



RALTEGRAVIR (Isentress)

WHAT IS RALTEGRAVIR?

Raltegravir (Isentress) is a drug used for antiviral therapy against HIV. It was formerly known as MK-0518. It is manufactured by Merck.

Raltegravir is the first "integrase inhibitor" drug. When HIV infects a cell, it combines its genetic code into the cell's own code. This is shown in fact sheet 400, step 5. Raltegravir blocks this process. When raltegravir blocks integration, HIV infects a cell but cannot make more copies of itself.

WHO SHOULD TAKE IT?

Raltegravir was approved in 2007 as an antiviral drug against HIV as part of an antiviral regimen. It was studied first in adults who had used antiviral therapy for some time whose virus had already developed resistance (see fact sheet 126) to existing antiviral drugs. Late in 2008 it was approved for use in patients just starting antiretroviral therapy. Raltegravir has not been studied in children, pregnant women or older adults.

There are no absolute rules about when to start antiviral drugs. You and your health care provider should consider your CD4 cell count (see fact sheet 124,) your viral load (see fact sheet 125,) 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.

Raltegravir is taken twice a day. It will most likely be used by people who have very few choices of antiviral medications in pill form. If you take raltegravir with other antiviral drugs, you can reduce your viral load and increase your CD4 cell counts. This should mean staying healthier longer.

WHAT ABOUT DRUG RESISTANCE?

The HIV virus is sloppy when it makes copies of its genetic code (RNA). Many new copies of HIV are mutations: they are slightly different from the original virus. Some mutations can continue to multiply 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.

Raltegravir has shown activity against HIV that already has resistance to several other HIV medications.

Resistance to raltegravir is not well understood. With combination therapy (taking more than one antiviral drug at the same time), HIV mutates much more slowly. Resistance takes longer to develop. **It is very important to take antiviral medications according to instructions, on schedule, and not to skip or reduce doses.**

Sometimes, if you develop resistance to one drug, you will also have resistance to other antiviral drugs. This is called "cross-resistance". Because raltegravir is in a new class of antiviral drugs, it seems to have almost no cross resistance with antiviral drugs in older classes.

HOW IS RALTEGRAVIR TAKEN?

Raltegravir may be taken with or without food. It is provided as 400 mg tablets. The adult dosage of raltegravir is 400 mg twice daily. There is also a 300 mg chewable tablet that is taken twice daily.

Raltegravir may also be used by children. Dosage for children less than 12 years old is based on their weight.

Merck studied a once-daily dose of 800 mg. This dose was less effective at controlling HIV than the approved twice a day dosage. The difference in

effectiveness was greater in patients who started with viral loads over 100,000.

WHAT ARE THE SIDE EFFECTS?

In human studies, the most common side effects in people taking raltegravir were diarrhea, nausea, and headache. Reports from people using Raltegravir also include rash and depression. In rare cases, skin rash can be severe and life-threatening. **Contact your health care provider immediately if you develop a serious rash while taking raltegravir.**

HOW DOES IT REACT WITH OTHER DRUGS?

Raltegravir has been studied to see if it interacts with other drugs. Rifampin, used to treat tuberculosis (see fact sheet 518) decreases blood levels of raltegravir. A higher dose of raltegravir must be used.

Raltegravir has not been studied with all medicines, over-the-counter drugs or vitamin or herbal supplements. Be sure your doctor knows about all medications and supplements that you are taking.

THE BOTTOM LINE

Raltegravir is the first drug in a new class, integrase inhibitors. It stops HIV from inserting its genetic code into an infected cell. This prevents the virus from making new copies of HIV. Raltegravir helps control HIV, even when it is resistant to other medications.

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