

Drug and Poison Information Center  
(DPIC)

# DrugScope

Winter 2013

In this issue:

- ❖ N-bomb
- ❖ Needle exchange program
- ❖ Vicodin gets a makeover
- ❖ National Drug Facts Week
- ❖ Nexafed
- ❖ New generic opioid available in Canada
- ❖ Naloxone on the streets

2900 Vernon Place, 3rd floor, Cincinnati, OH 45219

# It's NOT da bomb!



Melissa Huber RPh, CSPI

Each year seems to hold its own new threats in the recreational drug use arena. 2012 was no exception. Poison control centers across the country saw multiple hospitalizations and fatalities related to a designer drug most commonly referred to as “N-bomb”. It also may be called “Solaris” or possibly “Smiles.”

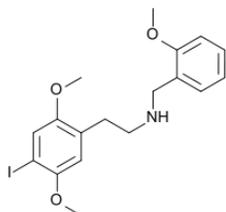
N-bomb is 25I-NBOMe [4-iodo-2, 5-dimethoxy-N-(2-methoxybenzyl)phenethylamine]. It is chemically related to 2C-I although it is not the same agent, as erroneously indicated in some media reports. It first was offered online in 2010, as a “research chemical, not for human consumption.” Despite this labeling, intentional human consumption often occurs with these products. It appears to be available, very inexpensively, in powder, tablet, and liquid formulations. Reports indicate that it has been taken by allowing dissolution in the mouth (held under the tongue or in the cheek), ingestion, insufflation (snorting of powder), or via a drop placed in the nostril.

Similar to other phenethylamine derivatives, N-bomb is a stimulatory agent with hallucinogenic effects. Its potency, with dosages on the order of micrograms, makes it particularly dangerous. Its use may result in dangerous increases in blood pressure (with risk for stroke), seizures, and kidney failure. Additionally, risky behavioral effects may occur. One account involved a death resulting from injuries sustained from running into fixed objects.

N-bomb is not scheduled under federal law; however it may be considered an analog of 2C-I or 2C-B (Schedule I controlled substances) in which case its possession or sale with the intent of human consumption would be considered illegal. Florida, Louisiana, and Virginia have established Schedule 1 status.

Despite the obvious risks and documented hospitalizations and deaths associated with use of this agent, many user accounts of positive experiences were revealed via an internet search. It is likely that those pursuing a psychedelic experience will continue to experiment with N-bomb and similar designer drugs.

N-bomb is not really “da bomb”, but it indeed may continue to prove very destructive.



# Dirty Controversy

Robyn Davis MSN, RNII, CSPI



It is no secret that injection drug use is a concern in the Cincinnati area, as well as throughout the United States. The complications of injectable drug use can be and often is deadly. Injection drug use accounts for 16 percent of new HIV infections every year. Although the total number of new HIV infections has decreased over the last two decades, there is still room for improvement regarding transmission related to injectable drug use.

Within the last couple of years, Syringe Exchange Programs (SEPs) have surfaced. These programs are designed to provide clean syringes in exchange for the used (possibly HIV contaminated) syringes. Needle exchange is not the only advantage offered through SEPs, they also offer counseling, drug treatment referrals, and HIV testing. SEPs not only provide safety to injection drug users, but also to the community. When used syringes are exchanged, SEPs take care of their proper disposal. This decreases the amount of dirty syringes lying in parks, alleys, playgrounds, or even around homes where children or other non-drug users may come in contact with them.

According to the North American Syringe Exchange Network (NASEN), there are currently 203 exchange programs operating at least one or more exchange sites in 34 states. There is an SEP in Cleveland, which is the only program currently recognized in Ohio by the NASEN. "Prevention NOT Permission" is a program that was established in Portsmouth, Ohio in response to the dramatic increase in heroin use. The program reports exchanging 22,000 syringes in its first year which reportedly made the streets, parks, and playgrounds much safer by eliminating discarded syringes. Cincinnati is working on creating the "Cincinnati Exchange Project" which will construct a recreational vehicle (RV) to act as a mobile syringe exchange unit. The Cincinnati Health Department issued an emergency ordinance supporting the exchange program as data identifying an HIV/Hepatitis C epidemic among injection drug users in Cincinnati.

Controversies about these programs include "What will it cost" and "who will pay for it?" Obtaining funds for SEPs proves difficult. In 2010, President Obama modified the ban on using federal funds for Syringe Exchange Programs, making money more available for these programs; however the ban was put back in place in 2012. The NASEN provides small grants for SEP programs, however most funding is local and state based.

Although funding is challenging, the amount of taxpayer money saved if even one person is spared HIV or Hepatitis C can be substantial. Dr. Feinberg from the University of Cincinnati Medical Center estimates the lifetime treatment cost for a HIV patient is \$600,000. The latest reported data (2005) from the Center for Disease Control and Prevention is that the cost to prevent one HIV infection by SEPs is \$4,000 to \$12,000. According to Dr. Feinberg, a needle exchange program that prevents one HIV transmission will save taxpayers more than the cost of the program per year.

As expected, this topic sparks much controversy. Some believe that providing clean equipment supports and encourages injection drug use. There have, however, been several federally funded research studies that have shown that this is simply not the case. Others recognize injection drug use as a known problem that will not resolve, therefore so providing a safer practice for that small population will increase the community's safety as a whole as well as reducing taxpayer healthcare burden.

## References:

1. Centers for Disease Control and Prevention (2005): Syringe Exchange Programs.  
[http://www.cdc.gov/IDU/facts/AED\\_IDU\\_SYR.pdf](http://www.cdc.gov/IDU/facts/AED_IDU_SYR.pdf)
2. Clean Exchange article from Vital Statistics
3. [Syringe Services Program Guidelines for Health Departments](http://www.nasen.org/)  
(<http://www.nasen.org/>)

# Vicodin gets a makeover

Christy Geis

Vicodin is a combination of hydrocodone and acetaminophen. Hydrocodone, a derivative of codeine is a narcotic. Acetaminophen is the generic name of Tylenol. The combination is used to relieve pain. The manufacturer has decreased the amount of acetaminophen to decrease the risk of liver toxicity.

There are 3 new imprint codes for the brand name Vicodin, Vicodin ES and Vicodin HP drugs. The manufacturer has decreased the Acetaminophen to 300mg in each of the Vicodin versions (Vicodin (used to contain 500mg acetaminophen), Vicodin ES (used to contain 750mg acetaminophen), Vicodin HP (used to contain 660mg acetaminophen)).

Imprint “VICODIN” & reverse “5/300” white/oblong/scored pill.  
Contains: APAP 300mg & Hydrocodone 5mg.

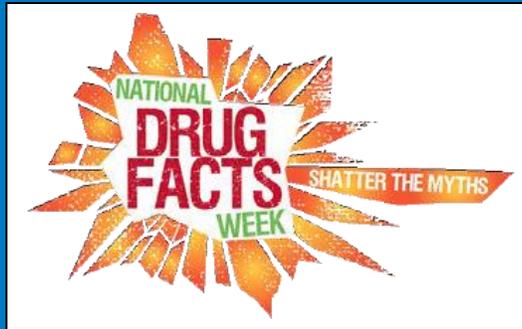


Imprint “VICODIN ES” & reverse “7.5/300” white/oblong/scored pill.  
Contains: Acetaminophen 300mg & Hydrocodone 7.5mg



Imprint “VICODIN HP” & reverse “10/300” white/oblong/scored pill.  
Contains: Acetaminophen 300mg & Hydrocodone 10mg





**National Drug Facts Week 2013: Monday January 28<sup>th</sup> through Sunday February 3rd.**

Drug and Poison Information Center celebrates National Drug Facts Week 2013

### **What is National Drug Facts Week?**

National Drug Facts Week was launched in 2010 by the National Institute on Drug Abuse (NIDA), part of the National Institutes of Health. To counteract the myths they get from the internet, TV, movies, music, or from friends, NIDA scientists want to stimulate events in communities so teens can learn what science has taught us about drug abuse and addiction.

### **What happens during National Drug Facts Week?**

National Drug Facts Week is an opportunity for teens to shatter the myths about drugs and drug abuse. In community and school events all over America, teens and experts will come together for an honest conversation about how drugs affect the brain, body and behavior. In school assemblies, after school clubs, athletic events, book clubs and other venues, students will be able to ask scientists questions about drugs, or discuss NIDA materials designed for teens.

### **DPIC summary of activities during National Drug Facts Week**

- Distribute National Drug IQ Challenge literature that discusses and highlights the facts about what happens to the body when someone uses drugs and alcohol. The following community locations will receive this literature Boys & Girls Clubs; YMCA's; Cincinnati Public Schools (CPS), End Zone Club, and select faith based organizations.
- Cincinnati Children's Hospital- DPIC Fact Blast Announcement each day of campaign at CPS High Schools; Public Service Announcement (PSA) on WIZ FM\*/BUZZ, possible interview with Dr. Jan Scaglione on KISS or WIZ; PSA with Pittsburgh Pirates player- Josh Harrison (Princeton High School, former UC baseball player) Possible Interviews with Janelle Walton, Channel 9 and Ben Swann, Channel 19
- Cincinnati Children's Hospital- DPIC partnering with Assistant Attorney General Kenneth Parker to shatter myths about use of drugs and alcohol and how these choices and drug behavior affect the community in an interview with Cincinnati Herald & Cincinnati Enquirer
- People of Color Wellness Alliance (POCWA) Fact Blast iMovie will used with Fountain Square LED screen, "Jumbotron" during the week of Jan 28- Feb 3, 2013 during the hours of 2:30-4:30 p.m. Fact Blast iMovie will also be shared at the Hamilton County Main Public Library.
- People of Color Wellness Alliance (POCWA) will host a Face Book Scavenger Hunt
- Presentation of SAMSHA and NIDA developed curriculum specific to Drug Fact Week in the classrooms of local high schools
- Cincinnati Children's Hospital- DPIC Fact Blast Announcement -Myth Buster Cards sent to homes in OTR/WestEnd, Schools, partners, and businesses



For more information for National Drug Facts Week 2013 or to become a partner in the future events please contact Alysia Longmire 513-636-5094 or [Alysia.longmire@cchmc.org](mailto:Alysia.longmire@cchmc.org)

# Abuse Deterrent Pseudoephedrine Set to Launch

Sara Stover, PharmD

Acura Pharmaceuticals launched an abuse deterrent pseudoephedrine (PSE) product, Nexafed™, on December 10, 2012. This product still falls under the sales restrictions of the Combat Methamphetamine Epidemic Act (CMEA) of 2006 as well as any more stringent individual state restrictions on pseudoephedrine sales. Nexafed is available as a 30 mg immediate-release tablet in a 24 count box for the treatment of nasal congestion associated with colds and allergies.

Nexafed utilizes a technology called IMPEDE®. According to the manufacturer, IMPEDE technology is an advanced polymer matrix that limits or disrupts the extraction of PSE from tablets for conversion into methamphetamine. Specifically, the IMPEDE technology forms a viscous, gelatinous mixture when Nexafed tablets are dissolved in solvents typically used in the PSE extraction or methamphetamine production processes thereby trapping the PSE or converted methamphetamine to prevent its isolation or purification.

Acura Pharmaceuticals has reported topline results of several studies of this technology via press releases that are available on their website. In October 2011, scientists working with law enforcement, reported test results that IMPEDE technology blocked extraction of PSE; however, in one test method, an unknown amount of methamphetamine was produced. They reported that they would delay commercialization of Nexafed pending further tests. Prior to this, they had a clinical research organization (CRO) attempt extraction with what they believed to be the three most common extraction methods used in illicit methamphetamine production, and no measurable quantity of PSE could be extracted from Nexafed tablets.

In March 2012, Acura Pharmaceuticals reported on an additional set of laboratory tests using the direct conversion or “one-pot” method of methamphetamine production. The study compared Nexafed 30 mg PSE tablets to Sudafed® 30 mg PSE tablets. One-hundred tablets of each product were tested with a variety of commonly used solvents in multiple “one-pot” tests. With 3 grams of PSE (100 tablets each containing 30 mg), the maximum possible methamphetamine production is 2.7 grams. Nexafed tablets produced 38% of the maximum amount of methamphetamine on average while Sudafed tablets yielded about twice as much methamphetamine on average. The purity of the powder produced by both PSE products was approximately 65%.

Based on the reported results, it appears that Nexafed may help deter PSE abuse, but it is still possible to produce methamphetamine from the product, albeit with decreased yields from traditional PSE products. The market for Nexafed tablets remains to be seen. The manufacturer is pricing Nexafed comparable to branded PSE products, but this is still at a premium to generic PSE. Nexafed also carries the same sales restrictions as traditional PSE products.



Reference: <http://acurapharm.com/>

# Oxycodone cr generic now available in Canada

Sheila Goertemoeller PharmD, CSPI, ICPS

Health Canada (the Canadian equivalent of the US FDA) has recently allowed approval of generic extended release formulation of Oxycodone. An alert has been issued to US law enforcement officials and border patrol agents warning them to expect an upsurge of prescription pain-medications transported from Canada for recreational use. Apotex markets apo-Oxycodone HCl CR that lacks the abuse deterrent technology of Oxycontin that is available in the US. The US version of Oxycontin has technology that makes it resistant to crushing, and it gels up when mixed with liquid, making it difficult to snort or inject. Purdue Pharma's patent on OxyContin expires in April 2013. The Canadian apo-oxycodone hcl cr lacks this technology and it is feared that it may be highly abusable.

The following is a list of apo-Oxycodone HCl CR imprint codes and national prices.

5 MG		\$31.50
10 MG		\$43.90
15 MG		\$53.00
20 MG		\$65.85
30 MG		\$87.00
40 MG		\$114.13
60 MG		\$157.50
80 MG		\$210.80

[http://www.apotex.com/ca/en/products/downloads/print/en\\_apl\\_print.pdf](http://www.apotex.com/ca/en/products/downloads/print/en_apl_print.pdf)



# Naloxone on the streets

Sheila Goertmoeller PharmD, CSPI, ICPS



Naloxone (Narcan®) was approved by the FDA in 1971 and has been used safely by emergency medical professionals for over 40 years. It is an opioid antagonist that provides rapid reversal of opioid overdose symptoms such as central nervous system and respiratory depression. Naloxone blocks the effects of opioids including oxycodone, hydrocodone, morphine and heroin on the brain within 1-2 minutes and last about 1-4 hours. It attaches to and blocks receptors for opioid drugs in the brain. In an overdose setting, it can displace opioids and reverse their effects. Naloxone is not habit forming. There is no overdose risk with naloxone; however, it may cause pulmonary edema or precipitate opioid withdrawal symptoms in addicts.

Overdose and death is common among opioid/heroin users, and the numbers continue to climb nationally. The Ohio Department of Health Office of Vital Statistics reports that in Ohio drug overdoses have increased by > 300% from 1999-2010. In response to this alarming trend, at least 15 states have implemented Naloxone Distributing Programs (NDPs). NDPs provide overdose management training and take-home doses of intranasal or intramuscular naloxone. Currently under Ohio law, naloxone can be legally prescribed and dispensed to a person at-risk for an overdose. The Ohio Department of Health has initiated and funded Project D.A.W.N. (Deaths Avoided with Naloxone) in Portsmouth. Project DAWN is Ohio's first overdose reversal project pilot program. It is housed at the Portsmouth City Health Department and services Scioto County. The cost of a project DAWN overdose reversal kit of intranasal naloxone is \$30.

There are different viewpoints on the potential value of NDPs. Opioid related deaths typically occur within the first couple of hours of an overdose, and often occurs in the company of others. A CDC report discusses that widely distributing and training people on how to use naloxone can be an effective strategy to reduce opioid related mortality. However, in a debate called by the CDC/NIDA and FDA in April 2012, the value and liability of naloxone accessibility to the lay public was questioned. With a 1-4 hour duration of action, naloxone wears off before longer acting opioids, and overdose could still cause death if patients don't seek medical attention. Some argue that the availability of naloxone will only enable opioid users to abuse it more, and reduce the number who would otherwise seek help for their addiction via rehab programs. There are pros and cons to the availability of naloxone in the community. Project DAWN has reported saving its first life <http://portsmouth-dailytimes.com/bookmark/20405704-Project-DAWN-credited-with-saving-it%E2%80%99s-first-life>. It can be difficult to determine if opioid overdose reversal with at-home naloxone use will be consistently life-saving.

#### References:

-<http://www.healthohioprogram.org/vipp/drug/ProjectDAWN.aspx>

-Ohio Department of Health Office of Vital Statistics

-<http://healthland.time.com/2012/04/13/naloxone-debate-fda-hears-testimony-about-making-an-overdose-antidote-nonprescription/#ixzz2GSeLk16y>



© 2013 By the Cincinnati Drug & Poison Information Center (DPIC)

Topics, print and layout editor: Sheila Goertmoeller PharmD, CSPI, ICPS

Content editors: Alysha Behrman RN, MSN, CSPI, ICPS, CARN; Sheila Goertmoeller PharmD, CSPI, ICSPS; Rob Goetz PharmD, DABAT; and Earl G. Siegel PharmD, OCPS

The opinions expressed herein are those of the contributing authors and do not necessarily reflect the views of the editor, publisher or supporting institutions. DPIC is a service of the Cincinnati Children's Hospital Medical Center and Children's Hospital Research Foundation. Services are also supported by: the US Department of Health and Human Services (HRSA), the Ohio Department of Health, Hamilton County Mental Health and Recovery Services Board, and the Ohio Department of Alcohol and Drug Addiction Services (ADADAS). Additional support for DPIC services is provided by Akron Children's Hospital

