

# Ridding the human body of HIV

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A new Northwestern Medicine study will undertake a bold new protocol to completely eradicate latent HIV cells that current drugs don't affect. Participants, with diagnosed HIV, in the experimental group will be given an investigational HIV vaccine that actually wakes up dormant cells at the same time regular HIV-drug therapy is aimed at extinguishing the activated cells.

"If we can effectively decrease the reservoir then we can think about curing [HIV](#)," said Robert Murphy, M.D., founding director of Northwestern University Feinberg School of Medicine's Center for Global Health and an infectious disease physician at Northwestern Memorial Hospital.

Many people with HIV are living with nearly undetectable levels of the virus in their blood, but they can't entirely clear HIV out of their bodies with the current treatment regimens. Dormant HIV cells linger, hiding in the body and resisting the powerful benefits of anti-HIV drugs. Through the study, called EraMune 02, researchers at Feinberg's Center for Global Health plan to activate dormant HIV cells, fight them off and kill the virus.

The first participant in the study was enrolled at Northwestern Medicine this week. The study will ultimately enroll and study 28 already HIV-infected participants in Chicago, New York and San Francisco for more than one year. A similar study, EraMune 01, also is taking place in Europe and includes participants from France, Spain, Italy and England.

"There is a reservoir of dormant, latently infected cells that current drugs don't affect, and we think we now have drugs available that can actually attack the virus in the reservoir," said Murphy, the principal investigator of the study and John Philip Phair professor of infectious diseases at Feinberg.

All participants will be given intensified doses of anti-HIV drugs for two months. Intensified drug therapy can suppress the amount of HIV in the blood to very low levels. Then participants will be randomly assigned (50/50) to either a control or an experimental group. In addition to the intensified HIV therapy, the experimental group will receive an investigational [HIV vaccine](#). In previous studies this vaccine has been shown to activate latently infected HIV cells.

"If you activate those cells in the presence of giving regular HIV-drug therapy, which would control and fight the virus, you might be able to extinguish the reservoir," Murphy said.

After the treatment phase researchers will follow the participants for one year. They will study the white blood cells of the participants and measure the amount of HIV in the integrated DNA of the cells. This is the first in a series of studies that will examine the effect the intensified treatment and the vaccine have on the reservoir of latent HIV cells, Murphy said.

"We think it is a step in the right direction to find the immunologic agent that will eradicate the reservoir," Murphy said.

Provided by Northwestern University

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