

How Long Does Ritalin (Methylphenidate) Stay in Your System?



By [The Recovery Village Ridgefield](#) Editor [Erica Weiman](#)
Medically Reviewed By [Elizabeth Cambria, PharmD](#) Updated on 05/10/22



[Ritalin](#) is the brand name of methylphenidate, which is approved to treat [attention-deficit hyperactivity disorder \(ADHD\)](#), attention-deficit disorder (ADD), and narcolepsy in children and adults. Ritalin is available in both long-acting and short-acting versions and may be prescribed as:

- Ritalin (Methylphenidate)
- Ritalin SR (Methylphenidate SR/ER)
- Ritalin LA (Methylphenidate LA)

Ritalin is classified as a [Schedule II controlled substance](#). Schedule II controlled substances have approved medical uses but also have a high risk of abuse, addiction and dependence.

How Does Ritalin Work?

[Ritalin](#) is a mild central nervous system stimulant. Ritalin works by blocking dopamine and norepinephrine transporters to increase dopamine and norepinephrine levels in the brain. Dopamine and norepinephrine help control function in the [prefrontal cortex](#), the part of the brain that's responsible for regulating functions such as attention, memory, decision-making and self-control.

How Long Does Ritalin Take to Work?

The amount of [time it takes Ritalin to work](#) depends on the preparation or version that is taken. Immediate-release versions of Ritalin take 20 to 60 minutes to start to work and up to four hours for maximum effect. Ritalin SR, the sustained-release version of Ritalin, takes 60 to 90 minutes to work and up to eight hours to reach peak levels. Ritalin LA, the newest version, is extended-release and takes 30 minutes to two hours to start to work and does not have an exact time to reach peak levels since its release is extended and consists of two phases: early and late.

How Long Does Ritalin Last?

How long the [effects of Ritalin](#) last can vary depending on which version of Ritalin is taken. Each version of Ritalin has a different duration of action and a different number of required daily doses.

- **Ritalin (immediate-release):** Each dose of immediate-release Ritalin lasts 2–4 hours and a total of 2–3 daily doses is required.
- **Ritalin SR (sustained-release):** Each dose of Ritalin SR lasts 4–6 hours and two daily doses are required.
- **Ritalin LA (extended-release):** Each dose of Ritalin LA lasts 6–8 hours and 1–2 daily doses are required.

How Is Ritalin Metabolized in the Body?

[Ritalin metabolism](#) occurs in the liver by an enzyme that breaks methylphenidate down into its major metabolite, ritalinic acid. Ritalinic acid does not work the same as the methylphenidate and has no effect in the body. Since methylphenidate is almost completely metabolized to ritalinic acid, only small amounts of [unchanged methylphenidate](#) are found in the urine.

Ritalin Half-Life

Half-life refers to how long it takes the average person to remove half of a drug from their system. The average half-life of Ritalin in adults is [3.5 hours](#) with a range of 1.3–7.7 hours. In children, the half-life is an average of [2.5 hours](#) with a range of 1.5–5.0 hours. The half-life of ritalinic acid, the main metabolite of Ritalin, is [3–4 hours](#).

How Long Does Methylphenidate Stay in Your System?

It takes about [five half lives](#), or 6.5 to 25 hours, for Ritalin to leave your body. How long Ritalin is detectable by a drug test depends on what fluid is being tested. A Ritalin drug test may be done to look for compliance with prescription instructions or if [misuse is suspected](#).

How Long Does Ritalin Stay in Your Urine?

Urine tests are commonly used for drug screening. During a urine test for Ritalin, a sample of urine is given in a collection cup. The collected urine is tested for the presence of Ritalin and ritalinic acid, the main metabolite of Ritalin. Ritalin and ritalinic acid can be detected in your urine for [1–3 days](#).

How Long Does Ritalin Stay in Your Blood?

During a blood drug test, a small amount of blood is taken for drug testing. Because of the short half-life of Ritalin and ritalinic acid, they are only detectable in the blood for about 24 hours. Blood tests are not typically done to test for Ritalin.

How Long Does Ritalin Stay in Your Saliva?

During a saliva drug test, saliva is swabbed from your mouth and tested for the presence of Ritalin or ritalinic acid. Ritalin and ritalinic acid can be detected in the saliva for up to [36 hours](#).

How Long Does Ritalin Stay in Your Hair?

During a hair drug test, a strand of hair with the follicle is taken and tested for signs of drug use. Ritalin can be detected in hair for [30 days](#). Some substances can be detected in hair for up to 90 days.

Factors Affecting How Long Ritalin Stays in Your System

How long Ritalin stays in your system depends on a variety of factors, including:

- **Age:** [Drug metabolism tends to decrease as we age](#). This means that substances will stick around longer in people who are older. For example, the Ritalin half-life in adults is longer than that of children. [Age can](#) also have an effect on the concentration of a drug in the body. Because children have a smaller surface area and body volume than adults, the same dose can result in a higher concentration of a drug in a child when compared to an adult.
- **Alcohol use:** Alcohol consumption can effect the release of Ritalin from its solid dosage form, resulting in a rapid increase in drug concentration in the body. A [study on the effects of alcohol](#) on the release of methylphenidate in Ritalin LA capsules demonstrated that 98% of methylphenidate was released within the first hour when alcohol and Ritalin LA were combined.
- **Presence of other substances:** Many times, the presence of other substances can determine how quickly a medication is eliminated from a person's system or can alter the effects of the medication. Ritalin is affected by monoamine oxidase inhibitors (MAOIs) and these substances [should not be taken within 14 days of each other](#). Other [substances](#) that can increase

the levels and/or effects of Ritalin include alcohol, caffeine, phenylephrine, atomoxetine (Strattera), fluoxetine (Prozac), bupropion (Wellbutrin), venlafaxine (Effexor), duloxetine (Cymbalta), modafinil (Provigil) and armodafinil (Nuvigil).

Ritalin Abuse and Addiction

In 2020, [5.1 million people](#) aged 12 and older misused prescription stimulants, including Ritalin. The percentage of people misusing prescription stimulants was higher among young adults aged 18 to 26 and older compared to other age groups. The rate of drug overdose deaths from stimulants such as methamphetamine, amphetamine and methylphenidate (Ritalin) increased on average by [29% per year](#) from 2012 through 2019.

Ritalin has high abuse potential due to its availability and its ability to cause euphoria. Ritalin can have an effect [similar to cocaine](#) when it is used intranasally and intravenously. Crushing and snorting Ritalin or injecting it can result in an instant “high” and intense euphoria.

Signs of Ritalin Abuse

[Ritalin abuse](#) occurs when the drug is taken in a different way than it was prescribed, at a different dose than it was prescribed, by a person without a prescription or to get high.

Physical and behavioral symptoms of stimulant use or misuse:

- “High” feeling, euphoria
- Hyperactivity and restlessness
- Anxiety, alertness, grandiosity
- Repetitive behavior, extreme anger, fighting, impaired judgment
- Paranoia, hallucinations
- Depression, suicidal ideation, irritability, emotional blunting
- High blood pressure, heart rate and appetite

Symptoms of Ritalin overdose or intoxication:

- Hallucinations
- Delusions
- Paranoia
- Confusion
- Disorientation
- Aggressiveness
- Violence
- Repetitive behaviors
- Grinding teeth
- Panic-like state
- Abnormal breathing
- Uncontrollable shaking
- Seizures
- Suicide
- Homicide

Ritalin Addiction Treatment

Ritalin is generally safe when used as prescribed at recommended doses. It is when Ritalin is misused that it can become dangerous and addictive. [Chronic misuse](#) of Ritalin can lead to tolerance and dependence. Psychotic episodes can occur and careful monitoring is required during withdrawal because severe depression can occur. Withdrawal symptoms [such as](#) fatigue, severe depression and disturbed sleep patterns are possible when stimulants are stopped after chronic abuse.

Treatment of Ritalin addiction can vary depending on each individual situation. Because Ritalin withdrawal symptoms are not typically dangerous, [Ritalin detox](#) at home is possible. If you have been addicted to Ritalin for a long time or are suffering from severe depression due to Ritalin withdrawal, an [inpatient or residential](#) treatment facility

may be the best option for you. Treatment specialists at The Recovery Village Ridgefield are available to perform a thorough evaluation and recommend the appropriate level of care for your situation.

Take the first step on the road to recovery. If you or a loved one are affected by a substance use disorder, The Recovery Village Ridgefield can help. To learn more about comprehensive treatment plans that may work for you, [call The Recovery Village Ridgefield](#) today to speak with a representative.

Sources

Medical Disclaimer: The Recovery Village aims to improve the quality of life for people struggling with a substance use or mental health disorder with fact-based content about the nature of behavioral health conditions, treatment options and their related outcomes. We publish material that is researched, cited, edited and reviewed by licensed medical professionals. The information we provide is not intended to be a substitute for professional medical advice, diagnosis or treatment. It should not be used in place of the advice of your physician or other qualified healthcare provider.