UCSF Center for AIDS Prevention Studies
AIDS Research Institute

how does methamphetamine use affect HIV prevention?

what is methamphetamine?

Methamphetamine (meth, also called crystal, speed, Tina, ice, crank) is a powerful, illegal stimulant and is similar to amphetamine. It can be taken orally, snorted, smoked, injected and inserted rectally and can affect the user for several hours or more depending on how much is used.[1] Meth is cheap, widely available and has a high potential for abuse and addiction.

Meth users describe the positive effects to be feelings of euphoria, loss of appetite, heightened self esteem and increased desire for and intensity of sex. However, meth also has many negative short and long-term effects, including damaging brain neurons, high blood pressure, oral hygiene problems, depression, anxiety, paranoia and psychotic symptoms such as paranoid delusions and hallucinations. Symptoms of overdose include chest pain, elevated body temperature, rapid heart rate and rapid shallow breathing.

Meth is widely used, both nationally and internationally, with over one million users in the US.[2] Although lifetime meth use has increased dramatically since the early 1990s, the number of abusers has remained steady and meth abuse is far less common than cocaine abuse.[3] In recent years, meth use has increased in some locales and sub-populations, particularly on the East Coast.

how does meth use affect HIV?

Meth use can heighten one's HIV risk through unsafe injection and sexual behaviors. If a person injects meth, sharing needles and injection equipment can transmit HIV.

Many users consider meth a sexual drug, using it specifically to intensify and prolong sex and increase disinhibition. Meth tends to dry out the skin on the penis, anus and vagina, which may lead to tears and cuts and HIV transmission, especially with extended sex play, multiple partners and more aggressive sex associated with meth use.

Meth can both increase sex drive and decrease men's ability to get and maintain an erection. As a result, some men using meth may choose receptive anal sex ("bottoms"), or may choose to combine meth with erectile dysfunction drugs such as Viagra. Both meth and Viagra use are independently associated with unprotected anal sex.[4]

how does meth use affect HIV risk?

Meth use and abuse is a very real concern among gay men and other men who have sex with men (MSM). Research on meth use in other populations, such as heterosexuals, is limited. Gay and bisexual men report using meth and other stimulants at rates 10 times greater than the general population.[5] This is particularly concerning because HIV is more common in this population than among heterosexuals. The use of meth for sexual reasons has been found to be more common among HIV+ men.[6,7] The reasons for meth use among MSM vary, and may include strong cultural expectations of sexual prowess in some parts of the gay community.[8]

Several studies of MSM (primarily gay-identified men) have found that users are 2-3 times more likely than non-users to engage in unprotected anal sex, have condoms break or slip off, acquire a sexually transmitted disease, or become infected with HIV.[9] In fact, these elevated risks occur among frequent and occasional users alike.[10]

A study of HIV- MSM found that men using stimulants were twice as likely to become infected as non-users, even when accounting for specific risky sexual behavior like unprotected anal sex with HIV+ partners.[11] This suggests that meth use may contribute to HIV infection above and beyond increasing the likelihood that users will engage in risky behavior.

While there is ample evidence of the link between HIV risk and meth use among MSM, some studies also show high levels of HIV risk behavior among heterosexuals. In one study, 86% of users reported engaging in "marathon sex" while high on meth. More than a third reported injecting, and of those, 47% had shared and/or borrowed needles.[12]

Says who?

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how does meth affect HIV+ persons?

Meth use and abuse can have negative consequences for HIV+ persons. HIV protease inhibitors (particularly ritonavir) may increase the potential for adverse reactions or overdose. Being high on meth may cause HIV+ persons to forget to take--or be unconcerned with taking--their medications. Meth use may also affect HIV+ persons' overall health by increasing dehydration, sleeplessness and weight loss.[13]

what's being done?

The high potential for addiction to meth and the intentional combination of meth and sex pose unique challenges for sexual risk-reduction efforts for meth users. However, a variety of approaches are available.

Meth and HIV prevention efforts should focus on: 1) preventing initial use of meth among non-users by influencing community norms, 2) discouraging occasional users from becoming regular users, 3) minimizing health risks for current users, and 4) increasing drug treatment capacity and getting meth abusers into accessible programs.

There have been several social marketing campaigns addressing the prevention of meth use. “Crystal Mess” and “Got Meth?” addressed negative consequences of meth use among gay men and youth, respectively. “Silence=Meth” calls for the gay community to take action around meth use.[14]

A harm-reduction approach may be better suited to those currently not choosing to cease meth use entirely, such as is offered at the Stonewall Project for MSM in San Francisco, CA.[15] Those injecting meth should be referred to needle exchange programs and provided education and counseling on safer injection and sex practices.

Life in the FASTLANE is a harm reduction-based program to reduce sexual risk among heterosexual active meth users. Using four weekly 90-minute one-on-one counseling sessions, FASTLANE increased intentions for safer sex and protected sex acts.[16]

For meth users ready to quit using, several programs are available. Some users may benefit from 12-step programs like Crystal Meth Anonymous, Narcotics Anonymous and LifeRing.[17] The Positive Reinforcement Opportunity Project (PROP), uses positive conditioning to help gay and bisexual men stay off meth. Participants get urine tests 3 times a week for 12 weeks. Each time the test is negative for meth, they get positive reinforcement and vouchers good for food, medical bills, personal care items and more.[17]

Perhaps the best studied meth treatment approach is the Matrix Model, which is a behavioral intervention using 48 group and individual sessions over 16 weeks.[18] Another study with MSM compared a variation of this model with contingency management (providing vouchers of increasing value for meth-negative urine), a combination of both approaches, and a gay-specific version of Matrix.[19] All groups showed substantial reductions in meth use and sexual risk behavior one year later.

While there are no medications currently approved to treat meth dependence, this may prove to be an effective approach. Currently, several studies, such as BUMP, are testing the feasibility of providing the antidepressant bupropion to meth-dependent MSM.[20]

what are next steps?

The gay community needs to address the very real pressure in some sub-communities to party and be highly sexually active,[21] and to ask the question "is drug use worth the risks men are taking?" It is not enough to attempt to reduce drug and alcohol use and abuse without also addressing the powerful sexual reasons why MSM use drugs, and explore ways to develop a healthy and satisfying sex life without drugs.

Research into potentially effective treatment, counseling, medication and harm reduction approaches continues. Counselors and health care providers should be trained on the symptoms and effects of meth use and how to discuss meth and other substance use with clients and patients in a non-judgmental way. Providers can refer users to locally accessible meth harm reduction, treatment and HIV prevention programs when appropriate.

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