



LAMIVUDINE (Epivir)

WHAT IS LAMIVUDINE?

Lamivudine (Epivir) is a drug used as part of antiretroviral therapy (ART). It is manufactured by ViiV Healthcare. Generic versions have been tentatively approved under PEPFAR (see fact sheet 475.) Lamivudine is also known as 3TC.

Lamivudine is a nucleoside analog reverse transcriptase inhibitor, or nuke. These drugs block the reverse transcriptase enzyme. This enzyme changes HIV's genetic material (RNA) into the form of DNA. This has to occur before HIV's genetic code gets inserted into an infected cell's own genetic codes.

WHO SHOULD TAKE LAMIVUDINE?

Lamivudine was approved in 1995 as an antiretroviral drug (ARV) for people with HIV infection. It has been studied in adults and children over 3 months old.

There are no absolute rules about when to start ART. You and your health care provider should consider your CD4 cell count, your viral load, any symptoms you are having, and your attitude about taking ART. Fact Sheet 404 has more information about guidelines for the use of ART.

If you take lamivudine with other ARVs, you can reduce your viral load to extremely low levels, and increase your CD4 cell counts. This should mean staying healthier longer.

A different formulation of lamivudine has been approved for people with hepatitis B. Some people with HIV had their hepatitis B get worse after they stopped taking lamivudine. Get tested for hepatitis B before you start taking lamivudine to treat HIV. If you have hepatitis B and stop taking lamivudine, your health care provider should carefully monitor your liver function for several months.

WHAT ABOUT DRUG RESISTANCE?

Many new copies of HIV are mutations. They are slightly different from the original virus. Some mutations can keep multiplying even when you are taking an ARV. When this happens, the drug will stop working. This is called "developing resistance" to the drug. See Fact Sheet 126 for more information on resistance.

Sometimes, if your virus develops resistance to one drug, it will also have resistance to other ARVs. This is called "cross-resistance."

Resistance can develop quickly. It is very important to take ARVs according to instructions, on schedule, and not to skip or reduce doses.

Lamivudine seems to be able to reduce resistance to AZT. After people develop resistance to AZT and then take lamivudine, AZT seems to work better for them.

HOW IS LAMIVUDINE TAKEN?

Lamivudine is available in tablets of 150 and 300 milligrams (mg). It is also available in liquid form.

The normal dose of lamivudine is 300 mg daily: either one 300 mg tablet daily or one 150 mg tablet twice a day. The dosage should be reduced for people who weigh less than 50 kilograms (110 pounds). It is also available as a scored 150 mg tablet which is easy to break into 75 mg portions that can be used for children.

Lamivudine can be taken with food or between meals.

Be sure your health care provider knows if you have had kidney problems: your dose of lamivudine may need to be lowered.

Lamivudine is also available in Combivir, Trizivir and Epzicom. Combivir contains AZT and lamivudine. Trizivir contains AZT, lamivudine, and abacavir. Epzicom includes abacavir and lamivudine. For more information, see Fact Sheet 417 on Combivir, Fact Sheet 418 on Trizivir, or Fact Sheet 422 on Epzicom.

WHAT ARE THE SIDE EFFECTS?

When you start any ART, you may have temporary side effects such as headaches, high blood pressure, or a general sense of feeling ill. These side effects usually get better or disappear over time.

The most common side effects of lamivudine are nausea, vomiting, fatigue, and headaches. Some people have trouble sleeping. There have been rare cases of hair loss.

HOW DOES LAMIVUDINE REACT WITH OTHER DRUGS?

Lamivudine can interact with other drugs or supplements you are taking. **These interactions can change the amount of each drug in your bloodstream and cause an under- or overdose. New interactions are constantly being identified. Make sure that your health care provider knows about ALL drugs and supplements you are taking.**

Lamivudine should not be taken with **emtricitabine (Emtriva, FTC)** because these drugs are very similar and there is no additional benefit.

Blood levels of lamivudine may be increased by bactrim or septria. See Fact Sheet 535 for more information on these drugs.

Lamivudine + abacavir (Ziagen) + tenofovir (Viread) or lamivudine + didanosine (Videx) + tenofovir (Viread): These combinations are linked to a high rate of treatment failure and should not be used without other ARVs.

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