



INDINAVIR (Crixivan)

WHAT IS INDINAVIR?

Indinavir is a drug used for antiviral therapy. It is also called Crixivan®. It is manufactured by Merck & Co. Indinavir 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?

Indinavir was approved in 1996 as an antiviral drug for people with HIV infection. There is not a recommended dose for pediatric patients. Due to reduced levels of indinavir, it should not be taken by pregnant women.

There are no absolute rules about when to start antiviral drugs. You and your doctor should consider your T-cell count, your viral load, any symptoms you are having, and your attitude about taking HIV medications. Fact Sheet 404 has more information about guidelines for the use of antiviral medications.

If you take indinavir with other antiviral drugs, you can reduce your viral load to extremely low levels, and increase your T-cell counts. This should mean staying healthier longer.

Patients with liver damage may need to take a reduced dose of indinavir.

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 antiviral drug. 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 antiviral drugs. This is called "cross-resistance".

Resistance can develop quickly. It is very important to take antiviral medications according to instructions,

on schedule, and not to skip or reduce doses.

HOW IS IT TAKEN?

The normal dose of Indinavir is 800 milligrams (mg) every 8 hours. The capsules are either 200mg or 400mg. Some people need to take 1000mg because of drug interactions in some combinations. A 333mg capsule is available for them to use. Different doses are used in some combinations. Be sure you know how much indinavir your doctor has prescribed for you, and when and how to take each dose.

If indinavir is combined with zidovudine (another protease inhibitor), you can take it twice a day without food restrictions. If you take indinavir by itself, you should take it when your stomach is empty. This means taking indinavir two hours after eating, or one hour before eating.

If you need to, you can eat dry toast with jelly and drink skim milk, juice, coffee, tea, or water with Indinavir. **Fat, protein, and high-calorie foods will reduce the absorption of Indinavir.**

Indinavir is sensitive to moisture. Store it in its original container. Inside the container, there is a desiccant (a material that helps keep it dry).

WHAT ARE THE SIDE EFFECTS?

The most serious side effect of Indinavir is kidney stones, including pain in the sides. **You can reduce the risk of kidney stones by drinking at least 8 glasses of water each day.** In rare cases, Indinavir can cause serious anemia, a loss of red blood cells. This may show up as extreme fatigue, jaundice (yellowing of the skin), or rust-colored urine.

It can also cause upset stomach, bloating, and skin rash. Indinavir capsules contain lactose (milk sugar). If you have trouble digesting dairy products, you may have more stomach problems with Indinavir. It may cause "frozen shoulder." Also called adhesive capsulitis, this is a reduced range of motion and pain in the shoulder.

HOW DOES IT REACT WITH OTHER DRUGS?

Indinavir is broken down by the liver. It can interact with other drugs that also use the liver. **Combining these drugs can change the amount of each drug in your bloodstream and cause an under- or overdose. Drugs to watch out for include drugs to treat tuberculosis (see fact sheet 518), erectile dysfunction (such as Viagra), several antihistamines, sedatives, drugs to lower cholesterol and anti-fungal drugs. Make sure that your doctor knows about ALL drugs you are taking.**

If you are taking Indinavir and **ddl**, take them an hour apart with your stomach empty.

Indinavir does not appear to have any significant interaction with **methadone**.

Indinavir should not be taken with **atazanavir (Reyataz)** due to the increased risk of jaundice.

Indinavir should not be taken with rifampin or rifabutin, drugs that treat tuberculosis (see fact sheet 518) or MAC (fact sheet 514).

Efavirenz (Sustiva) lowers blood levels of indinavir. Patients taking both drugs need a higher dose of indinavir.

Some **birth control pills** may not work if you are taking indinavir. Talk to your doctor about how to prevent an unwanted pregnancy.

The herb **St. John's Wort** (See Fact Sheet 729) lowers the blood levels of some protease inhibitors. Tell your doctor about any herbs or other supplements that you use.

Grapefruit juice reduces indinavir levels. Avoid drinking it if you are taking indinavir.

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