

# ADHD Treatment Options, Part 1: Medications

ADHD can be frustrating to live with since the symptoms can affect every aspect of life and make goals challenging to accomplish. Fortunately, ADHD is very treatable, and there are various treatment options to choose from.

While therapy geared toward ADHD management can help people discover their strengths and learn many useful life skills, medications can also be useful to alleviate the neurological challenges associated with the condition.

Some medications enhance focus and memory, while others balance moods and emotions.

## ADHD AND THE BRAIN

Pharmacologic agents (or drugs used for therapeutic reasons) can be used to help manage ADHD. To understand how ADHD medications work, it helps to first understand a bit about how the brain functions.

The brain, which is the center of the nervous system, is an information highway. In a process called neurotransmission, information in the form of chemicals is carried through an intricate circuit of nerve cells called neurons. In those with ADHD, however, these chemicals do not always get to where they need to be when they need to be there. Sometimes they get lost in the huge neural network. Other times they hit roadblocks and are not moved along the neural highway at all.

There are several medications that may be used to improve neurotransmission, helping these chemicals to be sent and received more effectively.

# ADHD MEDICATIONS ARE EFFECTIVE

Drugs cannot cure ADHD, but they can greatly improve quality of life. For many people with ADHD, medications are used to help balance their moods, reduce hyperactivity and impulsivity, and improve their ability to focus, thereby improving their learning and productivity.

In fact, ADHD medications work in about 8 out of 10 people. They work by improving the brain's ability to send and receive information. That is, they can assist in getting chemicals from neuron to neuron when needed. By changing the chemistry of the brain, they effectively enhance neurotransmission.

The [different drugs](#) typically used to treat ADHD fall into 2 categories: stimulants and non-stimulants. Both types of medication can have similar benefits in people with ADHD, but they work in different ways. The effectiveness of one over the other depends on an individual's unique brain structure and chemistry.

## STIMULANT MEDICATION TO TREAT ADULT ADHD

Neurotransmitters, or chemical messengers, are released by and carry signals between neurons. Stimulant medications can be used to boost and balance the levels of neurotransmitters in the brain.

Norepinephrine and its building block dopamine are key neurotransmitters. They are deficient in those with ADHD, which can be an issue because norepinephrine, for instance, is needed to tell the brain to get ready for action. These chemicals have many functions throughout the nervous system, an essential one being to sustain focus and attention and thereby enable more effective [executive functioning](#). Stimulant medications stimulate the central

nervous system (the brain and spinal cord), increasing its activity and the production of these important neurotransmitters.

Two primary stimulants used to treat ADHD are methylphenidate and amphetamine, which are sold under the brand names Ritalin and Adderall, respectively. Lisdexamfetamine, which is similar to amphetamine, is also used to treat ADHD and is sold under the brand name Vyvanse.

Stimulants can negatively affect sleep patterns, decrease appetite, increase anxiety, and increase blood pressure in some individuals, though these negative effects often lessen over time.

## NON-STIMULANT MEDICATION TO TREAT ADULT ADHD

Non-stimulant medications last longer than many stimulants. They activate the frontal lobe of the brain, which is responsible for executive functions, including focus, memory, organization, time management, and emotional control.

Specifically, these drugs moderate the levels of neurotransmitters such as serotonin and gamma-aminobutyric acid (GABA).

Common non-stimulant medications include atomoxetine, bupropion, clonidine, modafinil, and armodafinil, which are sold under the brand names Strattera, Wellbutrin, Nexiclon, Provigil, and Nuvigil, respectively.

Liver damage is a possible negative outcome of non-stimulant medication use and is closely monitored during ongoing medication management.

## MEDICATION VARIATIONS

The U.S. Food and Drug Administration (FDA) requires that medications have different names for each form (capsule, tablet, liquid, or patch) and release mechanism (immediate- or extended-release). Because each person's

neurological makeup is different, the most appropriate medication differs from person to person. While differences between medications are technical and can be confusing, these differences allow ADHD specialists to individualize treatments to best suit the unique needs of each person.

## THERAPY FOR ADHD

Learning skills to manage symptoms is at the heart of non-pharmacologic ADHD treatment. Non-pharmacologic treatment options include both education and talk therapy. Coaching, organizational training, and psychotherapy (such as cognitive behavioral therapy) can help those with ADHD overcome related challenges, learn new skills, and see oneself and the world in new ways. Therapy can help people identify and change any learned patterns that are not serving them.

Medication, therapy, or a combination thereof can result in effective control of ADHD symptoms. And when ADHD symptoms are controlled, goals may start to feel more reachable.

This article is part 1 of a 2-part series on ADHD treatment options. Part 2 focuses on options other than medication. Ultimately, a [trained and licensed practitioner](#) who is experienced in treating ADHD can best determine the appropriate treatment course for an individual.