

Drug to treat opioid addiction poses risks for accidental exposure to children

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Buprenorphine is a safe and effective drug for treating opioid addiction. But as the prescribed use of buprenorphine has dramatically increased in recent years, accidental exposure of children to the drug has risen sharply, placing them at risk for serious injury and in extremely rare cases even death, according to researchers at the Utah Poison Control Center (UPCC), U School of Medicine's Department of Family and Preventive Health, and the Utah Department of Health (UDOH).

In a study published Thursday, Dec. 13, 2012, by the U.S. [Centers for Disease Control and Prevention](#), the Utah experts urge physicians to carefully educate their patients about the proper storage and use of [buprenorphine](#), which is available under the names of Suboxone® (a combination with another drug) and Subutex, about the proper storage and use of the drug. Karen C. Thomas, Pharm.D., Ph.D., certified poison information specialist at the UPCC and adjunct professor of pharmacotherapy, and Christina A. Porucznik, Ph.D., assistant professor of family and [preventive medicine](#), led the study.

"A toddler or child who ingests buprenorphine can become extremely sick," says Thomas. "Therefore, it is critical that patients prescribed this drug understand how dangerous it can be for [children](#) and how to properly store it."

The dangers of buprenorphine exposures in children include:

- If a child "mouths" or sucks on the tablet, the absorption increases dramatically compared to if a child immediately swallows a tablet.
- Buprenorphine has the potential to cause delayed and persistent respiratory depression for more than 24 hours following ingestion. Even if the majority of the tablet or film packaging was immediately removed from a child's mouth,

the risk for respiratory depression remains.

- In children younger than 6, clinical effects include drowsiness, vomiting, miosis (contraction of the pupil), agitation, tachycardia (abnormally fast heartbeat), and respiratory depression.

As opioid addiction has become an increasing problem in recent years, the number of buprenorphine prescriptions has risen markedly. A UDOH analysis of data from the Utah Controlled Substance Database shows that since 2002 the number of Utah patients prescribed buprenorphine has increased 444-fold while the number of providers prescribing the drug increased 67-fold.

In that same period, the number of accidental exposures to buprenorphine reported to the UPCC increased 13-fold and averaged 36 a year from 2009-2011. The majority of exposures of children younger than 6 required evaluation and treatment at a health care facility. Three people—one teenager and two adults—died from accidental exposure to Suboxone®.

In a letter to Utah physicians and other prescribers, UDOH and the UPCC are advising them to educate their patients in the following ways regarding accidental exposures to buprenorphine:

- If a child is exposed to buprenorphine call the Utah Poison Control Center immediately at 1-800-222-1222. Do not wait for symptoms to appear.
- Keep buprenorphine in a locked box, bag, or cabinet for safe storage out of sight and out of reach of children.
- Keep buprenorphine in its original, labeled prescription container with child-resistant closure.
- Do not place buprenorphine tablets or films on counters, sinks, dressers or nightstands for later use.
- Discard used buprenorphine film wrapping

immediately after use by folding the package and disposing of it in the trash. Residue from the medication that remains in the packaging can be absorbed when placed in a child's mouth.

- Do not store buprenorphine in pockets, bags, purses, backpacks or other carrying cases.
- Do not leave buprenorphine in the bathroom, car or any publicly accessible space.

Robert Rolfs, M.D., deputy director of UDOH, says educating buprenorphine users about the potential risk to children can prevent serious injuries.

"Buprenorphine has benefits for treating addiction to heroin and prescription opioids, but it also has risks if used or stored improperly," Rolfs says. "It is important to educate the patient on proper use and storage of the medication to protect children from the dangers described in this study."

Provided by University of Utah Health Sciences

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