

# Not really 'bath salts'—paper provides update on 'designer stimulants'

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The last few years have seen the emergence of a new drug problem in so-called "bath salts"—actually "designer stimulants," packaged and sold in ways that skirt drug laws. A review and update on these designer drugs is presented in the June *Journal of Addiction Medicine*, the official journal of the American Society of Addiction Medicine.

Recent high-profile incidents have drawn attention to "bath salts" as a new and potentially hazardous type of recreational drug. Addiction medicine specialist Dr Erik W. Gunderson of University of Virginia, Charlottesville, and colleagues, review available data on the use and effects of these [designer drugs](#) in this issue of JAM. The paper provides a timely update including implications for [medical management](#) and drug policy.

## Rapid Rise in Abuse of 'Designer Stimulants'

Over the last few years, products containing "substituted cathinone stimulants" have become widely available for sale on the Internet and elsewhere. To evade legal controls, the stimulants are sold as [bath salts](#), stain removers, or other [household products](#). Although packages are conspicuously labeled "not for [human consumption](#)," they are clearly intended for "use as [psychoactive substances](#)," according to Dr Gunderson and coauthors.

Initially more prominent in Europe, designer stimulants have become a

problem in the United States over the last few years. The number of calls to U.S. poison control centers regarding substituted cathinone stimulants increased from zero in 2009, to about 300 calls in 2010, to more than 6,000 in 2011. The [chemical components](#) of these products vary widely, and the mechanisms of their effects in humans are still unclear. As of yet, [standardized testing](#) to detect their use is not easily accessible.

The effects are generally similar to those of cocaine, [amphetamine](#), and other stimulants but vary with compound, dose, and route of administration. Users may sniff or swallow the drugs, or even inject them. Reported symptoms in patients treated for acute toxicity include agitation, fast heart rate, and combative or violent behavior, potentially accompanied by delusions or hallucinations. The picture is often complicated by use of other drugs and underlying mental illness.

Serious acute (short-term) toxic effects of substituted cathinone stimulants have been reported—including deaths resulting from medical complications and suicide. Chronic (long-term) toxicity has also been observed, with evidence of tolerance, withdrawal, and dependence.

## **More Study Needed to Guide Drug Treatment and Regulation**

To illustrate the dangers, Dr Gunderson and colleagues present a case report of a patient who developed hallucinations, delusions, and potentially violent behavior after a three-week "bath salt binge." The findings suggest a possible interaction with the antihistamine diphenhydramine (Benadryl)—which users commonly take to manage insomnia caused by the drugs' stimulant effect.

Substituted cathinone products are still new, so there are no formal guidelines for medical treatment of acute toxicity. Experience suggests

that physical symptoms resolve after a few days, with supportive care. However, psychotic effects such as hallucinations may persist for a longer time. Intoxicated patients need close psychiatric observation and monitoring to keep them from harming themselves or others.

Treatment following acute care, according to Dr Gunderson and coauthors, should follow guidelines for treatment of other stimulant use disorders. In theory, substituted cathinone [stimulants](#) are controlled substances under current U.S. law. However, because of Internet distribution and the "forensic challenges" in identifying these substances, they have been difficult to police and regulate.

Dr Gunderson and coauthors highlight the need for further research on the "epidemiology, behavioral pharmacology, clinical effects and management" of substituted cathinone products. They write, "It is hoped that such research and coordinated public health efforts will help prevent and mitigate the rising harm associated with designer stimulant use."

Provided by Wolters Kluwer Health

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