

Antiretroviral drugs dramatically reduce risk of passing HIV to healthy partners

May 11 2011, By Glenda Fauntleroy

When one partner in a couple is infected with HIV and the other is not, treatment with antiretroviral drugs can dramatically lower the chances of the infected partner passing along the disease to his or her mate, a new evidence review finds.

Patients with [HIV](#) receive a combination of drugs is given as part of antiretroviral therapy (ART) to stop progression of the disease. The new review discovered that when patients with HIV are on ART, their partners had more than a five-fold lower risk of getting the [virus](#) than in couples without treatment.

“We weren’t particularly surprised having followed this literature for awhile,” said reviewer George Rutherford of Global Health Sciences at the University of California, San Francisco. “The magnitude of the effect was somewhat surprising, though.”

The review appears in the current issue of *The Cochrane Library*, a publication of The Cochrane Collaboration, an international organization that evaluates research in all aspects of health care. Systematic reviews draw evidence-based conclusions about medical practice after considering both the content and quality of existing trials on a topic.

In 2009, an estimated 33.3 million people were living with HIV, most in low- and middle-income countries in sub-Saharan Africa and Asia, according to the World Health Organization (WHO). More than 5 million were receiving ART.

The Cochrane reviewers evaluated seven studies conducted in foreign countries, including Brazil, China and seven African countries. There were 436 total HIV transmissions from all seven studies—365 transmissions in untreated couples and 71 among ART-treated couples.

One study, for instance, evaluated 2,993 couples in Rwanda and Zambia from 2002 to 2008 and found 175 new infections of HIV—only four of which were from partners on ART. This equaled an incidence of 3.4 percent per 100 uninfected partners per year for those whose partners were not taking ART and 0.7 percent for those whose partners were on ART.

Another major question the reviewers hoped to answer was, at what CD4 T-cell count could ART be shown to lower the risk of HIV transmission? CD4 cells help the body fight infection. The WHO recommends that all patients begin ART when their CD4 count goes below 350 cells per microliter of blood.

Rutherford and his colleagues could not find conclusive evidence to show that beginning treatment at greater than at a CD4 count above 350 stops transmission of the virus. A large randomized trial that might be more definitive is taking place in several African nations and due for completion in 2015.

Whether you are prescribed ART depends on where you live, Rutherford said.

“In most of the world, ART is not given to asymptomatic patients with greater than 350 CD4 cells per microliter to prevent transmission,” he said.

However, in the United States., clinicians frequently start HIV patients on ART with CD4 counts above 350 to prevent some of the chronic

changes associated with long-term HIV infection, Rutherford said.

Some experts warn, though, that despite the well-documented benefits of ART, access to the drugs in the United States is a major concern.

“About half the people living with HIV in the United States have sporadic and irregular access to care and treatment, and the antiretroviral therapy drugs are very costly. We in the United States pay the most of anyone in the world,” said Jim Pickett, director of Prevention Advocacy and Gay Men’s Health at AIDS Foundation of Chicago.

Programs to help people gain access to HIV drugs are under strain — with 7,873 people currently on waiting lists in 11 states, for drugs supplied through the federal/state AIDS [Drug](#) Assistance Programs, according to Pickett.

“We know that finding people living with HIV and linking them into appropriate care and treatment reduces the chances of onward infection,” he said. “But we need to do a much better job taking what we know and turning that into long-term, sustainable programs.”

More information: Anglemyer A, et al. Antiretroviral therapy for prevention of HIV transmission in HIV-discordant couples. *Cochrane Database of Systematic Reviews* 2011, Issue 5.

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