www.goodrx.com/ramelteon/what-is#side-effects). | Anxiolytic, sedative, hypnotic; Melatonin receptor agonist (https://www.drugs.com/mtm/ ramelteon.html, https:// www.goodrx.com/ramelteon/ what-is). | Non-habit forming (<u>https://</u> <u>www.goodrx.com/</u> <u>ramelteon/what-is</u>). |
| Reserpine | Agitated psychotic conditions, high blood pressure (<u>https://www.drugs.com/mtm/</u> <u>reserpine.html</u>). | Nasal congestion, dizziness, drowsiness, depression, headache, nausea, vomiting, diarrhea, loss of appetite, dry mouth, arrhythmias, syncope, male impotence, Gl upset, bradycardia, chest pain, hypotension, gastric ulceration (<u>https://www.ncbi.nlm.nih.gov/books/NBK557767/</u> #article-28402.s5). | Antiadrenergic agent (<u>https://www.drugs.com/mtm/</u> <u>reserpine.html</u>). | Should not be used by patients with stomach ulcer, ulcerative colitis, history of depression or suicidal thoughts, or being treated with ECT (https://www.drugs.com/ mtm/reserpine.html). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|----------------------------------|--|--|---|---|
| Risperidone (Risperidal) | Schizophrenia in adults and children at least 13 years old, bipolar disorder in adults and children at least 10 years old, irritability in autistic children ages 5-16 (https://www.drugs.com/risperidone.html). | Weight changes, metabolic changes, sedation, extrapyramidal symptoms (tardive dyskinesia may be permanent), rise in prolactin level, sexual dysfunction, decreased libido, impaired arousal, difficulty attaining orgasm, gynecomastia, galactorrhea, priapism, galactorrhea, amenorrhea, neuroleptic malignant syndrome, higher probability of cerebrovascular events in elderly patients with dementia, increase in all-cause mortality among elderly with dementia (https://www.ncbi.nlm.nih.gov/books/NBK459313/#article-28625.s5). | Atypical antipsychotic (<u>https://www.drugs.com/</u> <u>risperidone.html</u>). | Not approved for use in older adults with dementia-related psychosis, may increase risk of death for these patients (<u>https://</u> <u>www.drugs.com/</u> <u>risperidone.html</u>). |
| Rivastigmine (Exelon) | Alzheimer's disease, dementia in PD (<u>https://</u> medlineplus.gov/druginfo/meds/a602009.html). | GI effects, nausea, vomiting, extrapyramidal symptoms, sleep disturbances, muscle cramps, weakness, CNS effects, angioedema, contact dermatitis with transdermal route, allergic reaction to transdermal patch manifesting as vesicles and edema beyond boundaries of the patch (<u>https://www.ncbi.nlm.nih.gov/books/NBK557438/#article-28629.s5</u>). | Cholinesterase inhibitor (<u>https://www.drugs.com/mtm/</u> rivastigmine.html). | Approved by the FDA in 1997 (<u>https://</u> www.ncbi.nlm.nih.gov/ books/NBK557438/). |
| Secobarbital (Seconal Sodium) | Insomnia, sedation before surgery (<u>https://www.drugs.com/mtm/secobarbital.html</u>). | Drowsiness, difficulty falling asleep or staying asleep, nightmares, headache, dizziness, nervousness, agitation, excitement, restlessness, confusion, nausea, vomiting, diarrhea, constipation, hallucinations, slow or shallow breathing, slow heartbeat, hives, rash, itching, swelling, difficulty breathing or swallowing, hoarseness (https://medlineplus.gov/druginfo/meds/a682386.html#side-effects). | Barbiturate (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>secobarbital.html</u>). | Patients have engaged in daily activities while taking this medication and later not remembered the activity (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>secobarbital.html</u>). |
| Sertraline (Zoloft) | Depression, panic attacks, OCD, PTSD, social phobia, PMDD (<u>https://www.webmd.com/drugs/</u> <u>2/drug-1/sertraline-oral/details</u>). | Syncope, lightheadedness, diarrhea, nausea, sweating, dizziness, xerotstomia, confusion, hallucinations, tremor, somnolence, impotence, disorder of ejaculation, fatigue, rhinitis, female sexual disorder, bleeding risk, prolonged QT interval, serotonin syndrome, may increase risk of suicidal ideation and behavior in children and adolescents and young adults with major depression, possible induction of SIADH or hyponatremia in geriatric patients, increased risk of cardiovascular malformations in infants when taken during pregnancy (https://www.ncbi.nlm.nih.gov/books/NBK547689/#article-28926.s5). | SSRI (<u>https://www.drugs.com/</u> <u>sertraline.html</u>). | Better tolerated than tricyclic antidepressants or monoamine oxidase inhibitors (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK547689/</u> <u>#article-28926.s5</u>). |
| Suvorexant (Belsomra) | Insomnia (<u>https://medlineplus.gov/druginfo/</u> meds/a614046.html). | Drowsiness, dizziness, headache, unusual dreams, dry mouth, cough, diarrhea, temporary inability to move or speak for up to several minutes while going to sleep or waking up, temporary leg weakness during the day or night (<u>https://medlineplus.gov/druginfo/meds/a614046.html#side-effects</u>). | Orexin receptor antagonist (<u>https://medlineplus.gov/druginfo/</u> <u>meds/a614046.html</u>). | Some patients have engaged in activity while not fully awake and later had no memory of it (<u>https://www.drugs.com/</u> <u>mtm/suvorexant.html</u>). |
| Temazepam (Restoril) | Insomnia (<u>https://www.webmd.com/drugs/2/</u> drug-8715/temazepam-oral/details). | Hangover effect, drowsiness, dizziness, nausea, vomiting, rash, hives, swelling, hoarseness, difficulty breathing or swallowing (<u>https://medlineplus.gov/druginfo/meds/a684003.html#side-effects</u>). | Benzodiazepine (<u>https://</u> www.drugs.com/ temazepam.html). | Risk for abuse and addiction (<u>https:// www.webmd.com/drugs/</u> 2/drug-8715/temazepam- oral/details). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|-------------------------|---|--|---|--|
| Thioridazine (Mellaril) | Schizophrenia (<u>https://medlineplus.gov/druginfo/</u> meds/a682119.html). | Drowsiness, blurred vision, dry mouth, nausea, vomiting, diarrhea, constipation, changes in appetite, weight gain, stuffed nose, pale skin, darkening of skin or eyes, swelling, blank facial expression, shuffling walk, unusual or slowed or uncontrollable movements of any part of the body, restlessness, unusual dreams, breast milk production, breast enlargement, missed menstrual periods, decreased sexual ability in men, difficulty urinating, fever, muscle stiffness, confusion, sweating, neck cramps, tightness in the throat, difficulty breathing or swallowing, tongue that sticks out of the mouth, fine or worm-like tongue movements, uncontrollable or rhythmic movements of the face or mouth or jaw, vision loss especially at night, seeing everything with a brown tint, yellowing of the skin and eyes, rash, hives, erection that lasts for hours (https://medlineplus.gov/druginfo/meds/a682119.html#side-effects). | Phenothiazine antipsychotic (<u>https://www.drugs.com/mtm/</u> <u>thioridazine.html</u>). | Given the potential for a life-threatening side effect, patients should have been treated first with at least 2 other medications that did not work or caused intolerable side effects (https://medlineplus.gov/druginfo/meds/a682119.html). |
| Tranylcypromine | Depression (<u>https://medlineplus.gov/druginfo/</u> meds/a682088.html). | Dry mouth, headaches, diarrhea, urinary hesitancy, insomnia, agitation, anxiety, nausea, sexual dysfunction, postural hypotension (sometimes leading to syncope), hepatotoxicity, seizures, induction of mania, black box warning—activation of suicidal ideation and behavior in children and adolescents and young adults age 18 to 24 with major depressive disorder and other psychiatric disorders, transient rise in blood pressure, weight loss, risk of hypertensive crisis, serotonin syndrome (<u>https://</u> www.ncbi.nlm.nih.gov/books/NBK459162/#article-30526.s5). | MAOI (<u>https://medlineplus.gov/</u> druginfo/meds/a682088.html). | Dietary tyramine can cause an increase in blood pressure in the presence of an MAOI (<u>https://</u> www.ncbi.nlm.nih.gov/ books/NBK459162/ #article-30526.s5). |
| Trazodone (Desyrel) | Depression (<u>https://www.webmd.com/drugs/2/</u> drug-11188/trazodone-oral/details). | Headaches, fatigue, dizziness, drowsiness, somnolence, dry mouth, orthostatic hypotension, QT prolongation, torsades, priapism, increase in suicidal thoughts, arrhythmia, visual hallucinations (<u>https://www.ncbi.nlm.nih.gov/books/NBK470560/#article-30555.s5</u>). | Phenylpiperazine antidepressant (<u>https://www.drugs.com/</u> <u>trazodone.html</u>). | Can be used as part of combination therapy or used by itself to treat depression (<u>https:// www.ncbi.nlm.nih.gov/</u> <u>books/NBK470560/</u> <u>#article-30555.s5</u>). |
| Triazolam (Halcion) | Insomnia (<u>https://www.drugs.com/mtm/</u> <u>triazolam.html</u>). | Drowsiness, dizziness, lightheadedness, headache, problems with coordination, nervousness, tingling of the skin, nausea, vomiting, rash, hives, itching, swelling, feeling that the throat is closing, difficulty breathing or swallowing, hoarseness (<u>https://medlineplus.gov/druginfo/meds/a684004.html#side-effects</u>). | Benzodiazepine (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>triazolam.html</u>). | Used short term (7 to 10 days) (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>triazolam.html</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|--------------------------|---|--|--|---|
| Trifluoperazine | Schizophrenia, anxiety (<u>https://medlineplus.gov/</u> <u>druginfo/meds/a682121.html</u>). | Dizziness, feeling unsteady, difficulty keeping balance, blurred vision, dry mouth, stuffed nose, nausea, difficulty urinating, widening or narrowing of the pupils, constipation, changes in appetite, weight gain, blank facial expression, shuffling walk, agitation, jitteriness, unusual or slowed or uncontrollable movements of any part of the body, difficulty falling asleep or staying asleep, headache, extreme tiredness, weakness, breast enlargement, breast milk production, missed menstrual periods, decreased sexual ability in men, fever, muscle stiffness, falling, confusion, fast or irregular heartbeat, sweating, yellowing of the skin or eyes, flu-like symptoms, sore throat or chills or other signs of infection, neck cramps, tongue that sticks out of mouth, tightness in the throat, difficulty breathing or swallowing, fine or worm-like tongue movements, uncontrollable or rhythmic face or mouth or jaw movements, seizures, blisters, rash, hives, itching, swelling, erection that lasts for hours, vision loss especially at night (https://medlineplus.gov/druginfo/meds/a682121.html#side-effects). | Conventional antipsychotic; Decreases abnormal excitement in the brain (<u>https://</u> <u>medlineplus.gov/druginfo/meds/</u> <u>a682121.html, https://</u> <u>medlineplus.gov/druginfo/meds/</u> <u>a682121.html#side-effects</u>). | Not approved for use in older adults with dementia-related psychosis (<u>https:// www.drugs.com/mtm/</u> <u>trifluoperazine.html</u>). |
| Valbenazine (Ingrezza) | Tardive dyskinesia (<u>https://medlineplus.gov/</u> <u>druginfo/meds/a617023.html</u>). | Tiredness, dizziness, trouble walking, changes in balance, restlessness, vomiting, joint pain, rash, hives, itching, swelling, feeling faint, fainting or loss of consciousness, fast or irregular heartbeat, SOB (<u>https://medlineplus.gov/druginfo/meds/a617023.html#side-effects</u>). | VMAT2 inhibitor (<u>https:// www.drugs.com/</u> <u>valbenazine.html</u>). | First drug approved by the FDA for tardive dyskinesia, in 2017 (https://www.fda.gov/ news-events/press- announcements/fda- approves-first-drug-treat- tardive-dyskinesia). |
| Valproic acid (Depakene) | Seizure disorders, manic episodes related to bipolar disorder, prevention of migraine headaches (<u>https://www.drugs.com/mtm/</u> <u>valproic-acid.html</u>). | Hepatotoxicity, hallucinations, suicidality, psychosis, toxic epidermal necrolysis, Steven Johnson Syndrome, anaphylaxis, hyponatremia, SIADH, pancreatitis, thrombocytopenia, pancytopenia, hyperammonemia, myelosuppression, hypothermia, aplastic anemia, bleeding, erythema multiforme, polycystic ovarian syndrome, cerebral pseudo atrophy, encephalopathy, coma, withdrawal seizures with abrupt discontinuation, headache, abdominal pain, somnolence, dizziness, thrombocytopenia, asthenia, nausea & vomiting, diarrhea, dizziness, tremor, weight changes, alopecia, constipation, emotional lability, insomnia, petechiae & ecchymosis, depression, rash, nervousness, appetite changes, ALT and AST elevation, tinnitus, blurred vision, nystagmus, photosensitivity, myalgia, dyspnea (https://www.ncbi.nlm.nih.gov/books/NBK559112/ #article-30956.s5). | Acts on GABA levels in the CNS, blocks voltage-gated ion channels, inhibits histone deacetylase (<u>https:// www.ncbi.nlm.nih.gov/books/</u> <u>NBK559112/#article-30956.s5</u>). | Divalproex sodium, valproate sodium, and valproic acid are all similar medications (<u>https://medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a682412.html</u>). |
| Varenicline (Chantix) | Smoking cessation (<u>https://www.drugs.com/mtm/</u> varenicline.html). | Nausea, insomnia, abnormal vivid dreams, headaches, disturbed sleep, sleepwalking, agitation, drowsiness, constipation, SJS, erythema multiforme, photosenstivity, renal failure, kidney stones, increased risk of pancreatitis (<u>https://www.ncbi.nlm.nih.gov/books/NBK534846/</u> #article-30972.s5). | Smoking cessation agent (<u>https://www.drugs.com/mtm/</u> varenicline.html). | Used together with behavior modification and counseling support (<u>https://www.drugs.com/</u> <u>mtm/varenicline.html</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|--|---|--|---|--|
| Venlafaxine (Effexor) | Depression, social anxiety disorder, cataplexy (https://www.ncbi.nlm.nih.gov/books/ NBK535363/#article-31054.s5). | Impaired sexual dysfunction, headache, nausea, insomnia, dizziness, hypotension, anorexia, somnolence, xerotstomia, asthenia, HTN, impotencce, decreased libido, anorgasmia, constipation, weight loss, abnormal dreams, diarrhea, abdominal pain, blurred vision, anxiety, tremor, hypercholesterolemia, hyponatremia, serotonin syndrome, seizures, black box warning for suicidality, exacerbation of depression, hypomania/mania, abnormal bleeding, altered platelet function, anaphylaxis/anaphylactoid reaction, SJS, toxic epidermal necrolysis, erythema multiforme, deterioration of glaucoma angle closure, seizures, SIADH, HTN, arrhythmia, interstitial lung disease, eosinophilic pneumonia, pancreatitis, hepatotoxicity (https://www.ncbi.nlm.nih.gov/books/NBK535363/#article-31054.s5). | SNRI (<u>https://www.drugs.com/</u> <u>venlafaxine.html</u>). | Serotonin syndrome thought to result from hyperstimulation of brainstem 5HT-1A receptors (<u>https:// www.ncbi.nlm.nih.gov/ books/NBK535363/</u> <u>#article-31054.s5</u>). |
| Vilazodone (Viibryd) | Depression (<u>https://medlineplus.gov/druginfo/</u> meds/a611020.html#side-effects). | Dry mouth, increased appetite, heartburn, gas, dizziness, pain, burning, tingling in hands or feet, uncontrollable shaking of part of body, unusual dreams, tiredness, joint pain, sexual problems, rash, hives, swelling, difficulty breathing, loss of consciousness, seizures, fever, sweating, confusion, fast or irregular heartbeat, severe muscle stiffness or twitching, agitation, hallucinations, loss of coordination, nausea, vomiting, diarrhea, unusual bleeding or bruising, nosebleeds, small red or purple dots on the skin, hallucinations, headache, difficulty concentrating, memory problems, weakness, problems with coordination, increased falls, fainting (<u>https://medlineplus.gov/druginfo/meds/a611020.html#side-effects</u>). | Antidepressant; Serotonin modulator (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>vilazodone.html, https://</u> <u>medlineplus.gov/druginfo/meds/</u> <u>a611020.html#side-effects</u>). | Mental health may change in unexpected ways while taking vilazodone (<u>https://</u> <u>medlineplus.gov/</u> <u>druginfo/meds/</u> <u>a611020.html#side-</u> <u>effects</u>). |
| Vortioxetine (Trintellix, Brintellix) | Depression in adults (<u>https://medlineplus.gov/</u> druginfo/meds/a614003.html#side-effects). | Nausea, vomiting, diarrhea, constipation, gas, dry mouth, dizziness, unusual dreams, sexual problems, rash, hives, itching, swelling, hoarseness, difficulty breathing or swallowing, unusual bruising or bleeding, fever, sweating, confusion, fast or irregular heartbeat, severe muscle stiffness or twitching, agitation, hallucinations, loss of coordination, nausea, vomiting, diarrhea, nosebleed, headache, difficulty concentrating, memory problems, confusion, weakness, unsteadiness, hallucinations, fainting, seizures, coma (https://medlineplus.gov/druginfo/meds/a614003.html#side-effects). | Antidepressant; Serotonin modulator (<u>https://</u> <u>www.drugs.com/mtm/</u> <u>vortioxetine.html, https://</u> <u>medlineplus.gov/druginfo/meds/</u> <u>a614003.html#side-effects</u>). | Should not be used if patient has used an MAO inhibitor in the last 14 days, dangerous drug interaction could occur (https://www.drugs.com/ mtm/vortioxetine.html). |
| Zaleplon (Sonata) | Insomnia (<u>https://www.ncbi.nlm.nih.gov/books/</u> <u>NBK551571/#article-42980.s5</u>). | Drowsiness, dizziness, diarrhea, grogginess, decreased ability to concentrate, abnormal thoughts and behavior including aggressive behavior, confusion, agitation, hallucinations, worsening of mood issues including worsening depression, suicidal thoughts, memory loss, severe allergic reactions including anaphylaxis, anterograde amnesia, parasomnia, amnesia, hallucinations, increased risk of falls in the elderly, dizziness, postural instability, ataxia, increased risk of head injuries or hip fractures or death in the elderly, psychomotor impairment and level of consciousness and ability to drive at doses exceeding therapeutic concentrations (https://www.ncbi.nlm.nih.gov/books/NBK551571/#article-42980.s5). | Anxiolytic, sedative, hypnotic (<u>https://www.drugs.com/mtm/</u> <u>zaleplon.html</u>). | Most Z-drugs appear to have a dose-dependent effect on anterograde amnesia (<u>https://</u> <u>www.ncbi.nlm.nih.gov/</u> <u>books/NBK551571/</u> <u>#article-42980.s5</u>). |

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| | Clinical Use | Adverse Events | Notes on Mechanism | Historical and Clinical Notes |
|----------------------|---|---|--|---|
| Ziprasidone (Geodon) | Schizophrenia, bipolar mania, acute agitation in schizophrenia (<u>https://www.ncbi.nlm.nih.gov/</u> books/NBK448157/#article-31472.s5). | Tardive dyskinesia, neuroleptic malignant syndrome, hyperglycemia associated with coma or ketoacidosis or death, DRESS, motor and sensory instability, postural hypotension, hyperprolactinemia, priapism, dyslipidemia, drowsiness, headache, dizziness, nausea, lightheadedness, orthostatic hypotension, akathisia, anxiety, skin rash, weight gain, constipation, dyspepsia, xerostomia, vomiting, diarrhea, visual disturbances, pain at the injection site (<u>https://www.ncbi.nlm.nih.gov/books/</u> <u>NBK448157/#article-31472.s5</u>). | Atypical antipsychotic (<u>https://www.drugs.com/mtm/</u> ziprasidone.html). | Not approved for older adults with dementia- related psychosis (<u>https:// www.drugs.com/mtm/</u> <u>ziprasidone.html</u>). |
| Zolpidem (Ambien) | Insomnia (<u>https://www.ncbi.nlm.nih.gov/books/</u> <u>NBK442008/#article-31475.s5</u>). | Anaphylaxis, changes in behavior, withdrawal, CNS depression, swelling of tongue or larynx or glottis, SOB, airway closure, nausea, vomiting, changes in behavior, abnormal thinking, hallucinations, sleep-driving, worsened depression and suicidal ideations and actions (<u>https://www.ncbi.nlm.nih.gov/books/NBK442008/#article-31475.s5</u>). | Anxiolytic, sedative, hypnotic (<u>https://www.drugs.com/</u> <u>zolpidem.html</u>). | For patients with difficulty starting sleep (<u>https://</u> www.ncbi.nlm.nih.gov/ <u>books/NBK442008/</u> #article-31475.s5). |