



# ABACAVIR (Ziagen)

## WHAT IS ABACAVIR?

Abacavir (Ziagen) is a drug used as part of antiretroviral therapy (ART). It is manufactured by ViiV Healthcare. The FDA approved abacavir late in 1998. Generic versions have been approved under PEPFAR (see fact sheet 925.)

Abacavir is a type of drug called 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 ABACAVIR?

Abacavir was approved in 1998 as an antiretroviral drug (ARV) for people with HIV infection. It has been studied in adults and children 3 months old and older.

While antiretroviral therapy (ART) is recommended for all people living with HIV, independent of your symptoms or CD4 count, 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 abacavir 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.

Abacavir seems to get into the central nervous system (spinal fluid). Therefore, it may help prevent mental problems such as dementia. See Fact Sheet 505 for more information on dementia.

## 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.**

## HOW IS ABACAVIR TAKEN?

Abacavir is taken by mouth as a capsule. The normal adult dose is 300 milligrams (mg) two times a day or 600 mg once a day. The capsules are 300mg, so you will take 1 or 2 capsules at a time. Children take a liquid form. The amount of liquid depends on the child's body weight.

Abacavir can be taken with food, or between meals.

Abacavir is also available in Epzicom/Kivexa and Triumeq. Epzicom (Fact Sheet 422) contains lamivudine and abacavir. Triumeq (Fact Sheet 473) contains lamivudine, abacavir and the integrase inhibitor, dolutegravir.

## 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 abacavir are headache, nausea and vomiting.

## HYPERSENSITIVITY REACTION

About 8% of people who take abacavir have an allergic reaction. This usually develops within two weeks of starting abacavir. However, it can appear six weeks or more after starting. Patients had the following symptoms:

- Fever (80% of patients)
- Rash (60-70%)
- Headache/feeling bad/no energy (60%)
- Nausea, vomiting, diarrhea, or stomach pain (50%)
- Cough, shortness of breath, or sore throat (20%)

Recently, researchers found that a simple blood test can identify patients who might develop the abacavir hypersensitivity reaction. The blood test looks for the HLA-

B\*5071 gene. This genetic test is now recommended by the FDA before prescribing abacavir. If this test comes back positive, you should add abacavir to the list of medications you are allergic to.

If you have a hypersensitivity reaction, the symptoms will get worse each time you take a dose and will not go away until you stop taking the drug. If you develop any of these symptoms while taking abacavir, call your health care provider immediately. If you have an allergic reaction to abacavir, do not ever start taking it again. A few allergic patients who re-started abacavir had life-threatening reactions.

Some research studies suggested that abacavir might increase the risk of heart problems. Other studies have not confirmed this association. You should discuss your risk of heart disease with your health care provider. Recent studies have not confirmed this conclusion.

## HOW DOES ABACAVIR REACT WITH OTHER DRUGS?

Abacavir 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. However, no specific interactions with other ARVs have been identified yet.

The triple combination of abacavir plus zidovudine (Retrovir) plus lamivudine (Epivir) should only be used if no stronger regimen is available. The combination of abacavir + tenofovir (Viread) + lamivudine (Epivir) should not be used without additional ARVs.

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