The combination of sex and drugs may be the most potent force currently propelling the HIV epidemic in the United States. This combination does not represent a new phenomenon, but a review of the recent literature describes shifts in substance-use patterns and in cultural and social connections between substance use and sex. While this research has not established the precise cause-and-effect relationship among substance use, sexual behavior, and HIV seroconversion, data on the physiological and psychological effects of substance use offer insights into this complex phenomenon.

The research encompasses multiple populations, but recent studies have tended to focus on men who have sex with men. Researchers have found that the following substances are associated with sexual behavior that has a high risk of HIV transmission, particularly unprotected anal intercourse: alcohol; gamma hydroxybutyrate (GHB); ketamine; butyl, isobutyl, and amyl nitrites (poppers); marijuana; methamphetamine; methylenedioxymethamphetamine (MDMA, Ecstasy) and sildenafil citrate (Viagra).1-4

For example, in urban gay male communities, substances have a strong sexual association and are used specifically to facilitate or enhance sex.3,5,6 Further, over the past 10 years, these associations have expressed themselves in new ways, including “party and play,” the combination of drug use (party) and sex (play); circuit parties, large weekend-long parties held sequentially in different cities and often involving both sex and drug use; internet chat rooms; and an epidemic of methamphetamine use.

**Drug Use and Seroconversion Data**

Many studies have found positive associations between HIV seroconversion and non-injection substance use, particularly methamphetamine, cocaine, Viagra, and poppers.4,7,9 For example, a 1992 study of 481 men who have sex with men found that men who always used poppers while having unprotected receptive anal intercourse were 4.2 times more likely to be HIV-infected than men who had unprotected receptive anal intercourse without ever using poppers.9 The researchers postulated that an HIV-negative person with a history of popper use and unprotected receptive anal sex had 5.5-fold increased odds of becoming HIV-infected in the future.

Similarly, a 1998 San Francisco study of 337 gay men examined associations between various substances and time to HIV seroconversion. The data showed that a continuing history of popper or amphetamine use strongly increased the chances of HIV seroconversion, but current use (with no...
Patterns of Substance Use

There has been a great deal of research about prevalence and patterns of substance use among gay and bisexual men. Many studies have found that men who have sex with men use a wider range of substances than do heterosexual men, although it is not clear if lifetime use is higher among men who have sex with men than among heterosexual men. One study comparing heterosexual and gay men living in San Francisco in the 1990s found the prevalence of marijuana, poppers, Ecstasy, and methamphetamine to be higher in gay men. Interestingly, research has found that most gay men do not use any single substance frequently enough to constitute chronic use or abuse.

Consistent with these findings, researchers have found that men who have sex with men, in particular, tend to use more than one substance, either in combination or sequentially. For example, a study of 456 HIV-positive men who have sex with men found that 40 percent used more than one drug at a time. In this sample, primarily of men of color, alcohol, marijuana, and poppers were the most popular substances. However, less than 5 percent of the men reported using any drug, besides alcohol and marijuana, more than twice a week.

A New York study of 450 men who have sex with men found that of the 65 percent who used methamphetamine, many used that drug in combination with other substances. Almost 56 percent of the methamphetamine users also used alcohol, 50 percent used Viagra, 44 percent used ecstasy, and 41 percent used poppers. Black men were less likely to use methamphetamine than White, Latino, or Asian American men.

Studies have also found significant regional differences in patterns of drug use. For example, a large internet study of almost 3,000 gay and bisexual men found that methamphetamine use is much more common in the western United States than in other parts of the country. Alternately, the same study found that men on the northern and south-central areas of the country were more likely to report drinking until drunk than men on the West Coast. There were, however, no significant regional differences in popper or cocaine use.

Physiological Effects: A Brief Survey

A survey of some of the physiological effects of substances associated with HIV transmission sheds some light on the complex physiological interactions among substance use, sexual activity, and HIV transmission. Overall, researchers have found that substances can lower immune responses, for example, CD4+ cell production and CD8 cell activity, making it easier to contract HIV. Further, drugs and alcohol can impair judgment, undermining sexual negotiation and follow through on risk reduction. Finally, people may use one substance to counteract the less desirable effects of another, and this combination may increase HIV-related risk.

Alcohol. Alcohol, ingested in liquid form, depresses the central nervous system and slows brain functioning, respiration, and blood circulation. Although often used in the context of sexual activity and seen as an aphrodisiac, alcohol can impair erection and ejaculatory ability and decrease sexual arousal in men. In sexual situations, people who are using other substances, especially stimulants, often use alcohol as well.

Methamphetamine. Methamphetamine—ingested, injected into the bloodstream, snorted, smoked, or inserted anally—is a synthetic stimulant, similar toamphetamine, that increases central nervous system activity. Methamphetamine use is epidemic in the western United States among men who have sex with men in urban settings and is increasing among men who have sex with men in New York City.

Methamphetamine, particularly the form called “crystal meth,” which is the powdered, smokable form of the drug, can lead to hypersexuality. Users report greatly increased sex drive, increased sexual pleasure, multiple orgasms, and delays in orgasm, which allows them to have sex for longer periods. Methamphetamine’s euphoric effects may also block pain, which can facilitate rougher sexual activity or mask the...
pain or irritation resulting from injury to sensitive areas such as the penis, the vagina, or the lining of the rectum. Dehydration, caused by drug-induced increases in respiration and club activities such as dancing and sex, also increase the opportunity for tearing and other injury during sexual activity.

Further, methamphetamine can cause erectile dysfunction, sometimes called “crystal dick.” This inability to produce an erection in combination with an urgent sexual drive leads some men who are using the drug to engage in receptive anal sex, creating what are sometimes called “instant bottoms.” Men may also combine methamphetamine with drugs such as Viagra to maintain an erection.

Drugs for Erectile Dysfunction. Drugs for erectile dysfunction such as Viagra, tadalafil (Cialis), and vardenafl (Levitra) are legal and easily procured prescription medications which come in the form of ingestible tablets. They promote erection and subsequent erections after ejaculation by increasing blood flow to the penis, counteracting the erectile dysfunction caused by some substances, notably methamphetamine.

Ecstasy. Usually ingested in pill form, Ecstasy increases serotonin levels in the brain, producing a sensual and sexual euphoria. Users report overall a more sensual than sexual experience, and a decrease in ability to have erections and orgasms. Ecstasy, along with GHB and poppers, is considered a “club drug,” used in combination with dancing and partying because of its tendency to enhance appreciation of music, lights, and other sensory stimulation of club environments.

GHB. Usually ingested as a fluid, GHB is known as “liquid ecstasy.” It enhances the levels of the brain chemical dopamine, depressing the activity of the central nervous system. It produces euphoria and is also used as an aphrodisiac. In larger quantities, GHB can cause unconsciousness, and in this context it has been linked to date rape. GHB is often used along with other club drugs such as ecstasy to counteract their stimulating effects.

Poppers. Studies have shown that poppers—volatile liquid nitrites whose vapors are inhaled—relax both the smooth muscles around a person’s blood vessels and the anal sphincter and provide a quick rush of euphoria. These inhalants have long been called “the gay drug” because the relaxing effect on the anal sphincter can facilitate receptive anal sex.

Drug and HIV Treatment Interactions

HIV antiviral medications interact with substances in ways that may influence sexual activity in people with HIV. For example, protease inhibitors appear to raise levels of Ecstasy and methamphetamine in the bloodstream, greatly exaggerating the effects of these drugs.

Conversely, substance use may lead to increased viral load in people on antiviral medications either by altering the metabolism and efficacy of these medications or by decreasing treat-
ment regimen adherence. One longitudinal study compared HIV viral load in HIV-positive methamphetamine users with viral load in nonusers. Subjects who had positive urine tests for methamphetamine at the time of the study had increased plasma virus loads only if they were receiving triple combination antiviral treatment. Those who were untreated or receiving monotherapy or dual-drug therapies did not have elevated viral loads, nor did those who did not use methamphetamine. The research theorized that this occurred because methamphetamine may, in fact, affect both metabolism of the antiviral treatments and adherence to these regimens.

**Psychological Effects of Substances**

The recent research on the psychological effects of substance use on HIV-related sexual behavior derives primarily from relatively small qualitative studies of methamphetamine users. These studies have found that drug use and dependence is often associated with denial and the desire for escape. For example, ethnographic studies of substance users, especially those who use methamphetamine, have found that both HIV-positive and HIV-negative men who have sex with men use drugs, at least partially, to reduce their anxiety about either contracting or transmitting HIV. Former methamphetamine users in another study also stated that they had felt less responsible about HIV transmission to other people while they were using. In a follow-up to this study, researchers found that although condom use did not increase substantially over the year after drug treatment, participants’ sense of responsibility about HIV transmission did.

Finally, methamphetamine use may lead to sexual compulsivity that extends to a loss of control over sexuality, as well as lapses in judgment and ability to negotiate safer sexual practices. In a qualitative study of 34 HIV-positive men who have sex with men who were also former methamphetamine users, participants said that when they were using, they engaged in behaviors that they would not have ordinarily agreed to if they had not been using. These behaviors included unprotected receptive anal intercourse.

**The Stages of Change**

The HIV counseling session is by definition limited: counselors are rarely able to directly address substance dependence and its psychological underpinnings. However, counselors may be able to help clients understand the effects of substance use on sexual activity and HIV transmission by applying the Stages of Change model to both substance-related and sexual behaviors. The model describes readiness to change a behavior in terms of five stages: precontemplation, contemplation, preparation, action, and maintenance.

One study of 212 HIV-negative heterosexually identified methamphetamine users found that most participants were in the contemplation stage and preparation stage (also known as the “ready for action” stage) with regard to protecting themselves from HIV transmission. That is, they were aware a problem existed but were ambivalent about change, or they were preparing for changes they might make in the future.

The researchers suggest that focusing on condom use skills, encouraging positive social norms favoring HIV prevention behaviors, and raising awareness of the risks for other sexually transmitted diseases are ways that counselors can help people move from the contemplation to the preparation stage. Finally, the researchers found that participants in the contemplation stage used more methamphetamine than those in the preparation stage, indicating that reduction in drug use and movement toward HIV-related risk reduction may in some way be linked to each other. As another researcher puts it, “What remains to be demonstrated is whether or not sexual risk reduction follows from alterations in the sex-drug-using” behaviors or whether sexual behaviors must change in order to reduce drug use.

**Conclusion**

Although it seems clear that there is a relationship between drug use and HIV-related sexual activities, much remains unknown about the causal links between these two behaviors. More research is necessary, especially about motivations for using drugs with sex; the reasons for the rise of social phenomena such as circuit parties, party and play, and methamphetamine use; the implications of these phenomena for health and well-being; and the ways HIV prevention might be applied in these contexts. Even without clear answers to some of these questions, recognizing the complexity of the drug-sex interaction for individual clients can aid counselors in implementing client-centered prevention counseling.
Implications for Counseling

The primary prevention goal of HIV counseling is to enhance or clarify people’s perception of their HIV risk and to support their capacity to prevent infection in the future. To achieve this goal, counselors explore areas where HIV is a concern—primarily sex and drug use—and then build motivation for prevention by acknowledging past successes. This kind of empowerment, however, can be particularly difficult to achieve with clients whose shame and fatalism about sex, drugs, and HIV inhibit their belief that prevention is possible.

Challenges of Shame and Fatalism

Mixing drugs with sex can physiologically and psychologically facilitate HIV transmission. Cultural forces may also influence a client’s motivation to prevent HIV. For example, drug use is often stigmatized—particularly when it is combined with survival sex and pleasure-seeking sex—potentially contributing to a client’s internalized shame and doubts about the value of his or her health.

Additionally, since most people know the “safest” forms of prevention but have difficulty practicing them, clients may frame having sex with that sex is not risk-free as “failure.” Faced with all of these issues, some people give up completely on prevention, ashamed of past behaviors and fatalistic about the inevitability of future ones.

Broaching behavior change under these conditions is especially tricky because the shame of not using protection reinforces existing shame, contributing to HIV risk. In the words of one client, “I should be using a condom every single time, but I don’t. I’m probably positive. That’s my punishment for what I’ve done.”

Counselors may find consolation in the fact that shame and fatalism are often signs of contemplation. Client’s who are ashamed of past unprotected sex because of its HIV risk or who assume that they will fail to reduce risk are actually thinking about—contemplating—HIV risk and even HIV prevention. As difficult as shame and fatalism are, they may offer an opportunity for HIV prevention counseling.

When shame and fatalism are dominant themes in a session, motivating a client to prevent HIV in the future requires a counselor’s concerted effort to convey a neutral stance and unconditional positive regard. Three tools can help counselors intervene most effectively: uncovering past successes; giving specific and authentic praise; and negotiating realistic, incremental change. The following hypothetical scenarios aid in discussing these tools.

Uncovering Past Successes

Feeling both a motivation to change and a belief in the possibility of success facilitates behavior change. To help a client achieve these attitudes in the face of the client’s shame and fatalism, counselors may have to look beyond HIV prevention to discover ways in which the client has demonstrated a capacity to change in the past.

For example, with a client who sees no need to change behavior “because contracting HIV is inevitable,” a counselor may explore the context of the client’s sex and drug use to uncover how the client has increased his or her satisfaction with these activities, independently of reducing the HIV risk related to them. The counselor thereby helps the client think differently about his or her ability to create change by highlighting a past shift from feeling unable to make a life-enhancing change to being able to make one, from a sense of futility to a sense of possibility.

“Karla,” a counselor working with “Gus,” a gay man who has anonymous unprotected anal sex, took this approach by asking: “How did you first figure out sex parties would be something you’d like?” Gus had tried dating without much success and started using methamphetamine to meet people. Gus said he now uses crystal habitually, “because it’s more intense and easier to just have sex without an emotional connection.” Karla reframed Gus’s words by saying, “You didn’t get what you wanted out of dating, so you found a way to have sex without having to worry about getting disappointed when an ongoing relationship did not develop.”

In this way, Karla highlighted an example of Gus’s ability to create what he once perceived as a life-enhancing change. At the same time, Karla helped reveal discrepancies in Gus’s thinking. By reflecting back to Gus his deeper feelings of disappointment Karla sought to spark Gus’s thinking by distinguishing between his fatalism about risk behavior and his fatalism about not finding someone to date.

Karla’s goal was to help Gus conceive of change in the future by bringing to light his capacity to change in the past. From Gus’s perspective, having sex without worrying about disappointment was a demonstration of his capacity to meet his needs. Unfortunately, this change has also increased Gus’s HIV risk. This means that looking at the change from Gus’s perspective is only one step to motivate him toward HIV prevention. Getting to the other steps, however, can be challenging if a counselor is impeded by his or her judgments about a client’s behavior.

Specific and Authentic Praise

Fatalistic clients are often ambivalent; they have thought about change but feel that it is impossible. For a person who is in the contemplation stage,

A Counselor’s Perspective

“Change doesn’t happen in the absence of hope.”

Reverend Yvette Flunder,
Executive Director,
The Ark of Refuge, San Francisco
the main intervention is to explore pros and cons. Contemplative clients need to voice their ambivalence—which may also mean voicing hopelessness and resignation—without having the discomfort of their experience taken away by a counselor’s inauthentic praise.

Stigma and internalized shame often make clients particularly sensitive to negative judgment. One of the easiest ways to lose rapport with clients who are vigilant in this way is to offer nonspecific praise in the hope that any praise is better than none. Coming across as phony, however, can undermine a counselor’s credibility and devalue moments of authentic praise, leading clients to suspect that judgments are interfering with the counselor’s ability to be honest.

Authentic positive regard is particularly challenging to express in the face of a client’s shame and fatalism. The very skill that counselors rely on to build rapport—the ability to empathize—can lead them to identify with a client’s despair. In an attempt to find something to praise, counselors often look for any attempt of the client’s to practice HIV prevention, which is the precise thing about which the client feels hopeless.

One of the easiest routes out of this trap is for the counselor to continue exploring the client’s experience with open-ended questions. Eventually, because all people exhibit strength and resilience, the client will reveal something that deserves to be acknowledged through specific and authentic praise.

An example of this process is the experience of a counselor, “Carlos.” Carlos worked with “Kathy,” who had unprotected sex with HIV-positive men but did not care in the moment because being high on crack made her feel “horny.” Like many beginning counselors, Carlos felt at a loss and quickly responded to Kathy’s story by saying, “I’m so glad you came in for a test.”

Because Carlos noticed his neutral stance was off kilter, he made a process comment and followed it with an open-ended question: “That didn’t sound quite right. How do you feel once the horniness wears off?” Eventually, Carlos learned that Kathy had recently disconnected her telephone, which in turn meant she had fewer tricks, less crack, and less unprotected sex. After hearing this, Carlos offered specific praise that authentically highlighted Kathy’s ability to change, hoping that this would build Kathy’s confidence about effecting future changes.

**Negotiating an Incremental Step**

If, through specific and authentic praise, counselors can help clients remember other times in their lives

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**References**


when they were able to make successful changes, the next step is to encourage them to prevent HIV in the future. A useful way of bringing up the topic is to simply listen for and highlight HIV prevention steps a client has already tried. With clients who are fatalistic, however, the limited role of the counselor may limit the intervention to planting the seed for referrals.

For instance, Karla learned that the little things Gus used to do to nurture himself during a speed run—drink water and keep food in the refrigerator in preparation for his post-high crash—had slowly fallen away. Gus reported, “I feel like I’m completely out of control and there’s nothing I can do about it.”

Karla delved further into the context of Gus’s HIV risk: “Was there a specific incident that brought you here?” Gus had recently noticed that some of the men he was used to seeing at a sex party were gone: “I figure they’re HIV-positive now, and that’s why they’re not partying anymore.”

Gus was recycling to an earlier Stage of Change. In response, Karla non-judgmentally reframed Gus’s past “failures” and highlighted new motivations for him to engage in prevention.

Case Study
Cisco, a 27-year-old gay man who uses methamphetamine and alcohol, has had unprotected anal sex several times with men he met on the internet. “I’ve always used drugs,” he says, “but crystal is new to me. It makes it easier to say yes to the ads that say ‘no condoms.’ I know I shouldn’t, but . . .” Cisco’s last test was a year ago, and he has come in today for a rapid test.

Counseling Intervention
During informed consent, Cisco’s counselor, Tanya, notices he looks away when she takes out the data collection form (the Client Information Form, in California). She comments, “It looks like you recognize this part of the session.”

Cisco responds, “I don’t really remember how many partners I’ve had. And that form says I should remember, which just makes me feel worse.” Tanya puts the form down, commenting: “You know what works best for you. I’ll fill the form out later. What do you mean that remembering makes you ‘feel worse’?”

Tanya’s intervention seems to run counter to HIV prevention, since the data collection form is useful as a counseling tool, a source of epidemiological data, and a record for reimbursement. But because she is applauding Cisco’s ability to speak to and prevent what makes him feel bad, Tanya’s intervention invites Cisco to discuss HIV-related risk and his recent practice of not using condoms.

After receiving an HIV-negative test result, Cisco says, “I should be doing something more than testing but I don’t think I can. Anything I say I’ll do now, I know I won’t think about when I’m high again.”

Tanya responds, “I appreciate your ability to say what’s true for you. I want to be honest, too. I talk to a lot of gay men who are struggling with situations like yours. Tell me, if you were in my position, what would you do or say that would be most helpful to someone in your situation?”

Tanya’s intervention focuses on helping Cisco think differently about the inevitability of his situation. Cisco is contemplative, although he seems to be moving between thinking about change and not thinking about change.

“People should be talking more about HIV and meth,” Cisco responds, which prompts Tanya to explore how such discussions would impact his HIV risk. By engaging Cisco in a conversation about other people in similar situations, Tanya asks him to imagine beyond the inevitability of his own situation, gaining some distance from his own sense of futility.

Conclusion
There is no sure-fire prescription for how to deal with a client’s fatalism and shame about sex, drugs, and HIV prevention. However, counselors usually can begin by reflecting to clients—through specific and authentic praise—their capacities to effect change. This approach, combined with a tolerance for client ambivalence and despair, can help clients and counselors discover realistic, incremental change that reduces the chance of HIV infection in the future.
Review Questions
1. True or False: The causal connections among substance use, sexual behavior, and HIV infection are well understood.

2. According to the research, men who have sex with men tend to: a) use a wide variety of substances but only one at a time; b) use one substance only to the point of chronic abuse, especially if the substance is methamphetamine, Ecstasy, or cocaine; c) use a wide variety of substances, usually more than one at a time either sequentially or in combination; d) tend not to use substances.

3. True or False: Studies have shown an association between the recreational use of Viagra and HIV transmission.

4. True or False: Poppers are a harmless drug whose main side effect is dizziness.

5. Which drug has not been shown to decrease sexual functioning? a) methamphetamine; b) poppers; c) alcohol; d) cocaine.

6. True or False: A counselor’s skill in empathy may backfire if the counselor identifies too strongly with a client’s despair.

7. Which of the following effects may not result from combining HIV antiviral medications and recreational drugs: a) an increase in the duration and effect of the recreational drug; b) an increase in viral load; c) a decrease in antiviral medication adherence; d) a decrease in viral load.

8. True or False: Counselors should not explore a client’s past actions because the session should focus on “where the client is.”

Discussion Questions
1. How does introducing the topic of drug and alcohol use affect your counseling sessions? How do your own attitudes influence these discussions?

2. In what ways have you observed drug and alcohol use affecting a client’s sexual decision making?

3. In what ways does knowledge about the effects of substance use help clients in making prevention decisions?

4. How do you approach the process of referring clients to substance use resources?

5. Have you observed clients in different stages of change regarding substance use and HIV prevention? How has this situation helped or complicated these sessions?

6. How have a client’s shame about past behavior and fatalism about future risk affected that client’s ability to engage in HIV prevention discussions? How have they affected your own abilities to engage in these discussions?

Answers
1. False. While research has found associations among these behaviors, it has not identified the precise relationships that connect them.

2. c.

3. True.

4. False. Poppers can increase the risk of HIV transmission by dilating blood vessels in the anus, and they can also be fatal when combined with other substances that lower blood pressure.

5. b.

6. True.

7. d.

8. False. Clients may better reduce future HIV risk by identifying past successes and strengths.

Using PERSPECTIVES
PERSPECTIVES is an educational resource for HIV test counselors and other health professionals. Each issue explores a single topic. A Research Update reviews recent research related to the topic. Implications for Counseling applies the research to the counseling session. Also included are a Case Study and questions for review and discussion.
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