

Ritalin Abuse Among Students

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ABSTRACT

Background: Methylphenidate, ritalin, MPH misuse, drug abuse among student. Methylphenidate (MPH) was discovered in 1944 and used in the 1950s under the brand name “Ritalin” to treat anxiety and depression. Today, it is particularly prescribed for students with Attention Deficit Hyperactivity Disorder (ADHD).(1) MPH can enhance focus and learning abilities in students without an ADHD diagnosis, leading to increased activity, arousal, and talkativeness. However, some students may experience anxiety and fatigue symptoms instead of these effects.(2) MPH inhibits dopamine reuptake in the prefrontal cortex, limbic regions, and striatum.(1) Its brain concentrations are higher than in plasma because it accumulates in catecholaminergic systems and crosses the blood-brain barrier freely.(3) Despite its structural similarities to amphetamine, MPH has a lower potential for abuse. Moreover, while Methylphenidate binds as rapidly as cocaine, it is cleared from the brain more slowly, indicating that the potential for abuse is not solely dependent on binding speed.(4) To create cocaine-like effects, methylphenidate would need to be used at 40 times the recommended daily maximum dose. Therefore, abuse is very rarely observed, and it is generally accepted that addiction is not a common outcome.

Materials and Methods: MPH is particularly popular among high school and college students as a performance-enhancing drug. Its widespread usage is attributed to its ability to improve academic performance, attention, and alertness. For these reasons, students seeking access to MPH may share prescriptions, obtain it without a prescription, or use it for purposes other than intended.(2) In a study from our country it was found that 22,2% of resident physicians had used MPH without a medical indication. Further in the study authors stated that students were supplied MPH from friends and 48% of them shared with their friends.(5) In another study found that high school and university students often use MPH before exams or assignment deadlines. According to this research by the U.S. Drug Enforcement Administration, the rates of MPH use among high school students in drug treatment centers range from 30-50%, while for college students, the range is 0-25%. Furthermore, being male, white, living in a dormitory, and having a low GPA are factors that increase the likelihood of MPH abuse.(1)

Results: In a separate study among medical students, it was found that MPH abuse is common among students preparing for specialization exams. At Tehran University of Medical Sciences, MPH use rates were found to be 23% over their lifetimes, 48% in the past year, and 6.6% in the past month.(2)

Conclusion: In conclusion, MPH misuse is still a problem, especially among students preparing for exams. Therefore, educating students about the side effects of MPH and other drugs abuse is considered crucial in reducing the frequency and adverse consequences of drug misuse. Such warnings will help to promote the safe and effective use of MPH while minimizing the potential for abuse.

Keywords: methylphenidate, ritalin, MPH misuse, drug abuse among students