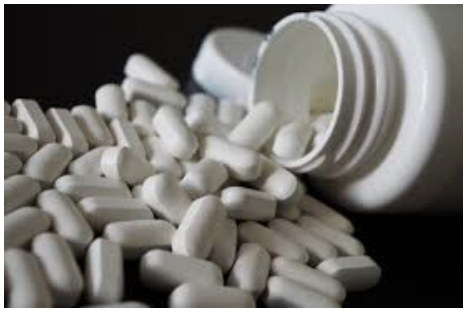
ToxTidbits

Maryland Poison Center
UNIVERSITY OF MARYLAND SCHOOL OF PHARMACY

November 2018 | Poison Center Hotline: 1-800-222-1222

The Maryland Poison Center's Monthly Update: News, Advances, Information

Gabapentin Abuse



Gabapentin (Neurontin®) is indicated for the treatment of epilepsy and neuropathic pain, including post-herpetic neuralgia. Gabapentin is often prescribed off-label for a variety of conditions including insomnia, anxiety, bipolar disorder, migraines, drug and alcohol addiction, and others. Off-label use exceeds use for FDA approved indications. Termed a gabapentinoid, it is an analog of γ-aminobutyric acid (GABA) that increases GABA but does not bind to GABA receptors. It has a selective inhibitory effect on voltage-gated calcium channels containing the α2δ1 subunit. Its exact mechanism for epilepsy and pain is unclear.

Gabapentin is not a controlled substance as it was believed that gabapentin had no abuse potential when approved by the FDA in 1993. Overall, if used at therapeutic doses by patients without a substance abuse/misuse history, the risk of misuse is probably lower than that of other drugs such as benzodiazepines. However, reports are increasing of gabapentin misuse and abuse. Motivations for misuse include recreational use, mood and/or anxiety control, potentiating the effects of drug abuse treatment, pain management, reducing cravings for other drugs, managing withdrawal from other drugs, substituting for other drugs, and gabapentin addiction (*Addiction 2016;11:1160-74*). The risk of misuse increases in people with a history of recreational drug abuse who take gabapentin at doses significantly higher than usual prescribed doses (*CNS Drugs 2014;28:491-6*). Sources of misused gabapentin include prescriptions, family or acquaintances, the internet, purchase abroad and drug dealers. Most gabapentin abusers ingest the drug but other routes such as injecting, smoking and inhaling crushed tablets have been reported.

Gabapentin is abused alone or in combination with other drugs such as alcohol, benzodiazepines, marijuana, SSRIs and quetiapine. Gabapentin and opioids are co-prescribed for pain. Misuse of gabapentin increases with concomitant opioid use. One study found that the frequency of overuse was 2.0% without opioids and 11.7% when opioids were co-prescribed (*Pharmacotherapy 2018;38:436-43*). Addiction history was a predictor of overuse with concomitant opioids. Treatment with opioids and gabapentin is associated with an increased risk of opioid-related death (*PLoS Med 2017; 14(10): e10023696*).

Gabapentin users report clinical effects such as euphoria, feeling high, sedation, relaxation, improved sociability, increased energy and better sleep quality. Patients with overdoses of gabapentin-only usually experience relatively mild toxicity including lethargy, sedation, dizziness, ataxia, tachycardia and hypotension. Although excessive doses are considered relatively safe, deaths have been reported. Chronic gabapentin use can produce tolerance, physical dependence and withdrawal symptoms upon discontinuing the drug.

Did you know?

There are reports of abuse of pregabalin (Lyrica ®), another gabapentinoid used for neuropathic pain, post-herpetic pain and fibromyalgia.

Approved by the FDA in 2004, pregabalin is Schedule V. Overall effects of excessive pregabalin use are similar to those of gabapentin. A recent study found that the number of abuse-related cases in relation to the total number of adverse event reports was higher for pregabalin than for gabapentin (*Research in Social and Administrative Pharmacy. 2018; https://doi.org/10.1016/j.sapharm.2018.06.018*).

Wendy Klein-Schwartz, PharmD, MPH, FAACT
Professor Emeritus
University of Maryland School of Pharmacy

@MPCToxTidbits