



TOXTALKS

A BULLETIN FOR HEALTHCARE PROFESSIONALS WHO MANAGE POISONED PATIENTS

Blue Ridge Poison Center

University of Virginia Health

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Phenibut Use and Withdrawal

What is phenibut?

Phenibut (4-amino-3-phenyl-butyric acid) is a GABA analog first synthesized in the 1960s in the former Soviet Union. It was previously used as part of the Russian cosmonaut space kit as an anti-anxiety medication to help the astronauts stay calm in space. It is still available by prescription in Russia and is used for anxiety, post-traumatic stress disorder, stuttering and vestibular disorders. In the United States (U.S.), phenibut is not available for prescription but it is sold online, marketed as a stress relieving agent or a nootropic substance, which is a substance that enhances one's cognitive abilities. Phenibut is also contained in products sold as nutritional supplements however, it does not meet criteria to be defined as a dietary ingredient by the Food and Drug Administration and thus is not allowed to be labeled as such. There has been an increase in use in the U.S. noted since 2015 with phenibut being widely available for purchase online both in powdered and tablet form.

How does phenibut work?

Phenibut works primarily as a GABA-B receptor agonist. It also has some GABA-A agonism and increases dopamine levels. Other GABA-B agonists include such drugs as baclofen and gamma-hydroxybutyrate (GHB).

What symptoms are caused by phenibut use and how are symptoms treated?

Phenibut is advocated for anxiolytic, euphoric and nootropic properties. It has been reported to cause symptoms consistent with a

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NEWS AND NOTES:

Calls to the Blue Ridge Poison Center about childhood exposures to cannabis are on the rise. In response, the BRPC has developed a handout for parents and caretakers of children and teens titled "Marijuana (Cannabis): What Parents and Caretakers Need to Know."

The two-page flyer is available for download or for digital sharing from the BRPC website. Please consider making this free resource available to your patients and clients.



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sedative/hypnotic toxidrome, including decreased consciousness, stupor, and depressed respiratory drive. It also been reported to cause agitation, hallucinations, seizures and delirium. Seizures may be related to the feedback inhibition of GABA-B receptor on presynaptic GABA-A neurons.

Treatment of symptoms is largely supportive and may include intravenous fluids, airway monitoring and potentially benzodiazepines for seizures. If severe agitation is present, consider withdrawal in the diagnosis and not acute intoxication.

What symptoms are caused by phenibut withdrawal?

Tolerance to phenibut has been demonstrated and thus withdrawal symptoms can occur with cessation of use. Withdrawal from phenibut resembles baclofen withdrawal and may include hallucinations, psychosis, agitation, tachycardia, hyperthermia, seizures, and myoclonus.

Treatment of phenibut withdrawal and treatment can be started with GABA-A agonists (e.g., benzodiazepines). However, because the primary mechanism of phenibut is GABA-B agonism, there are case reports using baclofen, another GABA-B agonist. There is no approved dosing regimen for baclofen for phenibut withdrawal, instead it should be tailored to the patient's clinical effects. Symptoms of withdrawal can be severe and may require management in an ICU setting.

Medical consultation from specialists at the Blue Ridge Poison Center is available 24/7. Call 1-800-222-1222, or call the dedicated healthcare professional hotline at 1-800-451-1428.

References available upon request.

The Blue Ridge Poison Center receives funding from University of Virginia Health, the Virginia Department of Health, and the U.S. Health Resources Services Administration (HRSA). We are accredited by the American Association of Poison Control Centers. We've been proudly serving the Commonwealth since 1978.

