



VACCINATIONS AND HIV

WHAT ARE VACCINATIONS?

Vaccinations, or immunizations, are treatments that build up your body's defenses against certain infections. It can take a few weeks for your immune system to respond after a vaccination. Vaccines are usually very safe.

Most vaccines are used to prevent infections. However, others help your body fight an infection that you already have. These are called "therapeutic vaccines." See fact sheet 480 for more information on therapeutic vaccines and HIV.

"Live" vaccines use a weakened form of the germ. "Inactivated" vaccines don't use a living germ.

Vaccines can have side effects. With live vaccines, you might get a mild case of the disease. With inactivated vaccines, you could have pain, redness, and swelling where you got the shot. You might also briefly feel weakness, fatigue, or nausea.

WHAT'S DIFFERENT FOR PEOPLE WITH HIV?

If HIV has damaged the immune system, it might not respond as well to a vaccine, or for the same length of time. If you will soon start antiretroviral therapy (see [fact sheet 403](#)) you may respond better if you wait until your CD4 count (see [fact sheet 124](#)) increases.

There has not been much research on vaccines and people with HIV, especially since people started using combinations of antiretroviral drugs (ARVs). However, there are a few key guidelines for people with HIV:

- Vaccinations can increase the viral load (see fact sheet 125) for a little while. On the other hand, getting sick with the flu, hepatitis, or other preventable diseases would be much worse. **Do not measure your viral load within 4 weeks of any vaccination.**
- Flu shots have been studied more than any other vaccination for people with HIV. They are considered to be safe and effective. **However, people with HIV should not use "FluMist" nose spray flu vaccine because it contains live virus.**
- If your CD4 cell count is very low, vaccines might not work. If possible, strengthen your immune system by taking strong ARVs before vaccination.
- **HIV-positive people should not receive most live vaccines (see below) including chickenpox (varicella) or smallpox vaccine. Do not get these vaccines unless your health care provider agrees that it is safe for you. Avoid close contact with anyone who got a "live" vaccination in the past 2 or 3 weeks.** However, the "MMR" vaccine against measles, mumps and rubella is considered safe if your CD4 cell count is over 200.

• **Yellow fever (YF) vaccine is a live vaccine**, it is not recommended for HIV+ people with CD4 counts below 200. The vaccine may be given to asymptomatic people traveling to areas with YF with CD4 counts more than 200 with close monitoring for side effects.

WHICH VACCINATIONS ARE RECOMMENDED?

1. Pneumonia: Having HIV greatly increases your risk of developing pneumococcal (bacterial) pneumonia. The vaccine takes 2 or 3 weeks to become effective. Vaccination should be repeated one time after 5 years.

2. Hepatitis (See fact sheet 506): Hepatitis can be caused by several different viruses. Men who have sex with men and people who use street drugs or who inject drugs have a higher risk of hepatitis A, B or C. Vaccines exist for hepatitis A and B. **Hepatitis A** is usually not serious but it can be for someone with a weakened liver. This includes people who are infected with hepatitis B or C. Two hepatitis A vaccine shots can protect you for about 20 years. **Hepatitis B** can cause serious disease including cancer. If you were exposed to hepatitis B, your body will make antibodies. If your body didn't, you should get vaccinated. A completed series of three hepatitis B shots should protect you for about 20 years. In HIV+ persons, antibody levels can determine who needs a booster shot.

3. Human Papilloma Virus (HPV, see fact sheet 510): A vaccine is available against four strains of HPV, which causes anal warts and vaginal or anal cancer. The vaccine is recommended for males under age 21 and females under age 26. They work best in people who have not yet been sexually active.

4. Influenza (Flu): A flu vaccine is offered each year, based on the most active type of flu. **Flu shots are recommended for all people with HIV.** For best protection, you should get the shot by mid-November, before flu season. A case of the flu can sometimes develop into pneumonia. Some flu vaccines can cause an allergic reaction in people who are allergic to eggs. FluMist is a "live attenuated" vaccine. **FluMist nasal spray should not be used by people with HIV.**

5. Tetanus and Diphtheria (Td): Tetanus is a serious disease caused by common bacteria. Tetanus infection can occur in any cut in the skin. It cannot be passed from person to person. Injecting drug users have a higher risk of a tetanus infection. **Diphtheria** is another bacterial disease. It can be passed from person to person and is common in homeless people. Diphtheria and tetanus vaccines are always combined.

Tetanus and diphtheria vaccines are usually given to children as a series of three shots. A single booster shot can be given every ten years. People with HIV should not receive the shots more than once every 10 years, or after 5 years if injured.

6. Pertussis (whooping cough): This is another bacterial disease causing prolonged coughing. A combined tetanus, diphtheria and pertussis vaccine (Tdap) is now normally given to children. Tdap vaccination should replace your next Td booster. Once you have received one Tdap immunization, you will only need to receive the Td booster in the future because there is no need for repeated pertussis vaccination.

7. Measles, Mumps and Rubella: These are three diseases caused by viruses. They are very contagious and can be spread by coughing or sneezing. Children are normally vaccinated against these diseases with an "MMR" shot. The vaccine usually gives life-long protection. If you were born after 1957 and did not get these vaccines as a child, you should get an MMR vaccination. However, since MMR is a live vaccine, it is not recommended for people with a CD4 cell count below 200.

8. Meningitis (meningococcal meningitis): In the past few years there have been several outbreaks of meningitis. Most have been on college campuses. People with weakened immune systems have a greater risk of developing meningitis if they are exposed.

HIV-POSITIVE TRAVELERS

Travelers with HIV should consider vaccination against hepatitis A and B.

Countries have different vaccination requirements for entry. In general, **inactivated** vaccines should not be a problem for travelers with HIV. However, they should **avoid live vaccines**, including yellow fever (see above) and smallpox. If polio or typhoid vaccines are required, they should be the inactivated versions, **not** the live versions.

Instead of getting a live vaccine, people with HIV should get a health care provider's letter explaining that they have a medical reason not to be vaccinated. This is accepted by most countries.

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