



# VACCINATIONS AND HIV

## WHAT ARE VACCINATIONS?

Vaccinations, or immunizations, are treatments that build up your body's defenses against certain infections. For example, many people get flu shots each fall. It can take a few weeks for your immune system to respond after a vaccination.

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. They can give you a mild case of disease, but then your immune system kicks in to protect you against a severe case. Other "inactivated" vaccines don't use a living germ. You don't get the disease, but your body can still build up its defenses.

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 have a better response if you wait until your viral load is controlled and your CD4 count (see fact sheet 124) increases.

Vaccines might cause more side effects in people with HIV. They might even cause the disease they are designed to prevent.

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.** Still, the "MMR" vaccine against measles, mumps and rubella is considered safe if your CD4 cell count is over 200.

## WHICH VACCINATIONS ARE RECOMMENDED?

**1. Pneumonia:** Having HIV greatly increases your risk of developing pneumococcal pneumonia. The vaccine takes 2 or 3 weeks to become effective. The protection lasts for about 5 years in people with HIV.

**2. Hepatitis** (See fact sheet 506): Hepatitis can be caused by several different viruses. 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. If you were exposed to hepatitis B, you should have antibodies. If you don't, you should get vaccinated. A series of three hepatitis B shots should protect you for about 10 years. Men who have sex with men and people who use street drugs or who inject drugs have a higher risk of hepatitis A or B.

**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 boys and girls at age 11. . 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. A new form of flu vaccine called "FluMist" was recently approved. This is a "live attenuated" vaccine. It has not been studied in people with weakened immune systems. **FluMist nasal spray should not be used by people with HIV.**

**5. Tetanus and Diphtheria:** 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. Getting this shot more often might cause a painful local reaction. The shots can cause a lump that can last for a few weeks.

**6. 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 against these diseases. If you were born after 1957 and did not get these vaccines as a child, you should get an MMR vaccination. However, since this is a live vaccine, it is not recommended for people with a CD4 cell count below 200.

**7. 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

Every traveler with HIV should be sure they are vaccinated 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 and vaccinia (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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