



To: Physicians, Nurses, and Other Health Care Providers in American Samoa  
From: Ron Kirschner, MD  
Medical Director, Nebraska Regional Poison Center  
Subject: Molly  
Date: 7/8/13

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- When young people refer to “Molly” they’re probably not talking about a 1980s brat pack actress, a troubled North African nation, or even an R-rated music video by rapper Tyga.
- They’re probably talking about a drug. What kind of drug?
- Historically the term “molly” (short for “molecular”) was used to denote a pure form of the designer amphetamine methylenedioxymethamphetamine (MDMA, also known as Ecstasy, Adam, and other street names). MDMA was a popular “club drug” in the 1980s, and became a controlled substance in 1986.
- In recent years amphetamine derivatives and other designer stimulants have proliferated, often sold on the internet as “research chemicals”, “bath salts”, or other products labeled “not for human consumption.”
- Internet purveyors of street drugs are subject to minimal oversight. Products sold as “molly” might contain MDMA, 4-methylmethcathinone (mephedrone), trifluoromethylphenyl piperazine (TFMPP) or various other amphetamine-like designer stimulants. Consumers never really know what they’re getting.
  - MDMA may be detected by some urine amphetamine screens. Most of the other substances won’t be picked up by routine drug of abuse screening.
  - Definitive testing through a reference lab is typically not available in real time, and is unlikely to change patient management.
- Designer stimulant abuse may result in hypertension, tachycardia, hyperthermia, agitation, dystonias, seizures, rhabdomyolysis, multisystem organ failure, and occasionally intracranial bleeding. Fatalities have occurred. Treatment should be guided by the patient’s clinical features.
- The mainstay of treatment is symptomatic and supportive care. This typically includes:
  - IV fluids, cardiac monitoring, and supplemental oxygen.
  - External cooling if hyperthermic.
  - Benzodiazepines as needed for agitation, tremors, or seizures.
  - Monitoring of electrolytes, creatine kinase, kidney, and liver function.
  - Brain imaging if level of consciousness is decreased.

References:

Duterte M. What's in a label? Ecstasy sellers' perceptions of pill brands. *J Psychoactive Drugs* 2009; 41: 27  
Gunderson EW. Substituted cathinone products, *J Addict Med* 2013; 7: 153.

**Our trained staff of nurse and physician assistant specialists in poison information and physician toxicologists is available 24 hours a day to answer your questions.**



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