What is methamphetamine?

Methamphetamine is a very addictive, central nervous system stimulant drug that is available only by prescription. Methamphetamine can be used to treat attention deficit hyperactivity disorder (ADHD), extreme obesity, and narcolepsy. The drug has a high potential for abuse and is sometimes produced illegally for recreational consumption. Drug abusers may refer to methamphetamine sold on the street as crystal, glass, ice, meth, speed, or rock candy. Methamphetamine can be made illegally from a combination of pseudoephedrine and household products.

How is making methamphetamine harmful to my health?

Making or “cooking” methamphetamine results in hazardous materials that are known to be corrosive, flammable, explosive, and toxic. Additionally, five to six pounds of hazardous waste are generated for every pound of meth produced. The generated waste is illicitly discharged to rivers, streams, ditches, backyards, and sewage systems, which can potentially contaminate the environment. Cooking methamphetamine inside a home or other residential building can produce toxic vapors that can contaminate walls, carpets, floors, furniture, personal belongings, and appliances.

Are there exposure risks where illegal methamphetamine is made?

Wherever methamphetamine is made or cooked illegally, there is the potential for exposure not only to methamphetamine but to other hazardous chemicals used in the manufacturing process. Exposure will be highest in the same room where the process of “cooking” methamphetamine occurred. The extent of contamination beyond the room where methamphetamine was cooked can vary from no contamination to highly contaminated rooms. Contaminated indoor air and surfaces can result in inhalation, ingestion, and contact exposures. Exposure is of greater concern during and shortly after the methamphetamine manufacturing process.

What are the health effects of methamphetamine?

Methamphetamine usage increases the release of dopamine, a brain chemical associated with reward, motivation, the sensation of pleasure, and motor function. A large release of dopamine results in a “rush” feeling due to the increase in heart rate, blood pressure, and blood sugar.
Methamphetamine use can result in enhanced alertness, increased body temperature, compulsive behavior, headaches, dizziness, nausea, impairment of driving, enhanced sexual arousal, irritability, nervousness and aggressiveness. Chronic effects from methamphetamine use include stroke, heart attack, weight loss, addiction, mental disruptions, and behavioral disturbances. Abrupt withdrawal from methamphetamines can result in extreme fatigue, mental depression, anxiety, increased appetite, and disorientation.

**How can illegal methamphetamine production affect the health of children?**

Children are more vulnerable to being exposed to home hazards than adults, particularly in homes where methamphetamine is made or cooked. Children can come into contact with chemicals in the home by crawling on contaminated floors, breathing in contaminated air, putting contaminated objects in their mouth, or through accidental contact with discarded needles. A child’s exposure to methamphetamine can result in irritability, hyperactivity, headache, nausea, dizziness, shortness of breath, coughing, lack of coordination, and eye and tissue irritation. In addition, children living in homes where methamphetamine is manufactured may suffer external and internal chemical burns as well as bodily harm from fires and other explosions. Children whose parents use or make methamphetamine are more likely to be sexually or physically abused; suffer from malnourishment; experience mental and behavioral problems; and placed into foster care as a result of neglect.

**Is there a medical test to determine whether I have been exposed to methamphetamine?**

Blood and urine testing are the most commonly used testing methods to determine exposure to methamphetamines. When taken as prescribed by a physician, normal blood concentrations range from 0.02 to 0.05 mg/L; however, levels up to 0.2 mg/L have been reported. Methamphetamine blood concentrations reported during recreational use range from 0.01 to 2.5 mg/L. Methamphetamine hair analysis can be used to determine if someone used methamphetamine several months prior.

**Who do I contact if a house or property is being used as a methamphetamine lab?**

If you suspect that a house or property is being used as a methamphetamine lab, contact your local law enforcement.

**What are the guidelines for properly cleaning a property where methamphetamine was manufactured?**

The Guidelines for Cleanup of Residential Property Used to Manufacture Methamphetamine provides information on the cleanup process recommended by the Virginia Department of Health.

**What actions have been taken to protect human health?**

Methamphetamine abuse and illegal production is an ongoing public health concern. In 1996, the U.S. Congress passed the Comprehensive Methamphetamine Control Act, which enacts control of the primary ingredients of meth (iodine, red phosphorous, hydrochloric acid, and
pseudoephedrine), while restricting the sale, possession, and manufacture of methamphetamines. Some initiatives to protect human health include the National Methamphetamine & Pharmaceuticals Initiative, which focuses on reducing the availability of methamphetamine and its base chemicals throughout the United States; the National Youth Anti-Drug Media Campaign, which develops anti-meth messages that focus on preventing meth use and raising awareness of treatment benefits among adults age 18-24 years; and the Partnership's Methamphetamine Demand Reduction Program, a campaign that provides strategies to prevent, treat, and raise awareness of methamphetamine use among residents of Northern Virginia.

Where can I get additional information?

If you need further information regarding the health effects of methamphetamine, please contact the Division of Environmental Epidemiology at (804) 864-8182. If you or someone you know needs help with overcoming substance abuse, please contact a community service board in your area. Community service boards phone numbers are provided on the Department of Behavioral Health and Developmental Services website.

Prepared by: Division of Environmental Epidemiology
2013