

HIV Coinfections

What is a coinfection?

Coinfection means infection with more than one disease at the same time. Some coinfections commonly seen in people infected with HIV include:

- HIV/**hepatitis B virus (HBV)** coinfection
- HIV/**hepatitis C virus (HCV)** coinfection
- HIV/**tuberculosis (TB)** coinfection

People infected with HIV should be tested for HBV, HCV, and TB.

What are HBV and HCV?

HBV and HCV are two different viruses that both cause liver disease. They are also among the most common causes of liver cancer. Some of the ways HBV, HCV, and HIV are spread are similar.

HBV is spread through the blood, semen, or other body fluid of a person infected with HBV. Having **unprotected sex** or sharing drug injection equipment (such as needles or syringes) with a person infected with HBV are the main ways people get HBV. (To prevent HBV infection, people infected with HIV receive the HBV vaccination.)

HCV is spread through the blood of a person infected with HCV. Sharing drug injection equipment with a person infected with HCV is the main way people get HCV, but HCV can also be transmitted during unprotected sex. (Before widespread screening of the blood supply began in 1992, HCV was also commonly spread through blood transfusions and organ transplants.)

Having unprotected sex or sharing drug needles are also ways people get HIV. That is why some people become coinfecting with HIV and HBV or HCV (or both) at the same time.

What is TB?

TB is a disease caused by germs that spread through the air when a person with active TB coughs, sneezes, or talks. TB usually affects the lungs.

There are two forms of TB: **latent TB infection** and **TB disease**. Latent TB infection is the inactive form of TB. The TB germs in the body are “sleeping” and don’t make the person sick. A person with latent TB infection can’t spread TB to others.

Without treatment, latent TB infection can advance to TB

disease, especially in people with weakened immune systems. The TB germs in the body multiply and become active, making the person sick. A person with TB disease of the lungs can spread TB to others.

Because HIV weakens the immune system, latent TB infection is more likely to advance to TB disease in a person infected with HIV. In a person infected with HIV, TB disease is considered an **AIDS-defining condition**, and TB treatment should be started immediately.

Are coinfections more serious in people infected with HIV?

Yes. Coinfections can become serious more rapidly in people infected with HIV than in people who are not infected with the virus.

HBV and HCV both lead to liver damage more quickly in people infected with HIV. People co-infected with HBV or

Terms Used in This Fact Sheet:

AIDS-defining condition: Any of several illnesses that can lead to a diagnosis of AIDS in a person infected with HIV. AIDS is the most advanced stage of HIV infection.

Coinfection: Infection with more than one disease at the same time. Some people infected with HIV are coinfecting with hepatitis B virus (HBV), hepatitis C virus (HCV), or tuberculosis (TB).

Hepatitis B virus (HBV): The virus that causes a disease of the liver (hepatitis B).

Hepatitis C virus (HCV): The virus that causes a disease of the liver (hepatitis C).

Latent tuberculosis (TB) infection: The inactive form of TB, which doesn’t make a person sick and can’t be spread to other people.

Tuberculosis (TB) disease: The active form of TB, which makes a person sick and can be spread to other people if the infection involves the lungs. In a person infected with HIV, TB disease is considered an AIDS-defining condition.

Tuberculosis (TB): A disease caused by germs that spread through the air when a person with active TB coughs, sneezes, or talks. TB usually affects the lungs.

Unprotected sex: Sex without using a condom.

HCV also have a higher risk of developing liver damage from anti-HIV medications.

TB disease is more likely to spread beyond the lungs in people infected with HIV than in people who do not have HIV.

Can coinfections be treated?

Yes, but the effectiveness of treatment depends on the coinfection.

- TB treatment can cure TB disease or prevent latent TB infection from advancing to TB disease.
- There is no cure for HBV, but treatment can slow down HBV infection.
- Treatment for HCV is generally less effective than treatment for TB or HBV. However, research on new medications that are more effective against HCV is underway.

Are HIV and coinfections treated at the same time?

Yes, but what medications to take and when to start them depend on the coinfection. Some anti-HIV medications are

effective against both HIV and HBV. Treatment for HCV or TB involves taking other medications in addition to anti-HIV medications.

Health care providers closely watch people receiving treatment for coinfections for any side effects from anti-HIV medications or medications used to treat coinfections. They also watch for drug interactions between the medications. Changing medications can be helpful to avoid side effects or drug interactions.

Talk to your health care provider if you have questions about HIV and coinfections.

For more information:

Contact an *AIDSinfo* health information specialist at 1-800-448-0440 or visit <http://aidsinfo.nih.gov>. See your health care provider for medical advice.