Undetectable = No Transmission

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The final results of the famed HPTN 052 trial found no transmissions between mixed-HIV-status heterosexual couples when the partner with the virus was on antiretrovirals (ARVs) and had a fully suppressed viral load.

Researchers randomly assigned 1,763 people with HIV who were in a partnership with an HIV-negative, opposite-sex person to receive ARVs either immediately or once they had two consecutive CD4 counts below 250 or if they developed an AIDS-defining illness.

In 2011, interim results found, to much fanfare, that starting treatment early reduced the risk of transmission by 96 percent. At that point, everyone in the delayed treatment group was offered treatment.

Seventy-eight partners contracted HIV during the study. Through genetic analysis, the researchers determined that 46 of those transmissions—three in the early treatment group and 43 in the delayed treatment group—were linked to the study partners.

None of the identified partner-to-partner transmissions took place when the HIV-positive member had a fully suppressed virus.

Treating the virus early, compared with delaying, was associated with a 93 percent reduction in the risk of transmitting HIV.

Explaining why some partners on ARVs transmitted the virus, the study's lead author, Myron Cohen, MD, associate vice chancellor for global health at the University of North Carolina at Chapel Hill Medical Center, says, "When an HIV positive person first starts on treatment, it takes a few months before viral growth is completely suppressed. During that short window of time, the couple should use condoms. Alternatively, the HIV negative partner might use antiretroviral agents as pre-exposure prophylaxis [PrEP]."

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