

# Narcotic Educational Foundation of America

Drug Abuse Education Provider of the:  
California Narcotic Officers' Association

## METH - AMPHETAMINES

### QUICK FACTS:

Amphetamines are derived from a synthetic chemical manufacturing process. The amphetamines, which are known as strong central nervous system stimulants, can seriously affect the human body. The stimulant drugs influence and accelerate (speed up) certain body functions. This class of drugs causes an "artificial" state of stimulation. Some of the signs of these body functions are increased heart and respiratory rate, elevated blood pressure, and the dilation of the pupils of the eyes. High doses have also caused very rapid and / or irregular heart beats, tremors, loss of coordination, a stroke, and in some cases death.

The amphetamine addictive qualities are exerted on that region of the brain and central nervous system that is responsible for the pleasure sensation of "reward" and the region that produces the classical "physical / psychological dependence syndrome." The brain's neurochemicals associated with the stimulants are that of "fight or flight" and physical endurance. These additions account for the abusers loss of control. The abuser is not consciously taking care of diet or biological needs. Stimulants, as well as the "drug abusing" lifestyle, may be expressed in neurological depression. This neurological depression is usually associated with the "down" side of the drug. Amphetamine "psychosis" can be self destructing (suicide).

### HISTORY OF THE DRUG

The amphetamines are not natural occurring such as cocaine (coca bush), but are derived from chemical synthesis. The amphetamines have been one of the nation's listed drugs for many years. This category of drugs dates back to its first synthesis in 1887, however, it did not become a drug for general medical use until 1927. It was felt that the amphetamines were going to be a more efficient way of counteracting depression in mental hospitals and to combat Parkinson's disease. A secondary effect, the loss of appetite, proved to have a large market value; thus amphetamines were once common ingredients in "diet" plans. During World War II, amphetamine was touted as a wonder drug and prescribed for a myriad of disorders including; sleeping sickness, hyperactivity and as an antihistamine. The military used the "pep pills" to increase the fighting effectiveness of their soldiers. By the end of World War II drug companies wanted to dispose of their surplus stock, and advertised using such slogans as "elimination of drowsiness and repletion of spirit." This advertising appealed to young men and women who had learned to use drugs during the war. This problem escalated into an epidemic of abuse.

Methamphetamine, also known as "speed" or "crank", was the lesser known of the amphetamine drugs until the 1970's when the illicit production of the substance began. Methamphetamine has become the

(Continued Column 3)

### UNDER THE INFLUENCE

**With moderate use, the user will be subject to:**

- ◆ Sweating ( heavy perspiration).
- ◆ Dilated pupils because amphetamines affect the chemicals which control muscle size.
- ◆ Increased respiration and pulse because the drug affects the part of the nervous system that controls those functions.
- ◆ Rapid speech and movement.

**With larger quantities to get a desired "RUSH" effect the user will be subject to:**

- ◆ Increased heart rate to dangerous levels.(atacardia).
- ◆ Skin picking or speed bumps (histamine reaction).
- ◆ Paranoia - increased suspiciousness characterized by delusions and hallucinations.
- ◆ Aggressiveness / Irritability.
- ◆ Potentially violent - sometimes tragically leading to murder and serious physical deterioration.

**AMPHETAMINE TYPE  
DRUGS ARE AN  
ATTRACTION TO**

### History - (continued from column 1 - this page)

drug of the nineties, with the advent of new, cheap, and easy methods of illicit manufacturing of the amphetamines. This has resulted in an explosion of illegal laboratories. In recent years, its use and supply have grown to rival cocaine in many areas of the country. This is primarily due to a discovery that using *ephedrine* has made the manufacturing of methamphetamine much easier. The "ephedrine process" has several advantages over the old process (Phenyl-2-Propanone). It is easier, involving approximately one-half the number of steps in its processing. Also, it does not give off the strong odors associated with its manufacturing, thus reducing the possibility of detection and allowing it to be processed in the inner city.

Illegal methamphetamine production is a hazardous and environmentally destructive crime that is expensive to clean up. Producers, often with little understanding of chemistry, combine a variety of explosive and hazardous chemicals to make the stimulant drug in makeshift laboratories.

When they are finished, they secretly dump the leftover toxic waste products down drains, in rivers, or by the side of the road. Cleanup costs for each illicit laboratory or dump site runs into thousands of dollars, with taxpayers picking up the costs.

## HOW IS THE DRUG RECOGNIZED

Amphetamine and methamphetamine are usually found as a powder. The color of the powder ranges from a brownish or yellowish to white. The more pure the substance, the more white it will appear.

What has become increasingly more popular is what is known as "ice, crystal, or glass." These are the street names for crystal methamphetamine. This is a purified form of the drug. To obtain it the drug is cleaned, purified, and placed into boiling water where it is recrystallized into white or clear rocks, similar to rock candy.

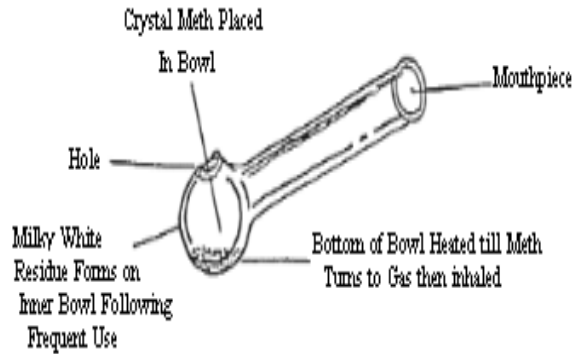
Boiling the crystal will turn the substance into a semi-liquid called "snot" which can be smoked or placed up the nose.

## AMPHETAMINES "DECOY" OR "TRAP"

Regardless of the method of administration, new users of amphetamine feel an intense experience of physical and psychological exhilaration that continues for hours. Moderate dosages result in a temporary feeling of cheerfulness, vigor, alertness, and general euphoria. These pseudo feelings of self confidence are the "DECOYS."

Amphetamines stimulate a tired person to seemingly feel new energy. When it wears off, exhaustion is more intense due to the reserve energy expended. Following a real binge, users may sleep 24 to 48 hours. That reveals the false assumption that amphetamines "give" - the fact is amphetamines "take." The "TRAP" is deeper involvement, soon resulting in tolerance and requiring bigger doses and addiction.

## Methamphetamine Pipe (Glass)



## CHRONIC STIMULANT USE SIGNS

- ◆ Time distortion in the form of tardiness, unusual meal times, and missed appointments.
- ◆ Chronic forgetfulness or broken promises
- ◆ Frequent absences
- ◆ Homicidal or suicidal indication
- ◆ Sleep deprivation
- ◆ Severe malnutrition

## STIMULANT WITHDRAWAL SIGNS

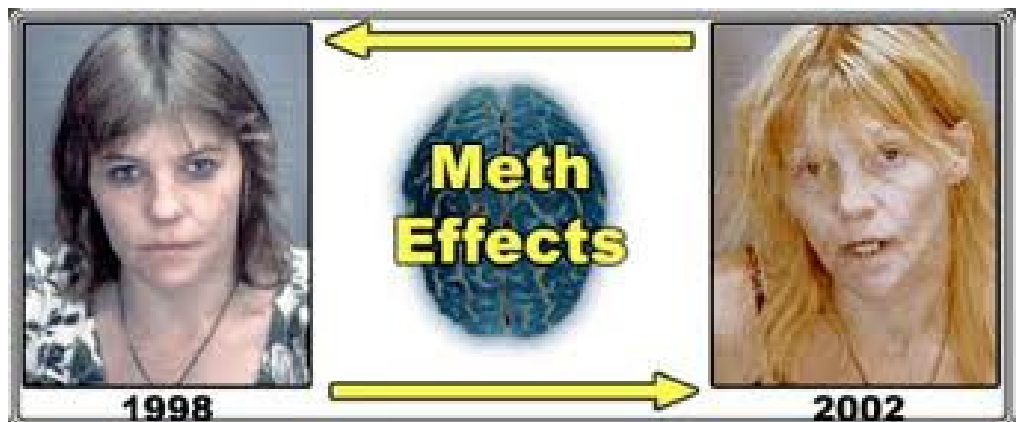
- ◆ Craving
- ◆ Depression
- ◆ Irritable
- ◆ Increased Appetite
- ◆ Increased Sleep
- ◆ Lethargic
- ◆ Weakness
- ◆ Confused Thoughts
- ◆ Loss of Memory

## METHODS OF INGESTION STIMULANTS

Regular users lose interest in the methods to ingest the amphetamine type drugs. This has had a developing metamorphosis. Originally the drug was taken orally (for prescription purposes still is) or by sniffing it through the nose (insufflate) into the nasal passages, and by injections into the blood stream. Now there is a chronic problem of taking the drug. It is smoked, which accelerates its effects. After the smoke enters the lungs, it is immediately absorbed into the blood and quickly reaches the brain. This results in an almost instantaneous, more intense, intoxication referred to by users as being "fried."

Snorting and intravenous use create adverse effects to the user. Those who inject will frequently develop abscesses, ulceration's, and welts around the injection sites. Those who snort the drug must endure the terrible burning sensation while the drug goes in their nose and down their throat.

When the drug is smoked the dosage amount is small, even as little as one hundredth of a gram (0.01). The standard dosage for taking it orally or snorting the drug is traditionally between five hundredths (0.05) and one tenth (0.10) of a gram. These amounts greatly depend upon the tolerance of the user and the quality of the drug. Small level dealers will do what is referred to as "stepping on the drug" which is diluting the drug with cutting agents. Thus, the seller makes more money.



**Decoy Trap** - (continued from Page 2 - column 1)  
food, thus suffering from malnutrition; and eventually become moody, nervous, and apprehensive. They often pace up and down, and perform other stereotyped acts. Users often suffer a persecution complex that has led to tragedy by fighting back because of imagined affronts. Violence is common. Regular users also develop depression, panic, delusions, hallucinations, and a toxic psychosis - like schizophrenia - among other symptoms. Now, an overpowering craving develops. Chronic users obtain more and more amphetamines, regardless of crime or difficulties - even giving birth to suffering addicted infants. The addiction "TRAP" has closed, and many may dose to death.

### **CRYSTAL METH "THE HIGH"**

The high gained from crystal methamphetamine lasts from 2 to 14 hours (some reports indicate 12 to 14 hours), depending upon the amount ingested. When heated in a glass pipe, the crystals turn to a liquid and produce a potent vapor that enters the bloodstream rapidly. As this happens, large doses may be excreted into the urine, unchanged, up to 72 hours after ingestion. When allowed to cool or cooled by a wet rag, the "ice" reverts to its solid crystal form. It is then reuseable and easy to transport.

There are several factors that may contribute to the growing popularity of crystal methamphetamine. One is that crystal methamphetamine is similar in quality to, or better than, injectable methamphetamine. This allows for the elimination of the needle. Another is that the drug enters the brain faster when it is smoked. The drug is longer lasting when compared to other drugs ( particularly in comparison to a cocaine "high" of about 12 -15 minutes).

Crystal Meth is easy to transport and is cheap to produce and buy.

### **PARAPHERNALIA**

Common carriers of methamphetamine are opaque glass vials, wax paper bindles, or the clear zip lock or heat sealed cellophane packets. Common paraphernalia includes syringes for the user who injects the drugs, or a glass smoking pipe.

There is a difference between a pipe used for cocaine and that used by the meth smoker. The meth pipe is made of one section where the crystal is placed and heated. There are no screens or coolants.

The meth is first placed into the chamber and heated with a lighter or heat source until it turns into a gas. The opening in the chamber and vent hole are sealed with the finger while the crystal is being heated. Once the crystal has turned to gas, it is inhaled by the user. A telltale sign of a meth user are the burn marks on the fingers used to seal and hold the main chamber. One might also see a flat spot on the thumb from using the flint on a lighter repeatedly.



**METHAMPHETAMINE CAUSES  
"HISTAMINE" REACTION**

### **HOW DOES AMPHETAMINE WORK IN THE BODY?**

It is well understood that the body is made up of millions of nerve cells. No two nerve cells touch each other, but are contiguous through a synapse or gap called the synaptic junction. It is at this site that the stimulant drugs have their greatest effect. The activity of the drug causing such stimulation occurs with the synapse of the nerve gaps inside the brain. This acutely affects production of neurotransmitters, chemicals that are responsible for sending signals in the nervous system. The messages sent throughout our central nervous system are conducted as one nerve transmits a message to another through the release of neurotransmitters. These neurotransmitters are produced by brain cells. The chemicals are released from the end of one nerve cell, they cross the synapse to another nerve cell where they transmit the message to a receptor. Once the message has been delivered, the chemical is reduced to smaller chemicals by what is called a Monoamine Oxidizer (MAO). The smaller chemicals then return to the original nerve cell that sent the message. Amphetamines inhibit MAO's by not allowing the MAO to perform its job and therefore blocking the re-uptake of the drug causing the neurotransmitter to remain with the synapse and continue its message to the specific receptors. Amphetamines work on the same neurotransmitters and receptors that the natural adrenaline works on. Amphetamines cause an extended triggering of the receptors, thus an over flooding of the brain. The overflowing causes the body to remain in an excited state for prolonged periods of time, thus depleting the body of its natural mechanism for survival.

Another effect is that brain cells may be destroyed by the amphetamines. Brain cells are one of the few cells of the body that are not regenerative. Thus, premature cell death can cause many side effects.

## Meth Mouth

"Cotton mouth", it has a medical term xerostomia (dry mouth). Saliva that moistens the inside of the mouth has many functions. Saliva lubricates the mouth permitting a person to speak properly, lubricate foods so they may be swallowed more easily, washes the mouth clear of food debris. Otherwise bacteria can grow and lead to infections of the mouth and teeth (cavities), and cause bad breath (halitosis).

Dry mouth can result from taking common used medications: antihistamines (cold preparations), diuretics (to control high blood pressure) and antidepressants. Illegal drugs can also decrease the flow of saliva, i.e. Methamphetamine, Cocaine and Narcotic Analgesics (heroin).

There are many physiological & behavioral manifestations of psychoactive drug use that causes a variety of health problems including tooth decay. Methamphetamine attaches to the fifth cranial nerve, an area that controls jaw movements. It is a key for the receptors in that area and the user experiences bruxism (extreme grinding of the teeth), bruxism also occurs with the drug MDMA (ecstasy), or analogs of MDMA.

The relationship to tooth decay is when the teeth are scraping against each other it wears down the enamel. Enamel acts as a protective cover; enamel is the hardest substance in the human body.

For relief of dry mouth one should avoid beverages and food containing sugar. There are many medical causes of dry mouth and teeth decay. Poor personal dental hygiene also contributes to this problem.



1979 - Age 28

Meth Decay

Dead - Age 38 - 1989

