



Focalin (dexmethylphenidate)

Generic name: Dexmethylphenidate

Available strengths: 2.5 mg, 5 mg, 10 mg tablets

Available in generic: No

Drug class: Stimulant

General Information

Focalin (dexmethylphenidate) is a psychostimulant, or better known as a stimulant. Focalin 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. Focalin is often used to augment antidepressants in treating refractory depression. For patients with chronic treatment-resistant depression, for example, Focalin 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, Focalin has clearly demonstrated improvement in outcome for children with ADHD. Focalin increases the child’s ability to concentrate, extends attention span, and decreases hyperactivity. Adults with ADHD also benefit from therapy with Focalin. Focalin helps them concentrate and remain focused on their tasks, increases their attention span, and decreases impulsivity and hyperactivity.

Focalin (dexmethylphenidate) is chemically similar to Ritalin (methylphenidate). Methylphenidate has two mirror-image forms, which are called isomers (*d*-, *l*-isomers). Focalin is the active isomer (*d*-isomer) of methylphenidate, whereas the *l*-isomer has little or no activity. Isomers are mirror-image chemicals, similar to right and left hands, and are not superimposable (i.e., cannot be placed over each other). The advantage of Focalin is that the patient is taking the active isomer of methylphenidate, but at equivalent dosages, there is little difference between Focalin and Ritalin.

Dosing Information

The recommended starting dosage of Focalin for individuals who are not currently taking methylphenidate (Ritalin, Metadate) is 2.5 mg two times a day (5 mg/day). The dosage is adjusted in 2.5- to 5-mg daily increments

at weekly intervals to a maximum of 10 mg twice daily (20 mg/day). For individuals whose medication is being switched to Focalin, the starting dosage is half the dosage of methylphenidate. The maximum recommended dosage for those switching to Focalin is also 10 mg twice a day.

The dosing of Focalin in adults is based on clinical presentation and individualized to the patient's response and report of side effects. In children, dosing is also based on age and weight. The other consideration in dosing is selection of a formulation with the duration of action tailored to the needs of the patient. Focalin is short acting and begins to work in 30–60 minutes after administration, with duration of 2–5 hours. The advantage is that it works quickly, but the duration of action is short and requires dosing two or three times a day.

Common Side Effects

The common side effects associated with taking Focalin 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

Focalin 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 Focalin develop tolerance and psychological dependence that may result in addiction. With long-term abuse of Focalin and the resulting sleepless nights, the individual may develop psychotic symptoms.

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

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

In children and adolescents who are still in their growth period, Focalin 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 Focalin require close monitoring for growth suppression and periodic measuring of their height. This effect is not a concern in the adult population.

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

Focalin 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

Focalin 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 amphetamine and methylphenidate 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 Focalin.
Monoamine oxidase inhibitors (MAOIs)	MAOI antidepressants (e.g., Parnate) should not be taken with Focalin; the combination may precipitate dangerous elevation of blood pressure.
Selective serotonin reuptake inhibitors (SSRIs)	Focalin 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 Focalin. Excess stimulation may cause agitation, irritability, insomnia, and other adverse reactions.

Use in Pregnancy and Breastfeeding: Pregnancy Category C

Focalin 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 Focalin 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

- The last daily dose of Focalin should be taken early in the evening, and not close to bedtime, to avoid insomnia.
- Focalin may be taken at mealtime or with food to avoid stomach upset.
- Do not take more than instructed by your physician.
- If Focalin causes pronounced nervousness, restlessness, insomnia, loss of appetite, or weight loss, notify your physician.

