



TIPRANAVIR (Aptivus)

WHAT IS TIPRANAVIR?

Tipranavir is a drug used as part of antiretroviral therapy (ART). It is also called Aptivus. It is manufactured by Boehringer Ingelheim.

Tipranavir is a protease inhibitor. These drugs prevent the protease enzyme from working. HIV protease acts like a chemical scissors. It cuts the raw material for HIV into specific pieces needed to build a new virus. Protease inhibitors "gum up" these scissors.

WHO SHOULD TAKE IT?

Tipranavir was approved in 2005 as an antiretroviral drug (ARV) for people with HIV infection who have already used other ARVs. It has not been studied in people just starting ART. Tipranavir boosted with ritonavir should not be used as part of an initial ART regimen.

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 tipranavir 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.

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.**

Tipranavir was specifically developed to control HIV that is already resistant to some other protease inhibitors. It has shown low levels of cross-resistance to other protease inhibitors.

HOW IS IT TAKEN?

Tipranavir is taken by mouth as a gel capsule. The normal adult dose is 500 milligrams (mg) two times a day. The tablets are 250 mg, so you will take 2 tablets at a time. Each dose includes two 250 mg capsules of tipranavir and two 100 mg capsules of ritonavir. In 2008 a liquid form of tipranavir was approved for adults and children as young as 2 years old.

Tipranavir should be taken with food. This increases blood levels of tipranavir. High-fat meals improve tipranavir blood levels.

Tipranavir should be stored in a **refrigerator until the bottle is opened**. After opening the bottle, the capsules can be **stored at room temperature for up to 60 days**.

WHAT ARE THE SIDE EFFECTS?

The most common side effects include diarrhea, nausea, vomiting, stomach pain, tiredness and headache. Women taking birth control pills may get a skin rash.

Tipranavir can make liver problems worse. Patients with hepatitis B or hepatitis C should have careful monitoring of liver blood tests. Some patients taking tipranavir developed hepatitis and, in rare cases, liver failure.

About 10% of patients develop a rash or sensitivity to the sun, sometimes with joint pain or stiffness, itching, or tightness in the throat.

Tipranavir can cause large increases in cholesterol and triglycerides (blood fats). See Fact Sheet 123 for more information on blood fats. This is at least partly due to the ritonavir taken with tipranavir. High levels of blood fats can increase the risk of heart disease. Be sure that your health care provider checks your blood fat levels before you start taking tipranavir, and regularly after that.

In 2006 several cases of internal bleeding were reported in patients taking tipranavir. Some of these were fatal. Be sure to tell your health care provider if you have any bleeding disorder.

Tipranavir is a sulfa drug. If you are allergic to sulfa drugs, be sure to tell your health care provider.

HOW DOES IT REACT WITH OTHER DRUGS?

Tipranavir can interact with other drugs or supplements that you are taking. **These interactions can change the amount of each drug in your bloodstream and cause an under- or overdose. New interactions are being identified all the time.**

Tipranavir lowers blood levels of lopinavir (see fact sheet 446), another protease inhibitor. They should not be taken together.

Other drugs to watch out for include other ARVs, drugs to treat tuberculosis (see fact sheet 518), for erectile dysfunction (such as Viagra), for heart rhythm (antiarrhythmics), and for migraine headaches. Interactions are also possible with several antihistamines (allergy medications), sedatives, drugs to lower cholesterol, and anti-fungal drugs. **Make sure that your health care provider knows about ALL drugs and supplements you are taking.**

Tipranavir raises blood levels of midazolam (Versed), a sedative. They should not be taken together without careful monitoring.

Some **birth control pills** may not work if you are taking tipranavir. Talk to your health care provider about how to prevent an unwanted pregnancy.

Tipranavir lowers blood levels of **methadone**. Watch for signs of excessive sedation if you take tipranavir with **buprenorphine**.

The herb **St. John's Wort** (See Fact Sheet 729) lowers the blood levels of some protease inhibitors. Do not take it while taking tipranavir.

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