PrEP Reaches Top Effectiveness After a Week of Daily Dosing

May 20, 2015

Daily Truvada (tenofovir/emtricitabine) as pre-exposure prophylaxis (PrEP) against HIV takes five to seven days to reach top estimated effectiveness among men who have sex with men (MSM), HIVandHepatitis.com reports. High levels of protection are maintained for perhaps a week after the last dose.

Publishing their findings in Clinical Infectious Diseases, researchers conducted a pharmacokinetic study of Truvada in which they gave Truvada to 11 HIV-negative men and 10 women for 30 days. (Such studies investigate how a drug is metabolized.) The researchers measured drug levels of the medication at days 1, 3, 7, 20, 30, 35, 45 and 60. They took one rectal biopsy sample from each participant two hours after the first dose.

Nineteen of the participants completed all the study visits. Participants apparently adhered to the daily dosing schedule at a rate of 99 percent, according to pill counts, self-reports and a dosing calendar.

According to levels of drug detected in peripheral blood mononuclear cells (PBMCs), and comparisons of those results to drug levels estimated in previous research to correspond to varying degrees of protection against HIV, one day on PrEP led to a 75 to 91 risk reduction, three days meant a 95 to 97 percent risk reduction, and five and seven days translated to a 98 to 99 percent risk reduction. The presumed risk reduction stayed higher than 90 percent for seven days after the last dose.

Although the study included female participants, it was not meant to estimate how well PrEP dosing protects them or other groups, just MSM. The iPrEx study used as the reference point for Truvada's effectiveness at various concentrations in PBMCs was only conducted among MSM and trans women.

This research does not apply to intercourse-based dosing schedules, as seen in the ongoing IPERGAY trial, in which people only take Truvada in the days surrounding sex. (A major difference in such a dosing strategy is that it starts with a double dose. This study only looked at taking one pill per day.)

A crucial outstanding question about PrEP's effectiveness after stopping Truvada is how long HIV

remains in the body if it is, for example, deposited in the rectum through semen. According to the researchers, “There appears to be little consensus on this issue given that several variables may affect the HIV clearance process.”

Regardless of their findings that PrEP remained quite effective for days after stopping, the researchers still advise starting PrEP about a week before the first possible exposure to HIV and staying on Truvada for four weeks after the last potential exposure.

To read the HIVandHepatitis article, click here.

To read the study abstract, click here.

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