



Special Populations

# Hepatitis B and HIV Coinfection

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When someone with hepatitis B virus infection (HBV) is also infected with human immunodeficiency virus (HIV), the term used is HIV/HBV coinfection. According to the Centers for Disease Control and Prevention (CDC), about 10 percent of people with HIV are coinfecting with hepatitis B.

## What is HIV?

HIV mostly infects CD4 cells, also known as T cells. These white blood cells coordinate the immune system to fight disease. AIDS (acquired immune deficiency syndrome) is a condition caused by HIV. When your immune system breaks down, you can develop many serious, often deadly infections and cancers known as opportunistic infections.

HIV can worsen hepatitis B. People who are coinfecting with HIV and HBV are at increased risk for liver damage and related [life-threatening complications](#). This damage tends to occur more quickly in people who are coinfecting with HIV and hepatitis B.

Although HIV treatment with antiretroviral therapy has improved the health and extended the life expectancy of people with HIV, liver disease related to viral hepatitis increases the risk of non-AIDS-related deaths in those who are coinfecting with HIV/HBV. Further, the presence of viral hepatitis can complicate the [management of HIV](#). It is important for people with HIV/HBV to work closely with their health care providers in order to safely and effectively monitor and treat both conditions.

## Treatments for Chronic Hepatitis B Infection With HIV Coinfection

Although a number of [medications](#) are used to treat hepatitis B, some specific treatments are recommended for people who are coinfecting with HIV. The latest hepatitis B practice guidance published in 2018 by the American Association for the Study of Liver Diseases, advise the following treatment guidelines for people coinfecting with HIV and hepatitis B:

“All patients with HBV and HIV coinfection should initiate antiretroviral therapy (ARVT), regardless of CD4 count. The ARVT regimen should include 2 drugs with activity against HBV. Specifically, the backbone of the ARVT regimen should be tenofovir disoproxil fumarate (TDF) or tenofovir alafenamide (TAF) plus lamivudine or emtricitabine.

Patients who are already receiving effective ARVT that does not include a drug with antiviral activity against HBV should have treatment changed to include TDF or TAF with emtricitabine or

lamivudine. Alternatively, entecavir is reasonable if patients are receiving a fully suppressive ARVT.

When ARVT regimens are altered, drugs that are effective against HBV should not be discontinued without substituting another drug that has activity against HBV.”

Here are the preferred medications used to treat HBV when coinfecting with HIV:

**Emtricitabine (Emtriva):** Emtricitabine is a nucleoside analog reverse transcriptase inhibitor. It is used with ARVT along with either, tenofovir disoproxil fumarate or tenofovir alafenamide in people who are coinfecting with HBV and HIV.

**Lamivudine (Epivir, Epivir-HBV):** Lamivudine is a nucleoside analog reverse transcriptase inhibitor. It is used with ARVT along with either tenofovir disoproxil fumarate or tenofovir alafenamide in people who are coinfecting with HBV and HIV.

**Tenofovir alafenamide (Vemlidy):** Tenofovir alafenamide (TAF) is the newest drug to be approved by the FDA for the treatment of chronic hepatitis B infection in adults with compensated liver disease. It is a nucleoside analog reverse transcriptase inhibitor. TAF is used along with either emtricitabine or lamivudine, and ARVT in people who are coinfecting with HBV and HIV.

**Tenofovir disoproxil fumarate (Viread):** Tenofovir disoproxil fumarate (TDF) is a nucleoside analog reverse transcriptase inhibitor. It is used along with either emtricitabine or lamivudine, and ARVT in people who are coinfecting with HBV and HIV.

**Entecavir (Baraclude):** Entecavir is a nucleoside analog reverse transcriptase inhibitor. It may be used in people who are not taking TDF or TAF but are receiving a fully suppressive ARVT.

It is very important that people with chronic hepatitis B take their medications exactly as prescribed. Missing doses can cause HBV to become resistant to HBV medications. Prematurely stopping HBV medications can also cause HBV viral load and liver enzymes to quickly increase, which can damage the liver and cause severe symptoms. This can also happen in people who have HBV who develop resistance to the medications they are using. In turn, for people with chronic hepatitis B who are receiving treatment, it is very important to be monitored frequently and carefully by a health care provider.

#### Further Information

If you never had hepatitis A, talk to your doctor about hep A vaccination, which [is recommended](#) for people who have hepatitis B or other liver disease.

If you are living with HBV and are not coinfecting with HIV, please check out [HEP's comprehensive lesson](#) on the diagnosis, monitoring and treatment of hepatitis B.

If you are living with HIV and are NOT coinfecting with HBV, vaccination against hepatitis B is highly recommended. For information on the diagnosis, monitoring and treatment of HIV, check

out [POZ's comprehensive lesson](#).

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