METHAMPHETAMINE USE AND HIV RISK

HIV transmission has been increasingly linked to methamphetamine use, and research suggests the drug may be the strongest factor in the seroconversion of people in some populations. The link to HIV risk may not exist for every methamphetamine-using client, but the findings raise a compelling question: Why is methamphetamine use, more than other substance use, tied to increased HIV risk? This issue of HIV Counselor PERSPECTIVES explores this question by looking at methamphetamine’s effects, populations at risk for HIV, and treatments that reduce HIV risk among people who use the drug.

Research Update

Methamphetamine is a stimulant. It is in the same class of drugs as amphetamine and cocaine, but is stronger, with longer lasting and more toxic effects.1 Also called meth, crystal, speed, Tina, and ice, methamphetamine comes in a range of forms and can be dissolved in liquid, snorted, smoked, injected into a vein (“slamming”), or inserted rectally (known as “booty bumping” or “keistering”).2,3,4 In the United States, the drug is most popular in the western part of the country.5

Methamphetamine has a high potential for chemical dependency and psychological addiction.5–7 Injecting or smoking the drug, which gives a user an intense “rush” or “flash” of pleasure that lasts for a few minutes before the onset of a longer high, increases the potential for addiction.2,5 In Los Angeles, methamphetamine sells for $25 to $50 per gram.7 Since a typical dose ranges from 5 to 100 milligrams,8 a single high costs a consumer as little as 10 cents. Dosage and effect, however, depend on a number of factors: the drug’s purity, the user’s tolerance, and the route of administration. For example, if smoked, the drug’s effects last from 8 hours to 24 hours,1 with the high lasting as long as six hours.8 In comparison, a high from smoking cocaine or crack lasts only 20 minutes to 30 minutes,1 costing far more per high. As a long-lasting, relatively inexpensive, and intensely pleasure-producing drug, methamphetamine has a higher potential for addiction than many other substances. Use of the drug has gained increasing attention as research data has shown a notable relationship between methamphetamine and HIV risk behaviors.

Physical and Psychological Effects

Methamphetamine has a number of compelling physical and psychological effects. Even in small doses, the drug increases wakefulness and physical activity, and decreases appetite. Smoking or injecting the drug produces the greatest rush, but even snorting or eating it stimulates a sense of euphoria (intense happiness) and well-being, confidence, and sexual excitement.1 Some people use methamphetamine for these pleasurable effects, to increase their productivity at work, or to improve mood in response to depression and decreased self-esteem.3,9,10

Published research about pre-existing depression and methamphetamine use is rare. However, a few studies suggest that some methamphetamine users may be “self-medicating”—that they may have begun to use in order to alleviate the symptoms of depression or other mental illness, and may continue to use for this reason or to counter the depression that commonly follows the drug’s high.9 A small New York study found that “chronic” users of the drug—those who

Inside PERSPECTIVES
1 Research Update
5 Implications for Counseling
7 Case Study
8 Test Yourself
8 Using PERSPECTIVES
had used methamphetamine more than 12 days over the prior three months—were more likely than less frequent users to state that they use to avoid unpleasant emotions, to avoid physical pain, and to have a pleasant time socially. The pleasurable effects of methamphetamine appear to be related to the brain chemical dopamine. Dopamine regulates motivation, pleasure, and motor function, and is the same brain chemical affected by cocaine and many other stimulants. Like cocaine, methamphetamine causes dopamine to circulate in the brain for longer periods—allowing dopamine’s pleasurable effects to linger. Unlike cocaine, methamphetamine also causes the brain to release high amounts of dopamine, resulting in a longer high and, perhaps, more harmful effects on brain receptors.

As methamphetamine wears off, a user is likely to experience an intense, unpleasant crash. Over long periods of use, some people are unable to experience pleasure without using greater amounts of the drug than they had previously used. They may respond by using higher doses, which can lead to sleep deprivation as well as changes to memory, emotion, and thinking. Other mental health complications such as hallucinations, paranoia, psychosis, violence, anxiety, and depression can also occur. Some of these effects may be reversible after a long period without methamphetamine use.

The Link to HIV Transmission

The effects of methamphetamine use on a person’s thinking may make safer sexual and injection practices more difficult or less appealing to users. But it is the drug’s effects on sexual desire, performance, and sensitivity to pain that have linked it most strongly with sexual risk.

Methamphetamine can dramatically increase sexual desire; in higher doses, however, it can cause both heightened desire and impotence. In response to methamphetamine-related impotence (known as “crystal dick”), some male users take erectile dysfunction medications such as Viagra. Some male users who have sex with men choose instead to switch from insertive to receptive anal sex. Both of these reactions to impotence can increase HIV-related risk: erectile dysfunction drugs may extend the sexual encounter, while being the receptive partner in anal sex increases the chances of being exposed to blood or semen.

Some research suggests that people may use methamphetamine in order to make the sexual behaviors they plan to engage in physically or psychologically easier than if they were sober. Methamphetamine is strongly associated with sexual disinhibition, easier sexual penetration, and a more positive sexual experience. These sexually enhancing features of the drug can help users meet their own (and others’) standards for sexual performance. For example, a person might be more able to have multiple sexual partners per day or per sexual encounter; to stay aroused longer; or to enjoy anal sex more. Thus, some individuals may not engage in HIV-related risk as a result of taking methamphetamine so much as they may use methamphetamine for the purpose of making a desired sexual risk easier to take.

Sexual and injection risks associated with methamphetamine are not mutually exclusive. Studies suggest that injection use of the drug heightens the likelihood of both unprotected sex and of using a syringe after someone else. In addition to facilitating transmission-related behaviors, methamphetamine appears to affect tissues and cells in ways that facilitate HIV infection. The drug dries out the ordinarily lubricated skin of the penis, anus, and vagina, and it decreases sensitivity to pain. This decreased sensitivity may allow users to engage in rougher, longer sex that can tear these compromised mucous membranes, aiding HIV’s entry into the bloodstream. Once HIV has entered the body, at least one study suggests that methamphetamine might also cause a reaction in the immune system that helps the virus to infect CD4+ cells.

The Nature of the Link to Risk

While all of these findings support the idea that methamphetamine use and HIV risk behaviors are related, the exact nature of that relationship is not yet clear. In particular, most studies have not been able to explore the link between being high on the drug and having unprotected sex or sharing needles on a specific occasion. Rather, researchers often assume the link based on circumstances. For example, if a person has a history of methamphetamine use and has also engaged in HIV risk behaviors or is HIV-positive, researchers may assume that the drug contributed to HIV-related risk behaviors or to seroconversion—even if there is no evidence that methamphetamine was used during the risk incident being studied.

A 2006 study, however, has made the clearest connection between methamphetamine use and HIV risk. The study surveyed 194 HIV-positive men who have sex with men, who, on average,
had contracted the virus four months prior to the research. The researchers asked men to compare instances when protected and unprotected anal sex did and did not occur. The study found that methamphetamine use was the strongest predictor of unprotected anal intercourse. Even this study has shortcomings: it does not fully describe the context of the men’s methamphetamine use and how it facilitated their behaviors. In fact, many studies offer only limited descriptions of these and other contextual factors such as the relationship between partners and the location and dynamics of the sexual encounter.

A better understanding of these contextual factors is important because not every user of methamphetamine experiences all of the effects of the drug. Physical aspects of the experience, such as the drug’s potency, the amount used, the route of administration, and each user’s unique physiology combine to determine the specific effects of the drug in a specific situation. Equally important are the individual’s reasons for using, and the social, cultural, and physical context in which that person takes the drug. Each of these factors has an impact on the drug’s effects, and may therefore also influence the link between methamphetamine and HIV-related risk.

**Variations in Risk by Subpopulation**

While studies of men who have sex with men show the clearest link between methamphetamine use and actual HIV infection, research has demonstrated a link between methamphetamine use and HIV risk behaviors in other populations as well. For example, some studies suggest that people who use methamphetamine share injection equipment and have unprotected anal and vaginal sex more than users of other drugs.

In 2003, among 2,597 women testing for HIV while in labor or seeking prenatal care at a hospital in Baja California, use of methamphetamine was independently associated with the risk of HIV infection. Likewise, some methamphetamine injectors seem to have greater sexual and injection-related HIV risks than injectors of other substances. For example, of 477 female injectors recruited from the streets of San Francisco between 2003 and 2005, methamphetamine injectors were significantly more likely than other injectors to engage in unprotected anal and vaginal sex, to have used a syringe after another person, and to have had sex with multiple partners.

Methamphetamine seems to be associated with the HIV-risk behaviors of heterosexual men as well. Researchers interviewed 968 men in five northern California counties who self-reported exclusively heterosexual contact in the prior six months. The survey revealed that both recent and past users of methamphetamine were more likely than non-users to have had unprotected anal or vaginal sex.

Despite this evidence, HIV infection among heterosexuals has not been firmly linked to methamphetamine use. The key reason for this is simply that HIV is more prevalent among men who have sex with men. This means that heterosexuals who use methamphetamine engage in many of the same HIV-related risk behaviors as men who have sex with men. However, since heterosexuals are less likely to have HIV-positive partners, they are less often exposed to the virus through these behaviors.

For this reason, most research on methamphetamine and HIV risk has focused on men who have sex with men. In 2005, the Centers for Disease Control and Prevention (CDC) hosted a national consultation to review the relationship between methamphetamine use and sexual risk. The group found a “solid link” among men who have sex with men, and “perhaps [among] heterosexual men and women.” Several studies suggest that, among men who have sex with men, users are two to three times more likely than non-users to engage in unprotected anal sex, to have condoms break or slip off, to acquire sexually transmitted diseases (STDs), or to become infected with HIV during sex. California HIV testing data reveals that among all men who have sex with men who received their test results from state-funded sites during the calendar years 2003 and 2004, there was an average HIV-positivity rate of 2.9 percent. Men who have sex with men and had also used methamphetamine in the two years prior to testing, however, had a positivity rate of 7.1 percent. On a broader scale, a review of the literature from 1980 through 2005 found evidence for a twofold increase of HIV risk among men who have sex with men who also used methamphetamine.

Within the subpopulation of men who have sex with men, research has suggested further distinctions. For example, some studies suggest that White men who have sex with men are more likely than other men who have sex with men to use methamphetamine. Another study of Asian and Pacific Islander men found a significant association within this group between unprotected anal intercourse and being high on Ecstasy but not on methamphetamine. Other studies have focused on other characteristics: for example, one

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study detected different patterns of use based on a user’s HIV status and age as well as race and ethnicity.3

Treatment as Risk Reduction

Unlike methadone for heroin users, no pharmacological agent exists for treating methamphetamine dependence.2,27 The San Francisco Department of Public Health is currently researching the efficacy of bupropion (Wellbutrin), an antidepressant drug used to treat nicotine dependence, for its application to methamphetamine treatment.2 Studies of behavioral interventions suggest that treatment among methamphetamine users—whether targeted at drug use, HIV risk, or both—can dramatically reduce sexual risk behavior, at least among men who have sex with men.28,29

One of these studies suggests that exposure to any drug treatment may be more significant than the type of treatment delivered. The study involved different cognitive behavioral, contingency management, and culturally tailored interventions. At the one year follow-up evaluation, all groups showed similar reductions in their methamphetamine use and changes in sexual risk behavior.28 Other studies have demonstrated the efficacy of reducing methamphetamine use through contingency management—the application of ever-increasing incentives or rewards as participants meet their treatment goals (most often benchmarks of abstinence such as drug-free urine tests).30

Some methamphetamine users are interested in reducing their risk for HIV, but not their drug use. A study conducted in San Diego between 1999 and 2004 successfully used social learning theory-based interventions and motivational interviewing techniques to help men decrease their HIV risk without specifically targeting their methamphetamine use.29 These findings are interesting because they reflect the range of functioning among methamphetamine users, and the fact that some are able to manage not only their use but also their HIV risk behaviors more effectively than others.

Conclusion

Methamphetamine use is clearly associated with HIV risk. While it may be easy to see how the physical and psychological effects of methamphetamine use can facilitate behaviors that can transmit HIV, more research is needed to understand the relationships among users, the drug, the context of use, and behavior. This understanding may be particularly beneficial for men who have sex with other men, since it appears that methamphetamine use plays a larger role in their HIV risk than it does for others. Further, a better understanding of the diversity of experiences of methamphetamine users may help to explain why the drug puts some individuals at greater risk for HIV transmission while leaving others much less affected.

References


Implications for Counseling

Many clients feel ashamed or mistrustful about disclosing any drug use in the counseling session, and this may be especially true for some clients who use methamphetamine. In some gay male communities, educational campaigns have emphasized the connection between use of the drug and HIV risk and infection, leading some clients to feel that they should “know better” than to use methamphetamine before having sex. Other clients may understand that some of their sexual or injection behaviors are putting them at risk for HIV infection but may not connect those risks to their methamphetamine use. Whatever a client’s understanding of his or her use, a counselor’s non-judgmental stance creates an environment in which clients can feel more comfortable disclosing methamphetamine use, discussing sexual and needle-related behaviors, and exploring the relationships among these activities.

If a client does not disclose methamphetamine use, but a counselor suspects the client’s HIV risks are related to use, it may help for the counselor to refer to methamphetamine use in the third person. For example, the counselor might say, “Some guys who use speed have told me they switched to oral sex because they couldn’t guarantee they would get an erection and use a condom. I know you said you don’t use drugs, but I’m wondering what you think about a similar strategy: refraining from anal sex in certain situations and having oral sex instead?” In this way the counselor creates an opportunity for the client to talk about his methamphetamine use.

A counselor should also question his or her own assumptions about how methamphetamine use appears when facing a client whom the counselor believes is using but who does not disclose use. For example, what may appear to be signs of chronic methamphetamine use—uncontrolled movement, for instance—could be the result of a neurological disorder, the need to urinate, or caffeine stimulation. Likewise, many people who occasionally use methamphetamine may express few, if any, signs; and significant signs such as uncontrolled movement may not appear until someone is using very actively.

Once a counselor establishes that a client uses methamphetamine, it is helpful to explore the context of use. Since methamphetamine can be smoked, snorted, and injected, counselors can find out more about their clients’ HIV risks by asking how the client takes the drug. If a client indicates injection use, the counselor should follow up with a conversation about harm reduction options for injection drug use.  

People use methamphetamine in different settings, for different reasons, and with different people. For example, one client may use alone, primarily in order to stay awake for his second job. Another
might use solely with her partner in order to enhance their sex life. A third client may use with friends before spending the night clubbing and meeting new sexual partners. Exploring how, why, and with whom the client uses can help the counselor understand if and how methamphetamine is related to HIV risk for a specific client. Counselors can bring out much of this information by simply asking, “How do you use?” “Who do you use with?” “How do you meet your sexual partners?” and “How are meth use and sex connected for you?”

Making the Connection

A key piece of this assessment is an understanding of what benefits and costs the client sees in methamphetamine use. A simple open-ended question such as “How is sex different for you when you use methamphetamine?” can help client and counselor understand not only the reasons for use, but how use is or is not connected to HIV risk.

Counselors can invite clients to talk about what methamphetamine use does for them, then reflect back to the client both the compelling elements of using and potential HIV risks. For example, “It sounds like when you use methamphetamine, you’re not that shy guy who just moved here and feels like he doesn’t have any friends. On the other hand, you’ve told me you feel guilty and anxious because when you were high you had anal sex without a condom. I’m wondering if there’s a way for you to feel comfortable going out and meeting new guys and still take care of yourself.” This “double-sided listening” helps clients confront their own ambivalence about engaging in behaviors that put them at risk.

Sometimes clients will not reveal their methamphetamine use until later in the session, after discussing episodes of unprotected sex. At this point, a counselor might wonder aloud about a possible connection between the drug and unsafe sex. For example, “I’m wondering if you think there is a connection between your drug use and the times you had unprotected sex?” If a client expresses that he does not believe there is a connection, the counselor might say, “It seemed that when you talked about the times you were putting yourself at risk, methamphetamine was involved. What do you think was going on for you at that time?”

“Third-personing” is a technique that can also be useful when the client reveals methamphetamine use but is ambivalent about talking in depth about it, or when a client expresses shame about methamphetamine-related HIV risk. For example, a counselor may say, “Some guys tell me that it’s really hard for them to keep their promises to themselves about safer sex when they use meth.” The counselor does not confront the client directly, but talks about other clients’ experiences in a way that allows the client to say what is true for him or her.

Risk Reduction Steps

Once counselor and client have identified the key areas of the client’s HIV risk, the discussion can move on to what, if anything, the client is willing to do to reduce that risk. If a client says he or she does not know what to do, the counselor may feel the urge to make suggestions. Instead, a skillful counselor can help the client identify solutions by asking what the client has done in the past to reduce risk successfully.

Counselors must remember to make the distinction between a client’s willingness to reduce HIV-related risk and willingness to reduce methamphetamine use. It is important that the counselor not get into a power struggle with the client about whether or not the client’s methamphetamine use creates HIV risk or about whether or not drug use should be reduced. By noting both the client’s greatest HIV risk areas and strongest motivations for change, counselors and clients can begin to identify achievable and effective risk reduction steps.

Once the client identifies a risk reduction step, the counselor and client can explore whether or not the step is realistic and discuss how the client can implement it. By using imaginary “what if” scenarios, the counselor can present scenarios to the client about how the step might play out in a variety of likely circumstances. For example, a counselor may say, “If you achieve your step—limiting yourself to oral sex when you are high—you will eliminate most of your risks. But what would happen if you meet a hot guy who you can tell really wants you, and he wants to have anal sex?” By talking this scenario through, the client can consider the viability of his plan and counselor and client can brainstorm ways of strengthening it.

Some clients may express the intention to stop or reduce their methamphetamine use, and counselors can both support this desire and offer appropriate referrals. It

A Counselor’s Perspective

“I’ve seen firsthand the devastation meth brought to my community. When someone comes in who thinks they can ‘handle’ using recreationally, I have to work hard to maintain my neutral stance. But I know that if I come across as judgmental or preachy, I’ve lost my chance to connect with the client.”
is often useful to identify interim steps as well: what can the client do to reduce his or her risk until he or she is able to abstain from using?

Some clients may identify risk reduction steps that do not involve reducing their methamphetamine use but that can still lower their risk of acquiring HIV. For example, a client might say “I can make sure I only party when my best friend is around. He always tells me when I’ve had enough, and so far, I’ve been able to stop when he says it’s time.” Or “When I use I can stick to having oral sex.” Supporting clients in taking simple harm reduction steps such as staying hydrated, remembering to eat, and keeping enough lube on hand can also help maintain the client’s overall health and reduce HIV risk when the client uses.

The Counselor’s Feelings
Some counselors who are aware of the relationship between methamphetamine use and HIV risk have strong feelings about their clients’ drug use. When faced with a client who appears uninterested in changing methamphetamine-related HIV risk, some counselors may feel frustrated or angry. Others may feel the desire to rescue the client from both HIV and drug-related risk. When counselors have a place to acknowledge and discuss these feelings with peers or supervisors, maintaining a neutral stance and a client-centered session can be easier. Counselors must also remember that clients can take steps to reduce their HIV-related risk whether or not they stop using methamphetamine.

Case Study

Jack is a 29-year-old gay man who is new to Los Angeles. About eight months ago, Jack was introduced to methamphetamine through a man he met online for sex. About five months ago, Jack stopped using condoms when he was the insertive partner (“top”) during anal sex, because he knows it is less of a risk than being the receptive partner (“bottom”). Jack tells his test counselor, Lily, that he is really worried today because the last two times he used meth he had unprotected anal sex—as a bottom.

Lily begins by acknowledging Jack’s honesty in disclosing his speed use and asks, “When you get high, how do you use?” Jack replies that he usually smokes the drug and that he hates needles.

Lily returns to the concern Jack first raised, saying, “You mentioned you were worried about what happened the last two times you got high and had sex. Tell me more about those times.” Jack describes the instances when he was a bottom, readily acknowledging the connection between his choice to not use condoms and his methamphetamine use. He says that prior to beginning to use meth, he had always used condoms even for insertive anal sex and that since he started using, he has not. Lily asks him how he feels about these changes. Jack says that they scare him because he feels like he’s “losing control” and could easily become infected.

Lily asks what Jack is willing to do to lower his risk for HIV. “I could stop using, but I know that I’m not ready to do that. I just know I can’t keep bottoming and not using condoms. Maybe I should just be sure I don’t bottom for now?”

“That’s one thing you could try. But I wonder how easy that will be for you. What would you do instead? Do you think you would top, or switch to oral sex, or something else?” Lily asks. Jack replies, “I’m not sure” and pauses.

“I really appreciate how upfront you are being, telling me that you are concerned about your meth use and HIV risk, that you’re not ready to stop using right now, and that you aren’t really sure what to do.” Lily replies. “I want you to be able to leave here with a step you can use to reduce your HIV risk. Sometimes clients devise strategies that sound good in here but that don’t help them in the real world. If not bottoming is a realistic step for you, great. To give it the best chance to work, you might want to figure out what you might do instead. For example, some guys tell me that it’s hard for them to top when they’re using meth. Is that ever true for you?”

Jack acknowledges that recently he had switched to receptive anal sex partly because he was having trouble maintaining an erection when he was high. Lily listens and then asks Jack why he uses methamphetamine.

Jack responds that using meth makes him feel more confident and more attractive to guys. The two talk about how to balance that need with Jack’s desire to reduce his risk. After more discussion, Jack decides that he is going to try having oral sex instead of anal sex. Lily also offers Jack a referral, saying, “The counselors at this agency are comfortable talking about sexuality and about harm reduction, so they can help you keep working on ways to reduce your risk.”
Test Yourself

Review Questions

1. True or False: A research review found a twofold increase of HIV risk among men who have sex with men who used methamphetamine, compared to men who have sex with men who did not use methamphetamine.

2. Which of the following is true about methamphetamine? a) the high from smoking usually lasts one to three hours; b) methadone can help lessen methamphetamine dependence; c) methamphetamine can be snorted, smoked, injected, or inserted rectally; d) only abstinence will reduce HIV risk.

3. True or False: Methamphetamine use is associated with unprotected sex among men who have sex with men, but not among heterosexuals.

4. Methamphetamine facilitates HIV risk more than other stimulants because it: a) increases libido over a very long period of time; b) can cause erectile dysfunction and lead users to choose receptive anal sex; c) tends to dry out the mucous membranes of the penis, anus and vagina; d) all of the above.

5. True or False: Methamphetamine use is associated with unprotected sex but not with syringe sharing.

6. What do we know about the treatment of methamphetamine dependence? a) Cognitive behavioral interventions work better than contingency management; b) Access to and participation in treatment may be more important than the specific intervention; c) Motivational interviewing works just as well as abstinence-directed treatment; d) Methamphetamine users are less interested in treatment than users of other substances.

Discussion Questions

1. What are some local referrals for active methamphetamine users who do not want to stop using but who do want to reduce HIV-related risk? What are some referrals for methamphetamine users who are willing to re-evaluate their use?

2. How have your experiences with methamphetamine influenced your opinions and beliefs about a user’s ability to reduce HIV risk without reducing methamphetamine use?

3. How can your beliefs about methamphetamine use influence your sessions with clients who use methamphetamine? What can you do to help yourself maintain a neutral stance?

4. Describe a client-centered approach for working with clients who state they are not interested in stopping their methamphetamine use, even though they believe that using increases their HIV risk.

5. Describe some effects of methamphetamine on sex that might compel a client to continue using.

6. From your experience, how do the HIV-risk-related effects of methamphetamine use vary among clients, and how have they varied between your male and female clients?

Answers

1. True.
2. c.
3. False. Methamphetamine is associated with unprotected sex among both heterosexuals and men who have sex with men.
4. d.
5. False. Methamphetamine use is associated with both unprotected sex and with syringe sharing.
6. b.
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