

Website Drug Profile: Methamphetamine

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PROFILE

Methamphetamine is a highly addictive and very potent central nervous stimulant, also known as “meth,” “crystal meth,” “ice,” and “glass.”¹ A Schedule II drug, methamphetamine is an extremely powerful amphetamine. The effects are long-lasting and users have been known to stay awake for days during binges.

Methamphetamine abuse and production is concentrated in the Western, Southwestern, and Midwestern United States.² Additionally, the growth of independent U.S.-based laboratories has dramatically increased in the Pacific Northwest, Midwest, and some portions of the Southeast. Production and availability is also beginning to spread to the Northeast. Due to increased restrictions on cold preparations and pharmaceuticals containing methamphetamine, as well as restrictions on the importation of bulk pseudoephedrine from Canada, the number of domestic methamphetamine superlabs has greatly decreased in the past few years. To offset that decline, the expansion of Mexican-based trafficking groups has increased their control of illegal laboratories and superlabs.³

HISTORY

Methamphetamine was derived from amphetamine in Japan in 1919. Both of these chemicals were originally used in nasal decongestants and in bronchial inhalers. Methamphetamine has also been used in the treatment of obesity.⁴ It first was brought to the United States in the 1930's, but use of the drug surged in the 1950's and 1960's when users began injecting more frequently.⁵ The drug was outlawed as a part of the U.S. Drug Abuse and Regulation Control Act of 1970. Production and trafficking soared again in the 1990's in relation to organized crime in the Southwestern United States and Mexico.⁶

METHOD OF USE

Methamphetamine can be taken orally, by intravenous injection, by smoking, or by snorting. The drug appears in powder (“crystal”) form, which can be processed into a rock (“ice”) or liquid form for the purpose of injection. After taking the drug, users experience a short but intense rush that lasts 5 to 30 minutes, depending on the route of administration. Afterwards, the stimulant's

¹ NIDA Methamphetamine Infobox. <http://www.drugabuse.gov/Infobox/methamphetamine.html>.
October 6, 2006.

² DEA Methamphetamine Page. http://www.dea.gov/concern/meth_factsheet.html. October 6, 2006.

³ ONDCP Methamphetamine Page. <http://www.whitehousedrugpolicy.gov/drugfact/methamphetamine/index.html>.
October 6, 2006

⁴ Methamphetamine Addiction Page. http://www.methamphetamineaddiction.com/methamphetamine_hist.html.
October 6, 2006.

⁵ ACDE Methamphetamine Facts. <http://www.acde.org/common/meth.htm>. October 6, 2006.

⁶ ACDE Methamphetamine Facts. October 9, 2006.

other effects, including increased activity, decreased appetite, and a sense of well-being, can last 6 to 12 hours. Some users will continue taking doses of methamphetamine occasionally to sustain the high and to avoid the severe withdrawal symptoms.⁷

METHAMPHETAMINE'S EFFECTS ON THE BRAIN

Methamphetamine stimulates the release of excess dopamine, which plays an important role in the regulation of pleasure.⁸ The release of dopamine and serotonin produce the intense rush that users feel. Even after the initial rush subsides, the brain remains in an alert state and keeps the user's body on edge. After the effects have worn off, the brain is depleted of its dopamine, and depression is a common result. Methamphetamine is easily addictive because the highs are so intense and the lows are so severe. In addition, regular users build up a tolerance to the drug's effects, needing more of the drug to feel the original effect. Furthermore, methamphetamine can be extremely addictive.

Methamphetamine appears to have neurotoxic (brain-damaging) effects, destroying brain cells that contain dopamine and serotonin.⁹ Over time, abuse appears to cause reduced levels of dopamine, which can result in symptoms like those of Parkinson's disease.¹⁰

Methamphetamine also stimulates locomotor activity (i.e., reflexes, basic physical movements) and produces "stereotypic behaviors"—random, repetitive, compulsive movements and actions such as twitching or picking at the skin—as a side effect.¹¹

METHAMPHETAMINE'S EFFECTS ON THE USER

In addition to being physically addictive, methamphetamine can also be very psychologically addictive as well. Under the influence of methamphetamine, users experience bursts of energy, talkativeness, and excitement. Users are able to go for hours or even days without sleep or food.¹²

High doses or chronic use have been associated with increased nervousness, irritability, paranoia, and occasionally violent behavior, while withdrawal from high doses generally leads to severe depression. Chronic abuse produces a psychosis similar to schizophrenia and is characterized by paranoia, picking at the skin, self-absorption, auditory and visual hallucinations, and sometimes episodes of violence.¹³

Tweaking

The most dangerous stage of methamphetamine abuse occurs when an abuser has not slept in 3-15 days and is irritable and paranoid. This behavior is referred to as "tweaking," and the user is known as the "tweaker." The tweaker craves more methamphetamine, but it is difficult to achieve the original high, causing frustration and unstable behavior in the user. Because of the

⁷ NIDA Research Report. <http://www.drugabuse.gov/ResearchReports/methamph/methamph.html>. October 9, 2006.

⁸ NIDA Research Report.

⁹ NIDA Methamphetamine Infobox.

¹⁰ NIDA Methamphetamine Infobox.

¹¹ NIDA Methamphetamine Infobox.

¹² ACDE Methamphetamine Facts.

¹³ ACDE Methamphetamine Facts.

tweaker's unpredictability, there have been reports that they can react violently, which can lead to involvement in domestic disputes, spur-of-the-moment crimes, or motor vehicle accidents. A tweaker can appear normal – eyes clear, speech concise, and movements brisk; however, a closer look will reveal that the person's eyes are moving ten times faster than normal, the voice has a slight quiver, and movements are quick and jerky. These physical signs are more difficult to identify if the tweaker has been using a depressant such as alcohol; however, if the tweaker has been using a depressant, his or her negative feelings—including paranoia and frustration – can increase substantially. A person should use extreme caution when dealing with an individual on methamphetamine.¹⁴

Short-Term Effects¹⁵

- Brief rush, euphoria
- Increased physical activity
- Increased blood pressure and breathing rate
- Dangerously elevated body temperature
- Decreased appetite
- Insomnia
- Unpredictable behavior
- Heavy sweating
- Nausea, vomiting
- Hypothermia
- Uncontrollable jaw clenching, cracked teeth
- Sores, skin infections
- Seizures, convulsions, sudden death

Long-Term Effects¹⁶

These negative effects can occur during or after methamphetamine intoxication:

- Damaged nerve terminals in the brain
- Increased heart rate, irregular heartbeat, increased blood pressure
- Brain damage similar to Parkinson's or Alzheimer's Diseases
- Repetitive motor activity, performing repetitive meaningless tasks
- Weight loss
- Prolonged anxiety, paranoia, insomnia
- Psychotic behavior, violence,
- Formication (the sensation of bugs creeping on the skin)
- Visual and auditory hallucinations
- Homicidal or suicidal thoughts
- Acute lead poisoning in intravenous methamphetamine abusers
- Strokes, heart infections, lung disease, kidney damage, liver damage
- Increased risk behavior, especially if drug is injected

¹⁴ Stop Drugs Methamphetamine Page. <http://www.stopdrugs.org/tweaking.html>. October 9, 2006

¹⁵ NIDA Research Report.

¹⁶ NIDA Research Report.

- When used by a pregnant woman, premature birth; babies suffer cardiac defects, cleft palate, and other birth defects
- Increased HIV, Hepatitis B and C in intravenous methamphetamine abusers
- Death

SIGNS OF ABUSE

There are several indicators that can help identify a person who has been abusing methamphetamine. Chronic use can cause violent behavior, anxiety, confusion, insomnia, auditory hallucinations, mood disturbances, delusions, and paranoia.¹⁷ Chronic methamphetamine users also often display poor hygiene, a pale, unhealthy complexion, and sores on their bodies due to formication—the sensation of bugs creeping on the skin.¹⁸ If this type of behavior is not typical for that person, he or she may have a drug problem.

TERMINOLOGY¹⁹

Slang Terms for Methamphetamine:

Meth, Crystal Meth, Crystal, Speed, Crank, Ice, Glass, Chalk, Redneck
Cocaine, Yellow Powder, Yellow Barn, Tina, Tick-Tick, Spoosh, Scootie

Slang Terms for Smokable Methamphetamine:

Hot Ice, Super Ice, L.A. Glass, L.A. Ice, Quartz, Batu, Hanyak, Hiropon

LINKS

NIDA Methamphetamine Infobox. <http://www.drugabuse.gov/Infobox/methamphetamine.html>

NIDA Research Report: Methamphetamine abuse and addiction.

<http://www.drugabuse.gov/ResearchReports/methamph/methamph.html>

ONDCP Methamphetamine Facts & Figures.

<http://www.whitehousedrugpolicy.gov/drugfact/methamphetamine/index.html>

DEA Amphetamines/Methamphetamine Page. <http://www.dea.gov/concern/amphetamines.html>

¹⁷ DEA Methamphetamine Page

¹⁸ NIDA Research Report.

¹⁹ ONDCP Methamphetamine Street Terms.

<http://www.whitehousedrugpolicy.gov/streetterms/ByType.asp?intTypeID=14>. October 9, 2006.