DEFINING METHAMPHETAMINE (METH)

Minnesota Department of Health Methamphetamine Program

April 2005

Defining Methamphetamine

All Meth is not created equal: The rapidity of addiction and degree of disability in Meth users is strongly related to drug, dose, potency and route of administration.

Drug

There are two common chemical forms of Methamphetamine: L-Meth and D-Meth.

- D-Meth is a controlled substance. It is a potent Central Nervous System stimulant that enters the brain easily.
- L-Meth has little CNS affect and is found in OTC products such as VICKS inhalers. Used as directed, it poses no risk to health.

Dose

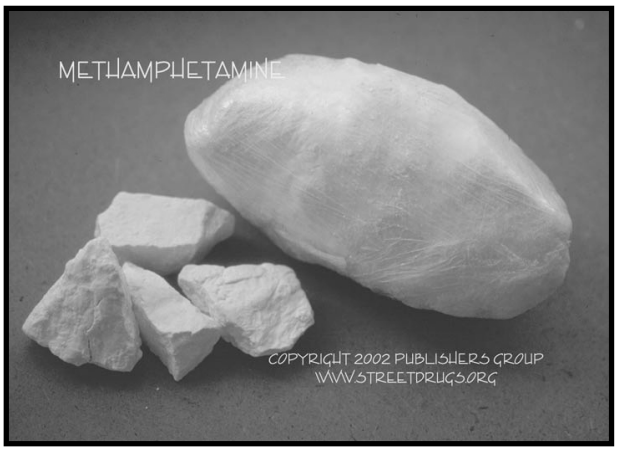
A small amount of an impure, less potent form of the drug produces a different high and less disability than a large dose of pure D-Meth, particularly if it is smoked or injected.

Potency

Meth seized in Minnesota recently reaches the consumer at roughly the following potency:

- Imported Meth: typically, 5 to 20 percent pure (in powder form).
- Minnesota-made Meth: typically 85 to 95 percent pure.
- Crystal Meth: until recently, 98 to 99.8 percent pure.
- Recent Crystal Meth: new techniques allow Crystal Meth to be diluted (cut) and reconstituted so new supplies may arrive at 20-25 percent purity.

Crystal Meth



Common Powdered Meth

Route of Administration

Meth can be smoked, injected, snorted (inhaled) or ingested (eaten or taken in a liquid). The methods of use are listed in their order of efficiency, i.e., the high produced is most effective, if smoked and least effective if ingested.

Material for this factsheet from: CA Dept. of Toxic Substances Control; S.A.Stalcup, MD, California Dept. of Justice; MN Bureau of Criminal Apprehension and MN Dept. Human Service.

Meth Changes Over Time

Meth: 1940-1980

Methamphetamine abuse was common after World War II and the drug has continued to be abused in the following decades. The Meth that was made illegally in the past, and the legitimate form of the drug fall into two categories: Pharmaceutical Meth and Superlab Meth.

- Pharmaceutical Meth (e.g., Desoxyn) is prescribed for narcolepsy, attention deficit disorder and weight loss. A typical therapeutic dose is 5 milligrams (mg) once or twice per day, taken in pill form (ingested). Made under typical pharmaceutical factory conditions, it does not contain toxics found in illegally made Meth. Drugs that are delivered to the brain in high concentrations in a short time intensify the high produced. Meth taken orally does not provide a high of the same intensity as from smoking.

- Methods for making Meth illegally in the Superlabs of past decades were less refined and efficient than they are now. Most of the Meth produced in the past was L-Meth. L-Meth emerged from the process at 10 to 15 percent purity. This drug would commonly be cut even more before it reached the consumer. This early Meth was most commonly inhaled ("snorted") or ingested. It contained toxic remnants of the chemical used to produce it, such as solvents, acids and metals.

Meth: 1980s to Present

In addition to Pharmaceutical Meth --- still available but not as often prescribed --- there are three types of Methamphetamine currently being made or used in Minnesota: Superlab Meth, Mom and Pop Meth, and Crystal Meth.

- "Common" or powdered Meth made in today's Superlabs is mostly the more dangerous, D-Meth. Also, refined Meth-making techniques provide a far more potent drug. Meth emerges from superlab factories at 85-95 percent purity. However, most imported Meth reaches the Minnesota consumer at a far lower strength. The toxic impurities from Meth-making chemicals are still present in this "improved" product.

- Mom and Pop Meth, made in homes and vehicles, is produced by the same methods as in Superlabs. Of the two primary methods, the Anhydrous Ammonia method accounts for 70 to 80 percent of Minnesota Meth. Red Phosphorus production makes up the balance. Minnesota Meth is mostly D-Meth, equally as contaminated as imported Meth, and reaches the consumer at dangerously high levels of potency.

- Crystal Meth (Ice, Glass), which appeared in 1988, is pure D-Meth in crystalline form, resembling shards of glass or ice. Crystal Meth is smoked. D-meth enters the brain far more readily than L-Meth and smoking produces a more rapid, longer lasting high. Crystal is powerfully addicting and contains somewhat fewer impurities than powder.

Users, particularly smokers of potent drugs, are at high risk for serious physical and mental health problems, including toxic psychosis, that complicate health and addiction treatment. Symptoms of underlying mental health illness may also be dramatically intensified. The medical detoxification period is likely to be longer, addition treatment must be longer, and mental illness symptoms must be addressed, if treatment is to be effective.

Note that doses increase, and tolerance for the drug develops very rapidly. While some users show signs of toxicity at blood concentrations of 20 µg/L, chronic abusers have been known to have blood concentration of up to 3000 µg/L.