

METHAMPHETAMINE AND OTHER
POTENTIALLY RISKY SEX-ENHANCING
DRUGS

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DISSERTATION APPROVAL

This dissertation submitted by David Michael Fawcett and Alfredo Eugenio Taule' has been read and approved by three faculty members of the American Academy of Clinical Sexologists at Maimonides University.

The final copies have been examined by the Dissertation Committee and the signatures which appear here verify the fact that any necessary changes have been incorporated and the dissertation is now given the final approval with reference to content, form and mechanical accuracy.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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I dedicate this dissertation to my first born son Timothy who at the age of thirty-four after the terrorist attack in New York and Washington became a part of our proud military forces. At present he is a proud Airborne Ranger protecting our nation in a dangerous forward zone in the Sunni Triangle in Iraq. Timothy's resolve and courage as well as all of his accomplishments in such a short period of time have become a great source of inspiration for our family. My son has become my hero and he has made me aware of noble feelings like honor, loyalty, patriotism and commitment.

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- DAVID MICHAEL FAWCETT

Vitas

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ABSTRACT

This dissertation entails the study of the so-called sex drugs and their effect on the sexual cycle. The focus of this project is amphetamines, and in detail their most potent derivative, methamphetamine. This drug has been referred to as the crack cocaine of the new millennium. Methamphetamine is well documented for its association with sexual activity. Users report that it significantly enhances the sexual experience. *Tina*, as it is known by many of its gay users, enjoys the reputation that it makes sex so good that it is difficult to think about anything else. In South Florida, the use and abuse of this drug appears to be increasing. There are some researchers that feel that the activity in South Florida is reaching epidemic proportions.

Methamphetamine is said to intensify the sexual experience to such an extent that it is believed to promote compulsive sexual behavior and unsafe sex. For people who are not infected by the HIV virus, or do not know if they are, the threat of sexually transmitted diseases may seem very distant. This dissertation will research the hypothesis that methamphetamine is not only a risky sex-enhancing drug, it may also be dangerously exposing new generations to unsafe sex and diseases. Is crystal methamphetamine in fact the drug of choice among the party-going South Florida population that uses drugs? It has been reported that when one is high on crystal methamphetamine the user is probably more likely to have unprotected anal or oral sex and engage in sex acts with multiple partners. Unprotected, receptive anal intercourse greatly increases the likelihood of transmission of the HIV virus and other sexually transmitted diseases. If

the user injects the drug rather than snorts it, there is an increased likelihood that dirty needles may be used. There appears to be great concern among AIDS and substance abuse professionals that this drug represents a new and major problem. The risky sexual activity and the use of needles make this a hazardous and potent combination. Some of these users describe sex with Tina as paradise, and those in recovery from the drug report that sex can cause cravings for crystal. The problem is being taken seriously in the many communities.

This dissertation will also explore first person accounts of the effects of crystal on sex and relationships, and attempt to draw some initial conclusions about possible best practices for addressing the sexual issues faced by individuals recovering from crystal methamphetamine.

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CHAPTER 1: INTRODUCTION

For centuries men and women have attempted to enhance their sexual experiences with a variety of chemicals. There is a rich history in all cultures of using substances derived from plants and animals, as well as synthetic materials, to change the sexual experience.

Phenylethylamine (PEA)

Scientists will attest to the fact that romantic euphoria and sexual desire can only be attributed to Cupid's arrows if the little sprite has dipped them in the unromantically named chemical phenylethylamine (PEA). Scientists have been aware for a century about phenylethylamine and the hormone's responsibility for our feelings of desire.

Phenylethylamine, the *sex molecule*, is a natural chemical that is similar to an amphetamine. It is suspected of causing the intense feelings of desire experienced by lovers. The theory is that production of phenylethylamine in the brain can be triggered by something as simple as the meeting of eyes or the touching of hands. The heady emotions linked to racing pulses, sweaty palms, and heavy breathing can be clinically explained as the result of an overdose of phenylethylamine.

Studies have noted that high levels of phenylethylamine also occur in chocolate. The cocoa bean has a history that dates back to pre-Columbian history. The words chocolate and cocoa both originated in the Nahuatl language of the Aztecs. The Spaniards introduced Europeans to cocoa and by the nineteenth century, it was being prescribed as a health drink. Since that time the love affair with chocolate has blossomed and increased.

The cocoa bean is approximately fifty five percent cocoa butter, complex carbohydrates, protein, tannins, phosphorous, potassium, caffeine, theobromine and phenylethylamine. PEA (Phenylethylamine) is the active ingredient in the cocoa bean responsible for the mood altering and perceptual changes associated with chocolate consumption.

Phenylethylamine is a natural amphetamine that the brain manufactures in response to feelings in the first stage of the sexual cycle, desire, and feelings such as euphoria and bliss. PEA allows us to feel unstoppable and energetic. It is the body's natural answer to ecstasy and nirvana. People crave it because of its stimulant and pleasing effects, inducing feelings of sexual desire, euphoria, bliss and pleasure.

An extract of cocoa without the added fat and the sugar would tremendously raise the content of phenylethylamine, thereby increasing the effects of the substance. Current research concludes that PEA is in fact the brain's natural stimulant and may be used as a health supplement enhancing endogenous neurotransmitters. It is one of the simplest neuro-transmitters and it is a structural relative of a series of hormones, some of which are linked to human motor system functions and the occurrence of Parkinson's disease, while others such as serotonin effectively dictate our emotional balance.

Some important conclusions from current research include:

1. PEA is a naturally occurring amphetamine to which the brain does not develop tolerance. The extract may be useful as an alternative to the street drug ecstasy or in the treatment of other drugs such as amphetamines, cocaine and marijuana.
2. PEA induces sexual behavior.
3. PEA is the basis for the effects of many street drugs including MDMA, cocaine, marijuana and speed.

4. PEA is responsible for the elation and mood elevation.
5. PEA is associated with reward centers within the brain and is successful in reinforcement.
6. Low levels of PEA are associated with depression.
7. PEA is one of the major classes of psychedelic drugs.
8. PEA is the brain's endogenous stimulant.
9. PEA can be used as a smart drug enhancing learning ability and memory.

Studies have shown that PEA has numerous effects on the brain. It has been proposed that PEA is responsible for many of the functions attributed to the catecholamines, in particular, epinephrine, norepinephrine and dopamine. The data suggest that phenylethylamine has a meaningful role in the modulation of behavioral stimulation and arousal.

Biochemical Pharmacology (1978) identifies phenylethylamine as one of the five major chemical classes of psychedelic drugs. *The Massachusetts Journal of Mental Health* (1974) reveals that PEA has a role in the perceptual changes induced by the THC in marijuana. Since the neuroamines modulate perception and affect, PEA has a role in the perceptual and behavioral changes associated with THC. In one study, administration of THC gave rise to a fourfold increase in endogenous PEA levels. It was concluded that the increase in PEA is responsible for some if not all of the THC effect.

Nature (1974), in an article entitled "Hallucinogenic Phenylethylamines," proposed that PEA stimulates five-ht receptors and is responsible for hallucinogenic properties. The *European Journal of Pharmacology* (1974) in the Soviet Union found that PEA is the basis of hallucinogenic action.

PEA is an endogenous brain amine that has been characterized as an endogenous amphetamine. It was studied, as were similar amphetamines in humans and other species, in neural processes underlying reward or reinforcement due to its rewarding properties (*Biological Psychiatry*, 1990). Another study concluded that a large percentage of depression might be due a deficit in PEA. Phenylethylamine, an endogenous neuroamine, increases attention and activity in animals and has been shown to relieve depression in better than fifty percent of depressed patients.

As mentioned above, researchers have proposed that PEA deficit may be the cause of a common form of depressive illness. Patients with major depressive episodes that responded to PEA treatment were reexamined about twenty weeks later and the results were very positive. Effective dosage did not change with time and there were no significant side effects. PEA was found to produce sustained relief of depression in a significant number of patients, including some patients who were unresponsive to standard treatments. PEA improves mood as rapidly as amphetamine, but it does not produce tolerance. There are sustained antidepressant effects of PEA replacement (*Journal of Neuropsychiatry and Clinical Neuroscience*, 1996). It was also stated that increased levels of PEA might be responsible for the elation induced by marijuana and for the therapeutic action of antidepressants (*NeuroPsychopharmacology & Biological Psychiatry*, 1984). *The American Journal of Psychiatry* (1974) reported that monkeys receiving PEA demonstrated behavior similar to that reported after the administration of amphetamines, with the exception of tolerance development. Other researchers have demonstrated that PEA induced mounting behavior and raised norepinephrine levels in a brain region implicated in the regulation of sexual behaviors (*American Journal of*

Psychiatry, 1978). Rats that were injected with PEA had a period of behavioral activation, primarily dopaminergic and serotonergic in nature (*Pharmacology, Biochemistry & Behavior*, 1984).

PEA has the ability to release a great proportion of dopamine. PEA combined with caffeine mimics the cocaine discriminative cue (*Brain Research Bulletin*, 1984). Caffeine-PEA combination mimics the amphetamine discriminative cue (*Life Science*, 1989). MDMA (methylenedioxyamphetamine) is classified as a PEA and its action work on the same principles as PEA (1985). In an article in 1994, researchers illustrate the many comparisons between the street drug ecstasy and chocolate in so far as mood altering and perceptual changes (*Biological Psychiatry*, 1994).

Amphetamines

Amphetamines are powerful psychostimulant substances that increase activity in the central nervous system. They increase the user's heart rate, breathing rate, blood pressure rate, and they dull the sensations of hunger and fatigue. Amphetamines mimic the effect of the body's adrenaline. Amphetamines are also thought to cause an accumulation of a neurotransmitter called dopamine. This excessive dopamine concentration appears to produce the stimulation and feeling of euphoria experienced by the user. Amphetamines are sometimes referred to as bennies, speed and uppers. In addition, dexedrine and biphphetamine are popular brand names of amphetamines. When taken orally, snorted, or smoked, the user usually experiences a feeling of euphoria, heightened alertness and greater energy.

Amphetamines are included in the popular term *club drugs*. These include amphetamines and methamphetamine which are currently the most popular synthetic

stimulants in the United States. Methamphetamine is integral to the sexual activities of some gay men. The so-called party drugs, such as MDMA (methylenedioxyamphetamine) (also known as ecstasy or *X-T-C*), *Special K* or ketamine, and GHB (gamma hydroxybutyrate), are popular at dances and celebrations such as circuit parties and raves. MDMA is a synthetic drug with hallucinogenic and amphetamine-like properties. The effects are reminiscent of lysergic acid diethylamide-25 (LSD). Ketamine, a white crystalline powder that is soluble in water and alcohol, is a dissociate anesthetic primarily used in veterinary medicine.

Intravenous injection (*slamming*) of amphetamines immediately produces a flash or a rush and causes tingling in the head and extremities, an increased heart rate and euphoria. After a few minutes, the rush decreases and blends imperceptibly into a level of central stimulation indistinguishable from that of oral use. Oftentimes, the user experiences rapid speech followed by slurred speech. Extremely high doses may cause users to flush or become pale and cause a rapid or irregular heartbeat, loss of coordination and even physical collapse. Amphetamine injections can cause such an intense increase in blood pressure that a high fever, a stroke, or even heart failure could take place. Anxiety, delirium, hallucination, restlessness and irritability are also acute toxic effects of amphetamine use. This sensation can last for several hours after which the comedown or crash is inevitable. Chronic amphetamine use can result in inflammation of the heart lining, damaged blood vessels and skin abscesses. It can also cause increased blood pressure, irregular heartbeat, rapid heart rate and irreversible stroke-producing damage to small blood vessels in the brain. Amphetamine abusers can also have episodes of violent behavior, paranoia, anxiety, confusion and insomnia. After ingesting or injecting large

doses of amphetamines a user might experience an amphetamine-induced psychosis, a mental disorder similar to paranoid schizophrenia. The abuser might even exhibit violent behavior. The symptoms usually disappear within a few weeks after the drug use is stopped, although there are indications that methamphetamine can cause permanent changes in brain chemistry.

Methamphetamine

Methamphetamine is the most potent form of amphetamine available with or without a prescription. It has been called the crack cocaine of the new millennium. How does methamphetamine differ from other stimulants, such as cocaine? Methamphetamine is classified as a psychostimulant, as are amphetamine and cocaine. Methamphetamine, like cocaine, results in an accumulation of the neurotransmitter dopamine. This excessive dopamine concentration produces the stimulation and feelings of euphoria experienced by the user. Methamphetamine has a much longer duration of action, and a larger percentage of the drug remains unchanged in the body than does cocaine. This results in methamphetamine being present in the brain longer, which ultimately leads to prolonged stimulant effect.

Methamphetamine differs from cocaine in that it is manufactured from chemicals, rather than derived from plant substances. The processing required to make methamphetamine from precursor substances is now easier and more accessible than ever before. There are literally thousands of recipes and information about making methamphetamine on the internet. An investment of a few hundred dollars in over-the-counter medications and chemicals can produce thousands of dollars' worth of methamphetamine.

Over-the-counter cold and asthma medications containing ephedrine or pseudoephedrine, red phosphorous, hydrochloric acid, anhydrous ammonia, drain cleaner, battery acid, lye, lantern fuel, and antifreeze are among the ingredients most commonly used in one recipe. The drug can be made in a makeshift lab that can fit into a suitcase.

Another recipe calls for large amounts of industrial and agricultural chemicals, which are either purchased or stolen. These chemicals are then used in large labs known as super labs. The average methamphetamine cook annually teaches ten other people how to make the drug. Production of methamphetamine begins with a precursor. A precursor is a chemical that, when combined with another chemical, results in a new product. The process of making methamphetamine starts with the precursor ephedrine or pseudoephedrine, and other chemicals are added to produce the drug.

Animal studies with *D*-amphetamine and cocaine suggest that some differences in underlying mechanisms of toxicity may exist between these agents. Because of the variation in quality and concentration of illicitly purchased methamphetamines, the clinical observation of toxic effects usually is more relevant than an estimate of total ingested dose. Although hair and saliva analysis have been reported, most toxicological monitoring or testing is performed with urine and blood samples (Derlet et.al.).

Crystal methamphetamine (*crystal meth*) is sold as a powder to be injected, inhaled or to be taken orally. The street names for methamphetamine are chalk, speed, crystal meth, meth, Tina, bump, and yaba. In its smoked form, it is often referred to as ice, crystal, crank and glass. Most of the methamphetamine sold today is homemade, although so-

called superlabs in Mexico are increasingly dominating its production. The final methamphetamine product resembles a fine coarse powder, crystals or rock candy. Its color varies from off-white to yellow and it is furnished in plastic wrap, aluminum foil or capsules or tablets of various size and colors. Crystal meth is similar to cocaine in its euphoric effects, but its effects last longer. It is readily available on the streets and is of a purer quality, has longer lasting effects and is less expensive than cocaine or heroin. Ice is a large crystal of high purity methamphetamine that is smoked in a glass pipe like cocaine. The smoke is odorless and leaves a residue that can be resmoked and the effects may continue for two to twenty hours, depending on how much is smoked.

Methamphetamine's chemical structure is similar to that of amphetamine, but it has more pronounced effects on the central nervous system. According to the *National Survey on Drug Use and Health*, 5.3% (over 12 million people) of the U.S. population reported trying methamphetamine at least once in their lifetime. The highest rate of methamphetamine use was among the 26 to 34 age group, with 6.7% reporting lifetime methamphetamine use during 2002.

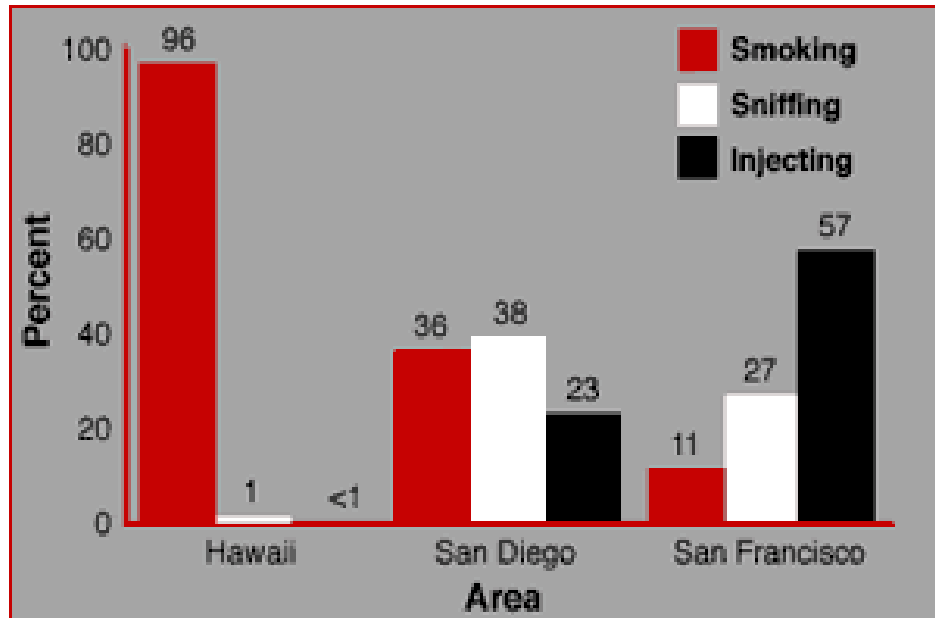
Percentage Reporting Methamphetamine Use, by Age Group, 2002

Age Group	Lifetime	Annual	Past 30 Days
12–17	1.5%	0.9%	0.3%
18–25	5.7	1.7	0.5
26–34	6.7	1.0	0.5
35 and older	5.5	0.3	0.1
12 and older (Total)	5.3	0.7	0.3

According to the *Monitoring the Future Study*, during 2003, 6.2% of high school seniors reported using a methamphetamine within their lifetime. Lifetime use among 8th

and 10th graders was 3.9% and 5.2%, respectively. During 2003, 3.9% of high school seniors reported using Ice, also known as crystal methamphetamine, within their lifetime. During 2002, 11.9% of college students and 14.8% of young adults (ages 19–28) reported using methamphetamine at least once during their lifetimes. Approximately 1.2% of college students and 2.5% of young adults reported past year use of methamphetamine, and 0.2% of college students and 1.0% of young adults reported past month use of methamphetamine. 2% of college students and 4.1% of young adults reported using Ice within their lifetime.

The preferred method of taking methamphetamine varies among geographical regions. San Francisco, where more of the users are gay, has a greater use of injection drug use (*slamming*), a method of administration with higher risk for transmitting HIV and hepatitis. In Hawaii, the great majority of methamphetamine users smoke the drug, while in San Diego smoking and snorting represent the most preferred methods of administration, with injecting a close third.



Source: Community Epidemiology Work Group, NIDA 1997

Similar to amphetamine, methamphetamine causes increased activity, decreased appetite and general sense of well being. It is also thought to cause accumulation of the neurotransmitter dopamine that is responsible for the euphoria associated with its use. After smoking or injecting the drug, the user experiences an intense rush or flash that lasts only a few minutes. Snorting or oral ingestion produces euphoria, a high without the intense rush. Snorting produces effects within three to five minutes but oral ingestion takes fifteen to twenty minutes before effects are felt. After the initial rush, there is typically a state of high agitation that in some individual can lead to violent behavior. The side effects of methamphetamine are very similar to those of amphetamines. Heart, breathing and blood pressure rates increase and sensations of hunger and fatigue are reduced. The mouth becomes dry and swallowing is difficult. The user's pupils dilate and reflexes are faster. Methamphetamine can cause a variety of short and long-term cardiovascular problems including rapid heart rate, irregular heartbeat, increased blood

pressure and irreversible stroke producing damage to small blood vessels in the brain. Chronic methamphetamine abuse can result in inflammation of the heart lining and among users who inject the drug, damaged blood vessels and skin abscesses. Long-term heavy use may also lead to malnutrition, skin disorders, ulcers and diseases resulting from vitamin deficiencies.

The U.S. Drug Enforcement Agency has created a schedule of drugs based on their medical usefulness and their potential for abuse. A complete list can be found at <http://www.usdoj.gov/dea/pubs/scheduling.html>. Schedule I and II drugs have a high potential for abuse. They require greater storage security and have a quota on manufacturing, among other restrictions. Schedule I drugs are available for research only and have no approved medical use. Examples of Schedule I drugs include PCP, ecstasy, MDMA, GHB, heroin, mescaline, and peyote. Schedule II drugs are available only by prescription (unrefillable) and require a form for ordering. Schedule II drugs include amphetamine, methamphetamine, cocaine, morphine, hydrocodone, and other opiate extracts.

Schedule III and IV drugs are available by prescription, may have five refills in 6 months, and may be ordered orally. Schedule III drugs include anabolic steroids, most barbiturates, codeine, ketamine, and lysergic acid (an LSD precursor). Schedule IV drugs include benzodiazepines such as Xanax and Valium and chloral hydrate. Most Schedule V drugs are available over the counter, and include such things as codeine preparations like Robitussin and opium preparations such as Kaopectate.

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.

Urbina and Jones (2004) have recapped what is known to date about how methamphetamine affects the body. Meth causes the release of dopamine and to a lesser extent, norepinephrine. As noted above, this results in an increase in heart rate and breathing, elevations in blood pressure and body temperature, and an excitation of the central nervous system not unlike that experienced with cocaine.

Toxic levels of methamphetamine can induce a variety of cardiovascular events (including the narrowing or inflammation of blood vessels) and a syndrome known as rhabdomyolysis, in which injured skeletal muscles leak intracellular contents into the plasma, with acute kidney failure being the most serious complication of this syndrome.

Long term use of methamphetamine can lead to grinding of the teeth, gum disease, heart attacks and stroke, while smoking of methamphetamine has been associated with the acute narrowing of the pulmonary artery and enlargement of the heart muscle. Acute lead poisoning has been reported as a result of *cutting* the drug with contaminated substances.

While intoxicated, users report alertness, euphoria, and an increased sense of well-being. Psychiatric effects include personality changes, restlessness, tension, irritability, insomnia, appetite suppression and weight loss, and a picking at the skin called formication. Verbally threatening behavior and physical aggression have also been observed.

With little or no sleep over a period of two to five days, a methamphetamine user can become extremely irritable and paranoid. In approximately 10% of persons, heavy, long-

term abuse can lead to psychosis which is characterized by paranoia, impaired reality testing and vivid visual, auditory and tactile hallucinations.

As use continues, tolerance develops and leads to greater use, resulting in dependence. Withdrawal begins 24 hours after the last use, and symptoms include depressed mood, fatigue, anhedonia and suicidal ideation. These symptoms resemble those experienced during major depression.

Abusers often have episodes of violent behavior, paranoia, anxiety, confusion and insomnia. Heavy users show progressive social and occupational deterioration. Psychotic symptoms can persist for months or years after methamphetamine use has ceased. Methamphetamine is unique among illegal drugs. Unlike other narcotics, the powerful man-made stimulant can keep users awake for weeks. It is so addictive that in many cases jailed users who are bailed out often get arrested a second time even before their first court appearance.

This neurotoxin is said to *grab your soul* and then refuse to let it go. This means that methamphetamine quickly takes over users' judgment and motivation to the extent that work, family, children, and other responsible behaviors such as safe sex practices are rapidly displaced by a preoccupation with getting and using the drug. Another troubling aspect of methamphetamine addiction is that there are cases where it took just one hit to hijack the user's life. After that first boost the amount consumed began to double within that first month.

Treatment experts dispute the recovery issues. Nevertheless, they all agree that methamphetamine poses unique challenges. Withdrawal can last longer than with other drugs. Some users report that in some cases they could not sleep for two-week periods

and when they finally fell asleep they dreamt about methamphetamine and tasted it in their mouths.

The social effects are devastating. Some addicts claim that one can become heartless when abusing methamphetamine because all concern is about getting high again. People often choose methamphetamine over their own children. A user reported "When one wakes up, the first thing on your mind is not your children, it is the need for the high." The uniqueness of methamphetamine is that anyone can learn to cook it and it is thus easily *home grown*. Crystal methamphetamine is cheap to make and lucrative to sell. It is easily manufactured in a backyard or a bathroom with common household items. The ingredients are over-the-counter cold remedies, batteries, brake cleaner and farm fertilizer that are readily available in stores and easy, although dangerous, to combine. The chemicals used to make it are usually toxic and highly volatile. Methamphetamine cooks use chemical processes in makeshift labs that fit in the trunk of a car. Methamphetamine was smuggled from Taiwan and South Korea into Hawaii in the 1980s. According to the Koch Crime Institute, a national organization aimed at understanding the causes of crime, the presence of methamphetamine has grown substantially since 1990. Meth today comes from local cooks as well as interstate and international drug runners. About eighty percent is believed to come from superlabs, many of which are in California, Arizona, New Mexico, Texas and Mexico. Bags of methamphetamine are often tucked into cars cruising on the interstates. They may be packed with peppercorn in order to mask the strong chemical odor.

Meth labs hit rural areas first because it is easier to obtain farm fertilizer and distant neighbors are less likely to smell the odor, which is described as similar to cat urine.

The number of makeshift labs is growing steadily, even in urban areas. There is increasing concern about children living at a home-based clandestine methamphetamine lab due to the physical, developmental, emotional, and psychological damage that these children may suffer. Proximity to the chemicals can make children ill. The drug also causes environmental issues derived from its distinctive homegrown manufacturing process. In the process of making a pound of methamphetamine, five to seven pounds of hazardous waste are created that cookers must dump. As tactics to fight methamphetamine evolve, so do the tactics to create the drug. Salt blocks with ephedrine intended for sick farm animals and power pole transformers that can be cannibalized for a chemical replacement for anhydrous ammonia are two of the replacement ingredients now used by small time cookers. Cookers are using these two new products to obtain the necessary ingredients. Ironically, federal attempts to end illegal methamphetamine production by restricting access to the necessary chemicals in 1989 and in 1994 resulted in clandestine manufacturers finding easier, cheaper methods of making the dangerous drug. Before 1989, the production of methamphetamine was the province of outlaw motorcycles gangs using a technique called P2P synthesis.

According to a recent office of National Drug Control Policy report, while P2P itself was a controlled substance, the precursors were not. The 1989 Chemical Diversion Trafficking Act (CDTA) restricted access to those precursors, but methamphetamine manufacturers found a ready substitute in ephedrine tablets, a decongestant that was not controlled. CDTA does control bulk ephedrine sale, but pseudoephedrine, found in many over-the-counter cold medicines is not controlled. It has become the new precursor for making methamphetamine. Criminals have easy access to pseudoephedrine, which has

led to the rapid increase in clandestine methamphetamine labs. Pseudoephedrine allows manufacture of methamphetamine using the *Nazi method*, so-called because it was first used by the Germans during the war. The Nazi method produces relatively pure methamphetamine very quickly compared to the ephedrine reduction method, which takes several days. Labs using the Nazi method require about 680 sixty milligram pseudoephedrine tablets to manufacture about one ounce of methamphetamine. About thirty percent of the pseudoephedrine is lost in the chemical conversion, which renders methamphetamine that is typically forty percent pure.

Motorcycle gangs once dominated distribution, and users were characterized as blue-collar workers. These trends have changed. Methamphetamine is now being reported in gay communities in cities like San Francisco and also in Southeast Florida. It has long been reported as the dominant drug problem in the San Diego area and now it has spread across the west and southwest. Methamphetamine appears to be reaching new populations throughout the entire nation. Investigators are discovering an increasing number of methamphetamine labs across the United States. In fiscal year 2002, the DEA reports there were 127 methamphetamine labs seized in Florida compared to twenty-eight labs seized in all of 2001. During the first quarter of 2003, 100 labs were seized throughout the state of Florida. According to the Broward Sheriff's Office there was a significant increase in the number of methamphetamine cases worked in their crime lab. There were eighty-eight cases worked in 2002. That is up from the thirty-nine that were worked in 2001 and thirty cases worked in 2000. The Broward County Commission on Substance Abuse reports that in 2002, the emergency Department at Broward General

Medical Center has experienced the number of methamphetamine cases more than double from the previous year.

Since the late 1980s crystal methamphetamine has been used by gay and bisexual men to initiate, intensify, and prolong sexual encounters, has been linked to high-risk sexual behavior, and in turn, has been associated with the transmission of HIV (Halkitis, Parsons, & Stirratt, 2001). Meth seems to be particularly synergistic with sex and has been found, more than other drugs, to be especially sexually arousing and disinhibiting (Paul, Stall, & Davis 1993, Reback & Ditman 1997, Semple et.al. 2002, Zule & Desmond 1999).

Gay and bisexual male [meth] users represent one central core of the AIDS epidemic on the West Coast (Reback, Larkins & Shoptaw, 2004, 95-96). The same social and demographic factors are central to the current epidemic of new HIV infection rates and crystal meth in the gay community in south Florida (e.g. see Kurtz and Inciardi 2003).

CHAPTER 2: SEXUAL EFFECTS OF DRUGS

It appears that although sex is generally wonderful, people are sometimes looking for ways to improve it. Humans have been experimenting with supposed aphrodisiac substances for further excitement and improvement of their sex life for thousands of years. The Romans used hallucinogenic substances such as Henbane in orgies long before the birth of Jesus Christ. Mandrake root was the primary ingredient in love potions during Shakespeare's time and was referred to in "Romeo and Juliet" as an aphrodisiac due to the heightening effect on the sensation of touch (<http://www.readytotest.com>). Atropa belladonna was another hallucinogenic that was the primary ingredient of Witches Brew. The plants were turned into a liquid compound. Sticks would be dipped in the liquid and straddled while dancing around a fire. The compound would be absorbed by the vaginal cavity and the muscles of the thigh and create a sensation of floating. This gave rise to the legend of witches flying on broomsticks and having the power to cause sexual desire and arousal. For the most part, traditional aphrodisiacs' sexual effects can be categorized as placebo in nature.

If one truly wants to believe that a chemical can improve sexual performance, it is possible to convince yourself that it works. This becomes a problem for scientists investigating causality between sex and drugs. It is very difficult to distinguish the

psychological effects from the physiological ones. Furthermore, scientific understanding of the complex chemistry of desire, even without chemical interference, is very limited.

In fact, most of the physiological effects of recreational drugs appear to be negative as far as sex is concerned (Anderson, 1993). Depressants such as alcohol, heroin, and other opiates, as well as tranquilizers, tend to make it more difficult both to achieve and maintain physical arousal and to reach orgasm. The larger the doses, the more likely one are to experience the negative effects. Some heavy opiate users report the loss of their sex drive all together. Many people report that stimulants such as cocaine, amphetamines and ecstasy, often reputed to be good for sex, can also cause erection and orgasm problems. On the other hand, since cocaine acts as a local anesthetic, premature ejaculation may be alleviated to some extent by applying cocaine to the tip of the penis.

Another drug that definitely helps with maintaining erections is Viagra (sildenafil citrate). Some men use Viagra to compensate the negative sexual side effects of recreational drugs. There are also studies that Viagra improves sexual response in women. However, Viagra is not an aphrodisiac in the strict sense of the word. Viagra affects the flow of blood. It does not affect sexual desire.

There is a prescription drug on the market, however, that seems to work as a true aphrodisiac, affecting sexual response by acting on brain chemistry. Uprima (apomorphine) stimulates the dopamine system and is used to help patients with erection problems. The medication was developed to relieve the symptoms of Parkinson's disease. Soon thereafter it was shortly discovered to cause erections. It appears that the effect of some recreational drugs on the dopamine system may, in some cases contribute to their reputation as aphrodisiacs. But the link between dopamine and desire is not

undeviating. Unfortunately, not all dopamine-enhancing chemicals affect sexual function. Amyl and butyl nitrates (poppers) relax and open blood vessels, producing sensations of heat and excitement (Julien, 1998). They are said by some users to prolong and intensify orgasm. They are said to be popular with gay men because they also act as a muscle relaxant and relax the sphincter and muscles around the anus making anal sex easier. GHB (gamma hydroxybutyrate) is also a muscle relaxant but some men report that they have erection problems after taking this drug.

Stimulant drugs speed up the heart and arouse the central nervous system. The stimulant quality of drugs such as poppers, cocaine, speed, methamphetamine and ecstasy takes us into a gray area between physiological and psychological effects on sexual function. The arousal of the central nervous system, together with feelings of euphoria, can be experienced as increased sexual arousal.

In tandem with this arousal, which is not specifically sexual, is perhaps the most crucial psychological effect of stimulant drugs in relation to sex: that is the reduction or loss of inhibitions and self-consciousness. This loss of inhibitions applies to other recreational drugs, including some depressants, such as alcohol. While using these drugs, one is more likely to engage in sexual activities if still capable. In addition, drugs can change the way one perceives and experiences sex. Professor Susan Greenfield of the Department of Pharmacology at Oxford University states "You are the passive recipient of your senses, you are having a sensational time." Many people claim that cannabis heightens the sense of touch. LSD and other drugs with hallucinogenic attributes, including ketamine (*K*), can do the same, though the effects of these drugs are unpredictable. The effects of stimulants such as cocaine, amphetamines and ecstasy are

not as dramatic as hallucinogens but they can intensify the perception and experience of sex. Nevertheless, there is nothing more sensual than sex. It relies totally on your senses and ecstasy enhances every one of those.

Ecstasy is attributed with the reputation of being the *love drug* or the *hug drug* (Julien, 1998). In terms of promoting intimacy, ecstasy appears to be in a class of its own. Some people state that the feelings of warmth and empathy they experience with ecstasy are not specifically sexual. Nevertheless, these feelings lead to sexual encounters that would not have happened otherwise.

All of these psychological effects depend not only on a drug and the dose but also on circumstances, mood and personality of the user. Some of us might like sex when using drugs. There are other people who would prefer chocolate.

All drugs involve risks and side effects. There are special risks in combining drugs with sex. Addiction professionals are concerned about people who have consensual but extreme forms of sex, and particularly violent sex, while using drugs that reduce inhibitions and sensitivity to pain. They are also worried about the transmission of diseases under such circumstances. Even with what one might personally consider *normal* sex, drugs increase the chance of unprotected sex. In February 2002, a survey of its readership by the clubbing magazine *Mixmag* reported that forty six percent of respondents had had unprotected sex while drinking and thirty four percent while using ecstasy.

Another issue is that since your mind and judgment are blurred while consuming drugs, the question of consensual sex can become blurred. Simply, you could find yourself in a state in which you do not know what you are doing or you become

incapable of putting up any resistance. This is not just a question of deliberate date rape in which drinks are spiked with benzodiazepines. This lack of resistance might appear sufficiently like consent to someone in a similar condition or to a person who does not really care.

Recreational drugs are not a solution for sexual problems. If you are experiencing problems with sexual energy or interest, or if you are a male with erection problems, there are many therapeutic alternatives. If you regularly use drugs for sex, you may come to feel that you can't have sex without your drug of choice. This type of behavior may be more likely to lead to drug problems and dependence. Finally, since many drugs can promote and impair sexual function at the same time, drug users who want to have sex may use a cocktail of drugs in order to get the desired effect. Mixing drugs is dangerous and increases risks. Mixing poppers with Viagra is particularly dangerous because they both lower the blood pressure. Combining stimulants such as amphetamines, cocaine or ecstasy or mixing them with alcohol puts an increased strain on the heart.

Alcohol generally makes people more willing to have sex but less capable of the act. In small amounts, alcohol can reduce inhibitions and increase sexual desire in both sexes. With alcohol there comes a rush, especially in the early stages. Although small amounts of alcohol may increase sexual excitement, it does not necessarily increase sexual arousal. Even in small doses, alcohol causes men's erection to be less firm. In larger doses alcohol reduces sexual arousal in both men and women. In men, alcohol causes impotence through several means. Long-term use of alcohol reduces testosterone levels and increases estrogen levels, which can result in impotence.

Due to alcohol's sedative effect, short-term use can cause transient impotence. In addition, alcohol can affect the nerves of the penis, causing neurogenic impotence. Some men agree that sex is less enjoyable when under the influence of alcohol because it makes the penis less sensitive and it interferes with orgasm. Sexual arousal can become a problem in women as well as men when using alcohol. Alcohol can reduce vaginal lubrication by causing the body to send less blood to the genital region and it can also make orgasm difficult to achieve in both men and women. Hormonal changes caused by long-term alcohol use can cause a reduction in libido, in addition to causing impotence. Using other depressants along with alcohol can amplify this effect.

Although using cocaine may heighten one's sexual interest and high doses are sometimes described as orgasmic, cocaine is not an aphrodisiac. Sexual dysfunction is common in heavy users. Furthermore, when dysfunction is combined with the isolation that cocaine dependent individuals experience, normal interpersonal, sensual, and sexual interactions are compromised. Cocaine in small doses can cause excitement and euphoria, which the user could interpret as sexual excitement. Nevertheless, chronic abusers find a decrease in their libido. The desire for cocaine can become so great that eventually it overpowers the desire for sex (Julien, 1998). Cocaine is a local anesthetic and when it is applied to the skin, it reduces sensitivity.

In some cases this effect is desired because it prolongs ejaculation in men who appear to have pre-ejaculation disorder. Since the penis is less sensitive the pleasure is reduced, causing the individual to take longer to reach orgasm. There are legal and relatively inexpensive creams that are readily available in many sex toy stores that could produce the same effect.

Heroin can reduce responses in both sexes. Men on heroin have difficulty achieving erections and ejaculating, while women on heroin produce less vaginal lubrication and have more difficulty reaching orgasm. Heavy use of heroin lowers libido.

GHB has similar effects to those of alcohol when used in small doses. At low doses it lowers inhibitions and increases sexual desire. The potency of the drug is often unpredictable, and in higher doses can cause vomiting, blackout and even death. It is extremely dangerous when mixed with alcohol or other depressants. Since it is clear, odorless, and almost tasteless it is not easily detected. It has been used as an ingredient for date rape because of its sedative aftermath. It can be secretly put into a drink, and then render the victim unconscious. Victims of this assault often have no memory of the rape but feel that something inappropriate took place. When an unknowing victim ingests this substance, the effect closely resembles a *Mickey Finn* which can produce increased intoxication, stupor, and loss of memory.

Nicotine can affect erectile tissue and the muscles involved in producing an erection, thus causing impotence. Men who use tobacco are twice as likely to be impotent as non-smoking men of the same age are. Using nicotine in conjunction with cardiac drugs, antihypertensive medications or vasodilators drastically increases a man's probability of complete impotence. Nicotine is a stimulant that causes the release of some of the same neurotransmitters that give you a sense of feeling safe while suppressing negative emotions (Jones, 2000).

Many people report that sex under the influence of marijuana to be especially enjoyable. According to *Adverse Drug Effects* by Jennifer Kelly, marijuana "enhances sensory experiences, and so is described by some as an aphrodisiac." Some marijuana

users claim that it makes them feel more sensual. Those senses include touch, music and definitely taste; and not just for the orgasm, but the entire sexual experience. When both partners are under the influence of marijuana and naked and horny and rubbing their bodies together, it feels like it is the first time they have ever been naked and horny and having sex. Some feel that marijuana makes orgasm longer, more intense and more satisfying. This can be attributed to the result of the distorted sense of time that marijuana use causes. Studies have found no measurable differences in the length or intensity of the orgasms of people using marijuana.

Some people feel that being under the influence of marijuana is a viable method of dealing with sexual panic. One form of sexual panic is emotional and it involves the fear of not performing well. Some people will avoid sexual intimacy out of fear of the inability to perform. Another form of sexual panic is physical: it is the panic we feel during a sexual encounter. We break out in a sweat, our heart races, our vision might blur and we probably lose our erection, can't get one, or cannot control our orgasm or ejaculation. Psychologically, we are scared, tense, ashamed, and confused; socially we are isolated, withdrawn and perhaps even humiliated (Anderson, 1993).

All of these feelings are a result of the fact the one feels incapable of living up to the cultural messages about sexual performance. Sex under the influence of marijuana in many cases enhances sensory experiences and it allows both partners to feel more sensual during the entire experience. The sexual excitement and euphoria caused by the marijuana during the first half-hour allowed the partners to avoid this panic stage that usually takes place at the beginning of the sexual activity. This panic stage is more likely to happen when the partners are not fully involved in the experience and are not sure

about their ability to perform. Marijuana will seem to provide the luxury of an unpressured way before, during, or after the pursuit of our individual pleasure. This may alleviate the initial pressure and allow the excitement and euphoria to take over.

When both partners are under the influence of marijuana and naked and horny and rubbing their bodies together, it feels like it is the first time that they have ever been naked and horny and rubbing their bodies together. Even when the subjects felt that the orgasms had been longer and even more intense. These studies indicate that for the first half-hour after consuming marijuana, the drug causes excitement and euphoria and increases the user's heart rate. The user may interpret these effects as sexual excitement. However, after about half an hour, marijuana has a sedative effect.

Marijuana does not always make sex more enjoyable. Marijuana can cause nervousness and self consciousness, especially in people who are unfamiliar with the drug or are in unfamiliar situations (Julien, 1998). These emotions can interfere with sexual desire. Marijuana also impairs the motor skills, which can interfere with performance during sex. Long-term use of marijuana has a negative effect on sexuality. Chronic heavy use of marijuana can lower the libido. There is some evidence that it can cause erectile dysfunction as well. In women, marijuana can disrupt the menstrual cycle (Fried, 1995). Long-term use of marijuana can lower sperm production or cause sperm to develop abnormally. Long-term use can also lower testosterone levels (Zimmer and Morgan, 1997). Fortunately, both of these conditions disappear after marijuana use ceases.

In healthy individuals, the body's circulatory system acts as a highway that allows for the delivery of oxygen and nutrients and the removal of waste from organs and tissues. If

the demands of the body increase, the vessels release nitric oxide. Nitric oxide precipitates a reaction that increases the creation of cyclic guanosine monophosphate, a molecule that leads to an increase in circulatory capacity by dilating blood vessels. Specialized penis tissue produces this substance in response to sexual stimulation. The enzyme phosphodiesterase (PDE) breaks down cGMP, which causes vessels to contract and returns the body to its normal state.

Viagra inhibits the PDE5 enzyme, preserving cGMP levels, therefore aiding erection viability and durability. PDE5 is the main cause of a flaccid erection. Specialized penis tissue produces a substance called cyclic guanosine monophosphate (cGMP) in response sexual stimulation. Scientists discovered that guanosine monophosphate was the ingredient sustaining the erection. They discovered that when a man gets sexually stimulated, a chain reaction occurs in the tissue in the penis that results in elevated levels of a substance called cyclic guanosine monophosphate (cGMP). As long as there are sufficient levels of cGMP the penis can remain erect. The more cGMP, the more robust and durable the erection. In fact, if you inhibit the degradation of cGMP it remains in the penis longer, producing a more durable erection. Viagra preserves the elevated levels of cGMP that are created when a man is sexually stimulated for a stronger and more lasting erection. It blocks the enzyme phosphodiesterase-5 (PDE5) which is responsible for the neutralization of cGMP. Sildenafil citrate is a highly selective inhibitor of PDE5. Viagra (sildenafil citrate) is a member of a family of drugs called PDE5 Inhibitors and used to treat impotence in men. Viagra increases the body's ability to achieve and maintain erection during sexual stimulation. Viagra is intended to treat erectile dysfunction and other erection problems in men. It has this sexual effect because it

increases blood flow to the penis. Unfortunately, Viagra will not have this effect unless the man is sexually excited.

Therefore, it is only helpful to men with physical reasons for their erection problems, and it is not effective in treating erection difficulties that have psychological roots. However, there are those users of Viagra that report that the drug can indirectly alleviate this particular problem. When not using Viagra, if there was a problem with erection, the problem was exasperated by anxious feelings. The anxiety at this point would cause the loss of the erection all together. When on Viagra, the user would never even start to lose his erection, so the anxiety would never occur in the first place and could not cause those feelings that lead to the loss of the erection.

There are new competitors for Viagra. Levitra (vardenafil HCl) provides only slight improvement to Viagra. It can be taken with food, it only takes twenty five to thirty minutes to take effect and lasts up to five hours. Cialis (tadalafil) is still another new drug with even more success in the treatment of erectile dysfunction, or male impotence. It promises to last for thirty-six hours instead of five hours for its rivals. It has been nicknamed *Le Weekend Drug* by the French (Marshall, 2003). Cialis promotes spontaneity as opposed to Viagra that requires planning exactly when to have sex. Furthermore, the male does not maintain an erection throughout Cialis' long half-life, as the duration is known. The erection will come and go according to the man's level of stimulation, just like Viagra. The partners are in control and that control allows freedom over when to have sex (Herper, Lagorce, 2003).

Cialis allows the male to have sex over the course of a weekend after taking just one pill. It offers everything its predecessors provided only faster and more effectively. A

dose of Cialis takes as little as sixteen minutes to begin to work even on a full stomach. Its long duration of action eliminates the need for planning around sexual activity (Herper, 2003).

Logically, the best possible drug would be the safest and most effective one. However, all three of the drugs in discussion have the same mechanism. Although they all block the actions PDE-5, this does not mean that they are identical. Small differences in the chemical behavior of these drugs give each of them a unique speed of onset, length of action and side effects profile. A closer look at how the medication work reveals key differences between them.

A comparison of the three major current impotence drugs, illustrates some similarities and some differences:

VIAGRA

Time to Onset: sixty minutes

Duration: Up to five hours

Common Side Effects: Headaches, facial flushing, upset stomach, stuffy nose, blurred vision

Cautions: Do not take with drugs containing nitrates

Response With Food: Fatty, greasy food may cause longer onset time

LEVITRA

Time to Onset: sixty minutes

Duration: Up to five hours

Common Side Effects: Headaches, facial flushing, upset stomach, stuffy nose

Cautions: Do not take with nitrates or alpha-blockers

Response With Food: Can be taken without regard to food

CIALIS

Time to Onset: thirty minutes

Duration: Up to thirty six hours

Common Side Effects: Headaches, facial flushing, upset stomach, muscle ache

Cautions: Do not take with drugs containing nitrates

Response With Food: Is taken without regard to food

Like alcohol, amphetamines, including methamphetamine and ecstasy, provoke the desire but impair the sexual performance. Amphetamines can increase one's desire for sex. Male methamphetamine users report that, while methamphetamine does not make them physically aroused, they can be psychological aroused. If they start to think about sex while under the influence, they begin obsessing on sex and can not sleep until they have an orgasm. In men, methamphetamine often makes achieving and maintaining an erection difficult. Conversely, in moderate doses, the drug can occasionally cause priapism, a painful erection that will not go away on its own. Because it makes erections difficult, methamphetamine users often find masturbation easier than actual sex with a partner.

In spite of these erection difficulties, male methamphetamine users find it possible, although difficult, to achieve orgasm while flaccid when they are using the drug. Some users report that they have never been able to do this except when using methamphetamine. Men report having difficulty with ejaculation while on high doses of

any type of amphetamines. Some users see this as an advantage, because it allows men to last longer during sex. However, this side effect can also become very frustrating. They feel the physical sensation of sexual stimulation is better while using methamphetamine, but overall the experience is less enjoyable. After a certain period of time the user wants it to be over and done.

Ejaculation can cause mild discomfort while using methamphetamine. Yet many users report that it feels equally good and satisfying regardless of whether on or off methamphetamine, but the testicles feel uncomfortable after ejaculating. In very high doses, amphetamines can cause spontaneous orgasm. However, such high doses are extremely dangerous and capable of causing convulsions, heart failure, stroke and death. Like cocaine, amphetamines are stimulants, so the effects of amphetamines are similar to the effects of cocaine (Julien, 1998). Like cocaine, amphetamines can cause erectile dysfunction and in moderate doses, priapism. As with cocaine, men generally find it difficult to ejaculate while on high doses of amphetamine, which can be assessed as an advantage, or a frustration. Finally, as previously stated, in very high doses, amphetamines, like cocaine, can cause spontaneous orgasm.

Women report that their sexual desire is greatly enhanced while under the influence of methamphetamine. They feel more sensitive and appear to be willing to do many things that they would not normally do. Women report incredible orgasm after a few hours and the desire to engage in oral and other sexual activities for long periods of time. It has been described as an insatiable hunt for *animalistic sex*.

Once a user gets into the true addictive stage of methamphetamine, the sexual experience must be bigger than, and more intense than, the previous one (National

Institute on Drug Abuse, 2000). A variety of other psychoactive effects add value, for example the euphoric high when injecting, acute perception and sexual performance are considered bonuses. However, although increased energy was reported by over half the sample of men and women in one study (Klee 1992), nearly as many experienced failures. Its unpredictable nature made methamphetamine a mixed blessing. Females get horny while some males, even though they also get horny, can not do anything about it. The females were significantly more likely to report disinhibition. Some females feel it makes sex a lot better and that they do more things on speed (methamphetamine?) than they ever dream of doing.

Thus, male respondents tended to be less predictably enthusiastic than women about the effects of speed on their sex lives. Although speed has the reputation as an aphrodisiac, it was also interesting that it was more valued with increasing age for both sexes. Since speed is less detectable than opiates, for many women, not only is it easier to conceal, there is less danger of their children being identified as *at risk*. There is also the added benefit of weight control. Many female respondents recognized the benefits and suggesting that amphetamine was a woman's drug.

CHAPTER 3: EFFECTS OF METHAMPHETAMINE ON SAFE SEX

Morbidity, mortality and drug treatment data suggest that methamphetamine use is on the rise. The Office of AIDS, Department of Health Services, in Sacramento, California, conducted a survey to determine the association of methamphetamine use during sex with risky sexual behaviors and HIV infection among non-injection drug users.

Methamphetamine use was independently related to decreased condom use during vaginal and anal intercourse, prostitution, and sex with known injection drug users.

Based on research findings among heterosexuals, a greater percentage of methamphetamine users than non-users participated in anal intercourse. Among gay, bisexual, and heterosexual men and heterosexual women, users of methamphetamine reported more sexual partners than non-methamphetamine users. In addition, methamphetamine users were more likely to have had a sexually transmitted disease.

The data suggest that noninjection methamphetamine use is related to increased, unprotected sexual activity and the risk of contracting sexually transmitted diseases, including HIV. Michael Siever, director of the Stonewall Project, a program in San Francisco that deals with safety issues among methamphetamine users, points out that there is an urgent need for programs that reduce the harm caused by methamphetamine.

Methamphetamine and HIV

Methamphetamine may have an impact on transmission of HIV in ways that are beyond the neurochemical impact. Methamphetamine may affect how the body fights the virus itself, which has tremendous implications for the deadly synergy of HIV and meth.

Urbina and Jones (2004) note that HIV may have immunomodulatory activity, particularly by impairing CD8 cell-mediated cytotoxic T lymphocyte function. The CD8 cell is responsible for early suppression of lentiviral replication and viral set point. Simply stated, methamphetamine seems to impair the ability of the immune system to fight HIV following exposure, thus facilitating the establishment of infection.

Both HIV and methamphetamine target dopamine neurons. HIV affects the dopamine neurons in subcortical structures, particularly the basal ganglia, while methamphetamine targets dopamine in many regions of the brain, including the orbitofrontal cortex (thought to be implicated in impulse behavior), as well as the dorsolateral prefrontal cortices and the amygdale (ibid., 892).

Rippeth et.al. (2004) looked at 200 individuals divided into four groups and matched for age, education, and ethnicity: HIV-positive/methamphetamine dependent (n=43); HIV-negative/methamphetamine nondependent (n=47); HIV-positive/methamphetamine dependent (n=50); and HIV-negative/methamphetamine nondependent (n=60). They found that “HIV infection, methamphetamine dependence, and the combination of HIV infection and methamphetamine dependence are all associated with neuropsychological (NP) impairments. In addition to global [impairment], impairments were noted...in several cognitive domains, including attention/working memory, learning, delayed recall, and motor skills.”

The combination of methamphetamine and antiviral medications can also be deleterious, both in terms of antiretroviral adherence and the potential for a drug overdose. With regard to adherence, Reback, Larkins, and Shoptaw (2003) interviewed 23 gay and bisexual men living with HIV who were participating in an outpatient drug

treatment research project on methamphetamine abuse, all of whom acknowledged that their drug use interfered with their adherence to antiretroviral medication. Unplanned nonadherence was associated with meth-related disruptions in eating and sleeping, while *planned* nonadherence was identified as a strategy in recognition that a rigorous medication schedule would not be maintained while using methamphetamine. or else was related to participating in sexual activities or to concerns about mixing methamphetamine and medications. The authors found that “even though the men did not take their medications according to prescribed directions, they did not interpret skipping, stretching, or modifying their medication doses as non-adherence.” The authors found that these medication adjustments were views as a positive coping strategy that served to create a sense of control over their lives. Short term, drug and sex-related non-adherence was rationalized as an *acceptable compromise*. The men did not considered their partial or inconsistent adherence as anything other than full adherence. They believed that if they caught up with missed doses by increasing their dosage for two or three days following a drug and sex related interruption, they would still qualify as *medication adherent*.

Methamphetamine can interact with HIV medications, particularly protease inhibitors, resulting in increased toxicity or death (Urbina and Jones 2004). Halkitis, Parsons, and Stirrat (2001) also found that the effect of methamphetamine has been demonstrated to be two or three times greater for individuals on combination therapy, especially combinations including ritonavir (Norvir) (21).

Semple, Patterson, and Grant (2003) compared binge and nonbinge use of crystal methamphetamine in 90 MSM (men who have sex with men) living with HIV and found that those who self-identified as binge users did not use any more methamphetamine over

a 30 period than nonbinge users, but they reported more social difficulties, a greater number of mental and physical health problems, and riskier sexual behavior. The authors concluded that it is important for the clinician to gather data on a client's pattern of methamphetamine use, not just quantities, to accurately assess HIV risk.

HIV risk assessment tools and methamphetamine users were compared by Twitchell, Huber, Reback, and Shoptaw (2002). They compared a standardized, general measure (*Risk for AIDS Behavior, RAB*) and a more behaviorally detailed measure (*Behavioral Questionnaire-Amphetamine, BQA*) in three samples of meth-dependent people receiving drug treatment: 65 gay men, 57 heterosexual men, and 33 heterosexual women. The BQA was able to discriminate between gay men who were already infected and those were not, unlike the RAB. The authors concluded that while many instruments pick up broadly-based HIV risk factors, more detailed measures are better suited to identifying risk behavior in populations with high prevalence of HIV based on sexual risk behavior.

Methamphetamine use in MSM who are HIV-negative was found to be correlated with a history of genital gonorrhea, having unprotected receptive anal intercourse with more partners in the 30 days preceding intake (for chemical dependency treatment), and a history of injection drug use (Shoptaw, Reback, and Freese 2002).

Semple, Patterson and Grant (2002), in a convenience sample of 25 HIV positive men, found that their use of methamphetamine was associated with high rates of anal sex, low rates of condom use, multiple sex partners, sexual marathons, and anonymous sex" (149). The authors also found that safer sex can occur along with methamphetamine use. "We interviewed heavy users who always used condoms and light users who never used condoms...Factors other than drug use (e.g. motivation) are important determinants of

condom use” (iii81). The authors, like others, noted that many MSM reported that they could not have sex unless they were high on methamphetamine. The fear of no longer being sexual was a major barrier to giving up methamphetamine.

The authors concluded that three major behavioral approaches are effective in promoting safer sex and abstinence from methamphetamine: cognitive behavioral therapy, motivational enhancement therapy, and self-help groups. Motivational interviewing techniques which help the client develop insights into the link between his meth use and his sexual experience were particularly useful. Through motivational interviewing clients apply their clinical insights to developing a plan and implementing behavior change. The authors also stressed the importance of helping high risk individuals recognize the relationship between *cognitive escapism* and their use of substances. This includes escape from the emotional pain associated their HIV+ status, reduced sexual stamina, other medical complications, and sometimes escape from the ravages of addiction itself.

In a study of heterosexual risk behavior among 139 HIV negative, meth-dependent men and women, the same authors (2004) found that sexual risk can be reduced among heterosexual methamphetamine users by taking a client-centered individual approach with sessions tailored to individual motivations and risk practices; teaching clients who are unwilling or unable to engage in drug treatment to engage in safer sexual practices when they use methamphetamine, and teaching more adaptive coping skills for managing emotional distress.

Reback, Larkins, and Shoptaw (2004) combined quantitative and qualitative research methods to explore sexual risk behaviors among 162 urban, educated gay and bisexual

men diagnosed with methamphetamine abuse or dependence, and 60.5% of whom were HIV positive. Participants reported a decrease in high risk sexual behaviors and a developed sense of responsibility for their own and others' health which were a result of their regaining control over their decision-making processes. This ability to assert oneself in decision-making such as condom negotiation and drug refusal were the result of treatment and reduction in or the elimination of methamphetamine use.

The ability of HIV-infected individuals to adhere to their medication regime makes abstinence vital. Once abstinence is achieved, the responses to antiretroviral therapy by former methamphetamine dependent persons are similar to those of non-substance abusing control subjects. (Ellis 2003: 1825).

It has been argued that methamphetamine has aphrodisiac qualities, as [meth] affects the subjective pleasure of sexual experience, independent of any effect on libido and sexual drive. (Halkitis, Parsons, and Stirratt 2001). This has been discussed in preceding chapters. In fact, use of the drug has been directly linked to increased likelihood of impulsive sexual behavior. In higher doses, methamphetamine is reported to increase sexual pleasure at the same time that its physiological effects preclude the ability to obtain a full erection. Anecdotal evidence also suggests increased anal sensation. A direct result of this phenomenon is the creation of *instant bottoms*, a term applied by gay and bisexual men to refer to drug users who take the receptive role during anal intercourse. Methamphetamine use may, therefore increase the practice of receptive anal sex which is the riskiest for HIV transmission. Because of the sensory effects and associated decrease in sexual inhibition, use of methamphetamine may also be directly linked to longer periods of continuous sexual intercourse (25).

Several recent reports suggest that expanding recreational use of sildenafil (Viagra) in conjunction with methamphetamine is contributing to increases in the rates of HIV, syphilis, and other sexually transmitted diseases in the US. In a study involving 388 MSM (Mansergh 2004), 16% reported using methamphetamine and 6% reported using sildenafil during their most recent episode of anal intercourse. Meth users were twice as likely as nonusers to have engaged in unprotected receptive anal intercourse and sildenafil users were 6.5 times more likely to report having had unprotected insertive anal intercourse. Sildenafil use did not, however, appear to increase unprotected receptive anal intercourse.

Wong (2004) reported that MSM who used methamphetamine and sildenafil in combination were 6.1 times more likely to be diagnosed with syphilis than those who abstained from these drugs.

In a study involving 1,263 MSM seeking clinic services for sexually transmitted diseases (Mitchell 2004), 17.4% reported using methamphetamine during the four preceding weeks. When compared to nonusers, those who used meth were more than two times as likely to be living with HIV, 4.9 times as likely to be diagnosed with syphilis, and 1.7 times as likely to be diagnosed with gonorrhea.

CHAPTER 4: FIRST PERSON ACCOUNTS OF THE EFFECTS OF METHAMPHETAMINE ON SEXUAL BEHAVIOR

Although studies of the risks associated with methamphetamine and sex have been well documented, the authors felt that the impact of this drug is most powerfully heard in the first person accounts of its effects and its impact on their sexual behavior and relationships. One highly affected group is comprised of gay men. In order to obtain qualitative accounts of the impact of methamphetamine on sexuality, a convenience survey was placed on the internet and a link to the survey was posted in several gay-oriented chatrooms and bulletin boards in January, 2004, and closed in June 2004 (a copy of the survey and methodology can be found in the appendices.). The questionnaire asked about sexual orientation, HIV status, methamphetamine use, impact of the drug on sexual behavior, and on their primary partner relationship. The surveys were anonymous although IP addresses were recorded automatically. An email contact was given should individuals have questions or want referrals for assistance. Postings included such groups as Circuitlife, Gay.com, Planetout, etc. A total of 368 responses were posted.

The following charts represent the demographics and responses of persons completing the survey.

Chart 1.

Question #2: How old are you?

The bulk of respondents fell almost evenly into two age bands: 31% were 26 to 35 years of age, and 30% were 36-45 years of age. The next largest group was 46-55 years of age (19%) and 56-65 years old (8%), followed by younger respondents and (18-21 and 21-25) and older (≥ 66 years old). Later in this discussion age is correlated with crystal use and HIV status and this survey bears out the literature that HIV positive methamphetamine users are middle aged and longer term HIV positive.

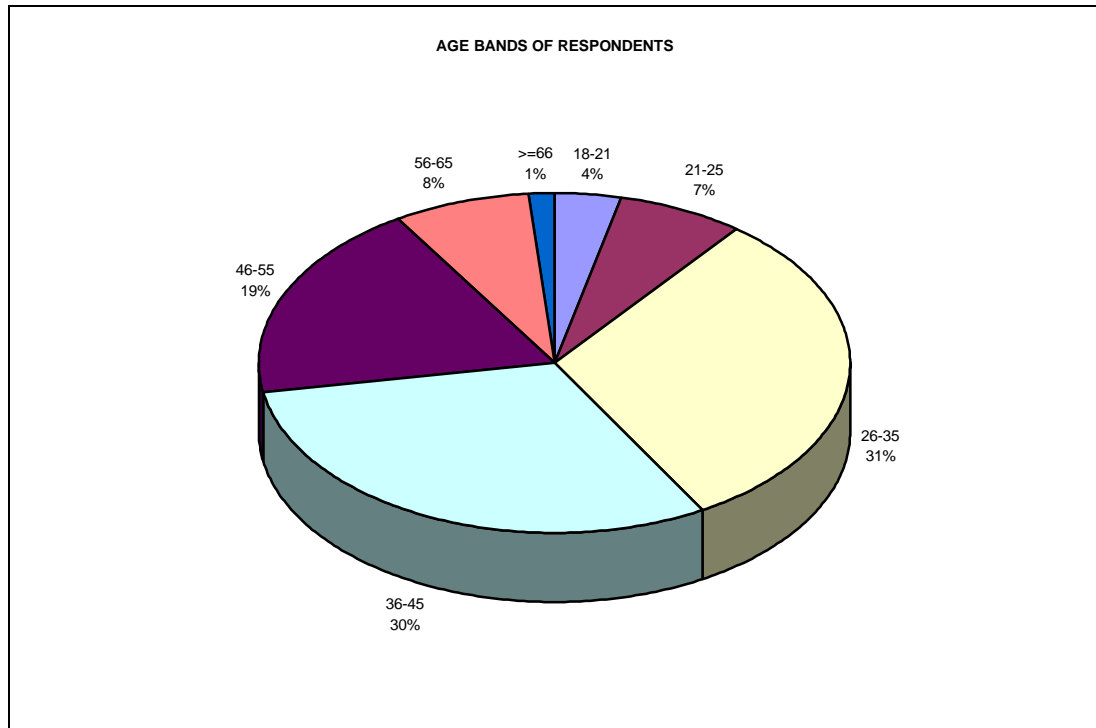


Table 1.

Question 3: In what state do you live?

Question 4: In what city do you live?

Respondents were asked to identify their location. The following table identifies the states and countries of the respondents. City names have been left as they were entered by the respondent (lower case, abbreviations, etc.)

The reach of the internet is evident in the responses. A large cross-section was obtained from most states in the United States as well as countries around the world.

Most of the respondents identified themselves as living in urban areas.

**LOCATION OF RESPONDENTS SORTED BY
COUNTRY/STATE/CITY**

US	AK	Juneau
US	AL	MOBILE
US	AL	Russellville
US	AL	Birmingham
US	AR	Arkadelphia
US	AR	conway
US	AZ	flagstaff
US	AZ	Phoenix
US	AZ	Phoenix
US	CA	Buena Park
US	CA	Campbell
US	CA	CSAn Diego
US	CA	Fort irwin
US	CA	Fremont
US	CA	Hanford
US	CA	LA
US	CA	LA
US	CA	la
US	CA	Los Angeles
US	CA	Los Angeles
US	CA	Los Angeles
US	CA	Los Angeles
US	CA	Palm Springs
US	CA	Palm Springs
US	CA	Palm Springs
US	CA	Porterville

US	CA	Sacramento
US	CA	San Diego
US	CA	San Diego
US	CA	san diego
US	CA	san diego
US	CA	San Diego
US	CA	san francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	san francisco
US	CA	san francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Francisco
US	CA	San Pedro
US	CA	San Rafael
US	CA	Santa Ana
US	CA	SF
US	CA	SF
US	CA	Vancouver
US	CA	West Hollywood
US	CO	Boulder
US	CO	Colorado Springs
US	CO	Colorado Springs
US	CO	Denver
US	CO	Denver
US	CO	denver
US	CO	Denver
US	CO	Evergreen
US	CT	mystic
US	CT	
US	DC	Washington
US	DC	Washington
US	DC	Washington
US	DC	Washington
US	DC	Washington
US	DE	Lewes
US	FL	Boca Raton
US	FL	daytona beach

US	FL	fort lauderdale
US	FL	Fort Lauderdale
US	FL	Fort Lauderdale
US	FL	Fort Lauderdale
US	FL	Fort Lauderdale
US	FL	Fort Lauderdale
US	FL	Fort Lauderdale
US	FL	Fort Myers
US	FL	FT LAUD
US	FL	ft laud
US	FL	Ft. Lauderdale
US	FL	Ft. Lauderdale
US	FL	Jacksonville
US	FL	Lauderdale
US	FL	Lutz
US	FL	Miami
US	FL	Miami
US	FL	Miami
US	FL	MIAMI
US	FL	Miami
US	FL	Miami
US	FL	Miami
US	FL	Miami
US	FL	Miami
US	FL	miami
US	FL	Miami
US	FL	Miami
US	FL	Miami
US	FL	miami beach
US	FL	Miami Beach
US	FL	MIAMI LAKES
US	FL	Ocala
US	FL	orlando
US	FL	Palm Bay
US	FL	palm beach
US	FL	Pembroke Pines
US	FL	Pensacola
US	FL	Saint Augustine
US	FL	South beach
US	FL	tampa
US	FL	Tampa
US	FL	west palm beach
US	GA	atlanta
US	GA	Atlanta
US	GA	Atlanta
US	GA	ATLANTA
US	GA	atlanta

US	GA	Macon
US	GA	Macon
US	GA	Savannah
US	GA	St Marys
US	IA	Des Moines
US	IA	Des Moines
US	IA	DSM
US	IL	chicago
US	IL	Chicago
US	IL	Chicago
US	IL	Chicago
US	IL	CHICAGO
US	IL	Chicago
US	IL	Chicago
US	IL	Chicago
US	IL	Chicago
US	IL	chicago
US	IL	chicago
US	IL	Joliet
US	IL	Joliet/chicago
US	IN	Indianapolis
US	KS	Lawrence
US	KY	Ashland
US	KY	Louisville
US	LA	new orleans
US	LA	New Orleans
US	MA	boston
US	MA	Boston
US	MA	Lowell
US	MA	Marlboro
US	MA	Somerville
US	MD	baltimore
US	MD	Hagerstown
US	MD	Silver Spring
US	MD	Silver Spring
US	MI	Ann Arbor
US	MI	Detroit
US	MI	Detroit
US	MI	detroit
US	MI	Detroit metro
US	MI	South Lyon
US	MN	minneapolis
US	MN	minneapolis
US	MN	Minneapolis
US	MN	Saint Cloud
US	MO	Columbia

US	MO	Hayti
US	MO	Kansas City
US	MO	St. Louis
US	MO	st. Louis
US	MO	stl
US	MS	brandon
US	MS	Starkville
US	MS	starkville
US	NC	Charlotte
US	NC	charlotte
US	NC	durham
US	NC	Greensboro
US	NC	GSO
US	NC	high point
US	ND	Fargo
US	NH	salem
US	NH	tilton
US	NH	Wakefield
US	NJ	beverly
US	NJ	Cherry Hill
US	NJ	edison
US	NJ	galloway
US	NJ	Trenton
US	NJ	
US	NJ	
US	NM	Albuquerque
US	NM	Albuquerque
US	NM	Santa Fe
US	NV	Las Vegas
US	NV	Las Vegas
US	NY	albany
US	NY	Manhattan
US	NY	New York
US	NY	New York
US	NY	New York
US	NY	New York
US	NY	New York
US	NY	New York
US	NY	New York City
US	NY	NY
US	NY	NYC
US	NY	NYC
US	NY	nyc
US	NY	nyc
US	NY	NYC
US	NY	NYC

US	NY	NYC
US	NY	one of them
US	NY	Rochester
US	NY	Rochester
US	OH	Aurora
US	OH	Cincinnati
US	OH	Cleveland
US	OH	Cleveland
US	OH	Columbus
US	OH	columbus
US	OH	columbus
US	OH	Columbus
US	OK	tulsa
US	OR	Sutherlin
US	PA	nanticoke
US	PA	new hope
US	PA	Palmerton
US	PA	pgh
US	PA	philadelphia
US	PA	Pittsburgh
US	PA	Pittsburgh
US	PA	Pittsburgh
US	PA	pittsburgh
US	PA	
US	RI	Providence
US	SC	chas
US	SD	Sioux Falls
US	TN	memphis
US	TN	Nashville
US	TN	Nashville
US	TN	Nashville
US	TX	Austin
US	TX	d
US	TX	Dallas
US	TX	dallas
US	TX	dallas
US	TX	DALLAS
US	TX	Dallas
US	TX	dallas
US	TX	EL PASO
US	TX	houston
US	TX	Houston
US	TX	Marshall
US	UT	salt lake city
US	VA	Alexandria
US	VA	arlington

US	VA	Arlington
US	VA	Fairfax
US	VA	fairfax
US	VA	richmond
US	VA	Roanoke
US	VA	
US	WA	oak harbor
US	WA	Puyallup
US	WA	SEA
US	WA	SEATTLE
US	WA	Seattle
US	WA	Seattle
US	WA	seattle
US	WA	Seattle
US	WA	Seattle
US	WA	SEATTLE
US	WA	Seattle
US	WA	Seattle
US	WA	Seattle
US	WI	madison
US	WI	Milwaukee
US	WI	Thomahawk
	ALB	haleyville
	ARGENTINA	BUENOS AIRES
	ARGENTINA	buenos aires
	ARGENTINA	Capital Federal
	AUSTRALIA	alice springs
	AUSTRALIA	Caloundra
	AUSTRALIA	Melbourne
	AUSTRALIA	Sydney
	AUSTRALIA	Sydney
	AUSTRALIA	Sydney
	AUSTRALIA	sydney
	AUSTRALIA	Sydney
	AUSTRALIA	Taree
	AUSTRALIA	WarWrick
	BEL	antwerp belgium
	BEL	Brussels
	BEL	Namur
	BRAZ	Brasilia
	BRAZ	Rio de Janeiro
	BRAZ	São Paulo
	CAN	edmonton
	CAN	hamilton
	CAN	hamilton
	CAN	Medicine Hat

CAN	Montreal
CAN	montreal
CAN	Montreal
CAN	ottawa
CAN	QC
CAN	rurual
CAN	Toronto
CAN	Vancouver
CAN	Vancouver
CAN	Montreal
CAN	Montréal
CROATIA	River
FRANCE	lyon
FRANCE	Paris
FRANCE	
GERM	berlin
GERM	Frankfurt/Main
GERM	Lauterbach
GERM	München
GERM	munich
GERM	Munich
GERM	ULM
ITALY	pe
ITALY	taranto
MALAYSIA	Ipoh
MEX	leon
MEXICO	Tijuana
NETH	amsterdam
NETH	Amsterdam
NETH	Amsterdam
PR	San Juan
QUE	Gatineau
RUSSIA	Moscow
SPAIN	ALICANTE
SPAIN	tenerife
SWITZ	Bienne
TAIWAN	tpe
UK	belfast
UK	cambridge
UK	Glasgow
UK	Liverpool
UK	London
UK	London
UK	London
UK	London
UK	London

UK
UK
UK
UK
VENEZ
VENEZ

London
manchester
oxford
Yorkshire
CARACAS
Caracas

Chart 2.

Question # 5: Are you male or female?

The great majority of respondents to the survey (98%) were male. This was anticipated as notice of the survey had been posted on gay male websites and group emails.

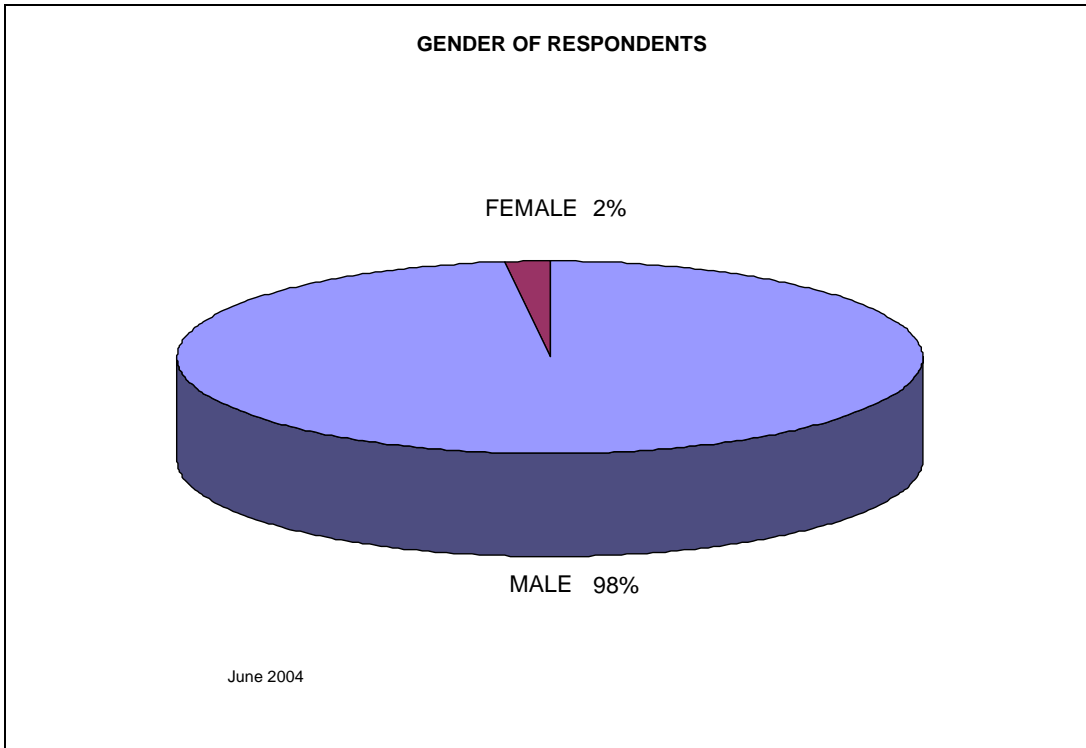


Chart 3.

Question #6: What is your sexual orientation?

A Likert scale was used, ranging from exclusively heterosexual to exclusively gay. Respondents had to select one of the five options to describe themselves. The majority (72%) of the respondents reported themselves to be exclusively gay. The next largest category (15%) was “mostly gay.” Eight percent of the respondents reported that they were “bisexual,” and a total of five percent reported “mostly” or “exclusively heterosexual.”

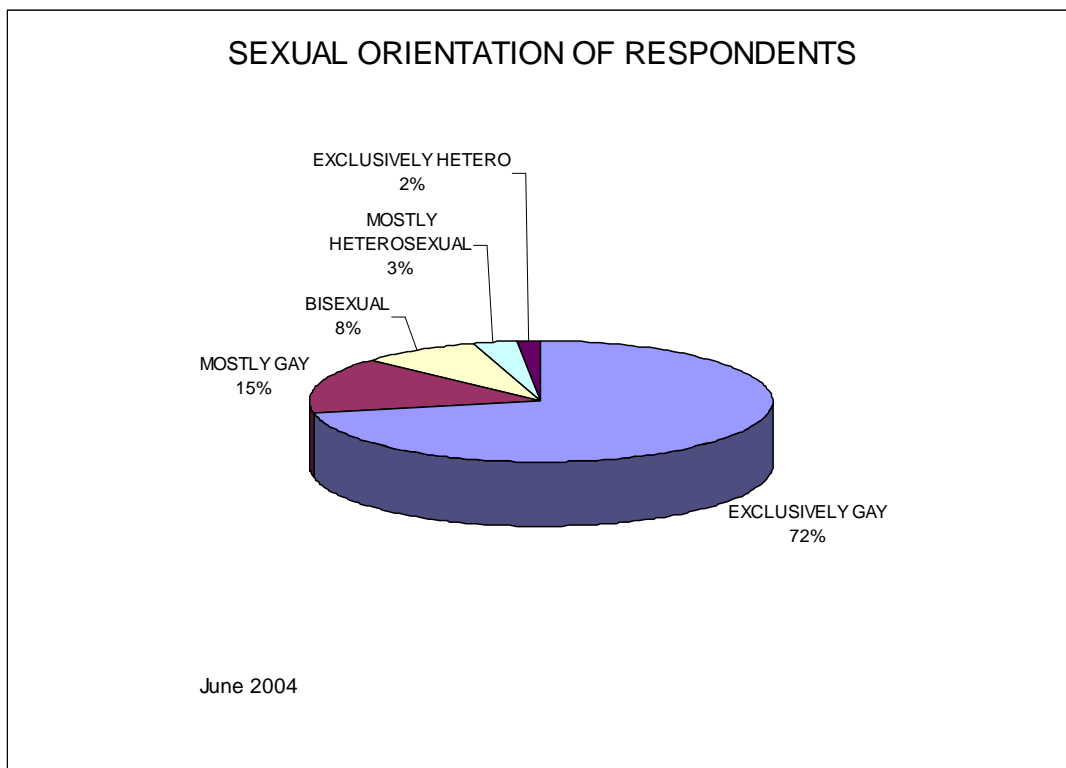


Chart #4.

Question #7: Are you HIV positive?

Respondents were asked to identify their HIV status. Of those that responded, 17% (n=60 of 368) identified themselves as HIV positive; 83% (n=294 of 368) identified themselves as HIV negative. The number of no responses (blank) was 14. Many recent HIV surveys are increasingly including a category “don’t know.” That category was not a selection on this survey.

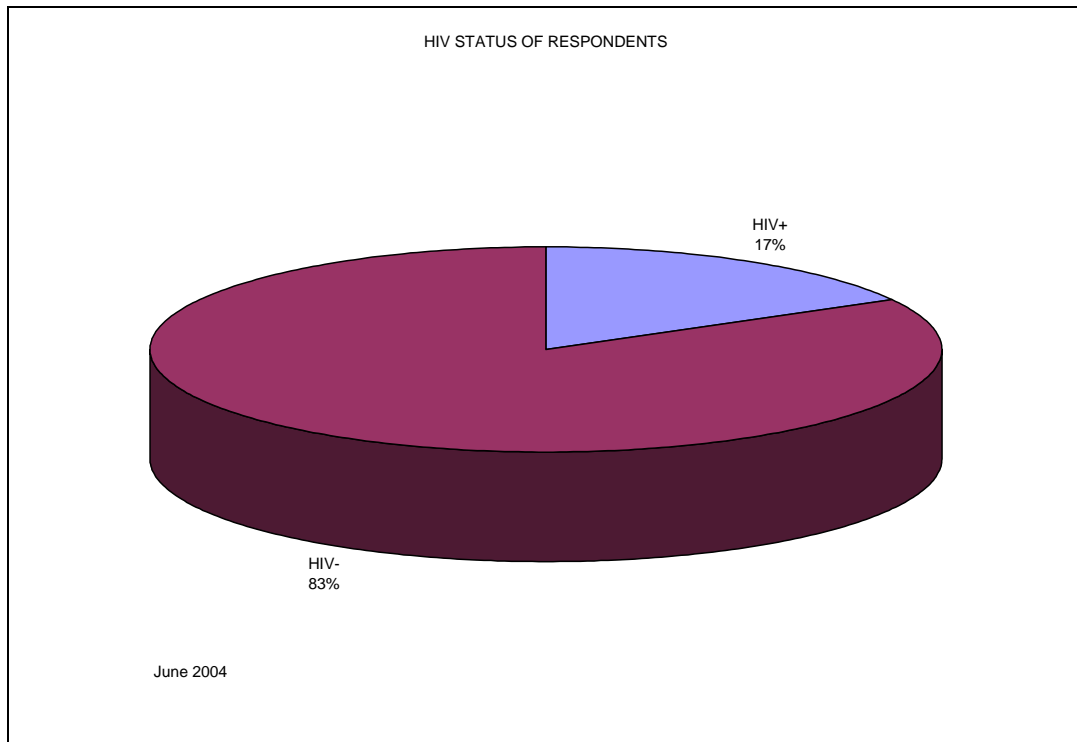


Chart #5.

Question #8. If you are HIV positive, how long?

Respondents were asked to identify how long they had been seropositive. Much of the literature cites increased energy and stamina in long term HIV survivors as a motivation for use of methamphetamine. Although a significant number reported being HIV positive for 1-5 years, the majority of respondents reported their positive status was from 6 to 10 years, followed by 10 to 15 years as the next largest category. Significant numbers had been living with HIV even longer.

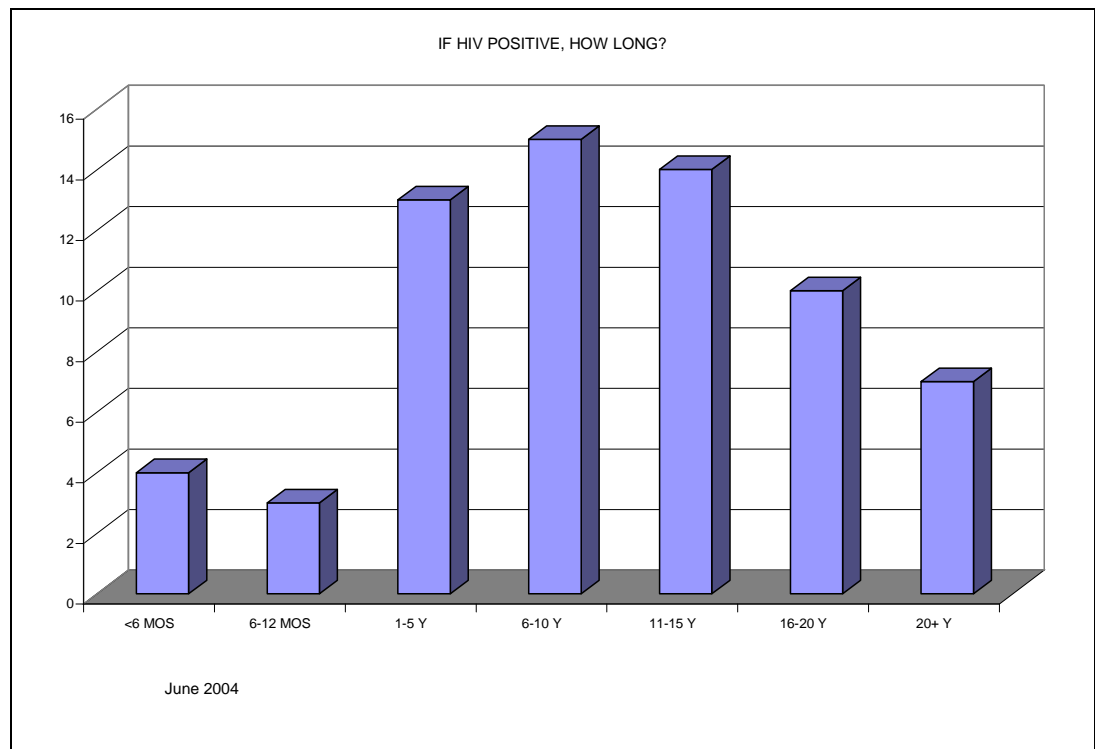


Chart #6

Question #9: Have you ever used crystal meth?

Of the 368 surveys, 152 (41%) reported ever using crystal, and 159 (43%) reported never using crystal (57 surveys or 15% of the total sample were blank for this question).

Question #10: Do you use crystal now?

Of the 368 surveys, 77 (21%) reported using crystal methamphetamine now, and 233 (63%) reported not using crystal now (58 surveys or 15% of the total sample were blank for this question).

Respondents were grouped according to their use of crystal methamphetamine and their HIV status. (following Rippeth, et.al.). The groups into which respondents were assigned were: 1) those who reported ever using the drug and HIV positive; 2) those who reported ever using the drug and were HIV negative; 3) those who reported currently using the drug and were HIV positive; and 4) those who reported currently using the drug and were HIV negative.

Of those respondents who identified themselves as HIV positive (n=60), 44 (73%) reported using methamphetamine at one time. Of those who identified themselves as HIV negative (n=294), 105 (35%) reported using methamphetamine at one time. There is clearly a strong correlation between HIV status and crystal methamphetamine use. Of those respondents who identified themselves as HIV positive (n=60), 23 (38%) stated they currently use methamphetamine. Of those respondents who identified themselves as HIV negative (n=294), 52 (17%) stated they use methamphetamine currently.

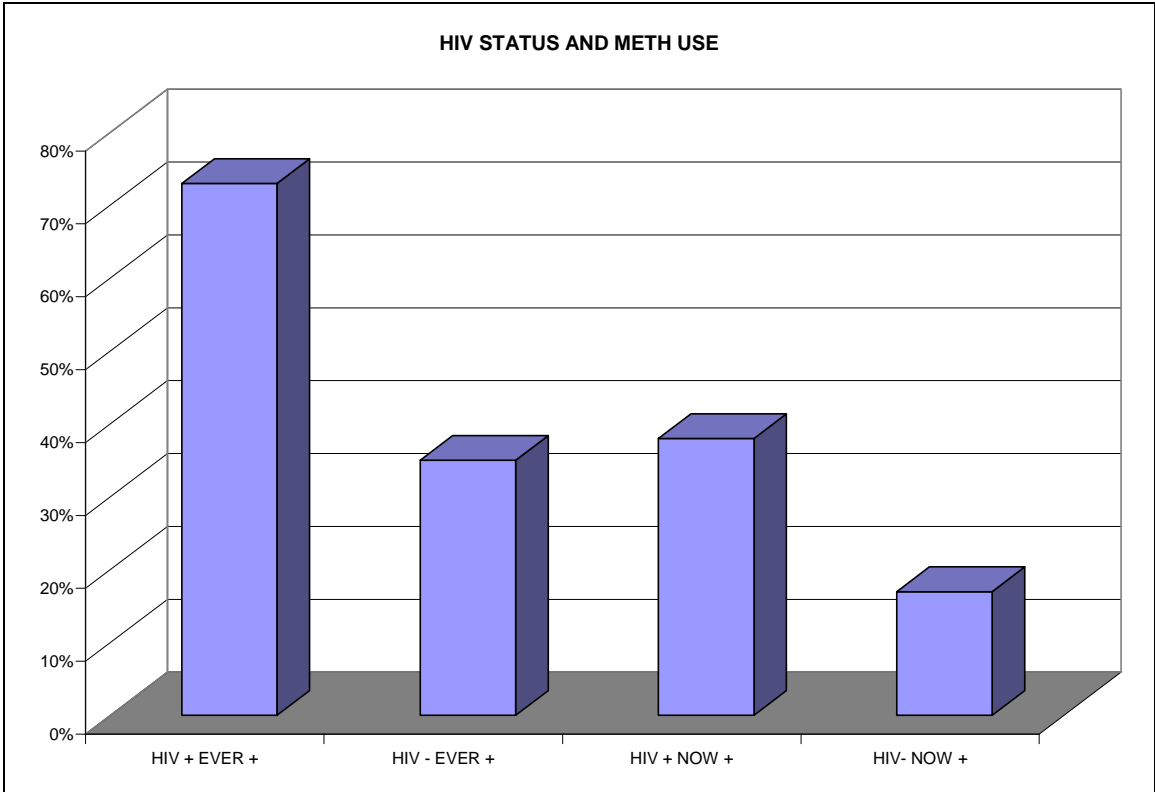


Chart #7.

Question #11: If you use now, how would you describe your use? (check box)

A five-point Likert scale was utilized to capture frequency of use of methamphetamine. The categories were: Rare (less than once a month); Sometimes (once in a while - weeks pass between uses); Moderate amounts (most weekends); More frequent amounts (weekends and some weekdays); and Too much. The majority of respondents reported using “sometimes.” The next largest group reported using the drug rarely. As expected, decreasing numbers of respondents reported increasing frequency of use.

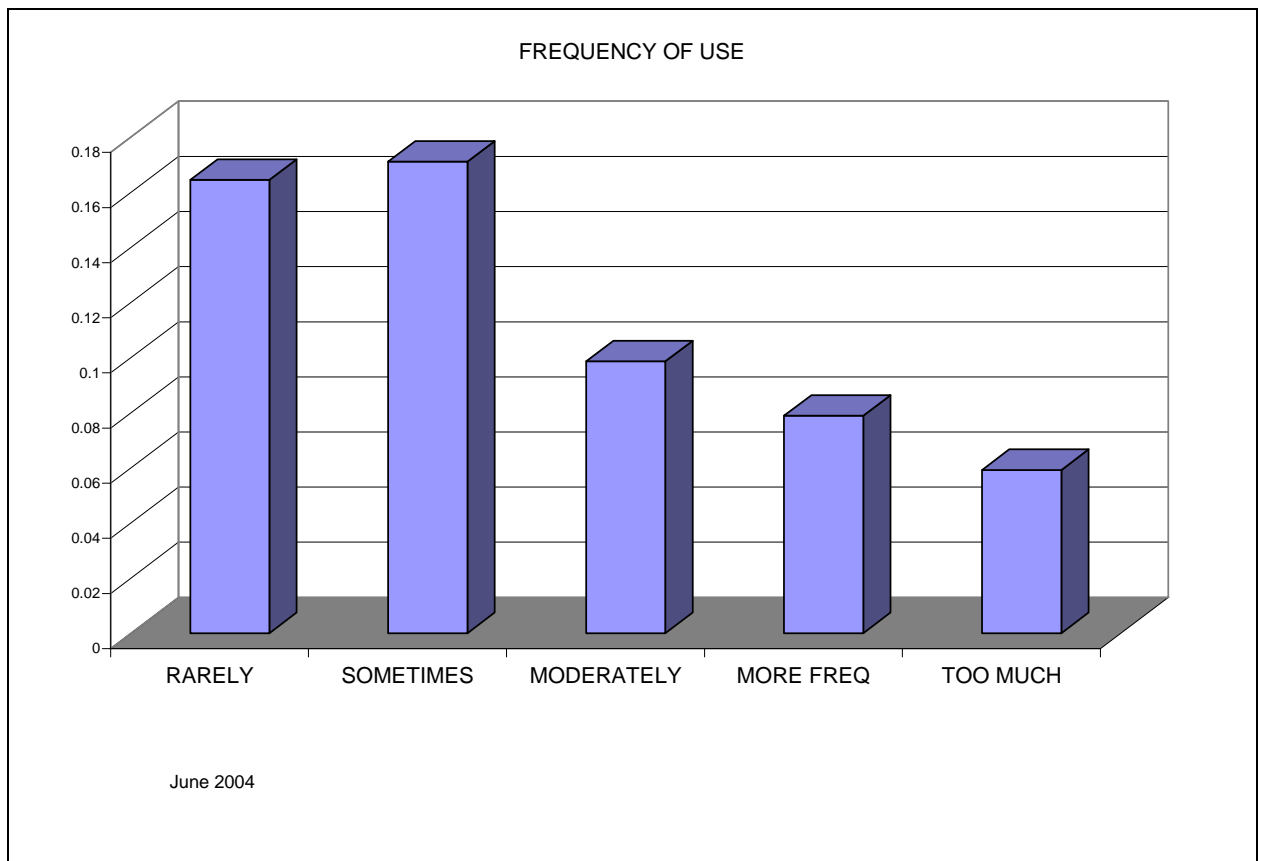


Chart #8.

Question #12: What is your preferred method?

Respondents were asked to identify their preferred method using a checkbox. The options were: Snort; Slam (intravenous injection); Bump (insert into anus); or smoke. A text field was added for “other” in case another method of administration was used. Only humorous responses were reported in this text field. Slamming is known as the ultimate and most *hardcore* method and often represents an admission of a problem by the user.

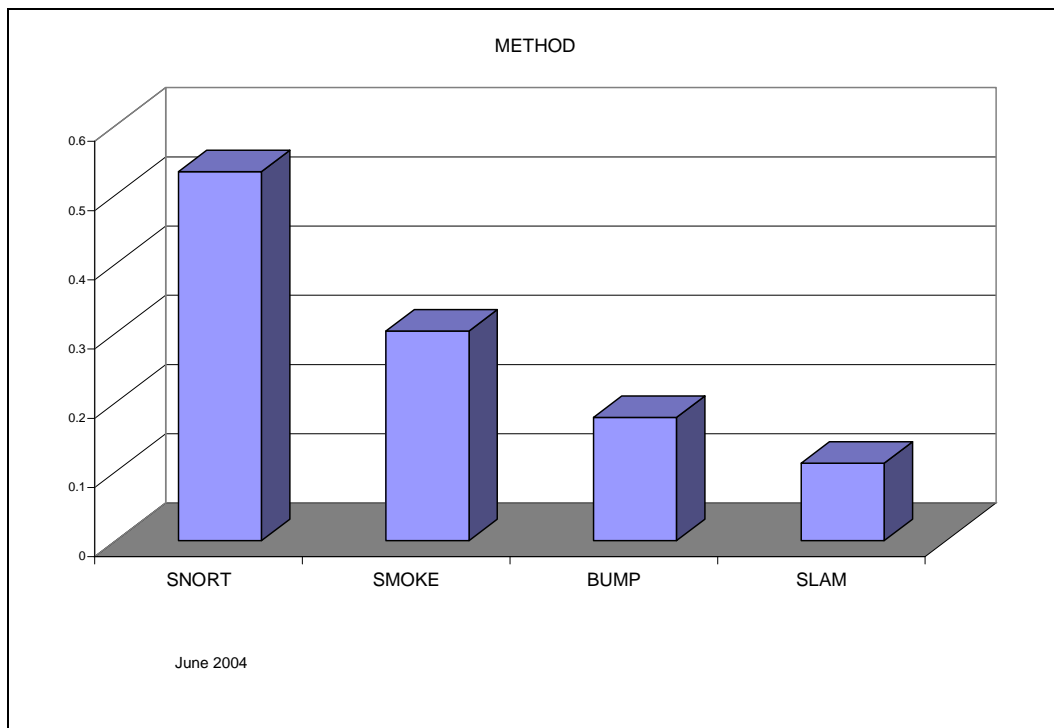
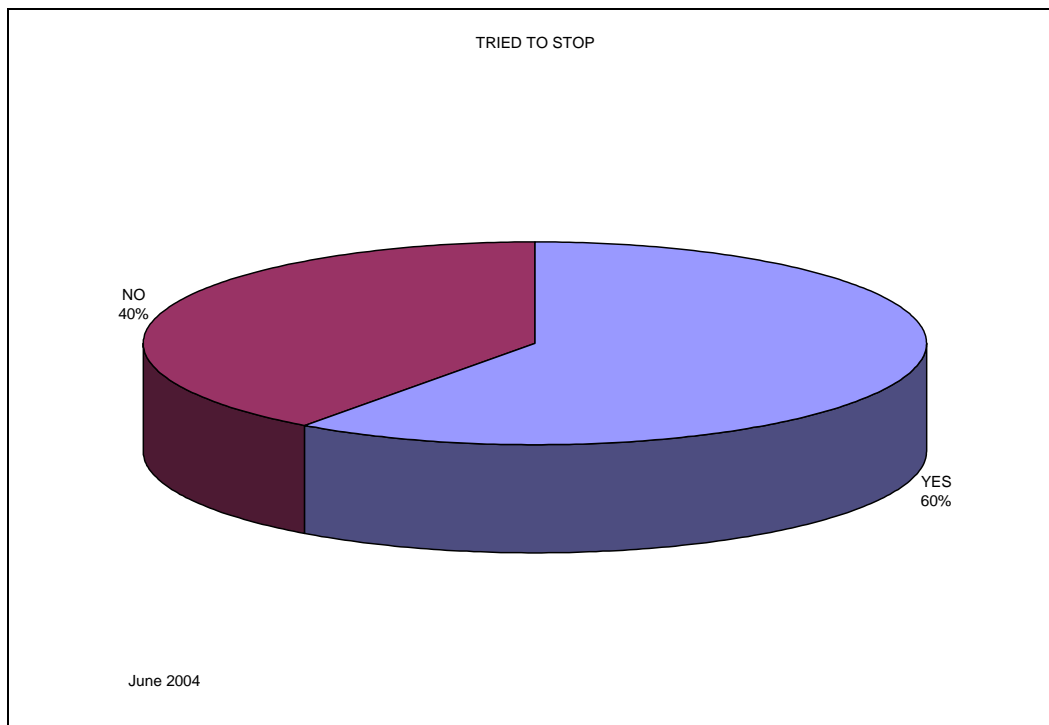


Chart #9.

Question #15. Have you every tried to quit using crystal? (YES or NO)

Respondents were asked (Question #13) if they thought they were using methamphetamine too much. 29 of 368 (8%) said they thought they were. Because denial of one's own problem is typical of addiction, respondents were asked (Question #14) if their friends thought they were using too much. 23 of 368 (6%) reported that their friends thought they were using too much. Finally, users were asked if they had every tried to stop. Of all the people reporting that they had ever used methamphetamine, 60% reported that they had tried to stop, indicative of the highly addictive nature of this drug.



Of those responding to the survey, a full 60% had tried to stop crystal methamphetamine with varying degrees of success. Responses were assigned to

categories by the author and are in the following table. It shows how these attempts were made, motivation to stop, and the success of these efforts.

The means by which people attempted to quit using methamphetamine varied widely. Five of the respondents reported recovery through 12 step groups, including Alcoholics Anonymous, Narcotics Anonymous, and Crystal Meth Anonymous. Discussions (outside of this survey) with recovering individuals have focused on the need for a separate 12 step program just for methamphetamine, in addition to AA and NA. Many users reported a need for a separate program because of the qualitatively different intoxicating effects of this drug and the need to share with others who had experienced it. Many users also report a disdain for the depressant effects of alcohol and opiates, seeking instead the intensity of an amphetamine high slowed only with the passage of hours or with the use of benzodiazepines when they become *sketchy* or too strung out on the drug.

Several other respondents to the survey reported alternate ways of stopping use of the drug, including on their own rather than in CMA (A) and just quitting (Q) on their own. In many cases this reflects the lack of specific treatment protocols for crystal methamphetamine, although a few did go for treatment (T) and into psychotherapy (SW).

The motivation to quit fell into several categories. These include consequences (CON) such as going to prison and spending all one's money; physical consequences (P) such as being hospitalized for lack of sleep and pulmonary problems; and psychiatric consequences (PS) such as "unbearable anhedonic depression that disintegrated my entire support network." Another respondent reported "On speed, I hate my life. Off it, I had no life. It's a tough choice..."

The ability of individuals to stay abstinent from the drug was highly variable. Many of the respondents reported controlled use (C), indicating that they use the drug only occasionally. Many in this category identified potential for damage in their own lives or in the lives of their friends due to this drug. One comment is typical, describing users who become “selfish” in both social and sexual terms. For others (R) the lack of intense sex, inability to focus (perhaps underlying ADHD that was self-medicated), the lack of energy, and the constant cravings were an overwhelming force to help them stay away from the drug. Some reported difficulty having sex unless their partner was *PNP-friendly*, where *PNP* stands for *Party and Play* and meaning using drugs, particularly methamphetamine, when having sex.

Not everyone enjoyed the intoxicating effects of methamphetamine. A significant number of respondents reported that they don’t use (DU) the drug, having tried it and not liked its effects. This has important implications in social marketing approaches to both HIV and methamphetamine prevention. Many gay men report getting caught up in unsafe behavior because of their belief that everyone is using crystal and everyone is having unsafe sex. Further epidemiological data on the penetration of the drug into the gay community would be useful. It is important to remember that high risk sexual behavior may be associated with moderate or low use of methamphetamine. That is, a number of moderate users have been documented to have unsafe sex, while some high quantity meth users show a high rate of condom use and safer sex practices.

Table #2.

If respondents had tried to quit using methamphetamine, they were asked how they did it and with what degree of success. The following table represents the responses described above.

IF YOU TRIED TO QUIT HOW?

CODES

12	12 STEP PROGRAM (e.g. CMA, AA, NA)
A	ALTERNATE
C	CONTROLLED USE
CO	CONSEQUENCES
DU	DENIES A PROBLEM OR NEVER USED
G	GEOGRAPHIC CURE
P	PHYSICAL CONSEQUENCES
PE	PEOPLE (AVOIDED OLD RELATIONSHIPS)
PS	PSYCHIATRIC CONSEQUENCES
Q	QUIT ON OWN
R	RELAPSE PRONE
RX	RELATIONSHIP
SW	SELF WORK (e.g. psychotherapy)
TX	TREATMENT

12	am in recovery for drug/alcohol addiction
12	Been clean and sober 35 months.
12	Joined aa/na - clean over 5 yrs now. The gay meetings esp were helpful
12	Narcotics Anonymous I have been clean and sober for 28 days
12	Went to Crystal Meth Anonymous. Stayed clean for 9 months. Ran into some friends. Thought I could handle doing it again.
A	CMA. I saw no change in amount I used. I'm doing better now on my own.
A	I stopped for long periods of time no problem.
C	I only use it on rare occasions -- a special dance or I have to pull an all-nighter. I don't understand the whole PNP craze. I THINK THAT I AM A SOCIAL USER INSTEAD OF A WEEKLY OR DAILY USER. FIRST BECAUSE I UNDERSTAND HOW CAN AFFECT MY HEALTH AND ITS COMPLICATIONS: SOCIALLY
C	ECONOMICALLY. I ALSO USE OTHER DRUGS SUCH AS POT; BUT BECAUSE I DO NOT HAVE THE NEED FOR IT'S USE I CONSIDERED MYSELF NON AND ADDICT. CAN LIVE WITHOUT IT AS WELL AS CIGARRTTES AND ALCOHOL. I HAVE NO DEPENDENCY AT ALL IN ANY KIND OF SUBSTANCES THAT CAN AFFECT MY BODY MY MIND AND MY DAILY LIVING.
C	I took a break for about year.

I was a gram to 2 gram per day user for about two years. I decided after this past New Years I didn't want to see myself decline any further down this slope that I was going on. It actually didn't take too much for me to quit. I mean I did help me to get rid of all my friends that I knew who did use it. I went to sleep for a few days. Basically became a loner all the time knowing I had to start a new life. I knew it would be hard to do. I found it interesting that each friend I knew who used Meth had become so selfish and basically liars about everything right down to some saying they either had cancer or brain tumors just to make themselves feel as though they had an excuse to keep using. San Diego is a messy town. just do it on occasion....used to do it full time not anymore

C My use is VERY irregular. It's not a habit with me.
 Only use occasionally for when I go out -- which can be once every couple of months or a couple of weekends a month -- otherwise it sits on the shelf

C Took a break use it here and there to party and have fun
 C tried stopping..wanted it bad..cant do it
 C was successful. use only when going out.
 got tired of spending all my money friends turned away went to prison numerous times because of it Tried to quit but it just keeps calling me I like to get high I guess to escape the reality I live in

CO Tried it about 5-6 times then stopped.

DU Tried it once and hated it.
 DU tried it once with my ex b/f
 DU used it once... never again
 DU don't use
 DU have never used it!!
 DU I don't use crystal or any other illegal substances mild marijuana on very rare occasions

DU n/a
 DU Never a user
 DU No problem
 DU none i dont use it.
 DU Nothing

G I had to leave Los Angeles to do it fortunately I have not lived anywhere that it is available and if it is I havent found it.

G I moved away from New York. Might sound extreme but with no connection it worked.

G I moved away from the area where it could be easily obtained and quit cold turkey I've been completely off now 2 years.

G Was an habitual user when living in NYC returned to UK and stopped

P Heart palpitations

P I stopped because after 10 yrs I was unable to find any veins and that was the only way I enjoyed it.

P In 1987 I had a bad meth addiction. I was lamming it at that time. After my third overdose I voluntarily put myself into a rehabilitation program. I didn't pick up a chemical for 14 years. Today I know that if I want to do meth it must be in sheer moderation or I can not touch it.

P I've become involved with crystal through binge periods. I've stopped for long periods of time sometimes up to a year. many times a few months would pass between use. first i slept or dredged through the day with long night sleeps. then i had a week or so of depression or moodiness. after which i felt good and wondered why i got involved with it again. i usually stop when i have a lot of obligations and just don't have time to spend doing it. also i tend to do more or less depending on who i'm spending time with.

PE I stopped associating with those individuals that used Tina. I never got really addicted. I've smoked it a hand-ful of times. It's been more than 2 years since I've used. I have not and will not use again.

PS I have stopped i put myself in the hospital voluntary because of lack of sleep. Nothing was wrong but i was so out of it i thought there was i was picking at my skin. So i have stopped

PS Unbearable anhedonic depression that disintegrated my entire support network.

PS withdrawals and then nasty ass depression.. have been clean now for about two years but the urge is clearly still there on a daily basis for me... i dream about it at least once a week and even though i recognize the destructive force it was in my life i still crave it... most days are alright but others... NOT PRETTY

Q I just quit. I was never addicted it wasn't difficult to give it up.

Q I just said no and luckily it worked!

Q quit 20 yrs ago

Q stopped no adverse side affects

Q stopped cold turkey

Q BD Quit meth

Q Cold Turkey

Q cold turkey

Q Cold turkey - just quit

Q cold turkey much sleep felt better after even a few days but went back into using for the weekend

Q Cold turkey - still want it

Q Cold turkey for 3 years and couldn't be happier.

Q Did just stop. Used twice.

Q i did it cold turkey... my friends came out to see me in california where i was doing 2 eight balls a week with my lover ..they told me if i didnt come back home it would kill me and i would come home in a pine box. something clicked in my head and 1 month later i packed my car and drove home to nj... havent used now in over 7yrs!

Q i stopped

- Q I stopped. I had used it 5 times along with other drugs over a period of several months it took 5 years for me to be able to get to the point where thinking about it would not bring on the first half of the rush. I was so relieved when that went away I have never gone back
- Q I stopped/
I was using it on a daily basis while at school work going out when I was bored etc. I stop using because I ran out and could not find a dealer. I went through some withdrawal and was always on edge somewhat depressed and anxious. I ended up dealing with the withdrawal through excessive drinking (alcohol).
Just decided I didn't like it's effects and stopped using it with no problem at all. Once a year I might snort one toke at a dance party but that's all I ever want or need. Prefer other recreational drugs much more than 'Tina'.
- Q Just said NO. There really is something to be said for the power of self-discipline. Too many people try to point the finger of blame on other potential factors. If you're a mature adult you should know how to be the boss of yourself and take responsibility for your choices - and make the correct ones.
- Q JUST STOP DOING IT. IT WORKED FOR A YEAR.
- Q JUST STOPPED AND HAVE NOT USED SINCE JAN 2004
- Q Just stopped...
- Q Not using it any longer. Too many friends have used crystal and it's really messed up their lives. No thanks.
- Q saw what it was doing to my sex drive as well as my friends stopped being daily plus user after i became increasingly aware of psychosis & delusion as norm for the trip. discarded whole life @ time and retreated to family to wean myself off over a period of months.
- Q haven't gone back but rarely and now find no real enjoyment in the situations involving use since. still shy of intimacy but slowly dealing with the lack of sensation and intimacy. still smoke a joint a couple of times a week.
- Q stopped for 1 week. had sex with someone that uses and started using again
- Q Stopped using aprox 15 years ago. Realized the high wasn't worth the after effects.
Stopped went through detox. Used once since wasn't impressed although I have flashbacks in my dreams of slamming or smoking. Really miss it although I know I'm very lucky to not be using. I think about it every day along with ghb they went well together.
- Q Well. not a habitual user here so I stopped b/c i hated the effect the drug had on me. Stopping was easy.
- R i actually quit for several months then just decided to do it again... HOW just put it down
- R I decided to stop using several times stopping after a real good one more time. Unfortunately one more time is ongoing while a real good

tina high seems in shorter supply.

R I USE TO DO CRYSTAL A LOT. A FRIEND SOLD SOME REALLY GOOD STUFF AND I GOT IT CHEAP. WOULD MOSTLY DO CRYSTAL MOSTLY ON WEEKENDS STARTING FRIDAY NIGHT AND GOING ALL WEEKEND HAVING MARATHON SEX. I GOT SICK WITH MY HIV IN 96 AND STOPPED USING CRYSTAL COMPLETELY. IT HAD DONE A TRIP ON MY HEAD AND FIGURED I DIDN'T NEED IT ANYMORE. I DO MISS THE SEX THAT I WAS HAVING BUT PREFER MY LIFE WITHOUT IT NOW.

R I was sober for 2 years until just a few months ago in fact. On speed I hate my life. Off it - I had no life. It's a tough choice... I've quit 3 times total in the 3 years since I started using meth heavily. The first time was for a period of 6 months that I quit and was 100% clean; I picked it up again a little later after those 6 months then I quit for 1 month; and recently I quit for 4 months. The only real way I've found effective to quitting (personally) is to have Alprazolam (Xanax) which helps calm the extreme edgyness in the initial 1-2 weeks after withdrawing. I only take half of a 0.25mg tablet usually and a whole tablet very rarely (especially when it's been just a few days since withdrawal). Every day that goes by we are wiser than we were yesterday and not as wise as we will be tomorrow; one of the many aspects of my own life that have made me reflect on this is that the two first times I quit using it going back to using meth was only because of boredom since I had moved back home far away from any of my close friends. But the last time I went back to using it I firmly believe I could've effectively quit using without going back as for the first time I realized how good it really was to not be a slave to that crap (bad skin temper sleeples nights etc); also my self esteem had suffered greatly as I became completely isolated from other people by not wanting to make new friends and dwelling on the past and the friends I had when I lived in San Diego. My reasons for going back this time were that I realized that I had learned a great deal of things in the period when I used crystal (I got certified as a Flash MX 2004 Designer & Flash MX 2004 Developer by Macromedia; and also got certified as a Microsoft Certified Technician). Being sober my attention span and patience to learn had plummeted incredibly. (A.D.D?) Another negative aspect I noticed about quitting this last time was that my sex drive was next to non-existent. In fact masturbation was almost like having phlegm in my throat in that I would just do it to get it out of the way and move on with my day. I plan on using meth for a couple of more months to get another certification towards opening more doors for my career in the future. Whether or not I end up quitting for good next time is something I can't really say since I've learned life has interesting twists along the way. But this time the big difference between quitting meth the first couple of times to this one is that this time I'm no longer even enjoying it

(at all) and am trying to speed up the process of getting things done and getting it over with.

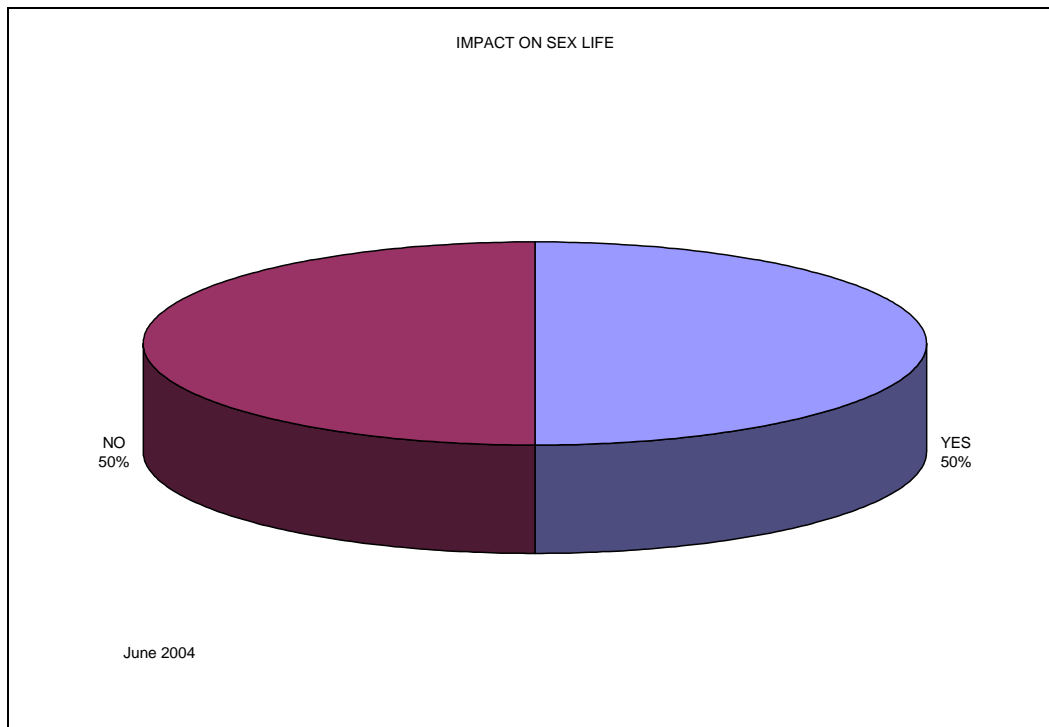
RX I got into a wonderful relationship that totally took my mind off the dope.
SW I just stopped and dealt with my issues. I have dealt with addiction with cocaine but Crystal is really different.
SW Was using daily for 1 1/2 years took three goes and some therapy to decide to let it go. Had desires to use for about a year would dream about using all the time. Now I dont have any desire use about 1/year only if offered at a party
TX Went through a in-house recovery program for 21 days. Went through withdrawals for about the first week or so. And now have been clean for 4yrs. tomorrow.
TX Went to Mount Sinai in Miami Beach (detox and rehab center). Got lots of support from good friends; kept away from those doing it. I would have been dead by now had I not gone for professional help. I had done lots of other drugs in the past from LSD to cocaine ectasy MDA THC (never IV)and never heroin or crack; nothing scared me as much as crystal. Never had the chance top get GHB since I got help before the introduction of G to my group but I know this is a very destructive drug.. Best news: my HIV status which was going rapidly down when using crystal has been under control for several years after stopping crystal. I could write a book about the horrors of crystal from what I experienced myself and among my friends.

Chart 10. Impact of methamphetamine on sexual behavior.

Question #16. Has use of crystal changed your sex life? (YES or NO)

If yes, how? (open text field)

Of those respondents who had every used methamphetamine (n=152), 120 responded to the question (79%). 32 responses to this question were blank among those who reported ever using methamphetamine. Of the 120 persons who responded “yes” or “no,” 50% stated it had affected their sexual behavior.



Respondents were asked how use of crystal methamphetamine had impacted their sex life. They were given an open text area in which to describe qualitatively the ways in which methamphetamine had impacted their sex life. Many noted that it affected their choice of partner (CH), saying that they were careless choosing partners, and in not using condoms.

Desire (D) and sensations (SE) were often noted as significantly changed by the drug. One respondent noted “it pushed my personal boundaries and changed preferences of the type of sex (rough, more adventurous, etc.)” Another described himself as a “sex maniac” on the drug. One quote is typical: “Use has increased my sex drive. While I have had [few] good sexual experiences, I have not experienced the orgasm that I seem to think will be brought with meth use. Now after four years’ use the thought of sex without meth is uninteresting.” Others used words such as uninhibited, horny, insatiable. Yet another noted he had never “fucked for 36 hours straight” before using methamphetamine. Still others describe allowing themselves to get into darker, “non-vanilla” sexual behavior such as BDSM. “I’ve become a bigger freak - a pig a fetishist -- however you want to put it. And of course - I never want sex to end. Ever.”

Others noted significant sexual impairment, including erectile dysfunction. “When I used it I found it impossible to obtain an erection. I would be impossibly horny but unable to cum unless I beat my dick to the point of blistering.”

Other respondents noted that they had become HIV positive while using the drug, and that “normal” sex without the drug was almost impossible. “I started using after a relationship ended. I let down my guard and let myself have sex with just about anyone because I was high. I was HIV negative before crystal and HIV positive by the time I finished letting it have its way with me. Now that I have been clean for a year I find that my desire to have sex is not there because it reminds me of when [I] was using and too many memories of how I let myself down come back. So to prevent those feeling I have not had sex in nine months.”

16. Has use of crystal affected your sex life?
If yes how?

	CODES
AVOID	AVOID SEX
CH	CHOICE (AFFECTED CHOICE OF PARTNER)
D	DESIRE
ED	ERECTILE DYSFUNCTION
H	HIV
IN	INHIBITIONS (DECREASED)
NV	NON-VANILLA SEX (INCREASED)
PSY	PSYCHOLOGICAL
RE	RETARDED EJACULATION
S	STAMINA
SE	SENSATIONS

AVOID I ALWAYS HAVE THE SAME SEX BEHAVIOR AND NOT NEED ANY DRUGS TO ENHANCE MY SEXUAL LIFE. DONT DO THINGS THAT CAN AFFECT MY THOUGHTS AND MY SEXUAL BEHAVIOR. ALWAYS TRY TO KEEP MY MIND OCCUPIED IN OTHER THINGS SUCH AS WORK FRIENDS AND EXERCISE. MY CONCEPT IS THAT A MATURE PEOPLE CAN DO WHATEVER THEY PLEASE IF THEIR LIFE IS NOT AFFECTED AND CAN DO THINGS WITH MODERATION.

AVOID I won't do anyone that I know is using crystal made me much more agressive and a bit careless when it came to playing safely. never quite veered off as far as others have but it's pushed both my personal boundaries and preferences of type of sex (i.e. rough.moreadventurous sex.. etc)out of the boundaries they once held

CH When I was using my sexual judgment tended to be impaired and I would hook up with random guys. There were times that I would be negligent in using a condom.

D as a str8 woman-decreased my drive before using was very sexually active while using became a sex maniac once stopped using lost almost all sex drive ...

D sometimes consider using again for the sex drive

D extremely active during nonexxistant after

D Extremely unihibited very horny insatiable and practiced unsafe sex could not think clearly when high sex music guys around me was all I could think about.

D I find I have much less drive now that I am not using

D I find now that I am off of meth I have no sex drive. Not that sex isn't interesting but sex went back to what I initaly was used to before I began using so in turn sex didnt feel nor was it dirty anymore it became a good thing again if that makes sense. The only problem now is that I dont trust people like I used to so my

interpersonal relationships are going to take a long time to grow again. More trust issues than anything.

D I have a lot LESS sex now
D I have never fucked for 36 hours straight before
D i want sex all the time..and all kinds of it
I wouldn't say it changed it but it makes it MUCH more inhibited.
D I'm a total pig on the substance. Sex is VERY enjoyable. I'm not really doing anything that I wouldn't do when not on the substance.
D Increased
D Less of a sex drive
D more likley to have sex on Crystal then off
D Sometimes it makes me want to have sex like it was on crystal and can make sex off of it seem less than good.
D Use has increased my sex drive. While I have had a small few good sexual experiences I have not experienced the orgasm that I seem to think will be brought with meth use. Now after 4 years use the thought of sex w/o meth is uninteresting.
D Was hard for me to find a lover since I was diagnosed with HCV shortly before entering a treatment program. And now it seems the only time I become aroused is when I masturbate alone.
ED Cant get hard
ED I couldn't get hard when I used it
ED Was very difficult to keep hard
ED When I used it I found it impossible to obtain an erection. I would be impossibly horny but unable to cum unless I beat my dick to the point of blistering.
ED yes... made it harder to get erect.... I quit and it became easier I started using after a relationship ended. I let down my guard and let myself have sex with just about anyone because I was high. I was HIV negative before crystal and HIV positive by the time I finished letting it have its way with me. Now that I have been clean for a year I find that my desire to have sex is not there because it reminds me of when was using and too many memories of how I let myself down come back. So to prevent those feeling I have not had sex in 9 months.
H Inhibitions have been let down a lot.
IN Made me more comfortable in having unprotected sex.
IN no protection i try things i wouldnt have before
IN Sex and Crystal lately is a problem I make bad choices while on crystal and having sex. Making some changes with that now.
IN yes it has allowed me to lower my inhibitions to explore my darker sexual side; BDSM...

NV I've become a bigger freak - a pig a fetishist -- however you want to put it. And of course - I never want sex to end. Ever.

NV made me more receptive to scenes outside my normal activities

NV More extreme sex. Wild fantasies able to expand limits more.*

PARTNER I try and steer away from crystal users because of the damage it does to their lives and to those around them. So it's an added thing to watch out for when looking for a partner.

PARTNER My lover was a user it destroyed your relationship

PARTNER When I was in a relationship it increased the level of intimacy. When I stopped we had constant arguments about how I didn't care enough. When I started up occasionally using again but only when he came over -- the arguments were limited to the times when I didn't. After we broke up and I started using full time again I'm back to sleeping with 3-7 guys a week...

PSY In my mind i cant have functional sex without it

PSY Life has become foreplay for the ultimate sexual experience that never happens

PSY Opened Pandora's Box.

PSY Since I used Meth primarily as a sex drug I truly believe it has changed my perception of sex and has damaged my ability to enjoy normal sex.*

PSY The reason I used crystal was for the sex. I became addicted to porn and group and anonymous sex.

PSY unable to trust allow myself vulnerability and honesty.

RE Can't cum

SE BETTER! More exciting more intense!

SE Enhanced it

SE hard to create the same degree of intimacy and absolute freedom let alone reproduce the same ability for extreme sex-stamina- and sensation-wise

SE Incredible sensations - super horny

SE It makes sex more intense and powerful.

SE made it more tactile....

SE makes you more sensitive and extremely horny and very receptive to do lots of things you normally wouldnt do

SE More intense

SE MORE INTENSE AND LONGER SESSIONS

SE MUCH BETTER

SE Really enhanced the feelings - hard to go back with out it

SE Sex is awesome on it

ST Get into longer and more intense sex

ST Improved it! Wasn't too tired to have sex.

ST Want longer sex including use of toys fisting

ST WELL WAS SUCH A DRIVING FORCE AND MADE SEX SO INTENSE. I COULD GO HOURS AND HOURS WITHOUT A CLIMAX. NOW I HAVE A CLIMAX IN A FEW MINUTES. SEX

WAS BETTER WITH IT BUT LIFE IS BETTER WITHOUT THAT MONKEY.

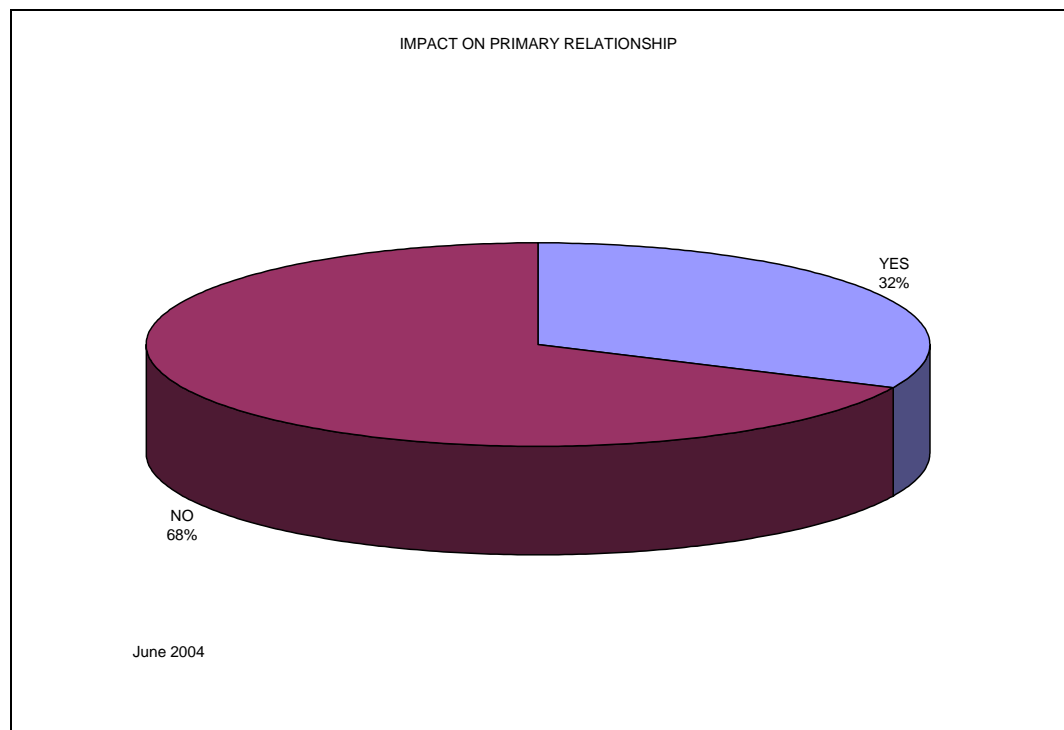
ST

When I have used it (once a year at most) It leads to what can only be described as a sexual marathon - non stop for hours

Chart 11.

Question #17: Has crystal affected your primary partner relationship (s)? (YES or NO)
If yes, how? (open text field)

Respondents were asked how use of crystal methamphetamine affected their primary partner relationships. 32% of respondents noted that methamphetamine had had an impact on their relationships.



If respondents felt that methamphetamine had had an impact on their partner relationships, they were asked to further elaborate in an open field text box. Their responses can be categorized as follows:

Numerous relationships ended due to use of the drug. This included several typical scenarios, including the using patterns of each partner getting out of synch with the other. One would want to use more extensively than the other. (AE, E, CH, CP). Men described long term relationships that disintegrated due to the drug: “[I] had a multi-year relationship that ended because my partner became addicted to meth.” Others reported that their partner’s use got out of control. “My boyfriend didn’t want to be with me unless I was doing the drug with him. After three years together he changed into a different person. He was the love of my life but he was essentially gone forever.” Another describes in vivid detail the impact of the drug on their relationship and his partner’s behavior: “My partner uses... unfortunately when he does it makes him insane. I have had to drive half way across the country to pick him up when he comes down. The last time he ended up in NY. Crystal allows him to live out his darkest fantasies of wanting to be a slave. The last time he almost got his wish to be kept against his will. When he broke the leather restraints and punched the guy in the face the guy decided that he had more than he could handle. I worry all the time that I am going to wake up and he will be gone. I panic if I can not get hold of him at home or on his cell phone. I worry that the next time he does it he will end up dead or with someone who can keep him caged away from everyone who loves him.”

Respondents described a decrease in excitement in their current relationship and a dishonesty that crept into their existing relationship (DE and DIS). “I have hurt and lied

to my partner while using as it makes me sociopathic.” “The few relationships I've tried in my long, [continuing meth] addiction have been volatile, shallow, violent, and insane”

Some respondents found themselves in exploitative relationships (EXP). “I actually had on guy use the crap out of me for about two years. Mostly my fault I let it happen but when using I just didn't want to see what was happening to me. I just let it happen over and over again. I can honestly say I was lonely so I let myself be hurt by others.” For other men, lack of trust (T) and trying to win it back proved on ongoing struggle. “I am now with my boyfriend that I had when I used. He finds it hard to trust me now although it is getting better.” Another reported, “I trust him much less. He's less likely to tell me where he's going, when he plans on using it, or hanging out with his friends that use crystal.” Finally, one other man noted the struggle to regain the trust of his friends. “It nearly ended all my relationships that I treasure more than my own life. However, my recovery has kept those friends close to me but they all seem to remain very guarded with their feelings out of fear that I may relapse and they may be hurt again.”

17. HAS CRYSTAL AFFECTED PRIMARY PARTNER RELATIONSHIP

CODES

AE	ALMOST ENDED
AP	ADDICTIVE PARTNER
CH	CHOSING WRONG PEOPLE
DE	DECREASED EXCITEMENT
DIS	DISHONESTY
E	ENDED/ BROKE UP
EM	EMOTIONS
EXR	EXPLOITATIVE RELATIONSHIP
PB	PRECARIOUS BALANCE
S	SINGLE

SYN EMOTIONAL SYNCHRONY WITH PARTNER
T TRUST

AE Almost ended it. Now I can say we made it thru a quarter of a century
AP we just celebrated our 25th anniversary.
AP nearly got dumped was only with partners help that I stopped using
He became addicted to crystal and cocaine. He would use it when I
was at work He often went to the bath house to get his fix have
AP indiscriminate un protected sex in exchange for drugs
i had to leave my partner of 8yrs because of this.. he decided that
AP crystal was more important to him then our love for each other.
AP Lost lover over Crystal
MY BOYFRIEND DIDN'T WANT TO BE WITH ME UNLESS I WAS
DOING THE DRUG WITH HIM. AFTER THREE YEARS TOGETHER
HE CHANGED INTO A DIFFERENT PERSON. HE WAS THE LOVE
OF MY LIFE BUT HE WAS ESSENTIALLY GONE FOREVER. THAT
WAS TEN YEARS AGO AND HE'S STILL ADDICTED AS FAR AS I
AP KNOW.
My partner became addicted started cheating on me and ultimately
engaging in self destructive behavior - i.e. unprotected sex. He
refused to admit any of this to me so I left him. So indirectly crystal
has had a huge impact on me. And because of that I almost never do
it. I no longer combine crystal with sex because of it's addictive
potential. My response to 20 is my own personal reaction to it not in
light of my breakup with my ex. Also my response to 20 long term
effects - short term (following use) would be different more
AP substantial.
My partner uses unfortunately when he does it makes him insane. I
have had to drive half way across the country to pick him up when he
comes down. The last time he ended up in NY. Crystal allows him to
live out his darkest fantasies of wanting to be a slave. The last time he
almost got his wish to be kept against his will. When he broke the
leather restraints and punched the guy in the face the guy decided that
he had more than he could handle. I worry all the time that I am going
to wake up and he will be gone. I panic if I can not get hold of him at
home or on his cell phone. I worry that the next time he does it he will
end up dead or with someone who can keep him caged away from
everyone who loves him.
AP
CH Partner got too involved with drugs and relationship deteriorated.
difficult to relate to someone who hasn't or doesn't use and use is
always disparate and a highly charged issue- trust is often a casualty
CH also.
Less apt to hang out with those who don't use (at times) less time
CH spent with family
When high lost site would have anonymous sex most were attractive
DE when I was high had unsafe sex very promiscuous.

DIS Both not as excited as before
I have hurt and lied to my partner while using as it makes me

DIS sociopathic
The few relationships I've tried in my long (continuing) speed addiction
have been volatile shallow violent and insane. Of course I'm Italian
they might have been that way in any case.

E BROKE UP

E Divorce

E ended relationship

E fucked it up

E Had a multi-year relationship that ended because my partner became
addicted to meth.

E I quit using. My ex and I broke up due to his addiction.
It destroyed it. I found myself admitting to making up and later even
doing stuff that I had never nor would ever do; specially sexually.
it did at one point....life got messy could bearly live with myself let
alone some else thats why we stopped using it so much

E it did. I lost my b/f to drugs

E Sort of. Was in a relationship with someone I liked (just liked) and
after he realized how much I use he ended the relationship.

E Too long to go into details right now since I'm on my way to have
dinner with family for mother's day but in one word: Isolation.

E we broke up

E We broke up because I had stopped and he didn't want to join me in
my crystal sobriety.

EM Emotional responses are out of whack.

EM We would fight a lot. Make bad decisions etc.

EXR During my usage I didnt really have any relationships. The only ones I
did have were with other meth users and they fell apart rather quickly.
I actually had on guy use the crap out of me for about two years.
Mostly my fault I let it happen but when using I just didnt want to see
what was happening to me I just let it happen over and over again. I
can honestly say I was lonely so I let myself be hurt by others.

EXR ended my relationship because of abuse

PB We met at a drug-crazed orgy 3 years ago and have been maintaining
a rocky relationship since. Love trully is holding us together... despite
all the obsticles. However we both see the source of our discord is
almost always the crack.

PB We were both addicted and had an open relationship. We're still
together... 28 years

S Single

SYN

T Had to be on similar highs at same time or else it was a bad situation
I am now with my boyfriend that I had when I used. He finds it hard to
trust me now although it is getting better.

T I trust him much less. He's less likely to tell me where he's going when
he plans on using it or hanging out with his friends that use crystal.

T

It nearly ended all my relationships that I treasure more than my own life. However my recovery has kept those friends close to me but they all seem to remain very guarded with their feelings out of fear that I may relapse and they may be hurt again.

Table 3.

Question #19. What would make sex WITHOUT crystal more satisfying for you? (open field text)

Finally, respondents were asked what could make their sex lives more satisfactory without crystal methamphetamine. Use of methamphetamine has damaged the sexual functioning and intimate relationships of many persons. While some of the respondents indicated they could not imagine satisfying sex without crystal, others were certain it is possible. “Sex without crystal makes sex so much more intimate and meaningful. Gay sex can be very much a sports type activity anyway and crystal just seemed to heighten that non-intimate feeling.” Another man wrote: “Sex *without* crystal was always more satisfying to me because with crystal you're insatiable - and cumming is near impossible. Without crystal, sex has a better sense of completion when finished.”

Not everyone was so optimistic. This man was quite bitter when he wrote, “I can't think of a way that sober sex could ever hope to be as passionate, as driven and hungry as speed sex. And please don't give me that ‘Oh it's so much more intense with someone you truly, deeply care for... crap. Gimme a break, huh? Save it for the greeting card companies.”

Other respondents indicated that they could imagine sex without crystal as a satisfying element within a loving and trusting relationship. “The only way sex will ever be satisfying for me again is if I am in a serious and committed relationship. Tricking reminds me of what [a] whore I was before when I was on crystal. Tricking would lead me down the road to relapse.” Another said sex without crystal would be possible in “[a]

trusting, loving relationship with foreknowledge (personal) of use -- haven't really gone there in two years so still reaching.”

Many men cited the physical problems associated with crystal methamphetamine use as a major goal in giving it up. The infamous erectile difficulties (*crystal dick*) were a concern for many users. “The few times that I have [tried crystal] I'd hardly call it mind blowing sex. Trying to get hard -- boring. Trying to stay hard -- boring. Trying to get my sexual partner hard -- even more boring. Trying to keep my sexual partner -- even more boring.” Another man wrote, “I find sex is unsatisfying on crystal because of the crystal dick problem - I guess if I was a total bottom whore I'd feel different about it?!?” Another man wrote, “All I wanted was my hard-on back and quitting gave that to me.” In that man’s case the physical property of methamphetamine resulting in erectile difficulties was alleviated by stopping the drug.

Desire, however, may not return unless other issues such as trust, self-esteem, and comfort with sexuality are repaired or normalized. One man reported that “Since I've quit using I've been practically impotent.” This was probably due to his inability to allow himself to perceive or express desire without the drug.

Still other men noted concern about the stamina the methamphetamine gave them, and the boost in their self-perception. One wrote that sex would be better without crystal if he could find “a man/men who would be able to have the stamina to keep up with my intensity level during sex.” Another reported that crystal gave him “more stamina during sexual intercourse [and] more lust for long sex sessions”

Many respondents indicated that greater trust and intimacy with their partner would improve sex without the drug, although some expressed doubt that sex without

methamphetamine could be as fulfilling. “Sadly that I don’t know. I am now fortunate enough to enjoy a relationship with a wonderful man that truly loves me. But that intensity of the high sex is never achievable.” Another wrote: “I believe that for me it is more about my desire to have a partner and the lack of intimacy on my and others level to commit to each other. That saddens me and thus my use.” Many other respondents felt that finding a stable person to be intimately involved with and learning to trust again would make the difference.

This ability to share intimacy and be responsive with one’s partner is an area that needs to be addressed in recovery. The use of methamphetamine often results in what has been described as *selfish* sex where partners and even body parts are depersonalized and objectified. One man wrote, “I have dated a couple of guys that used meth and found that sex with them was really kind of one sided--their side. When they weren't under the influence they were passionate lovers where mutual gratification was always achieved. [But on] meth they seemed to be so centered on themselves that they could care less whether I got any satisfaction.”

Some men noted that sex without methamphetamine can be enhanced by more active use of experimentation and fantasy. “I like to experiment with my partner or role play.” He went on to note that “just being with someone who is open and comfortable enough with themselves to have sex without feeling inhibited” can make the resulting sexuality activity enjoyable. Sexual technique can also improve the satisfaction of sexuality without mood altering drugs. Another respondent wrote, “learning more about technique and various forms of physical stimulation made a huge difference.”

Supportive psychotherapy for other issues of self-esteem and social isolation may also be helpful. Many of these men are long-term HIV positive and feel unattractive and without energy and stamina. One man wrote, "If I could meet somebody when I'm out and they would appreciate me and want to sleep with me, I wouldn't feel the desire to do a bump and go to after hours and pray that somebody attractive will want me there."

Finally, one man eloquently stated the process of rebalancing one's life and learning to enjoy things, including sex, in the moment. "It's being able to appreciate the little things in life -- the stuff that made me happy before. The deal with crystal is it's too good -- nothing can compare to it -- not sex, not anything [and] you don't appreciate the things you did before you started using. I was lucky. I didn't have anything I needed to run away from in my life. I had a good life and I chose the little things everyday. It was a very hard choice at the time. I am glad I made it."

What would make sex WITHOUT crystal more satisfying for you?

AI	ALREADY IS
C	COMMITMENT
CANT	CAN'T IMPROVE IT WITHOUT CRYSTAL
CON	CONSEQUENCES OF USE
D	DISTANCE (FROM CRYSTAL)
DE	INCREASED DESIRE
DK	DON'T KNOW
DYS	DYSFUNCTION
ED	NOT HAVING ED
F	FANTASY
FA	FEELING ATTRACTIVE
IN	INTIMACY NEEDS AND LOVE
LT	LITTLE THINGS
MO	MULTI ORGASMIC
NC	NO CONNECTION BETWEEN CRYSTAL AND SEX
ND	NO DRUGS
OD	OTHER DRUGS
P	PARTNER'S CHARACTERISTICS, STAMINA

PLM	PARTNER'S AFFECTION
RTN	RETURN TO NORMALCY
S	STAMINA, ENERGY
SE	SENSATIONS
SP	STABLE PARTNER
SW	SELF WORK (e.g. PSYCHOTHERAPY)
T	TRUST
T	SEXUAL TECHNIQUE
TI	TIME
AI	Sex without crystal makes sex so much more intimate and meaningful. Gay sex can be very much a sports type activity anyway and crystal just seemed to heighten that non-intimate feeling
AI	Sex WITHOUT crystal was always more satisfying to me because with crystal you're insatiable - and cumming is near impossible. Without crystal sex has a better sense of completion when finished.
AI	that it is natural
C	Commitment
C	The only way sex will ever be satisfying for me again is if I am in a serious and committed relationship. Tricking reminds me of what I where I was before when I was on crystal. Tricking would lead me down the road to relapse.
C	trusting loving relationship with foreknowledge (personal) of use- haven't really gone there in 2 years so still reaching.
CANT	I can't think of a way that sober sex could ever hope to be as passionate as driven and hungry as speed sex. And please don't give me that Oh it's so much more intense with someone you truly deeply care for... crap. Gimme a break huh? Save it for the greeting card companies.
CANT	IS IT POSSIBLE?
CANT	Nothing
CANT	Nothing
CANT	Nothing
CANT	Nothing
CANT	nothing.
CANT	Nothing.
CANT	Nothing. I usually don't have sex while on crystal.
DE	who knows the drive is just not there any more
DK	cant answer
DK	dont know
DK	dont know
DK	dont know
DK	Don't know at this point.
DK	Don't know.
DK	DON'T KNOW. SEX HAS NEVER BEEN THE SAME SINCE I STOPPED.

DK i have no clue

DK Just more time away from it

DK n/a

DK NOT SURE

DK Sadly that I don't know. I am now fortunate enough to enjoy a relationship with a wonderful man that truly loves me. But that intensity of the high sex is never achievable.

DYS Since I've quit using I've been practically impotent

ED All I wanted was my hard-on back and quitting gave that to me.

ED I cant get it up on crystal if my life depended on it..

ED I rarely have sex while on crystal. The few times that I have I'd hardly call it mind blowing sex. Trying to get hard boring. Trying to stay hard boring. Trying to get my sexual partner hard even more boring. Trying to keep my sexual partner even more boring.

ED I'm really not a crystal user although I have done it a few times. So I'm probably not your typical test subject providing valuable information for treating gay men with crystal and sex problems. I find sex is unsatisfying on Crystal because of the crystal dick problem - I guess if I was a total bottom whore I'd feel different about it?!?

F Ha... um seriously? The realization of my sexual fantasy would help... but gorgeous blond bodybuilders are rare in minnesota.

F I like to experiment with my partner or role play

F Just being with someone who is open and comfortable enough with themselves to have sex without feeling inhibited. They can do what they want and explore the fantasasis that crystal makes them feel free enough to do

F Kink

F Orgy

F The sense of power over another individual while I was using was incredible. I found partners who were more submissive and I reduced my use of crank.

FA If I could meet somebody when I'm out and they would appreciate me and want to sleep with me I wouldn't feel the desire to do a bump and go to afterhours and pray that somebody attractive will want me there.

IN I believe that for me it is more about my desire to have a partner and the lack or intimacy on my and others level to commit to each other. That saddens me and thus my use.

IN I don't know I guess slower/more intimate and less physical

IN LOVE that is true

IN love. i don't have sex while i'm using. too risky (promotes unsafe sex).

IN more intimate; less sketchy

IN the ability to lose inhibitions.

IS it is satisfying... :-)

J using conventional lighting

LT It's being able to appreciate the little things in life the stuff that made me happy before. The deal with crystal is its too good nothing can compare to it not sex not anything but you don't appreciate the things you did before you started using. I was lucky I didn't have anything I needed to run away from in my life I had a good life and I chose the little things everyday. It was a very hard choice at the time I am glad I made it.

MO IF WE BOTH WERE MULTI ORGASMIC

NC Crystal and sex are not connected for me.

NC Don't use it for sex

NC I dont use crystal to have sex.

NC I don't use for sex I use it to go dancing

NC I like sex without crystal. Not someone who needs it to have good sex (although partner became that way).

NC IM ACTIVE SEXUALLY BUT DO NOT DO THINGS THAT CAN RISK MY WAY OF THINKING AS WELL MY HEALTH OR THE HEALTH OF OTHERS. PEOLPLE SHOULD UNDERSTAND THAT THE NEEDS OS CRYSTAL METH AND OTHER RECREATIONAL DRUGS IN THIER LIFE IS NOT NECESSARY. THAT MIGHT HAPPEN IF YOU HAVE CONTROL IN YOURSELF ANDLEARN WHEN TO STOP AND SAY NO.

NC IM not a user

NC It's equally satisfying with or without.

NC never had sex on crystal ain't nothin' like the sober thing!

NC Never used it in the first place

NC not sexual on crystal

NC Umm..don't like sex WITH crystal so Anything would make it better than WITH.

ND Just that: NO crystal!

ND reality.

OD Ecstasy

OD G

OD GHB? ...lol They've almost eradicated it though. Most people have their thing like people who drink alcohol etc. I hate alcohol and GHB really is the only thing that makes sex satisfying for me. It's a shame to have to need something for sex I know... but that isn't as bad in my opinion (again nobody notices it when people go out drinking and have a hoot and a half in the sac). What is very bad is that well... GHB is almost non-exsistent anymore. I have no clue how to gain back a satisfying sex life without it and maybe there isn't a way. And crystal is to blame for that.

P Being with the ideal mate and being happy with him and both of us not feed off each other. Although it's very fun to do together it can ruin a relationship. As did mine.

P Having a partner with an above average endowment.

P I have dated a couple of guys that used meth and found that sex with them was really kind of one sided--their side. When they weren't under the influence they were passionate lovers where mutual gratification was always achieved but under meth they seemed to be so centered on themselves that they could care less whether I got any satisfaction.

P Just a hot partner I guess.

P Partner was not using

P Partners not doing it as well

P patience with self

P re-establish partnership again... but that's not going to happen

P To find someone worth it.

PARTY it already is satisfying with or without sex. crystal for me is more about going out and partying and less to do with sex. i have had sex on it but i don't do it to have sex.

PLM Knowing my partner likes me without the crystal.

PLM Knowing that the man loves me for my loving soul and not for how much fat I have to lose.

RTN getting back the way it used to be

S a man/men who would be able to have the stamina to keep up with my intensity level during sex.

S Energy that crystal gives.

S more stamina during sexual intercourse more lust for long sex sessions

SE Heightened sensations

SE I am satisfied with GOOD sex without crystal. Crystal makes ALL sex good. well almost.

SP Finding a stable person to be intimately involved with...

SW it's become more satisfying since being sober and meeting my partner i am with now. but it has more to do with the overcoming of the depressed self i was manifesting and working through my personal issues.

TI ? haven't had it with for years

TI Being able to trust again.

TI learning more about technique and various forms of physical stimulation made a huge difference*

CHAPTER 5: IMPLICATIONS FOR CLINICAL INTERVENTIONS

The physiological and psychological impact of so-called sex-enhancing drugs, the current and seemingly most devastating of which is crystal methamphetamine, call for sex therapists to increase their awareness of this issue and improve clinical interventions to better help clients as they seek to achieve sexual satisfaction without reliance on these drugs. When speaking of methamphetamine, abstinence-based and relapse prevention approaches, as well as treatment readiness-approaches, appear to produce the most effective outcomes.

Principles of Care

There are some underlying principles of care that should be incorporated into working with this population. Clients, especially HIV-positive gay men, will present with a wide range of substance use and psychosocial needs. Services need to be flexible and client-centered.

Services must also be consistent with the client's cultural needs and expectations. This includes sensitivity to GLBT (Gay\Lesbian\Bisexual\Transsexual) *culture* as well as sexual activities. It is important that the sex therapist be able and willing to frankly discuss a broad range of sexual activities without judgment, and thereby without introducing a clinical barrier between the client and therapist.

Effective services will promote self-respect and personal dignity, and the clinician must recognize the individual's self-worth. Many GLBT clients will have been stigmatized and the therapeutic process must not recreate those conditions.

Clients must be empowered to make decisions in collaboration with the service provider. Clinicians should not assume that they know what is best for individuals but should include clients in treatment planning. Motivational approaches work well in this regard.

Several therapeutic modalities seem to hold promise for dealing with the complexities of a methamphetamine abuser and sexual functioning following abstinence.

The client may present with significant psychiatric symptoms, including paranoia and other disturbed thought processes. Urbina and Jones note that at the present time there is no research evidence to guide the use of psychiatric medications with methamphetamine users. Acute psychotic symptoms are generally treated with neuroleptics, and if necessary, hospitalization. Psychiatrists treating HIV-infected patients who are methamphetamine users often use bupropion (Wellbutrin), an antidepressant with noradrenergic and dopaminergic activity, to reduce depressive symptoms, although it is not useful for management of acute stimulant withdrawal. The authors note that overall findings suggest that although acute psychosis tends to resolve, depressive symptoms tend to persist (2004, 893).

Animal studies suggest that methamphetamine accumulates in the brain and is toxic to the central nervous system. Methamphetamine causes neurodegeneration in the dopaminergic and serotonergic nerve terminals in animals. Human studies provide evidence that methamphetamine use leads to a reduction of dopamine transporter (DAT) levels, which are markers of dopamine cell terminals. Reductions in DAT levels have been associated with neuropsychiatric testing evidence of impaired motor function and

impaired verbal learning. In some cases, DAT levels can decrease to within the range seen for low-severity Parkinson disease (892).

Abstaining from methamphetamine can produce some effect on restoration of cognitive functioning. Wang et.al. (2004) noted that “protracted abstinence and proper rehabilitation may reverse some [methamphetamine]-induced alterations in brain function” (247) and that these alterations are associated with improved performance in motor and verbal memory tests (242). There are, however, some seemingly long-lasting changes in brain activity that could account for the persistence of amotivation and anhedonia in detoxified methamphetamine abusers (242). The degree of persistence of these symptoms, and effective interventions, remain to be identified.

The association of methamphetamine and sexual behavior, especially in gay men, is a significant factor in designing effective treatment. Many clients report that the drug and sex have become *fused* and that they cannot have one without the other. Many men hit a bottom with methamphetamine and get into early recovery, choosing sexual abstinence as a coping skill for maintaining drug abstinence. Eventually biology and normal urges emerge and they chose to have sex, which can lead to intense drug cravings. Many persons relapse at that moment. Halkitis, Parsons and Stirrat (2001) have noted that any prevention or treatment program for methamphetamine must recognize that many gay men use the drug to initiate, enhance, and prolong sexual encounters. Interventions to reduce crystal use must address the underlying sexual motivations that promote the use of the drug. Gay men and clinicians need to consider the connection between use of the drug and their sexual attitudes, behaviors, and risk taking.

Prevention and treatment must also be conducted with the recognition of the social contexts of gay and bisexual methamphetamine use, characterized by great involvement with bars, sex clubs, circuit parties, and increasingly, private sex parties announced through email lists and invitations. Halkitis et.al. recommend that prevention and treatment efforts remain *sex positive* but mindful of the contexts of drug use and sexual risk taking.

Since the gay civil rights movement, gay male subculture has maintained a strong connection between recreational drug use, all-night dance parties, and sexual freedom (Browning 1993, Kramer 1978, Rotello 1997). What Levine described as the *four D's* of the 1970s New York disco scene (disco, drugs, 'dish' and 'dick') has evolved into the circuit party, week-long dance events attracting thousands of men at which recreational drug use became extremely prevalent (Kurtz and Inciardi 2003, Mattison et. al. 2001). Kurtz and Inciardi note that gay men desired to escape the gaunt appearance of AIDS and raised the gym-honed body to icon status. Circuit parties, with their sexual and drug components, ironically became celebrations that defy the power of AIDS to define gay life.

Intimacy problems, sexual dysfunction, and abstinence from mood-altering chemicals often co-occur. Many individuals find their sobriety jeopardized because of an inability to comfortably integrate sexuality and recovery, and they therefore continually relapse. Others, who do attain recovery, can be mired in insecurity and continue to fail in their attempt to develop intimate relationships (Coleman 1987, 13). While some reviews of this literature exist (e.g. Coleman 1982 and O'Farrell, Weyland, and Logan 1983), the issue of sexuality and recovery from chemical dependency is often overlooked.

Coleman (1987, p 15) describes intimacy as “a qualitative description of a relationship between two or more people in which individuals have the ability to express feelings (both positive and negative) in a meaningful and constructive manner, and in a way that is mutually acceptable and respectful and that leads to the psychological well-being of the individuals involved.” In order to succeed, one must be able to communicate thoughts and feelings that define the boundaries of the relationship and express feelings of caring, concern, and commitment. Coleman goes on to note that intimacy can be expressed emotionally, intellectually, socially, sexually, recreationally, vocationally, and spiritually. Sexual behavior is just one way of expressing intimacy, and can be devoid of it (e.g. rape) or be an expression of it. It is also important to note that intimacy can be expressed without sexual activity (e.g. non-sexual friendship) (Coleman 1987 p 16).

Intimacy dysfunction is highly correlated with chemical abuse and dependency and can take several forms: 1) physical abuse, emotional neglect, or sexual abuse of children; 2) psychosexual disorders such as sex offending behavior; or 3) relationship or marital discord as a result of conflict, violence, codependency, sexual identify disorders, confusion or conflict in roles, communication problems, unhealthy attitudes regarding sexual activity and intimacy, and sexual dysfunction. Clients with a history of methamphetamine dependence often present in a therapist’s office with problems in the third area, which will be discussed in detail below.

Family conflict in both the current family (here broadly defined to encompass GLBT families), and the family of origin, is often identified by chemically dependent individuals as a priority problem to be addressed. Some models (e.g. Schwartzman 1985)

assert that alcoholism can be perceived as the solution to the paradoxical psychosocial context of an addicted household, and addiction becomes an adaptive response.

Other addictive disorders (gambling, sexual activity, spending, binge or purge eating, dieting, exercise, etc) are also increasingly recognized as correlates of chemical dependency. Coleman postulates that family intimacy dysfunction is highly correlated with these addictive disorders as well. (Coleman 1987, 19).

Sexual compulsivity, a hallmark of methamphetamine use, has also been described as a coping mechanism or an anesthetic to psychological pain (Coleman 1987, 19, Carnes 1992). Sex becomes a way of shoring up damaged self-esteem or creating a false sense of intimacy and ironically, compulsive sexuality can lead to the development of patterns of intimacy dysfunction. Many HIV-positive men report that they initially liked the stamina, boost to self-esteem, and psychic energy provided by crystal methamphetamine. They described feeling unattractive and fatigued and found a quick, if temporary, remedy in crystal. Compulsive sexuality can become a replacement for intimate relationships and leave the individual feeling isolated and increasingly vulnerable to drug use.

Shame is another issue often encountered in the context of methamphetamine. It can be a consequence of physical abuse or neglect, sexual abuse, and addiction. Shame is a feeling of unworthiness or sinfulness – or a feeling of being unwanted (Brown 1987; Evans and Schaefer 1980). Shame inhibits an individual from feeling worthy in intimate relationships. Brown (1987, 62) describes shame as a “total failure of self.” In the development of shame, the child is forced to disassociate from aspects of her or his emerging individuality and in order to satisfy the need to belong, to feel whole, and to feel a part of something larger, the child must substitute, throw away and disengage

aspects of self. Guilt is often used interchangeably with shame but more implies a transgression of a specific law, rule, or personal standard. Brown (1987, 65) notes that growing up in a shame-based system prevents the child from developing a sense of responsible self in the world by interfering with opportunities to test out logical consequences, try behaviors, and make mistakes. Sexual shame has specific, identifiable sources, including poor body image, some instances of sexual dysfunction and lack of sexual desire, shame about masturbation, and sexual identity dysphoria. HIV-positive gay men who use methamphetamine experience a significantly higher number of these shame risk factors than the typical population, including internalized homophobia, stigmas of addiction, HIV, and even sexual shame. This may account for the seemingly intractable interplay between HIV-positive gay men, methamphetamine, and sexual dysfunction. Other sources of sexual shame can include cultural and religious messages and early childhood experiences.

Resolution of feelings of shame is essential in the recovery process. Brown (1987, 70) notes that the clinical task is to reclaim aspects of self and development. For victims of sexual abuse this involves accepting sexual feelings and sensations that were previously associated with abuse and thrown away. Lack of acceptance of the personal sexual self (lack of desire, sexual dysfunction, or identify) results from the earlier, natural sexuality and sensuality of the child being marred by a lack of trust, over-constriction, and poor body image. The individual is unable to trust that his sexual feelings are a natural expression. The clinicians' role is not to rid this client of shame, as it is not pathological, but to conceptualize it as a developmental backslide in the areas of identity formation and

impersonal interactions with overall therapy directed toward advancing growth in these areas.

Boundaries represent another area requiring attention by the clinician. Boundary inadequacy is a pattern of ambiguous, overly rigid or invasive boundaries that are related to physical or psychological space (Coleman and Colgan 1986). An example of an ambiguous boundary would be a friendship hug that includes a body caress; an overly rigid boundary would be that hugs are exchanged only at airports; invasive boundaries include sexual and/or physical abuse.

Boundary inadequacy can be both a precursor and result of chemical dependency (Coleman 1983). Colgan (1987, 80) identifies six areas to assess boundaries:

1) the person's conception of boundaries (current satisfaction and concerns about boundary issues);

2) communication (self-disclosure, interaction for emotional give and take, problem solving, and expression of feelings);

3) values (*appropriate* behavior, discrepancies between what is said and what is done; sexual and sensual behavior considered appropriate for children);

4) sex roles (power balance, decision making processes, achievement encouragement and respect for individual differences);

5) touch (expression of affection, disciplining, meaning of touch to each person, meeting needs to touch and be touched); and

6) privacy (conventions about nudity, doors, sleeping arrangements, and bathing and dressing patterns). Skills at setting boundaries are essential for the maintenance of recovery.

Bell, Weinberg, and Hammersmith (1981) found that disturbed familial relationships were often the result of awareness of homosexuality in the child, rather than its cause. Oppression, alienation, guilt, shame, and disturbed family relationships all contribute to self-abusive patterns and lead naturally to alcohol and drug abuse problems. The GLBT community also uses bars as a setting for socializing which can contribute to addiction. It is interesting to note that methamphetamine is increasingly distributed through private networks and parties and that this distribution method, along with the internet as a meeting place for sex partners, has become an alternate social setting for gay interaction. Issues pertaining to one's sexual orientation that were present when addictive drinking or drugging began will emerge again in sobriety and have to be addressed in order to safeguard recovery.

While chemical dependency harms good communication patterns, for some individuals good communication never existed. Because of negative communication patterns witnessed while growing up, an individual may have never learned healthy and positive communication skills (Coleman 1987, 49). Chemical dependency can lead to greater defensiveness, self-centeredness, dishonesty, blaming, and withdrawal. As Coleman (1987, 49) states: "individuals stop communicating with themselves and thus have little to say to others. Negative experiences with communication reinforce the need not to communicate. Violation of boundaries leads to resentment and the desire to punish the other."

Sexual attitudes and values must be examined to understand their derivation, and to learn attitudes and values that promote healthy sexual functioning and intimacy rather than those that serve as a barrier to it (Coleman 1987, 50). Many gay men possess

shame about their sexual feelings. This is heightened by the extreme sexual activities they may have undertaken while on methamphetamine. Chemicals can serve as a coping mechanism for this shame, and the feeling can be overwhelming when that coping mechanism is removed. Many men stop having sex and when they (inevitably) reengage in sexual activity, strong associations with the drug are felt. Coleman (1987, 51) notes that clients in his Program in Human Sexuality at the University of Minnesota often felt like *sexual cripples* following chemical dependency treatment. They were afraid, insecure and uncertain, and felt that their treatment caused them to experience sexual difficulties, or at best, had not improved their sex lives.

Coleman summarizes the important attitudes that are goals of sex therapists:

“intimacy is based upon openness, honesty, communication, and respect for one another.”

“there are many different ways of expressing intimacy other than through sexual activity, all of which are important.”

“sex does not have to be associated with guilt.”

“every person should take responsibility for themselves in a sexual relationship>”

“be responsive rather than responsible for our partner’s pleasure”

“the biggest sexual organ is our brain and not our genitals.”

“individuals need to learn how to deal with the sources of shameful, anxious feelings about sexuality without the crutch of alcohol and drugs.”

Beckman (1984) has suggested that sex role stereotyping may both contribute to and create boundary inadequacies in the recovering female alcoholic. This may very well

be true for the gay recovering male operating under assumptions based on stereotypes about gay sexual behavior.

Sussman (1994) notes that many gay men experience stereotypes about themselves as sexual predators and long-term relationship failures. Consequently, many gay men feel a sense of hopelessness and frustration about finding, and developing a meaningful, functional, and loving intimate relationship.

Although sexual freedom and expression often feel wonderful and satisfying, there is also a limit to the pleasure if there is no deeper, more meaningful relationship experience. Although the excitement, connection and release inherently feel good, it alone does not meet other essential human needs, including feeling interpersonally connected, getting deeply known and understood by another and experiencing the profound sense of trust in another. Without intimacy, the superficial connections with others eventually become empty and meaningless. The word *intimacy* comes from the Latin and translates as *moving into fear*. Sussman goes on to write (1984, 4) “if we are disconnected from, or shameful about, our emotional relationship and sexual wounds, to feel them deeply can be overwhelming and lead to a sense of fear and vulnerability.”

Addressing sexual behavior among MSM has led to a *cultural divide* among gay organizations in such cities as New York and Seattle. The number of newly reported HIV cases among MSM in King County increased 35% from 2001 to 2002, and may have risen an additional 16% in 2003, according to the *Seattle Times* (Eskanazi, Jan 6, 2004). Some MSM say it is unfair to condemn men who engage in risky sexual behaviors; other MSM say that making excuses for such behavior is fueling the spread of HIV and that events such as HIV prevention workshops held in bathhouses implicitly

normalize anonymous and unprotected sex. Some gay community leaders produced a document titled “A Community Manifesto: A New Response to HIV And STDs:” which calls on MSMs to be accountable to themselves, their partners, and their community. This has resulted in increasing controversy, with Gay City Health Project, one of Seattle’s largest gay health organizations, saying that the manifesto makes moral judgments about sex between MSM and that is more important to nurture men’s self-esteem, which will inspire them to make healthier choices. Dan Savage, a nationally syndicated sex columnist who helped found Gay City before becoming critical of the organization said, “There are some lost gay men out there who want and need guidelines on what is expected of them so they go searching and are told, ‘Everything goes, and the more reckless you are, the gayer you are.’ ...Gay men today don’t need AIDS organizations saying, *Go for it!*” (*Seattle Times*, 1/6/04).

In another example, a meeting was held by the H.I.V. Forum New York City in July, 2004, at which discussion featured testimony about the negative impact of crystal meth on the gay world. Frank Owen, writing in *The New York Times* in August, described the split in the gay community.

“But not everyone approves of such measures. In the May issue of the gay magazine *Genre*, a writer who calls himself Diabolique criticized people “...as *nanny nelly liberal activists* and accused them of helping spur a continuing police crackdown on gay night life.” “There’s a total split in the gay community about this issue,” Diabolique said in an interview. “Crystal meth is a problem,” he said. “It’s the worst drug problem I’ve seen in all my years of clubbing. But hysterical antidrug, antisex propaganda does nothing to solve that problem.”

Promising Interventions

Identifying where the client is in terms of the process of changing behavior is an important element in assisting him/her make such behavioral changes. The clinician

must identify where the client is in that process, and be cognizant of where he needs to go in preparing for behavioral change. The work of Prochaska and DiClemente (1984, 1986) and their Stages of Change model help clinicians tailor brief interventions to clients' needs. They developed a model consisting of five stages of change that seemed to best represent the process people go through when thinking about, beginning, and trying to maintain new behavior.

The stages proposed by Prochaska and DiClemente are:

- Precontemplation (the user is not considering change, is aware of few negative consequences, and is unlikely to take action soon).
- Contemplation (the user is aware of some pros and cons of a behavior (e.g. substance abuse) but feels ambivalent about change. This user has not yet decided to commit to change).
- Preparation (this stage begins once the user has decided to change and begins to plan steps toward recovery).
- Action (the user tries new behaviors, but these are not yet stable. This stage involves the first active steps toward change).
- Maintenance (the user establishes new behaviors on a long-term basis).

Each stage has corresponding treatment needs. At the Precontemplation stage, the client needs information linking his problems and potential problems to substance abuse and sexual behavior. Education is appropriate at this stage. The Contemplation stage is addressed by the clinician seeking to increase the client's awareness of the consequences of continued abuse and the benefits of decreasing or stopping use. The Preparation stage is addressed by helping the client strengthen their

commitment to change. This can include a list of treatment options and helping the client plan seeking the treatment that is best for him. Action requires helping the client execute an action plan and develop skills necessary to maintain the behavior change. Clients' feelings and experiences should be acknowledged as a normal part of recovery. Finally, the Maintenance stage requires assistance with relapse prevention, as well as evaluation of present actions.

Clients struggling with sexual dysfunction that has co-occurred with chemical dependency often have improved outcomes with brief intervention approaches. Miller and Sanchez (1994) have identified six elements critical to brief intervention to changes substance abuse behavior. The acronym FRAMES summarizes these active ingredients that have been combined in different ways and tested in diverse settings and cultural contexts. The FRAMES elements are:

- Feedback is given to the individual about personal risk or impairment.
- Responsibility for change is placed on the participant
- Advice to change is given by the provider.
- Menu of alternative self-help or treatment options is offered to the participant.
- Empathic style is used in counseling
- Self-efficacy or optimistic empowerment is engendered in the participant.

Early behavioral theories of substance abuse were nonmediational in nature (Donovan and Marlatt, 1993). They focused on overt, observable behaviors and it was felt that understanding the antecedents and reinforcement contingencies of such behaviors was sufficient to explain behavior and modify it. Over time, these behavioral theories began

to incorporate cognitive factors, and more recent models are mediational in nature: a greater role is attributed to the interaction among a variety of individual variables such as beliefs, values, perceptions, expectations, and attributional processes in mediating the development and continuation of substance abuse disorders (Abrams and Niaura 1987; Mackay and Donovan, 1991; Marlatt et.al. 1988; Marlatt and Donovan 1981).

A broad range of cognitions is included in cognitive-behavioral theory, including attributions (an individuals' explanation of why an event occurred); appraisals (an individual's appraisal of stressful situations and his ability to cope with the demands of these situations); self-efficacy expectations (an individual's beliefs about his ability to successfully execute an appropriate response to cope with a given situation); and substance-related expectations (substance use being reinforced by the positive effects of the substance taken as well as a set of cognitive expectations about the anticipated effects on feelings and behavior).

The application of cognitive-behavioral approaches to substance abuse disorders postulates that low levels of self-efficacy are related to substance use and increased likelihood of relapse after having achieved abstinence (Marlatt and Gordon 1985; Gorski and Miller 1986).

The cognitive-behavioral model assumes that substance abusers are deficient in coping skills, choose not to use those they have, or are inhibited from doing so. SAMHSA Tip 34 describes it this way: "it...assumes that over the course of time, substance abusers develop a particular set of *effect expectancies* based on their observations of peers and significant others abusing substances to try to cope with difficult situations, and through their own experiences of the positive effects of

substances. They have come to believe that substances have positive benefits that are more immediate and prominent than their negative consequences. They also come to rely on substances as a means of trying to cope with these situations.” When confronted by situations in which substance use has enhanced the individual’s ability to cope with a situation, unless other skills have been developed, the individual is likely to use the substance[s] again.

Carroll (1998) has outlined the key ingredients in distinguishing cognitive behavioral therapy from other therapies. These include a 1) functional analysis of substance abuse; 2) individualized training in recognizing and coping with craving, managing thoughts about substance abuse, problem solving, planning for emergencies, recognizing seemingly irrelevant decisions, and using refusal skills; 3) an examination of the client’s cognitive processes related to substance abuse; 4) the identification and debriefing of past and future high-risk situations; 5) the encouragement and review of extra-session implementation of skills; and 6) the practice of skills within sessions.

Another approach useful in treatment individuals with methamphetamine and sexual therapy are brief strategic/interactional therapies. They attempt to identify the client’s strengths and actively create personal and environmental situations where success can be achieved. The focus is on the individual’s strengths rather than on pathology, the relationship to the therapist is essential and interventions are based on client self-determination with the community serving as a resource rather than an obstacle (Juhnke and Coker 1997; Miller and Berg 1991; Ratner and Yandoli 1996; Watzlawick et.al. 1967).

Most of these models stem in part from the work of Milton Erikson who coined the term *strategic therapy* to describe an approach in which the therapist takes responsibility for finding new and effective strategies to help clients in distress. Haley, Weakland, and other theorists of the Mental Research Institute (MRI) consulted Erikson as they expanded this approach. Steve De Shazer and his colleagues shifted the focus of treatment from problems to solutions, calling their modality *solution-focused therapy*.” This is a form of interactional therapy, which is based on the assumption that problems can best be understood by examining clients’ interactions with others and their resulting problems. Strategic therapy does not focus on the root causes of the client’s problems but instead tries to increase competency and develop problem-solving skills that will help the client in their interactions with others.

One technique of solution-focused therapy is to focus on the exceptions to the client’s problems (e.g. when the client was substance free). The purpose is to help the client understand that he can maintain sobriety and has, in fact, done so in the past. Exceptions to presenting problems may fall into two categories: deliberate exceptions and random exceptions.

The primary strength of this approach is that it shifts focus from the client’s weaknesses to his strengths. The therapist’s task is to help the client identify, recognize, and use these strengths to make the changes the client sees as beneficial. The therapy is based on three primary theoretical assumptions:

- The therapy takes a constructivist view of reality, which asserts that reality is determined by individual perceptions in turn influenced by cultural, sociopolitical and psychological factors;

- The therapy stresses the importance of attribution of meaning. It is the meaning we attribute to situations that determines whether a problem exists. One goal of therapy is to understand the meaning the client attributes to events, his frame of reference.

The therapy focuses on human interactions and the problems that evolve from ineffective ways of coping with situations. By understanding the role of social interaction in the development, maintenance, and change process for any problem, the therapist can better support the client through the change process.

Group therapy is another treatment modality that should be mentioned in the context of methamphetamine abuse and sexual issues. The curative factors associated with group psychotherapy as defined by Yalom (1975) address such issues as instillation of hope, the universality experienced by group members as they see themselves in others, the opportunity to develop insight through relationships, and a variety of other concerns specific to the support of substance-abusing clients and their recovery. IN *Treatment Intervention Protocol 8, Intensive Outpatient Treatment for Alcohol and Other Drug Abuse*, the Center for Substance Abuse Treatment (SAMHSA) cites group therapy as the substance abuse treatment modality of choice because it gives participants the opportunity to see the progression of abuse and dependency in themselves and in others, and gives them an opportunity to experience their success and the success of other group members in an atmosphere of support and hopefulness. The effectiveness of the group modality is particularly useful with gay men for socialization and exploring their sexual attitudes and behavior.

There are several kinds of groups. One kind is a process-sensitive group that examines the unconscious processes of the group as a whole and utilizes these energies to help individuals see themselves more clearly. A second approach, more often used in substance abuse treatment, is the directive approach. This approach offers structured goals and therapist-directed interventions to enable individuals to change in desired ways. The directive approach addresses specific agenda items in a logical order with greater emphasis on content as the primary source of effective change. It does not focus on the cohesive power of the group as the primary curative factor, as is the case in process-sensitive group. One example of the directive approach is known as Rational Behavioral Training (RBT), developed by Maultsby and Ellis (Maultsby 1976). This cognitive-behavioral therapy takes place over 13 weeks, one session per week. It uses fundamental cognitive-behavioral interventions and the clients' growing awareness of their ability to control their own belief systems and self-talk and thus control their affective states. They share homework assignments and bring real life situations into the group for exploration and examination. There is little effort to direct energy to relationships within the room, rather RBT provides for a short-term intervention to develop the client's skill in controlling emotions. "The inference is that individuals who experience their emotional world as controllable will no longer need to use substances to exert 'external' control" (TIP 34, 159).

A final therapeutic approach that has been alluded to in some of the approaches described above, is the strengths-based approach. This promotes active client participation as well as client responsibility. The interaction with the therapist is both collaborative and respectful, incorporating the desires, interests, aspirations and

experiences of the client and placing the worker in a partnership that encourages utilization of naturally occurring resources. It validates the client's experience, and is pragmatic and anticipatory.

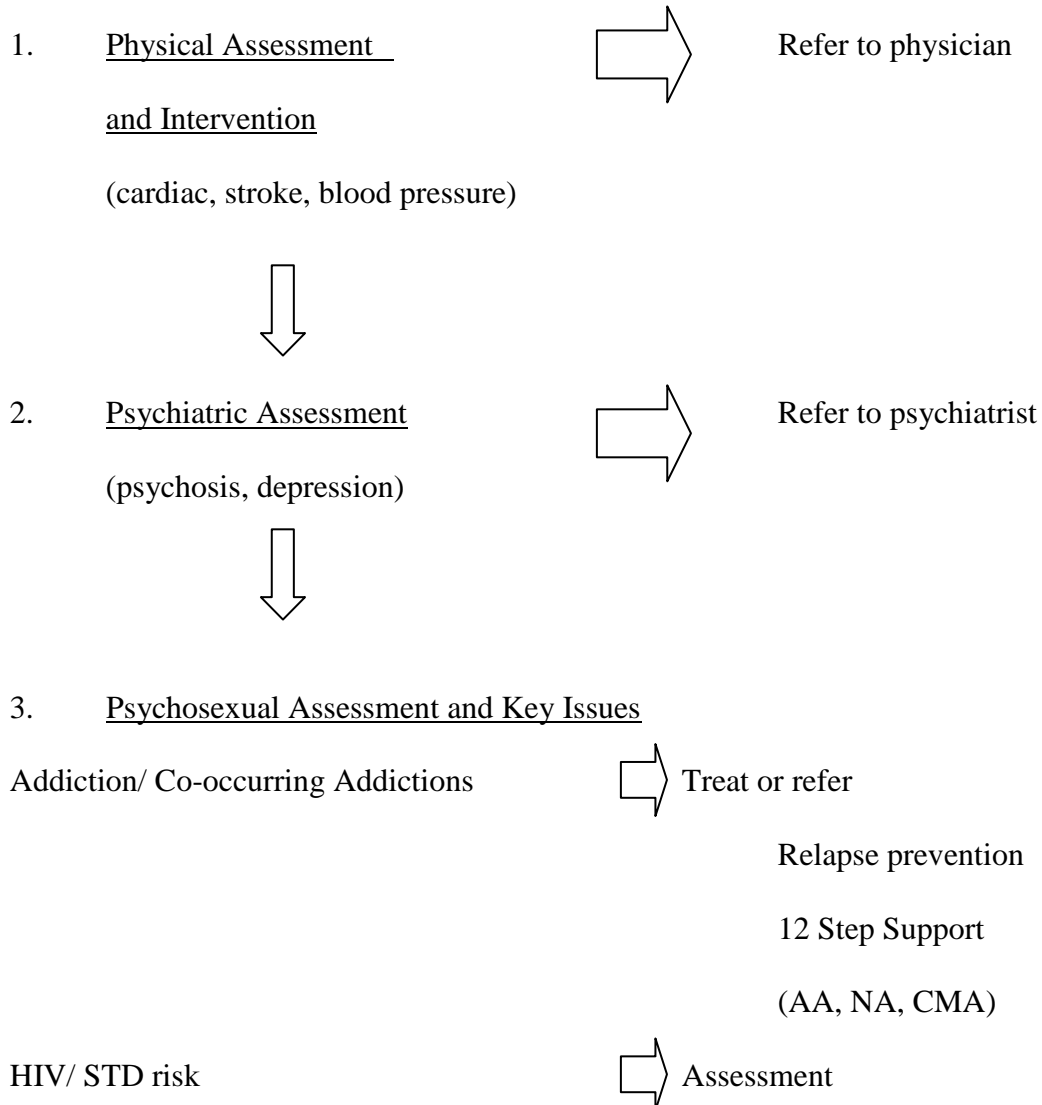
The strengths-based approach has been documented for its belief in the worth and dignity of clients and the empowerment of vulnerable populations (Weil and Karls, 1985; Kisthardt 1997). The strengths-based approach has also been documented with effective results for clients with substance abuse diagnoses (Rapp et.al. 1994) and mental health diagnoses (Rapp and Kisthardt 1996). The strengths-based philosophy is the core value in Brief Solution-Focused Therapy developed by Steven de Shazer and Insoo Kim Berg. They note that clients bring essential information to the therapy process that cannot be known by the clinician.

The social context of sexual behavior and use of mood-altering drugs is critical in developing effective therapies. A sociocultural perspective understanding drug use and patterns among GLBT populations necessitates analysis of the meanings and definitions of alcohol and drugs used by persons within the culture. "How those in power structure the roles of gay people and alcoholics, how they define problem drinking and alcoholism, and how gay people in turn respond to these structures and definitions are the issues emphasized by this perspective." (Nardi, 1982).

Sex therapy can play a critical role not only in improving the sex lives of men and women in recovery from mood altering chemicals, but can bring a critical level of acceptance into the clinical processes of prevention and intervention where all stakeholders must speak freely and comfortably about sex, drugs, and HIV and other sexually-transmitted diseases.

Based on the issues identified in the words of gay men, and in the clinical experiences of the authors, as well as a review of the literature for effective principles and therapeutic methods, the following is a brief outline for the front line clinician who will, if they haven't already, face clients suffering from methamphetamine, sexual dysfunction, and the resulting devastation in their lives.

PROPOSED HEIRARCHY OF NEEDS FOR INTERVENTIONS WITH PERSONS
ABUSING METHAMPHETAMINE



		Referral if necessary
		Education
Sex Therapy	⇒	Issues of technique
		Issues of desire
		Erectile dysfunction
Gay identity (and internalized homophobia)	⇒	Self-esteem
		Couples issues
		Trust and intimacy issues
		HIV and self-image
		Energy and stamina
		Shame and guilt

CHAPTER 6: CONCLUSIONS

There is sufficient evidence to substantiate the fact that methamphetamine use has increased dramatically in the United States in the past several years. Across the South Florida region, it is an emerging drug epidemic. This growing problem has been confirmed in *Epidemiological Trends in Drug Abuse, South Florida, 2003*. An increasing number of methamphetamine laboratories are being discovered by law enforcement agencies across the nation. In fiscal year 2002, the DEA reports there were one hundred and twenty seven methamphetamine laboratories seized in Florida, compared to twenty-eight seized in all of fiscal year 2001. Even more alarming, there have been one hundred methamphetamine laboratories seized throughout the state of Florida in only the first two quarters of fiscal year 2003. In 2002, the Emergency Department at Broward General Medical Center reported the number of methamphetamine cases more than double from the previous year. This is even more dramatic in light of the fact that many emergency rooms do not routinely discriminate methamphetamine from amphetamines in their laboratory panels.

Once very popular amongst some of the gay communities in the United States and among bikers and truckers to stay awake during long journeys, it is now spreading fast into the mainstream culture. Methamphetamine use has emerged and is still emerging as a serious problem in the workplace. Methamphetamine use among workers has skyrocketed. New records indicate that among employers who screen job applicants and workers for drugs, the number testing positive for methamphetamine surged sixty eight percent last year. According to Quest Diagnostics Inc., the country's largest testing laboratory, the increases that we are seeing are the largest increases of any drug or drug

class for as long as they have been tracking the individual categories of drug tests.

Methamphetamine production and usage has its roots in southern California and for a long period was most prevalent in western states. DEA statistics and Quest testing data confirm that it has spread to the middle and eastern portions of the country. Quest found the number of workers testing positive for the drug has increased sharply in southeastern states such as Georgia, Alabama and Florida. Last year, the Drug Enforcement Administration shut down the largest number of small methamphetamine labs in Missouri, with states such as Tennessee and Arkansas also hotbeds of production.

One of the biggest problems related to methamphetamine abuse is its strong link to risky sex. The two issues are intertwined. Some users shoot methamphetamine, and this injecting drug behavior greatly increases the likelihood of HIV and hepatitis transmission. When users get high, they want to have sex without any precautions. Methamphetamine keeps the high going for days and, even if the user is wearing a condom, after several continuous hours of sex the condom eventually wears and rips. When high on meth, many of the users get into rougher sex and find themselves in sexual scenarios far outside what they would normally do. Once the user gets into the true addictive stage, the sexual experience must be bigger than, and more intense than, the previous one. One of the biggest risks is from the increased chance of HIV infection through unprotected and uninhibited sex while under the influence of methamphetamine. The liberating nature of the drug means that safer sex practices are often discarded while sexual activity increases greatly. There are current reports that methamphetamine has been a factor in almost half of the new AIDS cases.

Methamphetamine addiction is one of the hardest to break. As methamphetamine becomes a burgeoning addiction throughout the United States, more and more research indicates it could be the toughest drug to kick. Addicts face a one-two punch when they are trying to recover. With methamphetamine use and sex, one often discovers that the addictions are fused. Addicts will not use methamphetamine without sex or have sex without methamphetamine. The two activities become a single package.

This has resulted in considerable relapse risk for those persons trying to break the grip of methamphetamine and other drugs. Many vow to have no sex because of its strong association with their drug use. Once biological urges inevitably re-emerge, the recovering person finds that sexual thoughts, feelings, and situations all act as triggers for the drug.

Treatment has become so specialized that clinicians often lack knowledge and skill for addressing both addiction and sexual problems. In seeking to identify principles and modalities that are effective in helping such individuals, the authors have identified several themes.

The clinician must approach the client with a broad psychosocial approach. Clients may present with an initial crisis related to drugs or sexual behavior, but often have a broad spectrum of issues, including HIV-related problems, depression, anxiety, relationship problems, and other compulsive behaviors.

Clients should be encouraged to become empowered in seeking solutions. In many cases, such clients will need more than information. They will require assistance, provided in the context of self-respect and dignity, with the discovery of solutions, coping skills, and support as they begin to apply these skills in their lives. Many clients

initially will not be able to prioritize the many problems in their lives. Unlike other addictive drugs, methamphetamine appears to bring people to the bottom so fast that the normal systemic impact doesn't occur. That is, the swiftness with which money, jobs, housing, lovers, and even health is lost, seems to take everyone by surprise.

Front line providers must be capable of identifying methamphetamine problems which may look like something else. Clients may have physical damage, such as cardiac problems, related to methamphetamine that is masked or hidden. They will require a thorough physical examination. They may also have unusual, almost Parkinsonian, movement disorders. Clients may also present with psychotic features, such as paranoia or other disturbed thought processes. They will require a psychiatric evaluation. Like other addictions, denial will be in place.

Several themes have emerged regarding psychotherapy and this population. Issues related to sexual identity and sexual function that were present before the onset of drug use will re-emerge with abstinence, and are often exacerbated. The clinician must be able to discuss a broad range of sexual practices frankly and without judgment.

Clients will also bring with them issues related to self esteem, trust, intimacy, shame and guilt. Many will be long term HIV-survivors who seemed to have found a temporary remedy for their self-image and low energy in methamphetamine. Many will be verbalize feelings of hopelessness and seek a return to pre-HIV *normalcy* in terms of their looks, their stamina, and their sexual energy.

Finally, many will have experienced a ravaging of their partner relationships, either through both parties using the drug, or their drug use falling out of synch. One partner may want to continue to use, while the other attempts to stop. Many will describe

changes in their partner due to methamphetamine. These changes occur at the level of sexual expression between the partners, and include the observation that their partner has become more selfish and focused on duration, numbers of partners, or more extreme sexual acts. There will often be a feeling that their lover has disappeared and they themselves have in turn become objectified. Any expression of caring, intimacy, or partner satisfaction appears not able to co-exist with methamphetamine in the relationship.

The *speed* with which methamphetamine has overtaken communities in the United States has overwhelmed the knowledge and skills of front-line providers. As noted above, the face of this epidemic is continually and rapidly changing. More research is needed to evaluate epidemiological trends. For example, medical and law enforcement professionals agree that in South Florida the drug is *crossing over* from the gay population to the straight population. More youth are being caught with the drug, and heterosexual clubs in Miami Beach are beginning to run the same kind of sexually-explicit meth-oriented advertisements run by gay clubs just several years ago.

More information is needed on best practices for work with this population. Because of the complexity of the issue, work groups such as the South Florida Methamphetamine Task Force, of which the authors are members, is vital to exchanging information among professionals. When this task force began, almost eighteen months ago, law enforcement officers at the table visibly winced when clinicians described their crystal-using clients and sexual behaviors such as bare backing, fisting, and *crystal dick*. Treatment professionals were uncomfortable talking about their clients' drug problems with law enforcement personnel in the room. The officers and the clinicians got over it,

and an important dialogue has developed where information and ideas about prevention and intervention are exchanged. This is a clinical emergency still largely under the radar. Information, action, publicity, and an open exchange of ideas are vital.

APPENDICES

APPENDIX 1: CLASSIFICATION OF AMPHETAMINES

This appendix offers three classification systems for amphetamines.

1. CLASSIFICATION OF AMPETHAMINE AND AMPHETAMINE-LIKE

DRUGS by Maurice H. Servers

Compounds Containing Amphetamine as One Ingredient

Amphaplex (Palmedico)

Amvicel (Stuart)

Amvicel-X (10) (Stuart)

Amvicel X (15) (Stuart)

Biphetamine (Strasenburgh)

Biphetamine-T (Strasenburgh)

Obetrol (Obetrol)

Obocell (Neisler)

Quadimine (Tutag)

Compounds Containing Amphetamine Phosphate, Monobasic, Racemic

Strascogesic (Strasenburgh)

Compounds Containing Amphetamine Sulfate

Benzedrine Sulfate (Smith, Kline & French)

Dex-Sed-10 (Carrtone)

Dex-Sed-15 (Carrtone)

Edrisal (Smith, Kline & French)

Nobese (Tilden-Yates)

Phantos Preparations (Cooper, Tinsley)

Edrisal with Codeine (Smith, Kline & French)

Compounds Containing Dextro-Amphetamine Phosphate

Obocell (Neisler)

Compounds Containing Carboxyphen

Bontril (Carrnick)

Brontril Tmed Tables (Carrnick)

Compounds Containing Dextro-Amphetamine Hydrochloride

Bamadex Sequels (Lederle)

Curban (Pasadena Research)
Gevrestin (Lederly)
Amodex Timed-Capsules (Fellows-Testagar)
Pymadex Timed Capsules (Fellows-Testagar)

Compounds Containing Dextro-Amphetamine-Sulfate

Adder (Shire)
Amphaplex (Palmedico)
Amplus Improved (Roerig)
Amsustain (Key Pharmaceuticals)
Amvicel (Stuart)
Amvicel-X (10) (Stuart)
Amvicel-X (15) (Stuart)
Appetrol (Wallace)
Appetrol-SR (Wallace)
Daprisal (Smith, Kline & French)
Dexedrine Sulfate (Smith, Kline & French)
Eskatrol Spansule Capsules (Smith, Kline & French)
Theptine (Smith, Kline & French)
Thora-Dex (Smith, Kline & French)
Vi-Dexemine (Smith, Kline & French)
Vio-Dex Timelets (Rowell)
Zamitam (Marion)
Zamitol (Marion)

Compounds Containing Dextro-Amphetamine Tannate

Nalertan Tabules (Neisler)
Synatan (Neisler)

Compounds Containing Methamphetamine Hydrochloride

Ambar (Robins)
Amerital (Merit)
Amphaplex (Palmedico)
Carrtussin Syrup (Carrtone)
Desbutal (Abbott)
Desbutal Gradumet (Abbott)
Desoxyn (Abbott)
Gerilets Filmtab (Abbott)
Meditussin (Palmedico)
Methedrine (Burroughs-Wellcome & Co.)
Obedrin (Massengill)
Obestat Ty-Med (Lemmon)
Opidice (Boyle)
Secodrin (Premo)
Spn-RD (Metro Med)

Compounds Containing Methamphetamine Preparations

Ampheplex (Palmedico)

Obetrol (Obetrol)

Span-RD (Metro Med)

Drugs with Amphetamine-Like Action

Meratran (pipradrol)

Ritalin (methylphenidate)

Tenuate (diethylpropion)

Preludin (phenmetrazine)

2. Substance Abuse and Mental Health Services Administration Drugs of Abuse

Stimulatory Hallucinogenics (former psychotomimetics)

These drugs produce a mixture of psychomotor stimulant and hallucinogenic effects, depending on dose and other factors; no therapeutic uses, except phencyclidine as a veterinary anesthetic.

Examples: MDMA (ecstasy), phencyclidine (PCP), ketamine

Psychomotor Stimulants

These drugs stimulate psychological and sensory-motor functioning; are used therapeutically to treat ADHD and narcolepsy, sometimes as an appetite suppressant, occasionally ant fatigue, formerly for asthma and for sinus decongestion.

Examples: amphetamine, methamphetamine, cocaine, methylphenidate

Other Stimulants

These drugs are similar to psychomotor stimulants but with much less efficacy; various therapeutic effects including caffeine compounded with aspirin in some OTC pain

relievers, ephedrine in OTC asthma medicines, pseudoephedrine in OTC sinus decongestants and OTC appetite suppressants.

Examples: caffeine, nicotine, ephedrine, pseudoephedrine

3. Pompidou Group Coding System

The Pompidou Group of the Council of Europe has suggested a classification of Drugs of Abuse. The section on *Amphetamines* is useful to conceptualize how the various amphetamines are related or not.

The three digit coding has a hierarchical logic as follows:

First digit: broad drug-type group

Second digit: drug-type subgroup

Third digit: specific drug (see below)

200. Central Nervous System Stimulants

Cocaine, Amphetamine, and other Stimulants

200 unspecified stimulant

cocaine a bitter crystalline alkaloid $C_{17}H_{21}NO_4$
210 unspecified cocaine (a bitter crystalline alkaloid $C_{17}H_{21}NO_4$)
211 cocaine hydrochloride
212 freebase cocaine (includes *crack*)
213 other (specified) form of cocaine (e.g. cocoa paste)

amphetamines a compound $C_9H_{13}N$ or one of its derivatives [such as dextroamphetamine (amphetamine sulfate) or methamphetamine (an amine $C_{10}H_{15}N$) frequently abused as a stimulant of the central nervous system

220 unspecified amphetamine
221 amphetamine sulphate
222 dexamphetamine

- 223 methamphetamine (also known as Methedrine, methylamphetamine or desoxyephedrine)
224 methamphetamine (smokable – *ice*)
228 other (specified) form of amphetamine

other central nervous system stimulants

- 230 specified other stimulants (not cocaine/amphetamine)
231 methylphenidate (a mild stimulant $C_{14}H_{19}NO_2$) i.e.. Ritalin,
Rubifen
232 phenmetrazine (a sympathomimetic stimulant $C_{11}H_{15}NO$) i.e. Preludin,
Filon
233 ephedrine (a crystalline alkaloid $C_{10}H_{15}NO$), norephedrine
pseudoephedrine

MDMA

- 240 MDMA (ecstasy) $C_{11}H_{15}NO_2$
299 other (specified) central nervous system stimulant

APPENDIX 2: QUESTIONNAIRE

GAY MEN, SEX, AND CRYSTAL SURVEY

David Fawcett, LCSW

(Date field automatically populated)

1. How did you find out about this survey? (open text field)
2. How old are you? (check box)
 - 18-21
 - 21-25
 - 26-35
 - 36-45
 - 46-55
 - 56-65
 - 66-75
 - 76+
3. In what state do you live? (open text field)
4. In what city do you live? (open text field)
5. Are you male or female? (check box)
6. What is your sexual orientation? (check box – forces only one)
 - Exclusively Gay
 - Mostly Gay
 - Bisexual
 - Mostly Heterosexual
 - Exclusively Heterosexual
7. Are you HIV positive? (check box YES or NO)
8. If HIV positive, how long? (check box – forces only one)

< 6 months

6-12 months

1-5 years

6-10 years

11-15 years

16-20 years

20+ years

9. Have you every used crystal meth? (check box YES or NO)
10. Do you use crystal meth now? (check box YES or NO)
11. If you use now, how would you describe your use? (check box)
 - Rare (less than once a month)
 - Sometimes (once in a while - weeks pass between uses)
 - Moderate amounts (most weekends)
 - More frequent amounts (weekends and some weekdays)
 - Too much
12. What is your preferred method?
 - Snort (check box)
 - Slam (check box)
 - Bump (check box)
 - Smoke (check box)
 - Other, please describe (open text field)
13. Do you think you are using crystal too much? (YES or NO)

14. Do your friends think you are using crystal too much? (YES or NO)
15. Have you every tried to quit using crystal? (YES or NO)
How? And what happened? (open text field)
16. Has use of crystal changed your sex life? (YES or NO)
If yes, how? (open text field)
17. Has crystal affected your primary partner relationship (s)? (YES or NO)
If yes, how? (open text field)
18. Please rate how crystal has affected the following:
(Likert scale: Very Little; Little; Moderately; Much; Very Much)

Body

Emotions

Mind

Passion

Intimacy

Commitment
19. What would make sex WITHOUT crystal more satisfying for you? (open field text)

That's it! This data will be applied in therapeutic counseling for gay men. Thank you so much for your help. If you have any questions you can contact me directly at davidinlauderdale@yahoo.com. If you have other comments please make them below.

APPENDIX 3: METHODOLOGY

In order to obtain qualitative accounts of the impact of methamphetamine on the sexual behavior and primary partner relationships of gay men, a convenience survey was posted on the internet located at the site www.surveymonkey.com. A link to the survey was posted in several gay-oriented chatrooms and bulletin boards in January, 2004, and closed in June 2004 (a copy of the survey can be found in Appendix B). The questionnaire asked about location, age, sexual orientation, HIV status, methamphetamine use (including attempts to stop or control use), impact of the drug on sexual behavior, and on their primary partner relationship. Respondents were also asked how sex without methamphetamine could be improved for them. When the survey was closed, 368 responses from around the world had been collected.

Some data fields on the survey were open text fields, that is, respondents could type in whatever responses they chose. This was important to capture subjective experiences and personal interpretation of experiences. Other questions such as age, method of drug administration, and HIV status were more conducive to radio-button responses, which the respondent was able to click with the mouse.

The surveys were anonymous although an IP address for each respondent was recorded automatically. An email contact was given should individuals have questions or want referrals for assistance. Several people did make contact with specific questions about resources in their area or to further investigate who was collecting the data and how it would be used.

Notification of the survey and an invitation to complete the survey was posted on general gay men's health bulletin boards on sites such as Gay.com and Planteout.com.

Other websites and Yahoo groups that have been frequently mentioned by clients were included as well, such as *Circuitlife*. Because use of methamphetamine appears to be expanding beyond the traditional gay “circuit party” social networks, an attempt was made to get responses representative of other gay subcultures as well (such as bears, muscle, and BDSM groups) by posting notifications on several diverse groups.

APPENDIX 4: CLINICAL TOXICITY OF METHAMPHETAMINE

(From Derlet and Albertson, 2004)

History: Clinical toxicity of amphetamines and related compounds primarily affect the cardiovascular and central nervous systems. Patients may present with pulmonary systems if the drugs are inhaled or smoked.

I. Presenting Symptoms

A. Cardiovascular

1. Chest pain
2. Palpitations

B. Central nervous system

1. Agitation, anxiety, and hallucinations are typical complaints.
2. Some patients who have used methamphetamine present unconscious to the Emergency Department (ED). In these persons, lack of responsiveness may be partially caused by use of other drugs (i.e., opioids).
3. Other patients may be unresponsive because of the direct effects of intravenous methamphetamine use or secondary to amphetamine-induced seizures.
4. The initial feeling of physical and mental enhancement following amphetamine use can quickly deteriorate with high doses or chronic use, resulting in emotional lability, confusion, paranoia, and hallucinations.
5. Altered mental status was found in 57% of a series of 127 amphetamine-toxic patients who presented to an ED with agitation, suicidal ideation, hallucinations, delusions, confusion, and despondent affect. These are the most common major signs and symptoms of amphetamine abuse. Patients challenged with large doses of intravenous methamphetamine developed drug-induced psychosis if they were dependent on amphetamine but not if they were naive.

6. Methamphetamine can induce an acute toxic psychosis in previously healthy persons and precipitate a psychotic episode in those with psychiatric illness.
7. Methamphetamine-induced seizures have been viewed as isolated events or associated with hyperthermia, coma, muscle hyperactivity, metabolic acidosis, secondary rhabdomyolysis, renal failure, and shock.

C. Respiratory

1. Dyspnea
2. Wheezing

D. Other systems

1. Increases and decreases in sexual desire and activity have been reported with amphetamine use.
2. Methamphetamine use and/or abuse during pregnancy can be fatal to the mother and result in spontaneous abortion or teratogenesis to the fetus. Methamphetamine has been shown to cause placental vasoconstriction and interfere with placental monoamine transporters.
3. Although not formally studied, the most common dermatological manifestations in patients who abuse amphetamine-related compounds probably are related to self-induced skin picking, intravenous needles, or burns.
4. A case of lichenoid drug eruption has been reported with the use of methamphetamine.

II. Physical Complications

A. Cardiovascular

1. Tachycardia and hypertension may be observed.
2. Atrial and ventricular arrhythmias and myocardial ischemia have been noted.
3. Chest pain, associated with cardiac ischemia, following methamphetamine use may occur. Patients are at risk for cardiac ischemia because of accelerated atherosclerosis from chronic drug

use and other less well-understood mechanisms. Concern that thrombus formation may be contributing to amphetamine-related myocardial infarction has generated at least one case report on the use of thrombolytics, in addition to the use of nitrates and analgesics, in patients with chronic drug use.

4. Significant hypotension with bradycardia and metabolic acidosis has been observed in massive amphetamine overdoses.
5. Suppression of vasomotor outflow leading to severe orthostatic hypotension because of amphetamine intoxication also has been reported. This suggests that multiple mechanisms contribute to the development of circulatory collapse with amphetamine abuse.
6. Acute and chronic cardiomyopathy is thought to be secondary to direct amphetamine cardiac toxicity and indirectly from amphetamine-induced hypertension, necrosis, and ischemia. Although most reports of cardiomyopathy have implicated oral and intravenous amphetamines as causes, smoking of methamphetamine also has been documented as a cause.
7. Necrotizing angiitis with arterial aneurysms and sacculations have been observed in the kidney, liver, pancreas, and small bowel of methamphetamine drug abusers.
8. Similarly, acute aortic dissections and arterial aneurysms have been associated with methamphetamine abuse.
9. With the illicit use of any intravenous drug, bacterial or fungal endocarditis can lead to abnormal cardiac valves, secondary dilated cardiomyopathy, septic embolism, and mycotic aneurysm. Recently, some individuals orally taking fenfluramine and phentermine for appetite suppression have been found to have valvular abnormalities leading to mitral and aortic regurgitation.

B. Central nervous system

1. Seizures and psychosis may occur.
2. Acute and chronic amphetamine exposures also have been associated with choreoathetoid movement disorders independent of Huntington disease.
3. Other CNS disorders induced by amphetamines include cerebrovascular accidents caused by hemorrhage or vasospasm, cerebral edema, and cerebral vasculitis. Coma, clonus, and

respiratory failure are characterized in a recent report of massive dexfenfluramine overdose.

4. Spontaneous cerebral hemorrhaging has been reported in patients using amphetamines, as well as in patients with preexisting arteriovenous malformations and with amphetamine-induced cerebral vasculitis.
5. Cerebral artery spasm and occlusion, leading to ischemic strokes and transient cortical blindness, have been noted following methamphetamine use.

C. Respiratory

1. Barotrauma, including pneumomediastinum, pneumothorax, and pneumopericardium
2. Acute noncardiogenic pulmonary edema
3. Pulmonary hypertension

D. Renal and hepatic

1. Renal failure associated with amphetamines has been related to hypoxemia, rhabdomyolysis, necrotizing angiitis, and cardiovascular shock with subsequent acute tubular necrosis.
2. Renal necrotizing angiitis, noted in some cases of renal failure, has been observed in the presence of hepatitis B serum antigen and usually is found in those who use intravenous amphetamines.
3. In one case report, amphetamine-induced acute interstitial nephritis was thought to be the cause of renal failure.
4. Hepatocellular damage has been reported with amphetamine, malondialdehyde (MDA), and 3,4-methylelenedioxy-methamphetamine (MDMA) after acute and chronic abuse. Direct toxic effects (eg, hypotension, hepatotoxic, contaminants, hepatic vasoconstriction, lipid peroxidation, occult viral causes, necrotizing angiitis) have been postulated as mechanisms for amphetamine-induced hepatocellular toxicity.
5. Abuse of methamphetamine also has been associated with the formation of giant GI ulcers and ischemic colitis.

III. Causes

A. Illicit production of methamphetamine.

1. Methamphetamine is relatively easy to synthesize, and illicit production occurs in home kitchens, workshops, recreational vehicles, and rural cabins.
2. Methamphetamine is a derivative of Phenylethylamine. The substances differ structurally in that a methyl group attaches to the terminal nitrogen to form methamphetamine.
3. The federal government and some states have enacted laws decreasing the availability of necessary precursor chemicals. Many of these agents still can be obtained in neighboring states or countries.

B. Synthesis

1. A common method of synthesis begins with *L*-ephedrine, which is reduced to methamphetamine using hydriodic acid and red phosphorus.
2. Alternative approaches include using a different acid, a different catalyst, or a substituted ephedrine (eg, chloroephedrine, methylephedrine).
3. The methamphetamine produced by ephedrine reduction is a lipid-soluble pure base form, which is fairly volatile and can evaporate if left exposed to room air temperature. This product is converted to the water-soluble form, methamphetamine hydrochloride (HCl) salt.
4. Illicitly synthesized methamphetamine may be contaminated by nonstimulant organic or inorganic impurities. Poisoning from heavy metals, such as lead and mercury, or from solvents used in the synthesis process have been reported. Exposures to carcinogenic materials have been noted.
5. Street methamphetamine may be mixed with many drugs, including cocaine. Studies show that 8-20% of street-available stimulants contain both drugs. In a report on cocaine intoxication, 7% of patients sought medical help because of concurrent use of cocaine and amphetamines.
6. Fatalities related to amphetamine use have been associated with assaults, suicides, homicides, accidents, driving impairment, and maternal-fetal and infant exposures

7. In 1987, approximately one eighth of all homicides in San Diego County involved methamphetamine.
8. In a recent study of drug abuse and alcohol consumption related to motor vehicle accidents in Belgium, amphetamine was the most commonly found drug other than alcohol. A study of 28 drivers arrested or killed in traffic accidents with positive blood samples for methamphetamine showed that typical driving behaviors include aggressive and erratic driving with high-speed collisions.
9. Making ice, the smokable form of methamphetamine, from standard quality methamphetamine HCl is essentially a purification process. Methamphetamine HCl is added slowly to water that has been heated 80-100°C until a supersaturated solution is obtained. When the slurry is cooled, pure HCl salt of methamphetamine (ice) precipitates. Methamphetamine HCl, unlike cocaine HCl, is volatile and can be smoked. Other solvents, such as isopropanol, have been used in place of water to speed the process. Uncontrolled variations of this process can result in unreliable removal or addition of impurities. The physical characteristics of the final product depend on the quality and type of reagents used and on contaminants that may have been introduced. The lack of significant further processing of methamphetamine HCl has resulted in increased availability and popularity of smoking the drug.
10. One reason for the popularity of smoked methamphetamine is the immediate clinical euphoria that results from the rapid absorption in the lungs and deposition in the brain.
11. Smoking methamphetamine HCl powder, crystals, or ice occurs first by placing the substance into a piece of aluminum foil that has been molded into the shape of a bowl, a glass pipe, or a modified light bulb and heating it over the flame of a cigarette lighter or torch. Then, the volatile methamphetamine fumes are inhaled through a straw or pipe.

APPENDIX 5: METHAMPHETAMINE TIMELINE

Jan 18, 1887	Amphetamine was first synthesized by German chemist L. Edeleano and originally named phenylsopropylamine. It was then largely forgotten for the next 40 years
1919	Methamphetamine is first synthesized by Japanese scientists A. Ogata.
1932	Methamphetamine is first marketed as Benzedrine by Smith, Kline & French, in an over-the-counter inhaler to treat congestion.
1935	Amphetamine's stimulant effect is first recognized and physicians successfully use it to treat narcolepsy.
1937	Amphetamine is first approved by the American Medical Association for sale in tablet form. It is sold by prescription for use in the treatment of narcolepsy and ADHD (attention deficit hyperactivity disorder).
World War II	Both Amphetamine and Methamphetamine are widely distributed to soldiers to help improve performance. In Germany the drug was distributed under the name <i>Pervitin</i> . This led to addiction problems in Japan after the war.
1940	Methamphetamine is marketed under the trade name Methedrine by Burroughs Wellcome.
1941	Dextro-amphetamine and methamphetamine become commonly available.
1950-1953	US dispenses amphetamine to troops in Korea.
1954	Height of the Japanese amphetamine epidemic. There are estimated to be over 2 million amphetamine users in a population of 88.5 million.
1959	First report of IV injection of contents from Benzedrine inhalers.
1963	Illicit speed production begins when the Attorney General of California request that injectable ampules be removed from the market.
1960s	Methamphetamine use rises in the US.
1970	Amphetamine becomes a Schedule II narcotic in the US with the passage of the "U.S. Drug Abuse Regulation and Control Act of 1970." This makes it illegal to possess without a prescription.
Oct. 27, 1970	The Comprehensive Drug Abuse Prevention and Control Act is passed. Part II of this is the Controlled Substance Act (CSA) which defines a scheduling system for drugs. It paces most of the known hallucinogens (LSD,

	psilocybin, psilocin, mescaline, peyote, cannabis, & MDA) in Schedule I. It places coca, cocaine, and injectable methamphetamine in Schedule II. Other amphetamines and stimulants, including non-injectable methamphetamine are placed in Schedule III.
Jul 7, 1971	Amphetamine and Methamphetamine (non-injectable) are moved from Schedule III to Schedule II.
Late 1980s	Smoked Methamphetamine becomes more popular.
1990s	Spread from Hawaii to San Diego and eastward through motorcycle gangs. Use primarily heterosexual.
Mid 1990s	Methamphetamine becomes common at gay dance clubs in urban centers in California.
1996	US Congress passes the Methamphetamine Control Act establishing new controls over key ingredients and strengthening criminal penalties for possession, distribution and manufacturing.
Late 1990s	South Florida becomes the central east coast point for use of methamphetamine among gay men.

Information from the Meth Vault available on website.

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