

Health Advisory:

Acute Toxicities in Persons Exposed to Substances Marketed as “Bath Salts”

February 24, 2011

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Health Advisories provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

Health Guidances contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

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**FROM: MARGARET T. DONNELLY
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SUBJECT: Acute Toxicities in Persons Exposed to Substances Marketed as “Bath Salts”

The Missouri Poison Center continues to receive calls from health care providers and the public regarding toxic products marketed as “bath salts”. People abusing the mind-altering substances contained in such products could endanger themselves as well as others, and therefore continued usage of products marketed as “bath salts” represents a significant public health threat. The Missouri Department of Health and Senior Services (DHSS) strongly advises that health care providers: 1) consider “bath salts” abuse when evaluating patients presenting with acute toxicities as described below, 2) report all suspected cases of “bath salts” abuse to the Missouri Poison Center at 314/772-5200 (St. Louis) or 800/222-1222 (outside St. Louis), and 3) obtain, as necessary, medical consultation on the management of these patients from the Poison Center.

Background

In 2010 and 2011, Poison Centers representing 43 states and the District of Columbia have received calls about toxic products marketed as “bath salts.” Nationally, Poison Centers have already taken 469 calls regarding these products this year, compared to 292 calls in all of 2010. In the first six weeks of 2011, the Missouri Poison Center has already documented 34 exposures to “bath salts” and 11 requests for information about these products, compared to 18 and four, respectively, for the entire 2010 year.

Even though it is technically legal to possess these products, some states, such as Louisiana and Florida, have already issued orders criminalizing their possession. These products, which are being touted as cocaine substitutes, have been sold on the Internet and, in some states, are being sold at gas stations and head shops. They are known by a variety of names, including “Red Dove,” “Blue Silk,” “Zoom,” “Bloom,” “Cloud Nine,” “Ocean Snow,” “Lunar Wave,” “Vanilla Sky,” “Ivory Wave,” “White Lightning,” “Scarface,” and “Hurricane Charlie.” These products are believed to contain the chemicals *Methylenedioxypyrovalerone* (MDPV) and *Methylmethcathinone* (4-MMC, or mephedrone), which are not approved for medical use in the United States. These mind-altering substances cause increased heart rate and blood pressure, as well as agitation, hallucinations, extreme paranoia, and delusions.

A central nervous system (CNS) stimulant, 4-MMC is a designer drug developed from a primary ingredient found in a plant in Africa. The drug’s presumed ability is to make users feel more social and interactive. 4-MMC may also appear in certain brands of imported “plant food” packaged in small plastic bags. Another CNS stimulant, MDPV is a stronger stimulant causing powerful energy boosts and increased activity in a person. There is a potential for addiction with the chronic use of these drugs. Packages of “bath salts” usually indicate “not for human consumption”, and may contain a combination of both MDPV and 4-MMC. The white powder from the packages is usually snorted like cocaine, can be swallowed, and rarely even injected.

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Clinical Presentation

Patients **may** present with typical signs of a CNS stimulant overdose. The pupils may be dilated with slow response to light. Patients have tachycardia, arterial hypertension, and elevated body temperature. The skin is flushed, and the oral mucosa is dry. They speak fast, but dialog with them is complicated because they tend to jump back and forth between subjects. Patients may also present in a psychotic, paranoid, or confused state. They are difficult to restrain, and difficult to sedate with medications usually used in the emergency room for drug overdose. Large doses of MDPV can lead to muscle spasms and dystonia resembling methamphetamine abuse, as well as hallucinations and profound paranoia. As the effect wears off, MDPV users may develop meaningless repetitive motions and behaviors. Due to the stimulatory nature of the substances, seizures are also possible. The length of the substance-induced “high” is variable, but a duration of 3-4 hours is usually expected. Once symptoms start to abate, drug-induced effects wear off relatively quickly, and a depressed mood may develop. There have been reports of suicides a few days after use of MDPV.

The diagnosis of “bath salts” toxicity should be based on the relevant patient history and clinical presentation. Only specially certified laboratories have the ability to test for MDPV, 4-MMC, or related substances. The Missouri State Public Health Laboratory (MSPHL) does not provide testing for MDPV or 4-MMC.

Recommendations

- Health care providers should consider “bath salts” abuse as a possible etiology when evaluating patients presenting with acute toxicities as described above.
- Providers should report all suspected cases of “bath salts” abuse to the Missouri Poison Center at 314/772-5200 (St. Louis) or 800/222-1222 (outside St. Louis).
- Medical consultation on the management of suspected cases can be obtained from the Poison Center.