

# Has HIV become more virulent?

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Damage to patients' immune systems is happening sooner now than it did at the beginning of the HIV epidemic, suggesting the virus has become more virulent, according to a new study in the May 1, 2009 issue of *Clinical Infectious Diseases*, now available online.

Conventional wisdom says several years will pass between [HIV](#) infection and the need for antiretroviral therapy. However, clinicians have observed that [patients](#) are entering HIV care with lower initial CD4 cell counts than in previous years and now often require antiretroviral therapy soon after entering care, raising the question of whether HIV has become more virulent.

Researchers studied data from more than 2,000 HIV-positive active-duty military personnel, retirees, and dependents between 1985 and 2007 who had tested HIV-negative within the previous four years. When they looked at patients' first CD4 count after HIV diagnosis, they found that it decreased from an average of 632 cells/mm<sup>3</sup> in 1985-1990 to 514 cells/mm<sup>3</sup> in 2002-2007. Additionally, 25 percent of patients diagnosed with HIV in recent years already had fewer than 350 CD4 cells/mm<sup>3</sup>, the threshold for when antiretroviral therapy should begin, compared to only 12 percent of patients in the late 1980s.

The authors note that the trend seems to have stabilized, perhaps due to the widespread introduction of highly active combination antiretroviral therapy.

This is the first study from the United States which shows that the

[immune cells](#) among recently diagnosed HIV patients has dramatically fallen during the HIV epidemic. These findings are similar to those found in the study from Europe, which suggests that these trends may be widespread.

"Unfortunately, it may no longer be true that there is a time period of several years between diagnosis and the need for treatment - instead this time-span is shortening" said study author Nancy Crum-Cianflone MD, of the San Diego Naval Medical Center. "Early diagnosis is important for several reasons including that patients can enter into medical care and begin treatment before the immune system becomes weak and opportunistic infections develop."

Source: [Infectious Diseases](#) Society of America

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