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DID YOU KNOW THAT...

...Mr Yuk has a new telephone number?

By now you have probably heard about our new emergency telephone number. This national number is being used by all poison centers in the U. S. When you call this number from anywhere in Maryland, you will be connected to the Maryland Poison Center (except for Prince George's and Montgomery Counties—calling from these two counties will connect you with the National Capitol Poison Center). If you need new telephone stickers or other materials with the new number, call 410-706-2151.

For poisoning emergencies, call:

1-800-222-1222

PLEASE SHARE!

Post and share this edition of *Tox Tidbits* with your colleagues. Send any comments or questions to: *Tox Tidbits* at 410-706-7184 (FAX), or Lbooze@rx.umaryland.edu.

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GHB, GBL and 1,4-BD Withdrawal

Gamma hydroxybutyrate (GHB), gamma butyrolactone (GBL) and 1,4-butanediol (1,4-BD) are commonly used and abused substances in Maryland. They have become popular among bodybuilders as strength enhancers and growth hormone stimulants, and are popular among those frequenting rave parties due to purported euphoric and aphrodisiac effects.

GBL and 1,4-BD are metabolized to GHB and thus produce clinically similar effects. The toxic effects of these “dietary supplements” are well known and include vomiting, agitation, drowsiness, coma, tremors, respiratory depression, apnea and death. Those who chronically use these compounds for a period of at least 2-4 months are likely to experience a withdrawal syndrome upon discontinuation. This withdrawal syndrome has been described as similar to that seen with ethanol withdrawal. This is not surprising, considering the parallels between these substances and ethanol: both act on the neurotransmitter GABA and/or its receptors; there is a cross tolerance between ethanol and GHB; GHB has been successfully used in ethanol abstinence programs.

Autonomic instability and delirium are characteristic of the withdrawal syndrome and begin within several hours to several days after the last dose of GHB, GBL or 1,4-BD. Tachycardia, hypertension, insomnia, paranoid delusions, auditory and visual hallucinations, tremor, and diaphoresis have been described following discontinuation of GHB, GBL and 1,4-BD.^{1,2}

Patients with minor symptoms may be successfully treated using tapering doses of long-acting benzodiazepines. Patients with severe symptoms (altered mental status and abnormal vital signs) may be resistant to benzodiazepines. Phenobarbital and pentobarbital have been effective in such cases.^{1,2}

As the illicit use of GHB, GBL and 1,4-BD becomes more prevalent, health care providers should be prepared to recognize the symptoms associated with overdose and withdrawal. Call the Maryland Poison Center for assistance in diagnosing and treating these patients.

1. Schneir A et al. A case of withdrawal from the GHB precursors gamma-butyrolactone and 1,4-butanediol. *J Emerg Med* 2001; 21: 31-33.
2. Sivilotti M et al. Pentobarbital for severe gamma-butyrolactone withdrawal. *Ann Emerg Med* 2001; 38: 660-665.

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