

Methamphetamine: One of America's Greatest Challenges

Part I

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This publication examines the horrors of methamphetamine and its use.

Introduction

One of America's and Nebraska's greatest challenges is the drug epidemic, especially the use of methamphetamine (commonly called "meth"). Nebraskans need to become more aware of the magnitude of the problem, how it impacts individuals and families, and how it relates to health, safety, environment and rural economic development.

History of Meth

Amphetamine was first synthesized in Germany in 1887. In the 1930s it was marketed to treat nasal congestion as well as asthma and narcolepsy. Methamphetamine, chemically related to amphetamine, was discovered in 1919. Methamphetamine, at comparable doses to amphetamine, is longer-lasting and more harmful to the central nervous system. During World War II, amphetamines were widely distributed to soldiers to combat fatigue and improve both mood and endurance.

After the war, physicians began to prescribe amphetamine to fight depression as well as other health issues. In the United States following the war, biker gangs began to distribute meth. As use spread, so did abuse. In the 1950s and 60s, illegal production of amphetamine and methamphetamine began to occur. In 1970, amphetamine and methamphetamine became illegal with the passage of the U.S. Drug Abuse Regulation and Control Act. In 1990, illegal meth use increased dramatically in the Midwest. The primary source in the U.S. is from super-labs (larger labs that are permanently set up and can produce up to 100 pounds of methamphetamine) mostly found in Mexico. This meth is distributed along Interstate 80, making Nebraska a vital link in the fastest growing drug trafficking route in the U.S. The meth used during those early years was much less potent than it is today.

What is Methamphetamine?

Meth is a powerful, addictive drug made in illegal laboratories (clandestine labs) that affects the central nervous

system. It is a Schedule II stimulant, which means that it has a high potential for abuse and is available through prescription that can not be refilled. It is prescribed for the treatment of narcolepsy and attention deficiency hyperactivity disorder; but these medical uses are limited, and the doses are much lower than those typically abused. Abusers may become addicted in as few as one to three uses.

Meth is odorless, water-soluble and bitter tasting. It comes in many forms: off-white or brownish powder, crystals that look like shaved dirty ice cubes, and in pill form. Meth is made with many different ingredients which can affect its color. Over the years, law enforcement has found meth cut with a variety of candy, drinks and other materials. Cutting meth is the process of diluting the drug with another ingredient. To increase meth usage, drug cartels use ingredients such as powdered drink mix. For example, strawberry powdered drink mix is used to give the meth a pink coloring and sweetness, which partially masks the bitter chemical taste. This meth is known as "Strawberry Quick." Other flavors might include chocolate, peanut butter, cola, cherry, grape and orange. This meth looks just like the popular pop rock candies.

Meth can be smoked, snorted, orally ingested or injected. Street names are numerous: crank, crystal, speed, chalk, glass, ice, fire and zip, to name a few. These street names often reflect the way the meth makes the user feel, the appearance of the meth, or a way to hide meth use from law enforcement or others.

Meth is made easily in clandestine labs with relatively inexpensive over-the-counter ingredients, such as cold and allergy medicines (containing ephedrine or pseudoephedrine), iodine, ammonia, starter fuel or de-icer, drain cleaner or rubbing alcohol, and lithium batteries. There has been a decrease in meth production by local individuals because of a Nebraska and a federal law. This law requires cold and allergy medicine containing ephedrine and pseudoephedrine to be stored behind the counter, in an area not accessible to customers or in a locked case, so that a customer needs employee assistance to access the drug. Customers must be 18 years of age, show a valid driver's license, Nebraska state identification card, a military identification card, an alien registration card,

or passport as proof of identification and are limited in the amount that can be purchased at one time. Law enforcement also has played a very critical role in helping to reduce the number of labs. Although the number of clandestine labs in Nebraska has decreased significantly, the availability of meth has not decreased.

Who Uses Methamphetamine?

According to the 2005 National Survey on Drug Use and Health, an estimated 10.4 million people age 12 and older (4.3 percent of the population) have tried methamphetamine at some time in their lives. Moreover, the 2005 Monitoring the Future survey of student drug use and attitudes reports 4.5 percent of high school seniors have used methamphetamine within their lifetimes. Note: The 2007 Youth Risk Behavior Survey of Nebraska teens showed that 6 percent of Nebraska ninth through 12th graders have used meth in their lifetime.

Meth users can come from a variety of age groups, any race, economic and social status, and include both men and women. Curious teens and college students are attracted by the drug's erroneous reputation of increasing energy and sexuality, plus its ability to help them lose weight. Young and middle aged women can be particularly at risk because they see meth as a quick way to increase energy and uplift a depressed mood.

Effects of Methamphetamine

This highly toxic drug is associated with serious health problems including memory loss, aggression, violence, psychotic behavior and heart and neurological damage. Meth affects the central nervous system and may contribute to increased transmission of infectious diseases, especially HIV/AIDS and hepatitis, not only due to use of contaminated needles when injecting meth, but also the fact that users often experience loss of inhibition resulting in promiscuous behaviors.

Short-term meth use causes increased alertness, paranoia, euphoria, hallucinations, aggression, anxiety, loss of appetite, unusual acne or sores, convulsions, hyperthermia, increased blood pressure, and irregular and increased heart rate.

Long-term effects can include: addiction, gray or black decayed teeth, putrid body odor, self-inflicted wounds from hallucinatory "crank bugs," heart attacks, stroke, liver damage, kidney and lung disorders, brain damage, changes in brain structure and function, memory loss, repetitive motor action, depression, hallucinations, violent and aggressive behavior, paranoid-schizophrenia, severe anorexia, and possibly death.

Meth affects brain structures, most notably the ones that contain dopamine. Dopamine is a neurotransmitter which is involved in motivation, the experience of pleasure, and motor function. Dopamine helps you feel good about things like eating a piece of chocolate cake or enjoying a walk with friends and/or family. Meth and dopamine are similar in shape, size

and chemical structure. Meth increases the release of very high levels of dopamine, which stimulates brain cells, enhancing mood and body movement. Chronic meth abuse significantly changes how the brain functions by damaging neuron cell ends and altering the activity of the dopamine system. Recent studies reveal severe structural and functional changes in the areas of the brain associated with emotion and memory. Over time, continued use of meth causes the drug abuser to have a difficult time feeling pleasure without the drug. As the pleasurable effect stops, it is followed by non-pleasurable panic and fear (crash) that lead a person to want more of the drug which leads to addiction.

Some physical symptoms that might identify a meth user could be agitation, excited shaky speech, decreased appetite, increased physical activity level, repetitive movements, very quick eye movements and dilated pupils.

Conclusion

The meth epidemic is a continuing challenge in Nebraska and across the United States. For more information on how meth impacts families, health, safety, environment and rural economic development, plus strategies to help individuals, families and communities help combat this problem, see NebGuide G1749: *Methamphetamine — One of America's Greatest Challenges — Part II*.

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