

# toxtidbits

THE MARYLAND POISON CENTER'S MONTHLY UPDATE.  
NEWS. ADVANCES. INFORMATION.

## Fentanyl and Acetyl Fentanyl

Fentanyl and its analog, acetyl fentanyl, have recently been implicated in an epidemic of overdoses and deaths among intravenous drug users in the United States and Canada. There have been 50 confirmed deaths due to both opioids in Pennsylvania this year, and 14 confirmed deaths from acetyl fentanyl in Rhode Island. Other states including Delaware and New Jersey have also reported increases in opioid-related overdoses, possibly due to illicit fentanyl and/or acetyl fentanyl. It is not unreasonable to expect that these potent opioids could soon be linked to overdoses in Maryland, as recent history has shown. From April 2005 through March 2007, there were more than 1,000 fatalities from injecting illicitly produced fentanyl in the U.S. Most of the deaths occurred in Chicago, Detroit and Philadelphia, but other states reported cases, including Maryland.

Fentanyl is an opioid analgesic with a potency of at least 50 times that of heroin. Acetyl fentanyl is an illicit synthetic fentanyl analog that has the same color, consistency and packaging as heroin and is at least 5 times more potent. It is not approved by the FDA and is not commercially available. Fentanyl, acetyl fentanyl and heroin all produce prominent opioid effects (e.g. lethargy, coma, respiratory depression, constricted pupils, and bradycardia) with an onset within minutes of injection. Treatment of overdoses is the same as for other opioid overdoses: supportive care as well as the use of naloxone. It has been suggested that naloxone doses of 2 mg or higher are needed to reverse the respiratory depression associated with fentanyl and acetyl fentanyl. Among the fatalities in Rhode Island, 45% died in the emergency department while 36% died at home. Other drugs including cocaine were also present in many of the cases.

The Centers for Disease Control and Prevention issued a health alert in June with recommendations for increased vigilance in identifying opioid overdoses. It will be difficult, however, for health care providers to determine what drug is involved. Heroin sold on the street could be heroin, heroin mixed with fentanyl or mixed with acetyl fentanyl, or either of these two drugs without any heroin. Call your poison center for more information and to report all suspected cases of illicit opioid overdoses: 1-800-222-1222.

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### Did you know?

**Opiate assays in routine toxscreens do not usually test for fentanyl.**

Opiate assays will be positive if heroin is present, but they typically do not screen for fentanyl or acetyl fentanyl. It is recommended to request a specific ELISA assay for fentanyl if an illicit opioid overdose is suspected. If positive, samples may be sent to NMS Labs in Pennsylvania (1-800-522-6671; [www.nmslabs.com](http://www.nmslabs.com)) to confirm whether acetyl fentanyl is present.

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