



Adderall/Adderall-XR (amphetamine mixture)

Generic name: Amphetamine mixtures

Available strengths: 5 mg, 7.5 mg, 10 mg, 12.5 mg, 15 mg, 20 mg, 30 mg immediate-release tablets; 5 mg, 10 mg, 15 mg, 20 mg, 25 mg, 30 mg extended-release capsules (Adderall-XR)

Available in generic: Yes, in immediate-release tablets only

Drug class: Stimulant

General Information

Adderall (dextroamphetamine and amphetamine mixtures) and **Adderall-XR (extended-release)** are psychostimulants, or better known as **stimulants**. Adderall is used primarily in treating **attention-deficit/hyperactivity disorder (ADHD)** and **narcolepsy**, a condition characterized by daytime somnolence in which the patient periodically falls into a deep sleep during the day. Narcolepsy is a disorder of the sleep-wake control mechanisms within the brain that interferes with both daytime wakefulness and nighttime sleep.

The use of a medication for its approved indication is called its *labeled use*. In clinical practice, however, physicians often prescribe medications for *unlabeled* (“off-label”) uses when published clinical studies, case reports, or their own clinical experiences support the efficacy and safety of these medications for these unapproved indications. Adderall is often used to augment antidepressants in treating refractory depression. For patients with chronic treatment-resistant depression, for example, Adderall in combination with antidepressants can provide symptomatic relief and improvement beyond that experienced with antidepressants alone.

In numerous clinical studies and decades of clinical experience, Adderall has clearly demonstrated improvement in outcome for children with ADHD. Adderall increases the child’s ability to concentrate, extends attention span, and decreases hyperactivity. Adults with ADHD also benefit from therapy with Adderall. Adderall helps them concentrate and remain focused on their tasks, increases their attention span, and decreases impulsivity and hyperactivity.

Adderall and Adderall-XR are mixtures of amphetamine and dextroamphetamine salts in different combinations. For example, a 20-mg tablet of Adderall contains 5 mg of dextroamphetamine sulfate, 5 mg of dextroamphetamine saccharate, 5 mg of amphetamine sulfate, and 5 mg of amphetamine aspartate. The given strength of an Adderall tablet or capsule is the sum of all the stimulants in the mixture. Adderall has a duration of action of approximately 5 hours, whereas Adderall-XR lasts about 9 hours.

Dosing Information

For adults, the recommended starting dosage for Adderall is 5 mg twice a day. The dosage is adjusted based on the individual's response. The usual therapeutic dosage may range from 10 mg/day to 40 mg/day, administered two times a day. The maximum dosage should not exceed 60 mg/day.

Adderall may be converted to once-daily dosing with Adderall-XR using an equivalent dosage of the extended-release form. However, the maximum recommended dosage is 30 mg/day with Adderall-XR. The capsules should be swallowed whole and not chewed or crushed. The capsules may be opened and sprinkled in applesauce and swallowed without chewing.

Common Side Effects

The common side effects associated with taking Adderall are rapid heart rate, palpitations, nervousness, restlessness, insomnia, dry mouth, constipation, nausea, diarrhea, loss of appetite, weight loss, and elevation of blood pressure.

Adverse Reactions and Precautions

Adderall has a high potential for abuse. Individuals with a history of alcohol and substance abuse may be at risk for abusing stimulants. Individuals who abuse Adderall develop tolerance and psychological dependence that may result in addiction. With long-term abuse of Adderall and the resulting sleepless nights, the individual may develop psychotic symptoms.

Adderall may increase blood pressure. Individuals with a history of high blood pressure or heart disease should be cautious about taking Adderall because it can exacerbate these conditions. Uncontrolled high blood pressure can have serious consequences, including stroke and heart attacks. Patients taking Adderall should routinely check their blood pressure.

Individuals with a history of seizure disorder should be cautious while taking Adderall, because it can lower the seizure threshold.

In children and adolescents who are still in their growth period, Adderall can suppress linear growth. Physicians commonly interrupt treatment, if possible, on weekends and holidays, when children are not in school, for growth catch-up. Children and adolescents taking Adderall require close monitoring for growth suppression and periodic measuring of their height. However, this is not a concern in the adult population.

Adderall may make tics worse in individuals with a tic disorder (i.e., twitching of a muscle group, especially in the face).

Adderall should be avoided, or used with caution, by patients with a diagnosis of schizophrenia or bipolar disorder. Stimulants are frequently abused in this population, and high doses of stimulants may trigger psychosis and mania.

Possible Drug Interactions

Adderall should not be taken in combination with a group of antidepressants known as **monoamine oxidase inhibitors**. The combination may precipitate increases in blood pressure. This and other significant drug interactions reported with Adderall are summarized in the table on the next page.

Ismelin (guanethidine)	The antihypertensive effects of Ismelin (i.e., lowering of blood pressure) may be decreased when combined with Adderall.
Monoamine oxidase inhibitors (MAOIs)	MAOI antidepressants (e.g., Parnate) should not be taken with Adderall; the combination may precipitate dangerous elevation of blood pressure.
Selective serotonin reuptake inhibitors (SSRIs)	Adderall and other stimulants may elevate the blood levels of SSRI antidepressants (e.g., Paxil, Prozac) and enhance their effects.
Weight-loss medications	Weight-loss medications, prescription and non-prescription, should not be taken with stimulants. Excess stimulation may cause agitation, irritability, insomnia, and other adverse reactions.

Use in Pregnancy and Breastfeeding: Pregnancy Category C

Adderall has not been tested in women to determine its safety in pregnancy. The effects of the medication on the developing fetus in pregnant women are unknown. Women who are pregnant or may become pregnant should discuss this with their physician.

Nursing mothers should not take any stimulant, because small amounts will pass into breast milk and be ingested by the baby. If stopping the stimulant is not an alternative, breastfeeding should not be started or should be discontinued.

Overdose

The severity of acute Adderall overdose depends on the amount ingested. The individual may experience a progression of the following symptoms from an acute overdose: restlessness, agitation, irritability, insomnia, hyperactivity, confusion, elevated blood pressure, rapid heart rate, delirium, hallucinations, irregular heart beat, convulsions, coma, circulatory collapse, and death.

Any suspected overdose should be treated as an emergency. The person should be taken to the emergency department for observation and treatment. The prescription bottle of medication (and any other medication suspected in the overdose) should be brought as well, because the information on the prescription label can be helpful to the treating physician in determining the number of pills ingested.

Special Considerations

- To avoid insomnia, the last daily dose of Adderall should not be taken late in the evening. Adderall-XR should be taken only once a day in the morning.
- Adderall may be taken with or without food.
- Do not take more than instructed by your physician.
- If Adderall causes pronounced nervousness, restlessness, insomnia, loss of appetite, or weight loss, notify your physician.

