

# Bipolar adolescents continue to have elevated substance use disorder risk as young adults

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A follow up to a previous study finding an association between adolescent bipolar disorder and the incidence of cigarette smoking and substance use disorder finds that risk was even greater five years later, particularly among those with persistent bipolar symptoms. The report from a team of Massachusetts General Hospital (MGH) investigators, published in the *Journal of Clinical Psychiatry*, also finds evidence that the presence of conduct disorder, in combination with bipolar disorder, may be the strongest influence on the risk of smoking and substance use disorder.

"We also made another interesting finding - that those originally diagnosed with [bipolar disorder](#) who continued to have symptoms five years later were at an even higher risk for cigarette smoking and substance use disorder than those whose symptoms were reduced either because of remission from bipolar disorder or from treatment," says Timothy Wilens, MD, chief of Child and Adolescent Psychiatry at Mass. General Hospital for Children and co-director of the MGH Center for Addiction Medicine, who led both studies. "Both those with active symptoms and those whose symptoms had improved were at greater risk than our [control group](#)."

The original study, published in the June 2008 issue of *Drug and Alcohol Dependence*, analyzed extensive data - including family histories, information from primary care physicians and the results of structured psychiatric interviews - on 105 early adolescents diagnosed with bipolar disorder and a control group of 98 with no mood disorders. Among those

participants, with an average age of 14, the rate of substance use disorder among those with bipolar disorder was 34 percent, while it was only 4 percent in controls. The risk for smoking was 22 percent for those with bipolar disorder and 4 percent for controls.

For the five-year follow up, structured psychiatric interviews were conducted for 68 of the original participants with bipolar disorder - 37 being lost to follow up - and 81 control group members. Among those in the bipolar group, 23 no longer met criteria for the disorder, 36 still were experience active symptoms and 9 had symptoms that did not meet full criteria. During the five years since the original study, more members of the bipolar group developed new cases of substance use disorder than did controls, leading to an overall incidence rate of 49 percent versus 26 percent.

While controlling for the presence of other disorders - including [attention-deficit hyperactivity disorder](#) (ADHD) or [conduct disorder](#) - did not affect the bipolar-associated risk in the original study, the new analysis found that controlling for conduct disorder caused the increased levels of substance use disorder to disappear. That result suggests that co-occurring conduct disorder plays a significant role in the risk associated with bipolar disorder.

"We were surprised to find that conduct disorder, but not ADHD, played such a large role in mediating the increased risk of substance use disorder among those with bipolar disorder," says Wilens, who is an associate professor of Psychiatry at Harvard Medical School. "While this might be result of having only a few participants with bipolar disorder alone, it may be that it is the presence of conduct disorder that drives substance use disorder as adolescents with bipolar disorder become young adults. Since symptoms of bipolar disorder usually appear before substance use disorder develops, clinicians following youth with bipolar disorder should carefully monitor for cigarette smoking and substance

use, along with treating bipolar symptoms."

Wilens and his colleagues are also analyzing a subgroup of study participants who received detailed brain imaging in an effort to understand the brain circuitry involved in these disorders and their interaction. They also plan to investigate factors underlying the persistence of bipolar disorder and the impact of treatment on the incidence of smoking and substance use disorder.

**More information:** *Journal of Clinical Psychiatry*, DOI: [10.4088/JCP.14m094](https://doi.org/10.4088/JCP.14m094)

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