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## Treatment with ADHD medications is associated with reduced risk of suicide in patients with borderline personality disorder (a nationwide Swedish study) | 1

Approximately 5% to 10% of individuals diagnosed with borderline personality disorder (BPD) will eventually die by suicide, and the lifetime prevalence of suicidal ideation and attempts in these patients is 84% to 94%. Over one-third of individuals with BPD have comorbid symptoms of attention-deficit/hyperactive disorder (ADHD). In this study, researchers from Finland and Sweden used nationwide Swedish patient registries to investigate the comparative effectiveness of several commonly used pharmacological treatments, including antipsychotics, antidepressants, mood stabilizers, benzodiazepines, and ADHD medications on the risk of attempted or completed suicides in patients with BPD.

The authors stated that psychotherapy, especially dialectical behavior therapy, is effective in reducing suicidal behavior. However, due to limited access to psychotherapeutic treatments, most patients diagnosed with BPD are treated with pharmacotherapy. Patients diagnosed with BPD are often treated with benzodiazepines, despite augmented impulsivity and aggression-related issues that may facilitate suicidal behavior.

Previous large observational studies that investigated the effectiveness of antipsychotics on suicidal behavior in patients with personality disorders, including BPD, like a nationwide Danish registry study of 79,253 individuals (42,987 were patients with BPD) found that suicidal behavior was 32% lower during antipsychotic treatment than in periods without antipsychotic treatment. The authors noted that the fact that patients with comorbid psychotic disorders were not excluded from the study could influence these results.





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### ***About the study***

The authors used Swedish electronic nationwide patient registries and selected individuals diagnosed with BPD according to the International Statistical Classification of Diseases, 10th Revision (ICD-10, code F60.3) between January 1, 2006, and June 30, 2021, representing a nationwide sample of 22,601 patients with BPD. The mean age of patients was 29.2 years, ranging from 16 to 65 years. The study excluded individuals diagnosed with comorbid nonaffective psychotic disorders (codes F20-F29), bipolar disorder (code F31), psychotic depression (code F32.3), or personality disorders other than BPD (codes F60-61 except F60.3).

### ***Results***

The majority of BPD patients were women (84%), single, and without children (58%). Comorbidities in this cohort were substance use disorder reported in 33.7% of patients, depression in 56.6% of patients, anxiety disorder in 71.4% of patients, and ADHD in 17.2% of patients.

The mean follow-up was 6.9 years, and the maximum follow-up was 16 years. During the follow-up of 16 years, 32% of the sample diagnosed with BPD (8513 patients) had attempted suicide, and 316 patients completed suicide. The median time from BPD diagnosis to the first hospitalization for attempted suicide was 271 days (ranging from 55 to 895 days), and from BPD diagnosis to completion of suicide was 1300 days (ranging from 412 to 2605 days).

### ***Treatment and risk of suicide***

Most BPD patients (82%) were treated with antidepressants at some point during the follow-up. Sertraline was the most common, used in 29% of patients.

56% of the patients were taking benzodiazepines at some point during follow-up.

41% of BPD patients were treated with antipsychotics. The most common antipsychotic drug was quetiapine used in 24% of patients. 32% of BPD patients were treated with mood stabilizers. The most common mood stabilizer was lamotrigine, used in 24% of patients.

24% of BPD patients were treated with ADHD medications. The most common ADHD medication was methylphenidate, used in 19% of patients. Treatment with ADHD medications, especially stimulant compounds, was associated with a decreased risk of



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attempted or completed suicide. A decrease of 48% in the probability of suicide completion was attributable to the treatment with ADHD medications. The lowest risk of attempted or completed suicide was found for lisdexamphetamine.

Treatment with other pharmacotherapies (antidepressants, antipsychotics, mood stabilizers, or benzodiazepines) was not associated with a reduced risk of suicide. In contrast, treatment with antidepressants or antipsychotics was associated with an increased risk of attempting or completing suicide. Of all antidepressants, paroxetine was associated with the highest risk of attempting or completing suicide. Of all antipsychotics, zuclopenthixol was associated with the highest risk of attempting or completing suicide.

Importantly, treatment with benzodiazepines, among all investigated pharmacotherapies, was associated with the highest risk of attempting or completing suicide. These findings remained unchanged even when the first 30 or 60 days of exposure to every medication were omitted.

### *Conclusion*

This study showed that the use of ADHD medications in patients with BPD was associated with a reduced risk of suicide. On the contrary, the use of antidepressants, antipsychotics, or mood stabilizers was not associated with a reduced risk of suicide in patients with BPD. Furthermore, the use of benzodiazepines was associated with a marked increase in suicide risk.

The authors noted that the limitations of this study were the lack of specific clinical parameters, such as the severity of BPD symptoms and indications for pharmacotherapy, and the lack of information regarding concomitant psychotherapy, such as dialectical behavioral therapy.

According to the authors, treatment with ADHD medications should be the preferred option for BPD patients with ADHD symptoms, and suicidal behavior. In contrast, benzodiazepines should be used with caution in patients diagnosed with BPD due to their association with an increased risk of suicide.

The article was published in JAMA.

### ***Journal Reference***

Lieslehto J et al. Comparative Effectiveness of Pharmacotherapies for the Risk of Attempted



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