

Global iPrEx MSM Efficacy Study: The pre-exposure prophylaxis (PrEP) Initiative

Sponsored by the National Institute of Health (NIH) with co-funding by the Bill and Melinda Gates Foundation and drug donated by Gilead Sciences, Inc., iPrEx was a double-blind controlled trial and the only efficacy trial to date among men who have sex with men (MSM) for the use of pre-exposure prophylaxis (PrEP).

Launched in 2007, the iPrEx study, or PrEP Initiative (PrEP), enrolled 2,499 participants at 11 sites in six countries.

<u>iPrEx Countries</u>	<u>Percentage of Trial</u>
Peru	55%
Brazil	15%
Ecuador	12%
United States	9%
Thailand	5%
South Africa	4%



iPrEx was aimed at determining the safety and efficacy of a once-daily dose combination of two antiretroviral (ARV) medications, TDF/FTC (brand name Truvada), as part of a comprehensive HIV prevention service, to help prevent HIV acquisition in HIV-uninfected gay men as well as transgender women and other men who have sex with men (MSM).

iPrEx began enrolling participants in June of 2007 and ended enrollment in December of 2009.

An ongoing comprehensive HIV prevention package was offered to all iPrEx participants, including:

- Monthly HIV testing
 - Pre/post test counseling
 - Condoms
 - Monthly STI testing (if symptomatic)
 - STI screening/treatment (every 24 weeks)
 - STI Treatment of partners (as needed)
 - Post-exposure prophylaxis (PEP) if recent exposure
 - HBV vaccine

Participants in the iPrEx study were followed for:

- HIV seroconversion
 - Adverse effects
 - Metabolic effects (FAT and BMD)
 - HBV exacerbations
 - Risk behavior and STIs (including HSV)
 - Adherence
 - If infected: drug resistance, viral load, immunological responses to CD4 counts

WHY PrEP FOR HIV PREVENTION?

Multiple strategies are needed to assemble a well rounded “prevention tool-kit.”

No one HIV prevention strategy will be 100 percent effective, appropriate for, or accepted by everyone.

Multiple prevention strategies must be evaluated in different populations, domestically and globally, to determine best combinations for a given population.

Global iPrEx: PrEP Initiative (continued)

iPrEx PRIMARY ANALYSIS OF EFFICACY

On November 23, 2010, data were published indicating that at the end of the trial, among the 2,499 enrolled participants, there were 36 infections among participants who received TDF/FTC and 64 among placebo recipients.

Researchers calculated that the use of TDF/FTC cut new HIV infections by an estimated 44 percent overall when compared to placebo.

These data are viewed as a statistically significant level of efficacy and an important step forward for HIV prevention research. This is the first evidence that an oral antiretroviral agent can be used to reduce risk of HIV among HIV-negative people.

These results raise hopes but there are also many important issues for consideration before replication in public health settings.

All of the iPrEx participants received a range of prevention interventions, including condoms, safer sex counseling and treatment of sexually transmitted infections. They were also tested for HIV at all monthly clinic visits, or more frequently, and counseled every month about daily use of the trial drug.

It may not be feasible to provide this level of support and testing outside of a clinical trial. It is important, therefore to understand both how gay men would use PrEP in the “real world” if they had access to it and what the safety and effectiveness of PrEP will be when used with less frequent monitoring or less intensive counseling than what trial participants received.

The next critical step is gathering this information so that gay men and their health providers can be fully informed about how PrEP might best be utilized.

iPrEx – WHAT WE’VE LEARNED

PrEP is a daily antiretroviral (ARV) pill that can help prevent HIV among HIV-negative gay and bisexual men when used with other HIV prevention methods: The iPrEx trial has found that a strategy based on once-daily use of a combination ARV agent, a drug used to *treat* HIV, helped *prevent* HIV among gay and bisexual men, when used in combination with other proven HIV prevention methods such as counseling and testing and condom distribution.

PrEP was only shown to work with one particular HIV drug: The pill – TDF/FTC (known as brand name Truvada) – contains a combination of two drugs. Other HIV drugs are being evaluated for safety and effectiveness as PrEP strategies, but there are no data available from these trials yet.

You can still get HIV when taking PrEP: PrEP is only partially effective. It should be used with – not instead of – condoms, safer sex practices, ongoing monitoring and testing, and other HIV prevention methods.

PrEP is not a “vaccine” or a “morning-after” pill; it is a pill that must be taken daily: The iPrEx trial found effectiveness when the pill was taken daily, in the context of intensive counseling to encourage its daily use. There is no evidence supporting the effectiveness of PrEP in any other context. In the study, those who did not take the pill consistently had very little additional protection from acquiring HIV.

PrEP is not for everyone at risk of HIV: The iPrEx trial showed that the pill was partially effective for some gay and bisexual men at high risk of HIV; those who took the pill regularly and who were closely monitored. iPrEx results cannot be extrapolated beyond men who have sex with men. Other PrEP studies underway among heterosexual men and women and injecting drug users will provide additional answers.