



## “Bath Salts” Health Care Provider Fact Sheet

### How many cases have been seen in Michigan?

Between November 13, 2010 and May 16, 2011, there were a total of 71 emergency department (ED) visits by 65 patients related to the abuse of “bath salts.” A complete report of Michigan cases between November 2010 and March 2011 was published in the Centers for Disease Control and Prevention (CDC) Morbidity and Mortality Weekly Report (MMWR) (<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6019a6.htm>).

The Children’s Hospital of Michigan Poison Control Center (PCC) continues to monitor cases statewide called in by the general public and health care providers due to “bath salt” exposure. In 2011, there were a total of 164 cases and there have been 26 cases in 2012 through March.

### What are the signs/symptoms?

Patients are presenting with extreme paranoia, psychotic features (reporting seeing demons, monsters, foreign soldiers, or aliens), and sometimes violent behavior. Other symptoms include tachycardia, chest pain, confusion, high blood pressure, sweating, hyper-alertness, sleep deprivation, agitation, extreme anxiety, hallucinations, bruxism, compulsive water drinking, motor automatisms (compulsive repeated hand washing), tremors, and seizures. Symptoms may progress to rhabdomyolysis, renal failure, or liver failure. Several have remained symptomatic for 2-3 days.

### How do you evaluate and treat patients?

Intoxication with this drug should be evaluated and treated as any other drug causing a sympathomimetic toxidrome (cocaine, methamphetamine etc.) Patients should be evaluated and screened for rhabdomyolysis with CK testing, watched for hyperthermia, markedly elevated BP and tachyarrhythmias, agitated & violent behavior, paranoid behavior, potential harm to themselves or others.

Treatments should include use of lorazepam for hypertension, agitation, hyperthermia, or seizures. Tepid lukewarm water sponging and fanning should be used to cool patients with temp over 104 F (40 C) in addition to lorazepam to control agitation. Avoid using beta-blockers to treat ANY degree of elevation in blood pressure as this may cause an unopposed peripheral alpha-adrenergic effect and dangerous, dramatic paradoxical surge in blood pressure. Any patient with a history of paranoia, violent behavior or signs of this in the ED should be treated with lorazepam at whatever dose it takes to calm them down in 2 to 4 mg increments each 10 to 15 minutes IV or IM. In addition, a Pathways psychological consult should also be obtained in such patients.

Benzodiazepines in large doses may not be effective. This is still the primary agent of choice, with ziprasidone or haloperidol added if this is not effective.

**What are long term health effects?**

Psychiatric symptoms may persist. Patients have been transferred to long term psychiatric facilities because their symptoms weren't improving.

**How is it packaged and what does it contain?**

"Bath salts" are sold as crystalline powder in a small bag with names, such as White Rush, Ivory Wave, Blow, Red Dove, Vanilla Sky, Aura, Zeus 2, Zoom, Bliss, Blue Silk, White Lightning, Ocean, Charge, Cosmic Blast, Scarface, Hurricane Charlie, Red Dove, Cloud 9, Energy 1, White Dove, and others.

Regardless of the label, these can contain one of many "designer drugs". The most likely one currently used is MDPV (methylenedioxy pyrovalerone) but they could also contain mephedrone (a Khat derivative). The packets likely come from New Orleans and are distributed to head shops, gas stations, etc. They are not sold at normal outlets.

**Is it legal?**

Specific "bath salt" ingredients MDPV and mephedrone are Schedule I drugs in Michigan which makes them illegal to sell or use. The Drug Enforcement Agency (DEA) in the New Orleans area has confirmed that much of the supply is coming in from China. Nationally, DEA temporarily placed some of these chemicals on Schedule I of the Controlled Substances Act. Additionally, the DEA has determined that because MDPV is an analogue of a drug that is on Schedule I of the Controlled Substances Act, "law enforcement cases involving MDPV can be prosecuted under the Federal Analogue Act of the CSA."

**What is the pattern of abuse?**

Most patients are experienced drug users/abusers who describe the experience as horrible. Some binge for 3-4 days and come in crashed. Most were young adults in their 20's to 30's. "Bath salts" are snorted, ingested mixed with water, injected, or inserted rectally or vaginally. There is craving for more once the binge is over.

**How should cases be reported?**

Although there is no mandated reporting requirement, as part of the PCC's ongoing surveillance of designer drugs, the PCC encourages hospitals to contact them by calling 1-800-222-1222 or e-mailing [ssmolins@dmc.org](mailto:ssmolins@dmc.org). A [designer drug report form](#) is available upon request, to facilitate reporting.