

# HIV-2 infection inhibits HIV-1 disease progression

July 19 2012

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For people infected with HIV-2 and then HIV-1, it takes longer for AIDS to develop, study finds.

(HealthDay) -- While many people don't know it, there's more than one kind of AIDS virus. Besides the HIV-1 strain that's common throughout the world, a type known as HIV-2 is found in some parts of Africa. Now, a new study finds that people infected with HIV-2 and later with HIV-1 appear to be better equipped to fight off the virus.

Double-infected people can still go on to develop AIDS, and there's no indication that anyone infected with HIV-1 should go out in search of HIV-2.

However, "this study should prompt researchers to take a fresh look at HIV-2 infection" and why it seems weaker, and the potential implications for a vaccine, said Sarah Rowland-Jones, an AIDS specialist and professor of immunology at John Radcliffe Hospital in Oxford,

England.

The big questions, she said, are these: Is there something about the HIV-2 virus that makes it less dangerous to the human body's immune system defenses? Or is it perhaps the other way around, and the body's defenses are the key?

"If we understood this, it would have a lot of relevance for HIV vaccine design," said Rowland-Jones, who's familiar with the new study's findings.

The HIV-2 strain is largely found in West Africa and hasn't spread much beyond there, although there have been cases reported in Europe, India, Japan and the United States, Rowland-Jones said. Many people who are infected with the HIV-2 virus develop AIDS and die, but some live normal lives, she said.

The new study looked at West Africans in the country of Guinea-Bissau and focused on 223 people who first became infected with HIV-2 and then with HIV-1 or those who only got the HIV-1 strain.

The researchers tracked the patients for about 20 years. They found that it took an average of 104 months (nine years) for those with dual infections to develop AIDS, but just 68 months (nearly six years) for those infected solely with the HIV-1 virus.

"Those infected with HIV-2 first seem to be better prepared to handle the more aggressive HIV-1 infection and thereby have a longer progression time to AIDS," said study lead author Joakim Esbjörnsson, a postdoctoral researcher at Lund University, in Sweden.

"It is clear that the effect is huge," Esbjörnsson said, and it probably affects death rates, too.

Esbjörnsson emphasized that the research only looked at people who became infected with HIV-2 *first*: "People already single-infected with HIV-1 should under no circumstances try to get infected with HIV-2," he said.

Phyllis Kanki, an AIDS specialist and professor of immunology and infectious diseases at the Harvard School of Public Health, suggested that people who get infected with HIV-2, which affects the body more slowly, may develop better defenses against the virus. That, in turn, could help them more effectively fight the HIV-1 strain, she said.

The study appears in the July 19 issue of *The New England Journal of Medicine*.

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Citation: HIV-2 infection inhibits HIV-1 disease progression (2012, July 19) retrieved 3 May 2024 from <https://medicalxpress.com/news/2012-07-hiv-infection-inhibits-disease.html>

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