# Addicted to Adderall

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In college student's everyday struggle of completing assignment after assignment, the *au naturel* approach doesn't always cut it. Substances are often used to bridge the gap to allow students to meet the ideal level of academic rigor while maintaining a desired lifestyle. In the realm of "study drugs," caffeine plays a significant role, keeping students awake and alert, but Adderall reigns supreme.

Intended to alleviate difficulties associated with Attention Deficit Hyperactive Disorder (ADHD), Adderall touts a greater focus and increased alertness. But, defining and diagnosing ADHD is a fairly difficult and subjective process. The National Institute of Mental Health states that those with ADHD may experience symptoms such as "difficulty staying focused and paying attention, difficulty controlling behavior, and hyperactivity (over-activity)," but provides no explanation as to its causes. The lack of understanding surrounding ADHD, given its unknown origins and vague symptoms yields issues in diagnosing ADHD and determining who actually needs to use the drugs designed for it.

Because of this confusion, Adderall is one of the most commonly used drugs by college students, who often lack even a prescription to justify their use. 30% of students abuse ADHD medication such as Adderall, and an estimated 81% of students believe ADHD medication is not dangerous. Students like Adderall because it makes them "smarter," and if negative consequences of the drug are this unclear, who wouldn't want this additional focus? Ethical considerations aside – what are we to make of this? How does Adderall interact biochemically and is it detrimental to one's health?

Adderall is a chemical compound made up of different portions of amphetamine salts. It is composed of ¼ racemic amphetamine aspartate monohydrate, ¼ dextroamphetamine saccharin, ¼ dextroamphetamine sulfate, and ¼ racemic amphetamine sulfate. Amphetamines are psychostimulants and target neurotransmitters of the central nervous system.

Before we can understand how Adderall works in the body, we need to know a few things about neurotransmitters. Neurotransmitters are chemical messengers responsible for a range of everyday life functions. Popular neurotransmitters include dopamine, serotonin, norepinephrine, epinephrine, histamine, melatonin, and endorphins. We don't usually consider it, but, in reality, our actions are simply dictated by a series of biochemical interactions going on in our bodies. This gives drugs that can control and alter these interactions significant power in affecting behavior.

Adderall primarily functions by targeting activity of the neurotransmitters dopamine and norepinephrine in the brain. Dopamine is, in part, responsible for pleasures related to motivation, emotional states, and internal reward systems. Norepinephrine is related to focus and alertness levels. It's evident that these neurotransmitters might be implicated in ADHD, and increasing amounts of them seems a reasonable approach to counteract issues related to one's attention.

If the main effect of Adderall is an increase in attention capacities and greater mental stimulation – it's not hard to see why it might be taken as a method of efficient studying. Greater dopamine concentrations keep you studying longer by tricking your brain to feel as if it is being rewarded for doing an otherwise unpleasant task, and greater norepinephrine concentrations allow you to stay focused on the task at hand.

Supposing one doesn't have ADHD, is Adderall really bad for you? If Adderall makes you a better studier, why aren't we all popping Addys and acing our exams?

Every person has a different biochemical makeup and no drug is without side effects. Though it boasts mental alertness, Adderall's *common* side effects include nausea, loss of appetite, dry mouth, anxiety, agitation, mood changes, sleep problems, headache, dizziness, and more. Other side effects may include fast, pounding, or uneven heartbeats, numbness, tingling, and dangerously high blood pressure. Side effects vary between people, and there's an inherent risk in taking a drug without knowledge of how it might affect one's body.

Additionally, the issue of addiction to such an enhanced state exists as a significant concern. Because dopamine and norepinephrine levels are at such peaks, chronic use of Adderall for an individual without ADHD may result in addictive use of the substance.

Adderall usage for those without ADHD, though it may likely enhance performance, is not worth it. The benefits don't outweigh the risks, and there are reasonable alternatives such as exercise! Don't use Adderall without a prescription. It just doesn't *add* up.