



HIV VACCINE
TRIALS NETWORK

Questions and answers: HVTN 505 vaccine trial

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1. What is the HVTN 505 trial?

HVTN 505 is the name of a clinical trial that tests a combination of 2 experimental HIV vaccines. Scientists think that this study regimen may provide insight into how to make future HIV vaccine products. The experimental vaccines used in this trial are described in Question 5 below.

The products used in this trial are not produced from live HIV, killed HIV, or from HIV-infected human cells. *These study vaccines cannot cause HIV infection.*

2. Who is conducting this trial?

This trial is sponsored by the National Institutes of Health (NIH), an agency of the US Department of Health and Human Services (DHHS).

The HIV Vaccine Trials Network (HVTN) will run the trial. The HVTN is a global partnership of researchers, academic institutions, and community members. The HVTN conducts clinical HIV vaccine trials worldwide in a safe, efficient, ethical, and scientifically rigorous way. All of the HVTN's research is developed and conducted with community input.

3. What is a vaccine trial?

A vaccine trial is a study of experimental (unproven) vaccines. A vaccine is given to people to prevent infection or fight disease. Right now there is no licensed vaccine against HIV. In order to find an effective HIV vaccine, researchers need to test experimental vaccines to see if the vaccines can help the body prevent infection with HIV or eliminate or control HIV if a person gets infected. Experimental HIV vaccines are tested in animals before they are tested in people. However, only human testing can help us understand how an HIV vaccine can work in humans.

4. Why is this trial being done?

We are doing this study to find out whether or not the study vaccines lower the level of HIV in the blood of people who become infected with HIV. Prior non-vaccine studies have shown that this could help HIV-infected people stay healthy longer.

We will counsel participants on how to protect themselves from HIV. Unfortunately, in spite of this counseling some participants will get infected with HIV during the study through high risk behavior with an infected partner. We do not expect the study vaccines in HVTN 505 to prevent HIV infection.

5. What kind of experimental vaccines, or “study vaccines,” are being tested in HVTN 505?

HVTN 505 tests a combination of 2 vaccines. The technical names of the vaccines are VRC-HIVDNA016-00-VP (a DNA vaccine) and VRC-HIVADV014-00-VP (a recombinant adenoviral vector vaccine). From here on, we will call them the DNA and rAd5 vaccines or the “study vaccines.” The study vaccines were made by the Dale and Betty Bumpers Vaccine Research Center (VRC), which is part of the US National Institutes of Health.

Each of the study vaccines contains pieces of man-made DNA that look like pieces from HIV. DNA is a natural substance found in virtually all living things, including people and some viruses. DNA instructs cells to make proteins. When these study vaccines are injected, the man-made DNA will tell the body to make small amounts of proteins that look like ones found in HIV. There is no actual HIV in the vaccine and the body does not make HIV from the DNA in the vaccines.

The rAd5 vaccine is made out of a virus called adenovirus type 5. Adenoviruses are common. They cause colds and diarrhea. However, the adenovirus in this study has been changed so that it cannot make you sick.

6. Are these study vaccines safe?

Both the DNA and rAd5 vaccines have been given to hundreds of people in previous clinical trials over the past five years without serious side effects.

The study vaccines are considered experimental, meaning the US Food and Drug Administration (FDA) only allows them to be used in research. They have been made according to FDA guidelines and were reviewed by the FDA. However, it is always possible that there could be unexpected problems. Each participant's health and safety will be watched closely throughout the trial.

A previous study called the Step Study tested a different HIV vaccine that also contained adenovirus type 5. Uncircumcised, vaccinated men with blood tests that showed evidence of prior adenovirus type 5 (Ad5) infection had more HIV infections than other people in the Step Study. Circumcised men with no evidence of prior adenovirus 5 infection did not show increased risk of HIV infection after vaccination in the Step Study.

As a safeguard, HVTN will enroll only circumcised men with no evidence of prior adenovirus type 5 infection. This was the group that did not show any increased risk of HIV infection after vaccination in the Step Study. (See Questions 10 and 11.)

We do not expect the study vaccines to protect people from HIV infection. All participants will be urged to avoid HIV exposures that could result in infection.

7. Can these study vaccines cause HIV infection?

It is *impossible* to get HIV infection or AIDS from these study vaccines. They are not made from live HIV, killed HIV, or HIV-infected cells. The DNA and rAd5 vaccines have been given to hundreds of people in previous clinical trials and no one became infected from these vaccines.

8. How could a vaccine help prevent HIV infection or AIDS?

As described in Question 5, the study vaccines contain pieces of man-made DNA that look like pieces from HIV. There is no actual HIV in the vaccines. When the study vaccines are injected, the man-made DNA tells the body to make proteins that look like HIV proteins. In responding to these proteins, a person's immune system may learn to recognize HIV without being exposed to actual HIV. An immune system that can recognize HIV if it comes along later may be more able to fight the virus and to decrease the damage that HIV can do to the body.

Of course, the best HIV vaccine would keep people from getting HIV infection in the first place. We do not expect the vaccines in HVTN 505 to prevent HIV. We will need to do more laboratory research and clinical trials to find a vaccine or vaccines that prevent HIV infection.

Getting a study vaccine does not protect a person from HIV. Participants in HIV vaccine trials are counseled on how to avoid HIV infection.

9. How many people are in this trial?

The trial will involve 1350 participants: 675 participants will receive injections of the vaccines and 675 participants will receive injections of placebos, sterile solutions with no active substances in them. Using placebo injections helps the trial stay blinded – that is, neither the participant nor the clinical staff will know whether active vaccine or inactive placebo is being injected until after the trial is completed and analyzed.

10. Who is eligible to participate in HVTN 505?

Each participant must meet certain criteria to be eligible for the trial.

Participants must be healthy adult men who have sex with men (MSM). They must be between 18 and 45 years old and they must be HIV negative (free of HIV infection). Only men who are circumcised (no foreskin on the penis) and who do not have detectable antibodies to adenovirus type 5 (no evidence of prior infection with Ad5) will be eligible to participate in this study.

Potential participants are asked about their medical history, sexual history, and drug use and are given a physical examination. They then have blood samples taken for routine testing. All volunteers are tested to ensure they are not infected with HIV. A volunteer who is HIV positive at screening cannot enroll in this trial.

11. Why is the study group limited to circumcised men who have sex with men?

As noted in Question 6, a previous study called the Step Study tested a different HIV vaccine that also contained adenovirus type 5. Uncircumcised, vaccinated men with blood tests showing evidence of prior adenovirus type 5 infection had more HIV infections than other people in the study. Circumcised men with no evidence of prior adenovirus 5 infection did not show increased risk of HIV infection after vaccination in the Step Study. As a safeguard, the HVTN 505 study is enrolling only those participants who clearly did not show increased risk of HIV infection after vaccination in the Step Study.

12. When and where is this trial being conducted?

The trial is expected to begin enrolling participants around late Spring/early Summer 2009. It will be conducted in 12 US cities: Atlanta, GA; Birmingham, AL; Boston, MA; Chicago, IL; Los Angeles, CA; Nashville, TN; New York, NY; Philadelphia, PA; Rochester, NY; Seattle, WA; San Francisco, CA; and Washington, D.C.

13. How will the safety and rights of participants be protected?

The HVTN works hard to protect the safety and rights of participants. Before joining a trial, volunteers are given information about HIV and AIDS, about the reasons for the trial, about possible risks and benefits, and about study procedures. The clinic staff allows plenty of time to talk with volunteers, answer their questions, and give information in writing.

Volunteers will have time to think about whether they want to join the trial. Volunteers are asked to sign an informed consent form if they agree to join the study. They are screened to see if they are eligible. Volunteers can decide not to join the study. If they do join, they can leave at any time for any reason. They will be treated the same no matter what they decide. During the study, participants will be given any new information that could affect whether they want to stay in.

Any new experimental vaccine can have risks. During the trial, the clinic staff monitors participants to make sure the study vaccines are not causing them problems. HVTN and NIH safety staff review the data from all sites and address any safety issues that may come up during the study.

In addition, a Data and Safety Monitoring Board (DSMB) reviews the study routinely to make sure participants are not being harmed by the vaccine, that the trial is moving forward adequately, and that it will be able to answer the research questions. An independent statistician evaluates each new HIV infection and immediately alerts the DSMB that vaccinations should stop if participants getting the study vaccine seem to be at increased risk for HIV infection. The independent statistician can see who is getting vaccine or placebo.

Participants are reminded often that being in a vaccine trial does not mean they are protected from HIV. They are counseled at every clinic visit on ways to avoid HIV.

14. Could the study vaccines cause a vaccine-induced positive or “false-positive” result on an HIV antibody test?

Yes. An HIV vaccine trial participant can test positive on an HIV antibody test, even if the participant is not infected with HIV.

Vaccines can teach your body to fight an infection before you ever have it. They make the body produce antibodies. Antibodies help fight infection. Common HIV tests look for antibodies against HIV. This means that after a participant gets an experimental HIV vaccine, a routine HIV test may say the person has HIV, even if that isn't the case. This result is called a “vaccine-induced positive” or “false-positive” result.

The HVTN study sites have HIV tests that look for the virus itself. This keeps you from having a false diagnosis of HIV infection. Participants who become vaccine-induced antibody positive will be able to have testing by the study site or the HVTN, free of charge, for as long as the vaccine induced antibodies are present.

Someone with a false positive test result may be treated unfairly by others. People with a positive HIV test, even a vaccine-induced positive, are not allowed to donate blood. They may also have problems getting insurance or medical/dental care, traveling to other countries, or serving in the military or Peace Corps. They may have problems getting a job, or with their relationships with friends and family. The clinic staff can help with any such problems. The study site or the HVTN can help counsel and provide other support for any study participant with a vaccine-induced positive HIV test result.

15. If the study vaccines lower the amount of HIV in the blood of participants who get HIV, will the vaccines be licensed for public use?

No. This study is not expected to lead to a license for the study vaccines. The results of HVTN 505 will help researchers decide whether they should proceed with other trials of these vaccines. Even if the decision is made to NOT proceed with further studies, the results of this study could help researchers understand how HIV vaccines might work.

16. Who watches over this study?

Many groups watch over the study to make sure it is being done properly and that the rights and welfare of participants are respected.

The people who designed the study carefully reviewed the information about the study vaccines before deciding to begin the study. Then, the NIH conducted a scientific review and a human subjects protection review of the study. The FDA also reviewed the safety and potential scientific benefit of the study.

The rights and welfare of participants in the study are monitored by Institutional Review Boards (IRBs) or Independent Ethics Committees (IECs) at each participating clinical research center. The safety of the study vaccines is also reviewed by local Institutional Biosafety Committees (IBCs).

Throughout the trial, community members are involved to make sure that the rights of participants and the concerns of the community are addressed. As described in Question 13 above, during the trial, the DSMB and an independent statistician review data to detect any possible differences between the participants getting the vaccine and those getting the placebo, the substance without the vaccine.

17. For more information

About AIDS vaccine clinical trials: AIDS Clinical Trials Information Service, 1-800-TRIALS-A (USA only); www.clinicaltrials.gov

About the HIV Vaccine Trials Network: www.hvtn.org