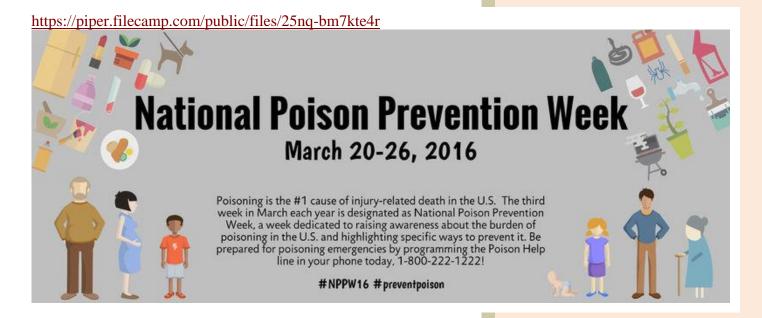
DPICtions

Winter 2016



Cincinnati Drug and Poison Information Center

Website:

http://www.cincinnatichildrens.org/service/d/dpic/default/

Blog:

 $\label{lem:http://cincinnatichildrensblog.org/category/safety-and-prevention/$



The Grim Reaper Fentanyl

Jan Scaglione PharmD, DABAT



American
Association of Poison
Control Centers
www.aapcc.org

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Last issue we reported on the increase in heroin overdose deaths reported in Cuyahoga County. Part of the increase in heroin cases has been found to involve adulteration of the heroin with a more potent narcotic; fentanyl. Fentanyl is on the order of 16-20 times more potent than heroin, and somewhere between 80-100 times more potent than morphine. This isn't pharmaceutical fentanyl we're talking about though; it was manufactured specifically for the illicit market. A deadly addition to the heroin supply, Drug Enforcement Administration (DEA) officials have traced this clandestinely made narcotic back to China as the origin of the illicitly manufactured fentanyl. Clandestinely manufactured fentanyl started showing up in the U.S. heroin supply in 2014, and continued into 2015. In some cases fentanyl was sold as heroin, and in many others, combined with heroin or other drugs, and sold simply as "heroin". Unfortunately, adding a super potent narcotic into the heroin supply has resulted in an unprecedented number of deaths, many of them young people in their twenties that didn't have a clue as to what they'd gotten themselves into. Fentanyl kills so quickly that users would have little chance to save their life unless they also had a buddy with naloxone ready to administer it at the same time they used (what they thought was) heroin. A buddy would be necessary to administer the life-saving naloxone since an overdosed person cannot administer their own antidote in these cases. Even then, because fentanyl is so potent, there is no guarantee you could bring someone back from the jaws of death with administration of naloxone.

The Ministry of Public Security in China, after a lot of bad publicity and intense pressure from countries like the U.S. and others, recently authorized banning the sale of 116 China-produced drugs, including fentanyl. This change just took effect on Oct. 1, 2015. China has also been a primary source of many of the world's other synthetic drugs of abuse, including many potent hallucinogens. It isn't clear that they also banned the manufacture, but many websites that previously offered these chemicals for sale started reporting they were temporarily out of certain products due to the governments new controls. Time will tell what impact these controls will have on the manufacture, sale, and distribution of these synthetic drugs of abuse.

There were only 5 fentanyl deaths recorded in Cuyahoga County in the year 2013. That drastically changed in 2014 when 39 deaths were found to have fentanyl in their system at the time of death¹. And in 2015, the Cuyahoga County Medical Examiner's office recorded an unprecedented 89 deaths due to fentanyl in their county alone.

Elsewhere across Ohio a similarly grim picture has emerged. In 2014, the state of Ohio topped all other states in the U.S., ranking #1 in the number of drug seizure reports containing fentanyl analyzed by DEA labs. There were 1,245 total fentanyl reports in Ohio recorded by the National Forensic Laboratory Information Service (NFLIS), almost twice the number of the #2 ranked state of Massachusetts with 630². In March 2015, the DEA issued a nationwide alert identifying fentanyl as a public health threat. The DEA noted, beginning in late 2013 and throughout 2014, several states reported spikes in overdose deaths due to fentanyl and its analog acetyl-fentanyl. The increase in deaths was not due to pharmaceutical fentanyl, but due to illicitly produced fentanyl. In Ohio, there were 84 unintentional drug overdose deaths in 2013, and 502 in 2014 related to fentanyl. This prompted the Centers for Disease Control and Prevention (CDC) to make a visit to Ohio to study these fentanyl-related deaths in October 2015. Stops included Cuyahoga, Scioto, Montgomery, and Hamilton Counties, counties that had a high number of deaths due to fentanyl in 2014. While we're waiting for the CDC report to point us in the right direction to getting a handle on this epidemic, it is likely that there will be no easy answers to keeping people safe until we stop the flow of these dangerous drugs into our communities.

References:

1: http://executive.cuyahogacounty.us/en-US/2015-Heroin-Related-Deaths.aspx 2:http://www.healthy.ohio.gov/~/media/HealthyOhio/ASSETS/Files/injury%20prevention/2014%20Ohio%20Preliminary%20Overdose%20Report.pdf



Poison Prevention Tips

Be prepared.

Put the poison control number (1-800-222-1222, U.S. only) in, on or near your phone.

Prevent carbon monoxide poisoning.

- o Install a battery-operated carbon monoxide alarm in every sleeping area of your home.
- o Keep appliances, furnaces, fireplaces and wood-burning stoves in good repair.
- Use generators safely.
 - Never operate a generator in an enclosed or semi-enclosed space such as a basement, garage, carport, barn or enclosed porch.
 - Place generators away from doors and windows. Direct the exhaust away from the house so that carbon monoxide won't enter the house.
- o Do not use charcoal or gas grills, stoves, gas ovens, camp stoves or hibachis to heat your home (or your tent or camper).
- Recognize the early symptoms of carbon monoxide poisoning: flu-like symptoms such as headache, nausea, vomiting, dizziness, and lightheadedness. Often many people and even pets get sick at about the same time. If symptoms develop, leave the area and get medical attention right away

Store medicines and products in their original containers.

- o Antifreeze (for cars) tastes sweet, but even a little can cause kidney damage or death. Keep it away from children and pets.
- Feverish? Use a digital thermometer. Glass mercury thermometers may break in a child's mouth. Spilled mercury requires special cleanup to avoid contaminating your home.

 webPoisoncontract

Alcohol Testing & Ethyl Glucuronide

Tisha Carson RPh, C.SPI

What is Ethyl Glucuronide?

Ethyl Glucuronide (EtG) is a direct metabolite of alcoholic beverages (ethanol). Its presence in urine may be used to detect recent alcohol consumption, even after ethanol is no longer measurable. The presence of EtG in urine is a definitive indicator that alcohol was ingested.

Key Benefits of Using EtG test Include:

Detects recent usage more accurately and for a longer period of time than standard testing

- Ideal for zero tolerance and abstinence situations
- Strong indicator of alcohol ingestion within the previous 3 to 4 days
- EtG is only evident when alcohol is consumed (this does not pertain to naturally produced alcohol in the body as a result of fermentation)
- Allows monitoring in alcohol treatment programs
- Acts as an early warning system to detect trends towards relapse
- > Tests are performed on state of the art equipment for accuracy and reliability
- Thirty-six hour turnaround time from receipt of specimen
- EtG may be run on urine specimens in conjunction with other drug testing panels
- lt is not a quantitative test.

Resources

http://www.norchemlab.com/wp-content/uploads/2011/08/EtS-EtG-facts.pdf http://www.drugtestingnetwork.com/alcohol-testing.htm



30 ml of Prevention

Robert Goetz Pharm D, DABAT

Ohio's Poison Centers encourage all healthcare professionals to consider ways to help prevent poisonings by participating in Poison Prevention Week and all year long.

Poison Prevention Week for 2016 is March 20-26 2016.

Links to information/free posters and materials:

http://www.poisonprevention.org/poster.htm

http://poisonhelp.hrsa.gov/what-can-you-do/national-poison-prevention-week/index.html

www.PoisonHelp.hrsa.gov

www.PoisonHelpEspanol.hrsa.gov

www.poisonprevention.org

www.aapcc.org

http://www.cincinnatichildrens.org/service/d/dpic/default/

http://www.nationwidechildrens.org/poison-center

Poisoning and drug overdose continues to be a major source of morbidity and mortality in Ohio and across the country. More than 2 million poisonings are reported to the Nation's poison centers each year. Approximately 90 percent of poisonings occur at home, and 51 percent of all poisonings involve children under the age of 6. Poisoning continues to be one of the leading causes of death in adults. Common causes include drug overdose, medication errors and increased suicidality in the elderly. In 2015, an estimated 1856 (19/100,000) Ohioans died as a result of drug overdose. That's equivalent to a little over 5 deaths daily.

The availability of naloxone for rescue of patients who have overdosed on prescription pain pills, heroin and other opiates holds promise to decrease deaths related to overdoses of these substances. However, it is important to realize that some the heroin being sold in Ohio has been adulterated with fentanyl. Fentanyl is both 40-100 times more potent than morphine and binds more strongly to opioid receptors. As a result, larger than expected doses of naloxone may be needed to revive patients who have overdosed on adulterated heroin.

Cincinnati Drug and Poison Information Center and the Central Ohio Poison serve the people of Ohio 24/7. Please help spread the prevention message and encourage your patients to call the poison center at **1-800 222-1222** when the need arises.

National Poison Prevention Week March 20-26, 2016

More than 2 million poisonings are reported each year to the Nation's poison centers. According to the American Association of Poison Control Centers, approximately 90 percent of poisonings happen at home, and 51 percent of poisonings involve children under the age of 6. The majority of fatal poisonings occur among adults, especially older adults.

National Poison Prevention Week was established by the U.S. Congress in 1961 to focus national attention on the dangers of poisonings and how to prevent them. To learn more about ways to keep people of all ages safe and help prevent poisonings, visit the Poison Help Web site at www.PoisonHelp.hrsa.gov (or to view materials in Spanish, visit www.PoisonHelpEspanol.hrsa.gov).

http://www.poisonprevention.org/poster.htm

Follow the link above to order copies of the posters (11x17): Submit your full name, mailing address (no P.O. Box, no international) and the quantity of posters requested. Up to 25 copies of each poster can be requested free of charge.

Not So Yummy Chips

Robyn E. Davis MSN, RNII, CNL, CSPI

The number of children being exposed to lead each year is appalling. It's estimated nearly 500,000 kids in the U.S. have elevated lead levels that could have serious, even permanent, health consequences if not detected. Even more concerning is that lead toxicity is 100% preventable and yet there are still hundreds of thousands of children exposed to lead each year.

There are several sources for lead exposure, the most common being lead-based paint. Although banned in most household paints in 1978, The Centers for Disease Control and Prevention (CDC) reports that nearly 24 million homes in the U.S. contain deteriorating lead-based paint and 4 million of those houses are home to young children. The most vulnerable population for lead exposures are children ages 1 to 5 years old. Children develop elevated lead levels from eating paint chips, chewing on toys that contain lead, or inhaling lead-based dust.

Other sources of lead exposure

- certain types of water pipes
- toys and jewelry
- imported candy
- traditional home remedies
- Parents may bring home from certain jobs or hobbies that involve working with lead-based products

Elevated lead levels can cause significant and permanent health problems.

- brain and nervous system damage which could lead to lower IQ
- slowed growth and development
- hearing and speech problems
- learning and behavior problems

If you are concerned about lead exposure, contact your physician right away. If you have concerns about the presence of lead paint in your home, reach out to your local health department for information on available resources for testing. When renovating, utilize a contractor certified by the Environmental Protection Agency. Check out The Consumer Product Safety Commission's website at www.cpsc.gov as it provides up-to-date information regarding recalled toys and jewelry. For more information, please visit the CDC's website at www.cdc.gov

http://flintwaterstudy.org/

To stay up to date on the lead issues in Flint, MI follow the above link.

http://www.healthcarecommunication.com/Main/Articles/13714.aspx?utm_medium=email&utm_source=Savicom&utm_campaign=Help%20prevent%20childhood%20lead%20poisoning%3B%20The%20demand%20for%20hospital%20print%20pubs%3B%20Secrets%20to%20content%20curation%3B%20and%20much%2C%20much%20more...&utm_term=http%3A%2F%2Fwww.healthcarecommunication.com%2FMain%2FArticles%2F13714.aspx



College Prescription Drug Study

The Ohio State University - Office of Student Life

Higher Education Center for Alcohol and Drug Misuse Prevention and Recovery

The College Prescription Drug Study (CPDS) is a multi-institutional survey of undergraduate, graduate and professional students. The CPDS examines the non-medical use of prescription drugs, including the reasons for and consequences of use, access to prescription drugs and perceptions of use among students. The purpose of the CPDS is to gain a more thorough understanding of the non-medical use of prescription drugs among college students. The CPDS was developed and administered as a collaboration between The Ohio State University's Center for the Study of Student Life and the Higher Education Center for Alcohol and Drug Misuse Prevention and Recovery.

During spring 2015, the CPDS was administered to random samples of students attending 8 four-year public and private institutions across the United States via an anonymous online survey. The survey was administered to 27,495 students; 3,918 responded for a response rate of 14.2 percent.

HIGHLIGHTS OF THE STUDY

Frequency of Use

10.2% of undergraduates report using pain medications for non-medical reasons, 8.9% report using sedatives and 18.6% report using stimulants. Respective figures for graduate and professional students are 6.1% for pain medications, 6.8% for sedatives and 11.8% for stimulants.

Access to Prescription Drugs

33.5% of undergraduates and 29.8% of graduate and professional students state it is easy or very easy to obtain prescription pain medications; respective figures for sedatives are 44.2% of undergraduates and 29.3% of graduate and professional students, and for stimulants are 71.0% of undergraduates and 48.6% of graduate and professional students. The majority of students who use prescription drugs for non-medical reasons report that they typically obtain prescription drugs from friends (60.9% for pain medications, 60.4% for sedatives and 82.6% for stimulants).

Reasons for Use

The most common reasons students report using pain medications are to relieve pain (54.9%) and to get high (46.0%); sedatives are to get to sleep (56.1%) and to relieve anxiety (48.8%); and stimulants are to study or improve grades (84.9%).

Consequences of Use

The most frequently reported effects of using prescription drugs for non-medical reasons include experiencing depression for pain medication users (18.6%), experiencing memory loss for sedative users (29.5%) and positive impacts on academics for stimulant users (62.8%).

Perceived Use of Other Students

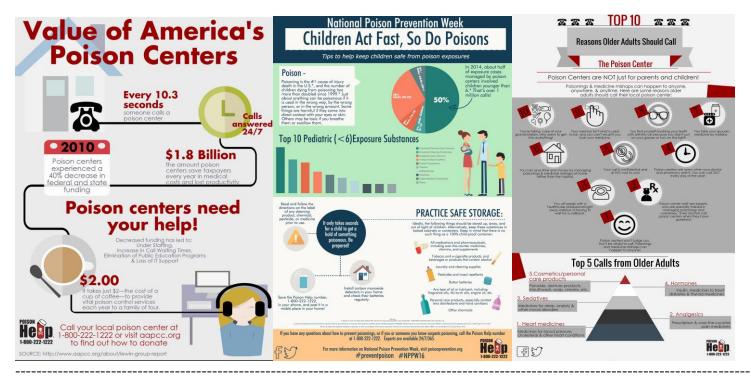
Students overestimate the non-medical use of prescription drugs by other students at their institutions. Undergraduate students estimate that 15.8% of other students use pain medications, 17.4% use sedatives and 33.6% use stimulants. Graduate and professional students estimate 12.9%.

More information on the study is available by contacting the CPDS team at rxstudy@osu.edu.

For more information or assistance with reducing prescription drug misuse on your campus, please contact the Higher Education Center for Alcohol and Drug Misuse Prevention and Recovery at hecaod@osu.edu or visit hecaod.osu.edu.



National Poison Prevention Week Infographics



DPIC's own Dr. Earl G. Siegel, was recently honored at the **People Of Color Wellness Alliance (POCWA) Community Gems: A Night of Elegance** event. The event honors individuals and/or agencies for outstanding community achievement. Dr. Siegel received an award along with a special Commendation from the Ohio State Senate. The Commendation is the highest honor the Ohio Senate bestows on a civilian. Congratulations Dr. Siegel!





Increases in Fentanyl Drug Confiscations and Fatalities CDC Health Alert Network

The Centers for Disease Control and Prevention (CDC) and the Drug Enforcement Administration (DEA) are investigating recent increases in fentanyl-related unintentional overdose fatalities in multiple states across the U.S. The purpose of this HAN advisory is to: (1) alert public health departments, health care providers, first responders, and medical examiners and coroners to the possibility of additional increases in other jurisdictions, (2) provide recommendations for improving detection of fentanyl-related overdose outbreaks and (3) encourage states to expand access to naloxone and training for administering naloxone to reduce opioid overdose deaths.

Reports on state drug seizures (or confiscations) from the National Forensic Laboratory Information System (NFLIS), a program of the DEA's Office of Diversion Control, indicate a significant increase in the total number of fentanyl drug seizures reported by forensic laboratories around the country from 2012 to 2014 (618 in 2012; 945 in 2013; 4,585 in 2014).7 More than 80% of drug seizures in 2014 were concentrated in 10 states (Table 1). The number of states reporting 20 or more fentanyl seizures every six months is increasing. From July to December 2014, 18 states reported 20 or more fentanyl drug seizures. Previously, six states reported 20 or more fentanyl drug seizures from July to December 2013.

Table 1: Top 10 states by total Fentanyl Seizures, 2014, unpublished NFLIS data

State	Number of Fentanyl seizures
Ohio	1245
Massachusetts	630
Pennsylvania	419
Maryland	311
New Jersey	238
Kentucky	232
Virginia	222
Florida	183
New Hampshire	177
Indiana	133
	Ohio Massachusetts Pennsylvania Maryland New Jersey Kentucky Virginia Florida New Hampshire

These increases raise serious concerns for public health if fentanyl seizures serve as a proxy for increased overdose risk. Recent fentanyl-related fatal overdose data from several of the top 10 states with highest seizure counts suggest fatalities have increased in states reporting large increases in fentanyl seizures. Two of the top-five states, Ohio and Maryland, both reported sharp increases in fentanyl-related deaths in 2014—Ohio reported 514 fentanyl-related fatal overdoses in 2014 compared to 92 in 2013,8 and Maryland reported 185 fentanyl-related fatal overdoses in 2014 compared to 58 in 20139. Massachusetts, another top-five state, is currently investigating whether an abnormally sharp increase in opioid related deaths in 2014 is attributable to fentanyl. 10 Florida, another state reporting increases in fentanyl-related drug seizures, recently reported 397 fatal overdoses attributable to fentanyl in 2014, up from 185 in 201311.

Fentanyl poses a significant danger to public health workers, first responders, and law enforcement personnel that may unwittingly come into contact with it either by absorbing through the skin or accidental inhalation of airborne powder. In August 2015, New Jersey law enforcement officers conducting a narcotics field test on an illicit substance experienced shortness of breath, dizziness, and respiratory distress after coming into contact with an unknown substance, which forensic laboratory testing determined to be a mix of cocaine, heroin, and fentanyl.



Increases in Fentanyl Drug Confiscations and Fatalities (contd.) CDC Health Alert Network

Recommendations

CDC suggests the following actions in response to increases in fentanyl-related overdose deaths:

- Improve detection of fentanyl outbreaks to facilitate effective response.
- Expand Use of Naloxone: Naloxone is a safe and effective antidote to all opioid-related overdoses, including heroin and fentanyl, and is a critical tool in preventing fatal opioid overdoses. 19,20 Depending on state and local laws, this medication can potentially be administered effectively by EMS, law enforcement 21, people at high risk for overdose 22, or family and friend bystanders who have obtained the medication 23.

For more information

- CDC Health Advisory: Recommendations for Laboratory Testing for Acetyl Fentanyl and Patient Evaluation and Treatment for Overdose with Synthetic Opioid at http://emergency.cdc.gov/han/han00350.asp
- DEA Issues Nationwide Alter on Fentanyl as Threat to Health and Public Safety at

http://www.dea.gov/divisions/hq/2015/hq031815.shtml

- Fentanyl SAMHSA letter to physicians and fact sheet at:
- http://buprenorphine.samhsa.gov/20130715114030811.pdf
- Special Report: Opiates and Related Drugs Reported in NFLIS, 2009-2014 at

http://www.deadiversion.usdoj.gov/nflis/spec_rpt_opioids_2014.pdf

• SAMHSA Opioid Overdose Toolkit at: http://store.samhsa.gov/shin/content/SMA13-

4742/Overdose_Toolkit_2014_Jan.pdf

• Call Poison Control at 1-800-222-1222 or use the webPOISONCONTROL online tool for guidance

References: available upon request

Opioid disposal kiosks

Walgreens plans to roll out safe medication disposal kiosks in more than 500 drugstores in 39 states and Washington D.C. The kiosks will dispose opioids and other controlled substances. It will primarily be stationed in the company's 24-hour locations. They also plan on having a program offering naloxone, the heroin overdose drug that users can inhale or inject, without a prescription.

For more information: http://www.drugfree.org/join-together/walgreens-install-disposal-kiosks-prescription-drugs-500-stores/

Zika virus

What is the risk of Zika virus infection in Ohio? The primary mosquito that transmits Zika virus is Aedes aegypti (yellow fever mosquito.) This mosquito is found in the tropics and southern United States. It is not indigenous to Ohio. Aedes albopictus, (Asian tiger mosquito) may potentially transmit Zika virus in the United States, although it has not yet been implicated in the transmission. This mosquito has been identified in 37 Ohio counties. As a public health safety measure, it is recommended that suspected cases of Zika avoid mosquito exposure for the week after symptom onset when mosquitoes are active in Ohio (May to October) in order to prevent the possibility that mosquitoes might become infected by biting an infected person and then transmitted the virus to other people. The CDC has issued a Health Alert Network Advisory to state, local and US public health departments to be aware of and to adhere to current recommendations for preventing sexual transmission of Zika virus, particularly for men with pregnant partners. Research is underway to establish whether Zika virus is transmitted sexually and whether it can cause microcephaly (baby born with a small head.)

For more information

http://www.odh.ohio.gov/zika

CDC HAN Advisory Update: Interim Guidelines for Prevention of Sexual Transmission of Zika Virus — United States, 2016



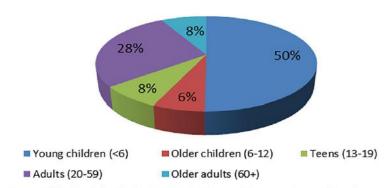
Poison Center Data Snapshot - 2014

Annual Report of the American Association of Poison Control Centers'

National Poison Data System

Poisoning is the leading cause of injury-related death in the U.S. In 2014, there were 56 poison centers serving 323 million people, nationwide. Poison centers managed 2.9 million cases, about 2.2 million of which were about people coming into contact with dangerous or potentially dangerous substances. These types of cases are called exposures.

Age Distribution of Human Exposures



From Table 3A of the 2014 AAPCC NPDS Annual Report - Age and Gender Distribution of Human Exposures. Excludes unknown age categories. N=2,056,697

Who calls the poison center? Anyone can experience a poison emergency. Poison centers take calls from and manage cases about people of all ages, and can provide help in 150 languages. In 2014, just under half of exposure cases managed by poison centers involved children younger than six, but as in previous years, many of the more serious cases occurred among adolescents and adults.

When someone calls the poison center, who answers the phone? Poison center cases are managed by medical experts – doctors, nurses, and pharmacists who have extensive training in poison prevention and treatment.

About what kinds of things do people call the poison center? In 2014, 57% of human exposures involved medications, or pharmaceuticals. Other exposures were to household products, plants, mushrooms, pesticides, animal bites and stings, carbon monoxide, and many other types of nonpharmaceutical substances.

Where do the most poison exposures occur? In 2014, 91% of human exposures occurred at a residence, but they can also occur in the workplace, schools, outdoors, and anywhere else! About 68% of the 2.2 million exposures reported to poison centers were treated at the exposure site, saving millions of dollars in medical expenses. In fact, poison centers save Americans more than \$1.8 billion every year in medical costs and lost productivity!

To locate your local poison center call 1(800) 222-1222 or visit aapcc.org.

The American Association of Poison Control Centers (AAPCC) maintains the National Poison Data System (NPDS). Developed in 1983, NPDS contains more than 60 million poison exposures managed over the telephone by U.S. poison centers. NPDS is the only comprehensive, near real-time poisoning surveillance database in the U.S.





Poison centers offer free, private, confidential medical advice 24 hours a day, 7 days a week. You can reach your local poison center by calling 1-800-222-1222.



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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 (ODADAS).



This newsletter is brought to you by the Cincinnati Drug and Poison Information Center and was produced with assistance from the American Association of Poison Control Centers and local poison centers across the country. When you dial 1-800-222-1222, your call is answered by a medical professional with special training in poison management. Help is fast, free, confidential and available 24 hours a day, every day.

