



PeachTree Professional Education, Inc.

EMAIL: info@fastceus.com Website: www.FastCEUs.com

PHONE: (800) 390-9536 FAX: (888) 877-6020 (note the 'triple 8' fax #)

MAIL: 15560 N. Frank L. Wright Blvd, #B4-118, Scottsdale AZ 85260



DIRECTIONS TO COMPLETE THIS COURSE:

Step One: Please use the above address and telephone numbers for ALL correspondence with our office. Our old address may still be on some of the handout pages, and mailing to the wrong address will delay your certificates.

Step Two: Please review the materials in this document (print, or scroll down to read).

On the following pages you should find an **Outline**, an **Evaluation of Learning Quiz** form, and a **Grade This Course** form, as well as the **Course Content** itself. Many courses will require that you also listen to an Audio lecture or watch a Video lecture, which you will access on our website in the same place where you obtained this document. Some courses may require that you read sections from the DSM-IV or your Professional Code of Ethics – and in such cases you must provide your own DSM and find your own Code.

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Your instructor is Richard K. Nongard, LMFT/CCH

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**15560 N. Frank L. Wright Blvd.,
#B4-118, Scottsdale, AZ 85260**

Voice: (800) 390-9536

Fax: (888) 877-6020

Email: info@fastceus.com

Web: www.fastceus.com

“Treating Crank / Methamphetamine Addiction”

3 Continuing Education Clock / Credit Hours

Instructor: Richard K. Nongard, MA, LMFT

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Purpose of this Course :

The purpose of this CEU course is to assist mental health, nursing and criminal justice professionals with understanding the unique problems associated with treating clients addicted to Crank or methamphetamines.

Course Objectives:

At the conclusion of this course the professional will be able to:

- 1.) Understand Methamphetamine / Crank - What it is, Who uses it and Why.
- 2.) Design Targeted Addiction Interventions
- 3.) Create Strategies to Alter Destructive Behaviors and Attitudes
- 4.) Utilize Community Resources

Course Outline:

10 Minutes: Course organization and introduction

55 Minutes: Audio lecture

75 Minutes: Synthesis of Course Notes

30 Minutes: Completion of required Evaluation of Learning Quiz

10 Minutes: Documentation and preparation

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180 Minutes (3 Hours)

If you ever have any questions concerning this course,
please do not hesitate to contact **PeachTree** at **(800) 390-9536**.

TREATING CRANK / METHAMPHETAMINE ADDICTION

3 CEU CREDIT HOURS

COURSE NOTES / OUTLINE

Introduction - What is Crank?

Methamphetamine (also known as speed, meth, crystal, crank, tina, and sometimes confusingly called ice) is a chemical widely known for its stimulant properties on the human body. It is frequently confused with other drugs that share similar effects, including amphetamine, 4-methyl-aminorex, ephedrine, caffeine, and other chemicals, both legal and illegal.

It can be smoked, snorted or used intravenously.

Effects

These include euphoria, hyper-excitability, extreme nervousness, accelerated heartbeat, sweating, dizziness, restlessness, insomnia, tooth grinding, incessant talking, and other effects.

Methamphetamine and other CNS stimulants have strong bronchodilation effects. Vasoconstriction (tightening of blood vessels) and pupil dilation are also common. Elevated blood pressure, heart rate, and other general symptoms of increased sympathetic nervous activity.

The physical effects are almost assuredly due to interactions between the amphetamine structure and human physiology, probably due to the similarity to adrenaline (epinephrine).

Mental capacity is not diminished directly by the drug. In fact, some studies have shown slight increases in mental capacity on simple tasks. It has been prescribed for attention deficit disorder, among other things.

Confusing reports tend to center around the effects of fatigue on mental capacity.

Emotional responses may range from euphoria to anger and paranoia. Preliminary doses tend to produce the former, while continued use (e.g. for three or more days) tends to produce the latter.

How does it differ from crack and cocaine?

SPECIAL ISSUES IN COUNSELING METH USERS

- HIV Risk
 - Health and mental functioning
 - Coexisting ADD/ADHD
 - Probation and Criminal Justice
 - Mental Illness (Dual-diagnosis)

Counseling Strategies:

- Education
- Testing (24-48 hours)
- Support groups and accountability (probation)

According to the National Institute on Drug Abuse the "most effective treatments for methamphetamine addiction are cognitive behavioral interventions. These approaches are designed to help modify the patient's thinking, expectancies, and behaviors and to increase skills in coping with various life stressors.

Methamphetamine recovery support groups also appear to be effective adjuncts to behavioral interventions that can lead to long-term drug-free recovery.

There are currently no particular pharmacological treatments for dependence on amphetamine or amphetamine-like drugs such as methamphetamine. The current pharmacological approach is borrowed from experience with treatment of cocaine dependence. Unfortunately, this approach has not met with much success since no single agent has proven efficacious in controlled clinical studies.

Antidepressant medications are helpful in combating the depressive symptoms frequently seen in methamphetamine users who recently have become abstinent."

TREATMENT GOALS:

Abstinence

Compliance with probation

Stable living environments

Education as opportunity

RELAPSE CUES:

- Unstable living environment
- Lack of situational supports
- Over-medication
- Under-medication
- Crisis events
- Awareness
- H.A.L.T.
- L.F.T.
- Uncorrected cognitive errors

WAR ON DRUGS

- One Trillion dollars.... Spent on police, prisons and politicians.
- We have a natural desire to alter the way we feel.
- Incarceration of minorities, women and the poor.
- Creates infringement on individual liberty and privacy laws.
- 25% of incarcerations are drug offenders
- Federal ban on needle exchange funding results in 4,000 HIV cases per year

"Domestic enforcement costs 4 times as much as treatment for a given amount of user reduction, 7 times as much for consumption reduction, and 15 times as much for societal cost reduction."

What is methamphetamine?

Methamphetamine is a powerfully addictive stimulant that dramatically affects the central nervous system. The drug is made easily in clandestine laboratories with relatively inexpensive over-the-counter ingredients. These factors combine to make methamphetamine a drug with high potential for widespread abuse.

Methamphetamine is commonly known as "speed," "meth," and "chalk." In its smoked form, it is often referred to as "ice," "crystal," "crank," and "glass." It is a white, odorless, bitter-tasting crystalline powder that easily dissolves in water or alcohol.

The drug was developed early in this century from its parent drug, amphetamine, and was used originally in nasal decongestants and bronchial inhalers. Methamphetamine's chemical structure is similar to that of amphetamine, but it has more pronounced effects on the central nervous system. Like amphetamine, it causes increased activity, decreased appetite, and a general sense of well-being. The effects of methamphetamine can last 6 to 8 hours. After the initial "rush," there is typically a state of high agitation that in some individuals can lead to violent behavior.

Methamphetamine is a Schedule II stimulant, which means it has a high potential for abuse and is available only through a prescription that cannot be refilled. There are a few accepted medical reasons for its use, such as the treatment of narcolepsy, attention deficit disorder, and - for short-term use - obesity; but these medical uses are limited.

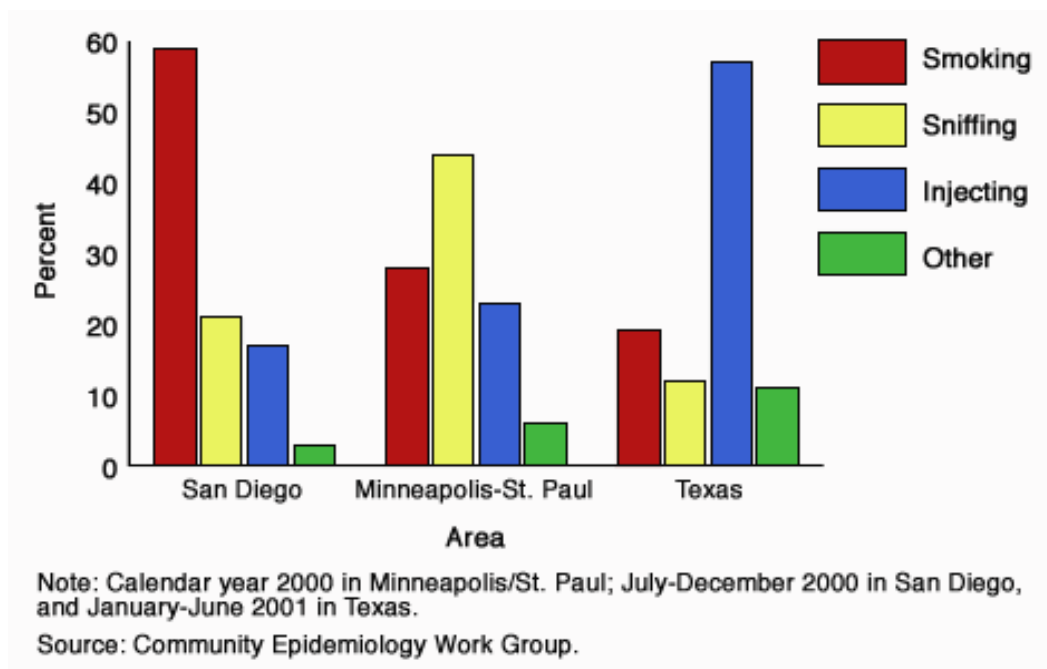
What is the scope of methamphetamine abuse in the United States?

Methamphetamine abuse, long reported as the dominant drug problem in the San Diego, CA, area, has become a substantial drug problem in other sections of the West and Southwest, as well. There are indications that it is spreading to other areas of the country, including both rural and urban sections of the South and Midwest. Methamphetamine, traditionally associated with white, male, blue-collar workers, is being used by more diverse population groups that change over time and differ by geographic area.

According to the 2000 National Household Survey on Drug Abuse, an estimated 8.8 million people (4.0 percent of the population) have tried methamphetamine at some time in their lives.

Data from the 2000 Drug Abuse Warning Network (DAWN), which collects information on drug-related episodes from hospital emergency departments in 21 metropolitan areas, reported that methamphetamine-related episodes increased from approximately 10,400 in 1999 to 13,500 in 2000, a 30 percent increase. However, there was a significant decrease in methamphetamine-related episodes reported between 1997 (17,200) and 1998 (11,500).

The preferred method of taking methamphetamine varies among geographical regions:



- **San Diego:** Smoking 59%, Sniffing 22%, Injecting 17%, Other 2%
- **Minneapolis - St. Paul:** Smoking 29%, Sniffing 43%, Injecting 23%, Other 5%
- **Texas:** Smoking 18%, Sniffing 12%, Injecting 60%, Other 10%

NIDA's Community Epidemiology Work Group (CEWG), an early warning network of researchers that provides information about the nature and patterns of drug use in major cities, reported in its June 2001 publication that methamphetamine continues to be a problem in Hawaii and in major Western cities, such as San Francisco, Denver, and Los Angeles. Methamphetamine availability and production are being reported in more diverse areas of the country, particularly rural areas, prompting concern about more widespread use.

Drug abuse treatment admissions reported by the CEWG in June 2001 showed that methamphetamine remained the leading drug of abuse among treatment clients in the San Diego area and Hawaii. Stimulants, including methamphetamine, accounted for smaller percentages of treatment admissions in other states and metropolitan areas of the West (e.g., 9 percent in Los Angeles and Seattle and 8 percent in Texas).

By comparison, stimulants were the primary drugs of abuse in a smaller percent of treatment admissions in most Eastern and Midwestern metropolitan areas, such as Minneapolis-St. Paul and St. Louis, where they accounted for approximately 3 percent of total admissions, or Baltimore, where no stimulant-related treatment admissions were reported in the first half of 2000.

How is methamphetamine used?

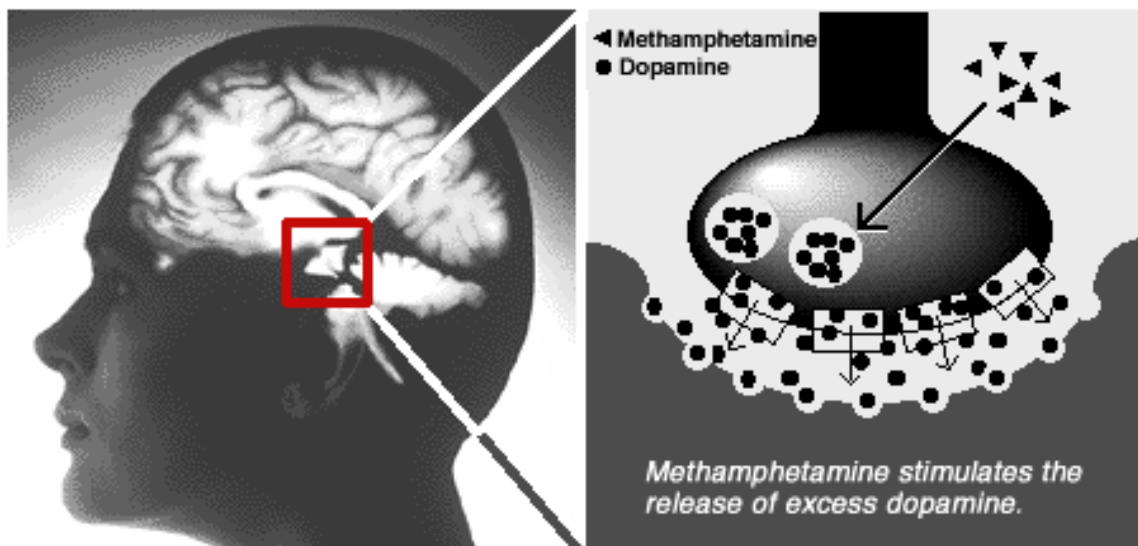
Methamphetamine comes in many forms and can be smoked, snorted, orally ingested, or injected. The drug alters moods in different ways, depending on how it is taken.

Immediately after smoking the drug or injecting it intravenously, the user experiences an intense rush or "flash" that lasts only a few minutes and is described as extremely pleasurable. Snorting or oral ingestion produces euphoria - a high but not an intense rush. Snorting produces effects within 3 to 5 minutes, and oral ingestion produces effects within 15 to 20 minutes.

As with similar stimulants, methamphetamine most often is used in a "binge and crash" pattern. Because tolerance for methamphetamine occurs within minutes - meaning that the pleasurable effects disappear even before the drug concentration in the blood falls significantly - users try to maintain the high by binging on the drug.

In the 1980's, "ice," a smokable form of methamphetamine, came into use. Ice is a large, usually clear crystal of high purity that is smoked in a glass pipe like crack cocaine. The smoke is odorless, leaves a residue that can be resmoked, and produces effects that may continue for 12 hours or more.

In the brain, dopamine plays an important role in the regulation of pleasure. In addition to other regions, dopamine is manufactured in nerve cells within the ventral tegmental area and is released in the nucleus accumbens and the frontal cortex.



What are the immediate (short-term) effects of methamphetamine abuse?

As a powerful stimulant, methamphetamine, even in small doses, can increase wakefulness and physical activity and decrease appetite. A brief, intense sensation, or rush, is reported by those who smoke or inject methamphetamine. Oral ingestion or snorting produces a long-lasting high instead of a rush, which reportedly can continue for as long as half a day. Both the rush and the high are believed to result from the release of very high levels of the neurotransmitter dopamine into areas of the brain that regulate feelings of pleasure.

Methamphetamine has toxic effects. In animals, a single high dose of the drug has been shown to damage nerve terminals in the dopamine-containing regions of the brain. The large release of dopamine produced by methamphetamine is thought to contribute to the drug's toxic effects on nerve terminals in the brain. High doses can elevate body temperature to dangerous, sometimes lethal, levels, as well as cause convulsions.

What are the long-term effects of methamphetamine abuse?

Long-term methamphetamine abuse results in many damaging effects, including addiction. Addiction is a chronic, relapsing disease, characterized by compulsive drug-seeking and drug use which is accompanied by functional and molecular changes in the brain. In addition to being addicted to methamphetamine, chronic methamphetamine abusers exhibit symptoms that can include violent behavior, anxiety, confusion, and insomnia. They also can display a number of psychotic features, including paranoia, auditory hallucinations, mood disturbances, and delusions (for example, the sensation of insects creeping on the skin, which is called "formication"). The paranoia can result in homicidal as well as suicidal thoughts.

With chronic use, tolerance for methamphetamine can develop. In an effort to intensify the desired effects, users may take higher doses of the drug, take it more frequently, or change their method of drug intake. In some cases, abusers forego food and sleep while indulging in a form of bingeing known as a "run," injecting as much as a gram of the drug every 2 to 3 hours over several days until the user runs out of the drug or is too disorganized to continue. Chronic abuse can lead to psychotic behavior, characterized by intense paranoia, visual and auditory hallucinations, and out-of-control rages that can be coupled with extremely violent behavior.

Although there are no physical manifestations of a withdrawal syndrome when methamphetamine use is stopped, there are several symptoms that occur when a chronic user stops taking the drug. These include depression, anxiety, fatigue, paranoia, aggression, and an intense craving for the drug.

In scientific studies examining the consequences of long-term methamphetamine exposure in animals, concern has arisen over its toxic effects on the brain. Researchers have reported that as much as 50 percent of the dopamine-producing cells in the brain can be damaged after prolonged exposure to relatively low levels of methamphetamine. Researchers also have found that serotonin-containing nerve cells may be damaged even more extensively. Whether this toxicity is related to the psychosis seen in some long-term methamphetamine abusers is still an open question.

Short-term effects can include:

- Increased attention and decreased fatigue
- Increased activity
- Decreased appetite
- Euphoria and rush
- Increased respiration
- Hyperthermia

Long-term effects can include:

Dependence and addiction psychosis

- paranoia
- hallucinations
- mood disturbances
- repetitive motor activity

Stroke

Weight loss

How is methamphetamine different from other stimulants, such as cocaine?

Methamphetamine is classified as a psychostimulant, as are other drugs of abuse such as amphetamine and cocaine.

We know that methamphetamine is structurally similar to amphetamine and the neurotransmitter dopamine, but it is quite different from cocaine. Although these stimulants have similar behavioral and physiological effects, there are some major differences in the basic mechanisms of how they work at the level of the nerve cell. However, the bottom line is that methamphetamine, like cocaine, results in an accumulation of the neurotransmitter dopamine, and this excessive dopamine concentration appears to produce the stimulation and feelings of euphoria experienced by the user.

In contrast to cocaine, which is quickly removed and almost completely metabolized in the body, methamphetamine has a much longer duration of action and a larger percentage of the drug remains unchanged in the body. This results in methamphetamine being present in the brain longer, which ultimately leads to prolonged stimulant effects.

Although both methamphetamine and cocaine are psychostimulants, there are differences between them.

Methamphetamine	vs.	Cocaine
Man-made		Plant-derived
Smoking produces a high that lasts 8-24 hours		Smoking produces a high that lasts 20-30 minutes
50% of the drug is removed from the body in 12 hours		50% of the drug is removed from the body in 1 hour
Limited medical use		Used as a local anesthetic in some surgical procedures

What are the medical complications of methamphetamine abuse?

Methamphetamine can cause a variety of cardiovascular problems. These include rapid heart rate, irregular heartbeat, increased blood pressure, and irreversible, stroke-producing damage to small blood vessels in the brain. Hyperthermia (elevated body temperature) and convulsions occur with methamphetamine overdoses, and if not treated immediately, can result in death.

Chronic methamphetamine abuse can result in inflammation of the heart lining, and among users who inject the drug, damaged blood vessels and skin abscesses. Methamphetamine abusers also can have episodes of violent behavior, paranoia, anxiety, confusion, and insomnia. Heavy users also show progressive social and occupational deterioration. Psychotic symptoms can sometimes persist for months or years after use has ceased.

Acute lead poisoning is another potential risk for methamphetamine abusers. A common method of illegal methamphetamine production uses lead acetate as a reagent. Production errors therefore may result in methamphetamine contaminated with lead. There have been documented cases of acute lead poisoning in intravenous methamphetamine abusers.

Fetal exposure to methamphetamine also is a significant problem in the United States. At present, research indicates that methamphetamine abuse during pregnancy may result in prenatal complications, increased rates of premature delivery, and altered neonatal behavioral patterns, such as abnormal reflexes and extreme irritability. Methamphetamine abuse during pregnancy may be linked also to congenital deformities.

Are methamphetamine abusers at risk for contracting HIV/AIDS and Hepatitis B and C?

Increased HIV and hepatitis B and C transmission are likely consequences of increased methamphetamine abuse, particularly in individuals who inject the drug and share injection equipment. Infection with HIV and other infectious diseases is spread among injection drug users primarily through the re-use of contaminated syringes, needles, or other paraphernalia by more than one person. In nearly one-third of Americans infected with HIV, injection drug use is a risk factor, making drug abuse the fastest growing vector for the spread of HIV in the nation.

Research also indicates that methamphetamine and related psychomotor stimulants can increase the libido in users, in contrast to opiates which actually decrease the libido. However, long-term methamphetamine use may be associated with decreased sexual functioning, at least in men. Additionally, methamphetamine seems to be associated with rougher sex, which may lead to bleeding and abrasions. The combination of injection and sexual risks may result in HIV becoming a greater problem among methamphetamine abusers than among opiate and other drug abusers, something that already seems to be occurring in California.

NIDA-funded research has found that, through drug abuse treatment, prevention, and community-based outreach programs, drug abusers can change their HIV risk behaviors. Drug use can be eliminated and drug-related risk behaviors, such as needle-sharing and unsafe sexual practices, can be reduced significantly thus decreasing the risk of exposure. Therefore, drug abuse treatment is also highly effective in preventing the spread of HIV, hepatitis B, and hepatitis C.

What treatments are effective for methamphetamine abusers?

At this time the most effective treatments for methamphetamine addiction are cognitive behavioral interventions. These approaches are designed to help modify the patient's thinking, expectancies, and behaviors and to increase skills in coping with various life stressors. Methamphetamine recovery support groups also appear to be effective adjuncts to behavioral interventions that can lead to long-term drug-free recovery.

There are currently no particular pharmacological treatments for dependence on amphetamine or amphetamine-like drugs such as methamphetamine. The current pharmacological approach is borrowed from experience with treatment of cocaine dependence. Unfortunately, this approach has not met with much success since no single agent has proven efficacious in controlled clinical studies. Antidepressant medications are helpful in combating the depressive symptoms frequently seen in methamphetamine users who recently have become abstinent.

There are some established protocols that emergency room physicians use to treat individuals who have had a methamphetamine overdose. Because hyperthermia and convulsions are common and often fatal complications of such overdoses, emergency room treatment focuses on the immediate physical symptoms. Overdose patients are cooled off in ice baths, and anticonvulsant drugs may be administered also.

Acute methamphetamine intoxication can often be handled by observation in a safe, quiet environment. In cases of extreme excitement or panic, treatment with antianxiety agents such as benzodiazepines has been helpful, and in cases of methamphetamine-induced psychoses, short-term use of neuroleptics has proven successful.

New trends in methamphetamine use...

- There is emerging evidence that methamphetamine is being administered increasingly via the intravenous route. Injecting this drug puts the user at increased risk for engaging in behaviors (both sexual and non-sexual) that could increase his/her chance of contracting HIV/AIDS, hepatitis, and other infectious diseases.
- Methamphetamine is not usually sold and bought on the streets like many of the other known illicit drugs. Users report that they obtain their supplies of methamphetamine from friends and acquaintances. It is typically a more closed or hidden sale, prearranged by "networking" with those producing the drug. Often it is sold "by invitation only" at all-night warehouse parties or "raves."
- Because methamphetamine can be made with readily available inexpensive materials, there is great variation in the processes and chemicals used. This means that the final product that is sold as "methamphetamine" may not be methamphetamine at all, but rather a highly altered chemical mixture with some stimulant-like effects. Uncertainties about the drug's sources and the pharmacological agents used in its production makes it especially difficult to determine its toxicity, and resulting consequences and symptoms.
- Methamphetamine is often being used in dangerous combination with other substances, including cocaine/crack, marijuana, heroin, and alcohol.
- Long reported as the dominant drug problem in the San Diego, California, area, methamphetamine has become a substantial drug problem in other sections of the West and southwest as well. The drug has now been reported in both rural and urban areas of the South and Midwest. It is emerging in major urban areas in the East, but not to the extent seen in other regions of the country.

Meth Q and A

According to the World Health Organization, methamphetamine is second only to marijuana as the most widely abused illicit drug in the world, and it is the most prevalent synthetic drug manufactured in the United States. "Meth" is a highly addictive stimulant that can be smoked, snorted, injected, or taken orally.

Users, particularly during the withdrawal, or "tweaking" phase, may experience acute psychosis and commit acts of extreme violence. The manufacture of methamphetamine exposes humans, animals, and the environment to toxic and explosive chemicals. Because the manufacture and use of meth may result in adults neglecting children in their care, the drug is increasingly a factor in many child protective services cases.

Even those who are not affected by meth use in their personal lives pay for the problems it causes. Although research is providing good evidence that those addicted to meth can regain their lives and function productively, treating them burdens the health care system. Other expenses include cleaning up environmental poisons resulting from meth production and jailing methamphetamine manufacturers and traffickers.

Where Does Meth Come From?

Fed by shipments of the drug and many of its ingredients from Mexico, U.S. production and availability of methamphetamine are increasing. In **1999**, the Federal-Wide Drug Seizure System (Drug Enforcement Administration [DEA], FBI, U.S. Customs Service, U.S. Border Patrol, and U.S. Coast Guard) reported confiscating **2.64 tons** of methamphetamine.

	1990	1991
Number of identified U.S. meth labs:	549	2,025
Amount of meth seized by the DEA:	973.1 kilograms	2,253.3 kilograms

(Source: ONDCP Drug Facts, May 2001)

Although organizations based in Mexico dominate methamphetamine trafficking, much of the U.S. supply of the drug is produced in this country. Meth is made with relatively inexpensive, over-the-counter ingredients. Thus, secret laboratories, often called "mom and pop labs," can spring up quickly and move easily to avoid detection. In recent years, trafficking organizations have begun operating "super labs" that can produce large quantities of meth.

Why Do People Use Methamphetamine?

On the surface, methamphetamine may seem attractive. Thus, many people are tricked or lured into using meth for the initial good feelings it brings. Immediately after smoking or intravenous injection, the meth user experiences an intense sensation, called a "rush" or "flash." While that rush is described as pleasurable, it lasts only a few minutes. The rush is followed by a high that can last 6 to 8 hours. Oral or nasal use produces the same long lasting high, but not the intense rush. Some people start using meth to reduce fatigue and maintain productivity-particularly for tedious, repetitive, or physically demanding tasks or when working long hours. Some people hope it will increase sexual desire and activity. Others want to lose weight.

Typical psychological effects of the methamphetamine high include:

- Euphoria
- Alertness or wakefulness
- Feelings of increased strength and renewed energy
- Feelings of invulnerability
- Feelings of increased confidence and competence
- Intensified feelings of sexual desire.

Whatever the excuse to use meth or whatever the short-term benefits, the meth high is followed by a devastating low. In fact, the depression that follows meth use can be very uncomfortable. This depression can be so intolerable that it often contributes to an individual's decision to start using meth again.

What's the Downside?

The "benefits" of meth are more than matched by the drug's ill effects-both immediately and over time. Methamphetamine is an addictive drug that causes physical harm throughout the body. In addition to that physical damage, some people looking for temporary relief from long-term conditions like depression and AIDS-related fatigue may try meth and ignore their prescribed treatments.

After the initial rush, individuals typically experience a state of great agitation that can lead to violent behavior. As the drug leaves their systems, users can experience:

- Irritability/aggressiveness/frustration
- Anxiety
- Depression
- Fatigue
- Paranoia (sometimes extreme, leading to thoughts of homicide or suicide)
- Hallucinations or delusions (e.g., sensation of insects crawling on the skin)
- Intense cravings for the drug.

The pleasurable effects of the drug vanish even before it disappears in the blood. As a result, meth users often follow a "binge and crash" pattern and may continue taking the drug over several days. They may go without food and sleep and inject the drug every 2 to 3 hours to prolong the high and postpone the inevitable crash.

The crash phase, commonly referred to as "tweaking," often overwhelms the user with feelings of anxiety and emptiness. When tweaking, people can be extremely irritable and paranoid. They may exhibit unpredictable and dangerous behavior when startled, confused, or confronted. To reduce or counter withdrawal, meth users frequently resort to alcohol, heroin, or marijuana.

The length of time before long-term effects become noticeable and the severity of those effects vary from person to person. People who report control of the drug at first may lose that control over time and become addicted. Meth addiction is caused by the changes in the brain produced by the drug. People addicted to meth experience a powerful physical and emotional withdrawal. The user's lifestyle changes to focus on getting and using meth. Even after chronic use has stopped, the meth user may experience depression, anxiety, fatigue, paranoia, aggression, and an intense craving for the drug.

Damaging effects of methamphetamine include physical, emotional, and mental destruction, including:

- Memory problems
- Insomnia
- Decreased appetite and anorexia
- Increased heart rate, blood pressure, and body temperature
- Tremors or convulsions
- Breathing problems
- Lung, kidney, and liver damage
- Irreversible damage to blood vessels in the brain, which can produce strokes
- Increased risk of getting or transmitting HIV/AIDS, hepatitis B and C, and other diseases for users who inject meth and share needles.

Meth's effect on the brain and the brain's ability to recover are not entirely clear. However, injury to brain cells can be seen months after a person quits using meth. This damage affects the supply of chemicals important to physical and mental well-being. Whether addicted or not, meth users risk brain damage that may be permanent.

Research is continuing, but studies also have connected prolonged use of meth with symptoms similar to those experienced by people with Parkinson's disease. Another outcome may be brain damage that appears similar to that caused by Alzheimer's disease, stroke, and epilepsy.

Who Uses Meth?

Meth use has grown greatly in recent years. The 2000 National Household Survey on Drug Abuse, conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), estimated that 8.8 million Americans had tried meth at least once. This number was more than double the level of use found in the 1994 survey.

Among high school seniors, 7.9 percent reported taking meth at least once. More than 4 percent of these seniors disclosed use in the past year-about twice the rate of a decade ago (2000 Monitoring the Future Survey).

Several groups may be especially susceptible to the illusion that using meth is beneficial:

- Truck drivers trying to remain awake and alert during the long hours involved in cross-country hauls.
- Restaurant, construction, and factory workers hoping to reduce fatigue.
- People trying to lose weight.
- White-collar workers wanting to become more competitive and able to work longer, more productive hours.
- Athletes, both in and out of school, seeking temporary bursts of energy and feelings of increased physical endurance.
- Youth partying all night.
- Students enduring marathon study sessions.
- Men in some gay populations wanting to boost sexual performance or alleviate depression.
- People with AIDS seeking temporary relief from AIDS-related fatigue and depression.
- People manufacturing meth at home as an income source and/or to support their addiction.

What Are the Effects of Methamphetamine Production?

Manufacturing methamphetamine is called "cooking." Cooking a batch of meth is extremely dangerous due to the unstable chemicals and the toxic byproducts. A few of the chemicals used in the manufacture of meth include sulfuric or hydrochloric acid, iodine, alcohol/ether, and lye. Whether inhaled, ingested, or absorbed through the skin, these chemicals pose serious health hazards:

- Respiratory and eye irritation
- Headache
- Dizziness
- Nausea and vomiting
- Shortness of breath.

Meth labs also can-and do-explode unexpectedly and forcefully. The volatile behavior of meth users adds to the danger of meth production. Labs are often boobytrapped; workers may be well armed. For every pound of finished product, the resulting 5 to 6 pounds of toxic waste typically are dumped on the ground or in nearby lakes and streams.

All of these hazards mean that anyone in or near a meth lab is at risk. Police officers, protective services workers, firefighters, and emergency medical technicians arriving at a meth lab run a high risk of injury as do campers and hikers who come upon labs in secluded areas-even in national parks. Cleanup crews and new residents who move into a former lab area without realizing it also may be harmed by toxic waste.

When a meth lab is seized, the cleanup requires special training and equipment. Depending on the size of the operation, cleaning up a meth lab can cost more than \$100,000.

What Is the Impact of Methamphetamine Use?

- Admissions for methamphetamine treatment jumped from 14,496 in 1992 to 55,745 in 1998 (SAMHSA, Treatment Episode Data Set (TEDS): 1993-98 National Admissions to Substance Abuse Treatment Services, September 2000).
- Chronic use of meth can lead to psychotic symptoms that sometimes last for years after use has ended (NIDA Resource Report-Meth Abuse and Addiction: NIH publication No. 98-4210, printed April 1998).
- The mortality rate for meth increased 38 percent between 1998 and 1999 (CSAP Prevention Alert Vol. 4, No 5, March 9, 2001. ncadi.samhsa.gov/govpubs/prevalert/v4/5.htm).
- Of the 85 drugs that caused death in the United States in 1999, methamphetamine ranked sixth (CSAP Prevention Alert Vol. 4, No 5, March 9, 2001. ncadi.samhsa.gov/govpubs/prevalert/v4/5.htm).

What Treatments Are Effective for Methamphetamine Addiction?

The effectiveness of treatment generally increases when the program draws on a variety of components. Because of the inability of many meth users to recognize problems related to their drug use, techniques that promote change in patients' thinking, expectations, and behaviors are emphasized. The length of the treatment program also is important. Many users have a tendency to quickly drop out of treatment, but those who continue in treatment can achieve long-term, drug-free recovery.

Strategies to prevent relapse may include drug education, family and group therapies, and self-help groups. These strategies often include teaching abusers to identify behaviors that put them in situations where they are at high risk for using meth. This form of treatment provides a structure for actively involving patients in treatment and helping them stay off meth.

Treatment is often provided in intensive outpatient programs. Therapies may be combined with techniques to strengthen coping skills for stress and with medications, as needed. The clinical challenges related to paranoia, psychosis, agitation, and severe craving usually require knowledge and skills beyond those involved in traditional alcohol treatment.

More research is needed to focus on concerns related to sexual behavior, weight issues, and ongoing paranoia. Studies examining special treatment issues associated with pregnant women, women with small children, the gay community, and homeless populations also are needed.

SAMHSA's Center for Substance Abuse Treatment's publication Treatment Improvement Protocol (TIP) 33: Treatment for Stimulant Use Disorders includes a review of treatment effectiveness, educational information, and practical/applied recommendations. To download, go to www.SAMHSA.gov. Click on Addiction Treatment and go to Publications. Copies can be ordered through SAMHSA's NCADI at 1-800-729-6686.

What Can Communities Do To Prevent Methamphetamine Use?

Communities can combine environmental prevention efforts with individual- and family-focused prevention activities. Combined approaches are more effective than strategies that focus only on parents or only on children and adolescents. Federal, State, and local governments are budgeting more resources to prevent drug problems and, specifically, to combat methamphetamine. But government alone cannot do the job. Joining, supporting, or helping to start a local prevention group can make a difference.

Community groups can work closely with a wide range of partners. These include parent groups, youth-serving organizations, faith communities, media, schools, public health agencies, service groups, professional organizations, law enforcement, treatment professionals, groups and agencies concerned with the environment, child protective agencies and advocates, businesses, political leaders, and others to create safe, healthier environments.

One organization promoting and coordinating this work nationally is the Community Anti-Drug Coalitions of America (CADCA). Call CADCA's office at 1-800-54-CADCA or visit its Web site at www.cadca.org to contact CADCA members in your area and obtain tools for coalition building.

Substance abuse prevention programs should be comprehensive and long term, with defined goals and objectives. Prevention at the community level begins by understanding a specific drug problem using data such as drug treatment statistics, emergency room admissions, and law enforcement reports. Information gathered from children and adolescents as well as from adults who care about or work with young people also is important. Then, specific activities that have a proven record of reducing drug use can be developed or adapted to respond to the community's identified needs and resources.

Meth labs are extremely dangerous.

Many of the chemicals found in these labs are corrosive or flammable. The vapors from the chemical reactions attack mucous membranes, skin, eyes, and respiratory tract. Some chemicals will react with water or other chemicals and cause a fire or explosion. Workers may be armed and violent. (Source: The U.S. Department of Justice, Drug Enforcement Administration, Clandestine Lab Enforcement Team, DEA Academy, Quantico, VA).

Many signs can indicate that meth is being produced or trafficked:

Houses

- Windows covered (cardboard, black plastic) for complete privacy
- Lights left on for long periods
- Activity can be all hours of the day or night or continuous for several days
- Drug paraphernalia / litter scattered in area
- Porch lights coded to indicate when drugs are available
- Dogs used to guard a house that has these signs

Traffic

- Heavy vehicle or foot traffic at all times of the day or night
- People and cars stay for short periods
- Taxis used to avoid license plate identification

Materials

- A variety of ingredient jars containing clear liquid with white solids on the bottom, shiny purple crystals, dark red or purple powder, or jars with tubing attached
- Several types of containers, such as a large number of cold medication containers; cans of camping fuel, paint thinner, acetone, lye, or drain cleaners; and other containers with sulfuric or muriatic acid
- Large amounts of lithium batteries that have been stripped
- Propane tanks with fittings that have turned blue
- Strong chemical smells like ether, ammonia, acetone, or urine.

A list of meth laboratory indicators provided by the DEA Clandestine Lab Enforcement Team, DEA Academy in Quantico, VA, is on www.SAMHSA.gov. Click on Campaigns & Programs, go to the Drug Facts icon, and then to Methamphetamine. For more information on meth production and trafficking, go to the DEA Web site at . If you suspect meth trafficking or production, stay away and alert local authorities and the DEA, listed in the telephone book's blue pages under U.S. Department of Justice.

Where can I get further scientific information about methamphetamine abuse?

To learn more about methamphetamine and other drugs of abuse, contact the National Clearinghouse for Alcohol and Drug Information (NCADI) at 1-800-729-6686. Information specialists are available to assist you in locating needed information and resources. Information can be accessed also through the NIDA Web site (<http://www.nida.nih.gov/>) or the NCADI Web site (<http://www.health.org/>).

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EVALUATION OF LEARNING QUIZ PAGE 1 of 2

PRINT and FAX or MAIL THIS PAGE AND THE ANSWERS PAGE TO OUR OFFICE
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EVALUATION OF LEARNING — Page 2 of 2

**Course Title: “TREATING METH/CRANK
ADDICTION”****3 Hours of Approved Continuing Education Credit***The purpose of the following Evaluation of Learning questions is to:*

- A.) Verify that you have read and watched the required course materials,
- B.) Demonstrate an understanding of the practical application of the course materials,
- C.) Officially document your participation and completion of this course.

CIRCLE THE ANSWER TO THE FOLLOWING 20 TRUE/FALSE QUESTIONS

- T F 1.) I have listened to the required audio CD presentation.
- T F 2.) I have read through all of the course handout materials.
- T F 3.) Crank and crack are the same drug.
- T F 4.) Crank is ingested most frequently used in tablet form, like a pill.
- T F 5.) Crank cannot be derived from common household chemicals.
- T F 6.) The "War on Drugs" has been effective in reducing addiction rates.
- T F 7.) Vitamin B is frequently used by drug dealers to "cut" crank and increase the volume.
- T F 8.) The most effective treatments for methamphetamine addiction are cognitive behavioral interventions.
- T F 9.) The Federal ban on needle exchange funding results in 4,000 HIV cases per year.
- T F 10.) Methamphetamine is a powerfully addictive stimulant that dramatically affects the central nervous system.
- T F 11.) "Ice" is the smokeable form of meth.
- T F 12.) Methamphetamine has no toxic effects, and few side-effects.
- T F 13.) Addiction is a chronic, relapsing disease, characterized by compulsive drug-seeking and drug use which is accompanied by functional and molecular changes in the brain.
- T F 14.) Unlike cocaine, methamphetamine results in an accumulation of the neurotransmitter dopamine, and this excessive dopamine concentration appears to produce the stimulation and feelings of euphoria experienced by the user.
- T F 15.) Methamphetamine can cause a variety of cardiovascular problems.
- T F 16.) Acute lead poisoning is another potential risk for methamphetamine abusers.
- T F 17.) Increased HIV and hepatitis B and C transmission are likely consequences of increased methamphetamine abuse.
- T F 18.) There are currently no particular pharmacological treatments for dependence on amphetamine or amphetamine-like drugs such as methamphetamine.
- T F 19.) Methamphetamine is rarely being used in dangerous combination with other substances.
- T F 20.) Some people start using meth to reduce fatigue and maintain productivity - particularly for tedious, repetitive, or physically demanding tasks or when working long hours.



Richard K. Nongard, Executive Director
PO BOX 121 ANDOVER, KS 67002

"Blue Sheet"
Grade This
Class!

Please complete this short course evaluation.

Please mail or fax this page to us along with your completed course documentation.

DATE: _____ Homestudy Course Title: _____

On a scale of 1-5 (5 being "highest" and 1 being "lowest") please answer the following questions:

LOW -----> HIGH

- | | | | | | |
|---|---|---|---|---|---|
| 1) The instruction appeared knowledgeable of the materials: | 1 | 2 | 3 | 4 | 5 |
| 2) The course objectives for this class were met: | 1 | 2 | 3 | 4 | 5 |
| 3) Appropriate teaching methods were utilized: | 1 | 2 | 3 | 4 | 5 |
| 4) The handout materials were useful: | 1 | 2 | 3 | 4 | 5 |
| 5) Sound / Video quality was acceptable: | 1 | 2 | 3 | 4 | 5 |
| 6) How much of this material was new to you: | 1 | 2 | 3 | 4 | 5 |
| 7) The overall quality of this course was: | 1 | 2 | 3 | 4 | 5 |
| 8) Please feel free to make any additional comments below: | | | | | |

Thank you for your participation! Please sign here if you give permission for your comments to be used on our website or other advertising materials.

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