



The Pitt Men's Study

news and notes

Fall 2010

Recreational Drug Use and the Risk of HIV Infection



Despite all we know about HIV transmission, men are still becoming infected. One important reason for this may be a combination of social behaviors, says Dr David Ostrow, a researcher at the Chicago site of the Multicenter AIDS Cohort Study (MACS). Dr. Ostrow's article, "Specific Sex Drug Combinations Contribute to the Majority of Recent HIV Seroconversion Among MSM in the MACS," was published last summer in the prestigious *Journal of Acquired Immune Deficiency Syndrome (JAIDS)*.

Dr Ostrow and colleagues reviewed records of 1667 participants in the Multicenter AIDS Cohort Study (MACS) (which included the Pitt Men's Study) and identified 57 new infections from 1998 – 2008. The researchers wanted to know if there was a link between the use of recreational drugs and medications used to treat erectile dysfunction, and the risk of becoming infected with HIV. For the past 25 years, participants at

all four MACS sites (Chicago, Los Angeles, Pittsburgh and Baltimore) have been asked questions regarding use of marijuana, poppers, cocaine, crack, heroin, methamphetamines, ecstasy, ketamine, LSD and other psychedelic drugs. In 1998, questions were added about erectile dysfunction medications, such as Viagra, Cialis and Levitra. The wealth of data in this area made Dr Ostrow's research feasible.

Prior to this study, research conducted on men who have sex with men (MSM) showed that the use of poppers (inhaled nitrites) and methamphetamines increased the risk of acquiring HIV infection. In the general population, use of intravenous drugs (IVD) also increased the risk of infection due to sharing needles and/or syringes that were contaminated with blood containing HIV. Dr Ostrow and colleagues wanted to ensure that needles and contaminated syringes were not the cause of any new infections in their study, so they focused their efforts in studying the effects of stimulants (such as cocaine, Ecstasy and crack), that can be smoked or taken by mouth, poppers which are inhaled and erectile dysfunction drugs that are taken as pills.

Information on alcohol use, educational level and number of anal sexual partners was also collected in Dr Ostrow's study. Findings revealed that men who became infected during the ten-year study period were similar in age, race/ethnicity and educational level as men who remained HIV negative. However, they were different with regard to drug use. Almost two thirds of the newly infected men reported using at least one of the following categories of drugs; stimulants, poppers and erectile dysfunction medications. The rate of infection was almost three times higher among men who used all three classes of drugs. As expected, the risk of HIV infection also increased with the number of unprotected receptive anal sex partners.

Drug use alone did not predict all infections, reinforcing the notion that risk reduction has to encompass more than just drug and alcohol use (*for more information on drug risk and HIV use, see article on page 2*). Nineteen

The Pitt Men's Study

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Recreational Drug Use and HIV Infection, con't

of the 57 men with new infections reported no use of either stimulants, poppers or erectile dysfunction drugs.

Dr Ostrow began this research to address the concern that sexual behaviors change when men are under the influence of recreational drugs. At the Pitt Men's Study, we've heard many personal accounts of men who become uninhibited after using stimulants and regret their behavior afterwards. In some cases, their willingness to participate in "riskier" sex, including anal receptive sex with multiple partners who don't wear condoms, increased whether they used a single drug, or drugs in combination. There are also examples of men acting completely "out of character" when under the influence of stimulants and performing sexually acts that they normally wouldn't do.

As we all know, participants of the MACS are well informed about the risk factors for becoming infected with HIV. Despite their knowledge, they are still becoming infected. Dr Ostrow wrote, "use of poppers, stimulants and erectile dysfunction drugs increased risk for HIV seroconversion significantly" in this population. He is hopeful that this current research will "provide direction for focused intervention."

It's important to note that recreational drug use can harm users in many ways, and not just by increasing the risk of HIV infection. Abusing recreational drugs can damage the liver, alter behaviors, strain relationships and add to the risk of other sexually transmitted diseases such as herpes, syphilis, gonorrhea and Chlamydia.

If you would like additional information regarding this study, or would like to discuss ways to decrease your recreational drug use, please contact Dr Bridget Calhoun at the Pitt Men's Study at 412-624-2008.



But I Don't Do Drugs. Does this Mean I'm Safe from Being Infected by HIV?

Unfortunately, no. In the Ostrow paper, one third of those who became HIV+ (19 out of the 57 men) reported no use of poppers, erectile dysfunction medications, or stimulants. While the use of drugs and alcohol have an impact on HIV transmission, men still get infected due to other factors.

In a landmark study of seroconversion in the Pitt Men's Study published in the journal AIDS in 1989 researchers interviewed 40 men who had become infected since joining the study in order to determine why these men – in spite of a negative HIV test and safer sex counseling – had acquired HIV.

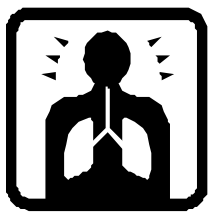
Two of the men were infected because psychological issues (such as depression) had clouded their judgment, leading them to take risks they otherwise might not have taken. Six of the men linked their infection with the abuse of alcohol and recreational drugs.

That accounts for one-fifth of the infections, but the cause of 80% of them was not immediately clear. After much sifting of data, a pattern emerged. 32 of 40 men became HIV-infected because they had simply taken chances and had sex based on their assumptions about the HIV status of their partners, a phenomenon researchers called "gambling," and/or because they were too embarrassed to discuss safe sex.

These men had partners that looked healthy, or had limited sexual experiences, or claimed to have tested HIV-, and so forth, so they decided to have unsafe sex with them based on these claims and assumptions. But in spite of appearing to be HIV-, these men, knowingly or unknowingly, were HIV+ and infected the gamblers.

We at the Pitt Men's Study feel that this study still describes one of the most potent vectors for infection – letting your guard down because you believe (or want to believe) that someone you are attracted to couldn't possibly be infected with HIV. Assuming that all of your partners are HIV+ and acting on that assumption is still a very good tool for avoiding HIV infection.

Meet Your Researcher - Pulmonary Edition



behind the curtain.

For this issue, we talked to Cathy Kessinger, RN and Barbara Rissler, RN, both coordinators for the MACS pulmonary study. Part of their study involves a small questionnaire that you may have been asked at your last visit, another part involves a series of lung tests conducted outside of the Pitt Men's Study clinic.

What problems are you studying?

Chronic obstructive pulmonary disease (COPD) or emphysema is a serious lung disease that makes it harder and harder for people to breathe. Individuals infected with HIV have an increased incidence of COPD or emphysema, even when we take into account important factors like age and smoking habits, and we want to know why. One possible answer to that question is that the tiny microbes that live inside all of our lungs are different in those infected with HIV and these microbes affect the progression of lung diseases, infectious or not. Or alternatively, maybe the microbes are the same, but they act differently on the lungs when HIV is present. Other possibilities are that HIV itself or the medications used to treat HIV can have effects in the lungs.

To get to the bottom of this (we hope!), we want to test your lungs and look at your lungs in all different ways. We'll ask questions about your lifestyle and history; we'll measure how well you breathe; we'll draw and study your blood; we'll study your phlegm and spit in a lab; we'll look at pictures and measurements of your lungs taken by medical equipment in a hospital; and, we may even call you back to take a sample of the actual environment right down inside your lungs for a closer look.

We just want to know how your lungs look, how they function, and what's inside to better understand the differences that lead the lungs of individuals infected with HIV to progress more quickly toward debilitating lung diseases. If specific microbes or molecules can be targeted, ultimately this research could lead the way to improvement of lung function and quality of life of those

infected with HIV.

In addition to emphysema, pulmonary arterial hypertension (PAH) or high blood pressure in the lungs is more common in individuals infected with HIV compared to the general population. HIV-PAH does not seem to be related to CD4 cell counts, has been seen in all stages of the disease, and increases HIV-related deaths. Using blood from our study we can determine persons who may be at risk for PAH.

What are you hoping to glean from the data you're collecting from the Pitt Men's Study volunteers?

All those questions that we ask you about your lungs help us know if breathing problems and lung diseases are more common in people with HIV. The answers to the questions help us learn which diseases we should focus our research on and if there are changes in the lung symptoms and diseases in HIV over time. We can also tell if people are getting tested and treated for different kinds of lung diseases.

For people who do our pulmonary testing study, we get a lot of information about the way the lungs work and look in people with HIV. In particular, the study will help us determine if COPD/emphysema gets worse more quickly in people with HIV and why.

From all the specimen samples we collect in this study, we can perform multiple tests concerning lung disease for many years. As people live longer with chronic HIV, lung disease will become common. We hope that by studying the data from people who are HIV +, HIV -, smokers and non-smokers we will be able to help sustain a greater quality of life for those living longer with HIV.

Have you made any findings from these data so far, and if so, what?

We have found that lung testing is underused in high risk patients with HIV. Our study has noted that there is a high prevalence of impairment in the way lungs use the gases we breathe and in COPD, even among non-smokers. Of course, smoking and IV drug use continue to be major risk factors for lung abnormalities and quitting smoking is really important if you have HIV infection. The research is still in progress and laboratory testing and analysis of the large amounts of data collected will take some time before conclusions can be made and published, though we are confident much will be learned from the participation of our many volunteers.

Positive OUTlook

On July 8th, 2010, The Pitt Men's Study and the Pittsburgh Prevention Project began sponsoring a show called Positive OUTlook to get information to the LGBT communities of Pittsburgh and beyond about health and wellness issues that affect the community. Whenever (if ever) we hear about LGBT health, it is usually associated with HIV/AIDS. While this is a very important issue and concern in our communities, it is not the only problem that affects us. Depression, suicidality, obesity, cancer, domestic violence and high blood pressure, just to name a few, are all areas that LGBT communities are battling every day, yet we rarely hear about them. Positive OUTlook intends to remedy this and bring all these other issues to light for the communities afflicted by these problems.

Positive OUTlook airs every Thursday, live, from 1 to 2pm on outonline.com. If you catch the show live you will see one of the features that attracted us to do this venture. When you log on to outonline.com you will see two screens, one for the live show and the other for the chat room. Upon signing in to the chat room you are assigned a random number which keeps you anonymous to the other guests. It is possible to enter a name, but most people either use the random number or use an alias to sign in. This feature is especially attractive for a show on health and wellness because it allows the viewer to ask questions about their health or other issues and still maintain their anonymity. You can also call in to the show and ask questions or make a comment. Shortly after the live airing the show is archived on the site for future viewing, and they can even be downloaded to your computer to watch later when you have the time.

We are still looking at ways in which to make this a successful tool to communicate health information for the communities in Pittsburgh. Some of the topics that have been covered so far include: what are the health issues of the LGBTQ communities, what are the mental health issues, aging and sexuality, and the mental and physical health benefits of doing Yoga in the nude. If you would like to be a guest on the show and talk about your research into LGBT health, please contact Nayck B. Feliz at 412-383-2612, or email to nbf5@pitt.edu. We look forward to the possibilities in the future, and until next time, be well Pittsburgh!

The 23rd Annual World AIDS Day Service

Wednesday, December 1, 2010,
7:00 PM

Pittsburgh will commemorate this event with the 23rd annual World AIDS Day service sponsored by the Pitt Men's Study.

The non-denominational, multi-religious service will take place at Heinz Chapel (located on Bellefield Ave next to the Cathedral) on the University of Pittsburgh campus in Oakland.

For more information, contact
WorldAIDSdayPgh@stophiv.pitt.edu

