



# MARAVIROC (Selzentry, Celsentri)

## WHAT IS MARAVIROC?

Maraviroc (Selzentry in the US and Celsentri elsewhere) was formerly known as UK 427,857. It is a drug used for antiretroviral therapy. It is manufactured by ViiV Healthcare.

Maraviroc is the first "attachment inhibitor" drug. When HIV infects a cell, it attaches to the outside of the cell. It uses molecules on the surface of the CD4 cell to attach to the cell before fusing with it. Maraviroc blocks the receptor called a CCR5 molecule. When maraviroc blocks this receptor, HIV cannot infect that cell.

The preference of HIV for one type of attachment molecule is called tropism. Maraviroc only works against HIV that uses CCR5 to enter the CD4 cell. Before patients are prescribed maraviroc, they must take a tropism test to make sure that their virus uses the CCR5 receptor. See fact sheet 129 for information on tropism tests.

## WHO SHOULD TAKE IT?

Maraviroc was approved in 2007 as an antiretroviral drug against HIV as part of an antiretroviral regimen. It should only be used by people whose virus is "CCR5 tropic." Maraviroc has not been studied in children, pregnant women, people with serious liver problems, or older adults.

While antiretroviral therapy (ART) is now recommended for all people living with HIV, 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 HIV medications. Fact Sheet 404 has more information about guidelines for the use of antiretroviral medications.

Maraviroc is taken twice a day. It will most likely be used by people who have very few choices of antiretroviral medications in pill form. If you take maraviroc with other antiretroviral 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 antiretroviral 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.

Resistance to maraviroc is not well understood. With combination therapy (taking more than one antiretroviral drug at the same time), HIV mutates much more slowly. Resistance takes longer to develop. **It is very important to take antiretroviral 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 antiretroviral drugs. This is called "cross-resistance". Because maraviroc is in a new class of antiretroviral drugs, it seems to have almost no cross-resistance with antiretroviral drugs in older classes.

## HOW IS MARAVIROC TAKEN?

Maraviroc is provided as 150 mg or 300 mg film-coated tablets. The adult dosage of maraviroc can be 150 mg, 300 mg, or 600 mg twice daily. The dosage depends on which other drugs are being used for antiretroviral therapy.

The standard dose is 300 mg twice daily. The 150 mg dose is needed if you are taking certain drugs including delavirdine or most protease inhibitors. The 600 mg dose is used with efavirenz, etravirine and other drugs that can lower blood levels of maraviroc. The dosage should be reduced for patients with serious kidney problems.

Maraviroc can be taken with or without food.

## WHAT ARE THE SIDE EFFECTS?

The most common side effects of maraviroc include cough, fever, upper respiratory infections, rash, sore muscles, abdominal pain, and dizziness. People taking maraviroc also may have an increased risk for cardiovascular events such as heart attack, or dizziness when standing up quickly.

Maraviroc could be hard on the liver. People taking maraviroc should tell their health care provider if they have any signs of liver problems such as rash, yellowing skin or eyes, dark urine, vomiting, or abdominal pain. However, maraviroc appears to reduce liver stiffness (fibrosis).

## HOW DOES IT REACT WITH OTHER DRUGS?

Maraviroc has important interactions with many anti-HIV medications. These require changes in the dosage of maraviroc. Maraviroc should usually not be taken by patients with serious kidney problems who are also taking ritonavir.

The herb **St. John's Wort** (See Fact Sheet 729) lowers the blood levels of maraviroc. Do not use it with maraviroc. Maraviroc has not been studied with all medicines, over-the-counter drugs or vitamin or herbal supplements. **Be sure your health care provider knows about all medications and supplements that you are taking.**

## THE BOTTOM LINE

Maraviroc is the first drug in a new class. It stops HIV from attaching to a cell. This prevents HIV from infecting the cell. Maraviroc helps control HIV, even when it is resistant to other medications.

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