

FACTSHEET #6: HIV TREATMENT (ART)

YOUR KEY MESSAGE:

“Antiretroviral treatment is not a cure for HIV. But taken daily and as recommended by your doctor it can keep HIV in check so you can live a normal and happy life.”

HIV AND ANTIRETROVIRAL TREATMENT

HIV is a *retrovirus*. *Retro* means slow acting which means that HIV may take many years to make a person with HIV sick. HIV treatment is called *antiretroviral* treatment.

HIV is a virus and like all viruses HIV changes or *mutates*. Because HIV changes it can become *resistant* to antiretroviral treatment (ART). If this happens then ART is no long effective against HIV. Because HIV changes, taking just one ART drug doesn't work in the long term. More than one drug is needed to keep HIV in check.

Taking ART involves taking three or more *classes* of ART drugs every day. Because of that, ART is also called *combination therapy*.

The goal of taking ART is to reduce the level of HIV viral load in your blood to *undetectable* levels (below 40 or below 20 viral copies) and to increase your CD4 count to 500 or more or keep it as high as possible over the long term.

Once you start taking ART you shouldn't stop unless your doctor tells you to. If your ART combination stops working your doctor may ask you to change your ART combination.

You must take your ART every day, on time, every time. This is to stop HIV developing resistance to your combination, so that your ART can keep HIV in check.

GROUP EXERCISE: WHAT'S YOUR COMBINATION?

Ask participants who are already taking ART to put their ART out in the middle of the circle.

Ask participants to explain to the group what combination they are taking when they take and their experience taking that ART combination.

Use the ART that participants are taking to educate about ART and its side effects.

THE INDUCTION PERIOD

The induction period is when you first begin taking your ART combination. It lasts from day one of starting treatment up to anywhere between six and twelve weeks. In the induction period for ART you may experience side effects that will reduce over time.

HINT: purchase antiemetics (to stop nausea and vomiting), antidiarrheals (to stop diarrhea) and paracetamol (to stop headaches and fevers) the day you get your first ART combination. Keep these medications with you all the time during the induction period. Use them as recommended.

FIRST LINE ART

First line ART refers to the very first ART combination that you take to keep HIV in check. In most cases an ART combination called *Atripla* is given as first line treatment.

Atripla is the name of a combination of three drugs: efavirenz (600mg), emtricitabine (FTC) (200mg) and tenofovir (245mg) combined in to one pill and taken once a day. It is taken on an empty stomach, preferably at bedtime. Side effects can include skin rash, sleep disturbances, abnormal dreams, feeling sick (nauseous), vomiting, headache, depression or suicidal thoughts.

Nevirapine is the name of an ART in the same class as efavirenz. Some doctors may give you nevirapine in place of efavirenz.

SECOND LINE ART

Truvada, Atazanavir and Norvir (booster) are names of four drugs used in combination. Truvada is a fixed dose combination of emtricitabine and tenofovir in one pill. This second line combination is best taken with food but can be taken on an empty stomach. It is one of each pill taken per day. Side effects can include

Kaletra and Combivir are names of four drugs used in combination. Kaletra is 200mg of a drug calls lopinavir combined with the booster drug Ritonavir 50mg (Norvir). Combivir is 300mg of zidovudine (sometimes called AZT) and 150mg of lamivudine (sometimes called 3TC).

CLASSES OF ART

You may be surprised to learn that ART doesn't actually attack HIV. Instead, ART works on CD4 cells. ART works to protect CD4 cells by stopping HIV using CD4 cells to produce more HIV in the body (called *replication*).

ART *inhibits* particular chemicals or chemical processes that occur on the surface of CD4 cells and inside CD4 cells. Those chemicals or chemical processes are called:

- Nucleoside reverse transcriptase
- Non-nucleoside reverse transcriptase
- Nucleotide reverse transcriptase
- Protease
- CCR5 (ART class may not be available in your country yet, check with your doctor)
- Fusion (ART class not be available yet)
- Integrase (ART class may not be available).

Nucleoside Reverse Transcriptase Inhibitors (NRTIs) and Nucleotide Reverse Transcriptase Inhibitors (NtRTIs):

sometimes called "nukes." These drugs block an important step in the HIV reproduction process. They block HIV in its attempt to use enzymes to build new genetic material inside CD4 cells.

NRTIs include Abacavir (Ziagen), Emtricitabine (FTC), Lamivudine (3TC), Zidovudine (AZT).

NtRTIs include just one drug Tenofovir (Viread).

Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTIs): are also called "non-nukes." They work on CD4 cell enzyme to prevent them functioning correctly. By doing this they prevent HIV from making copies of itself inside CD4 cells.

NNRTIs include Efavirenz (Stocrin), Etravirine, and Nevirapine.

Protease Inhibitors (PIs): These drugs inhibit CD4 cell enzyme that that HIV uses to assemble new virus particles.

PIs include Atazanavir, (Reyataz) Lopinavir, Ritonavir (Norvir).

Entry/Fusion Inhibitors: These medications work to block the virus from ever entering or attaching to CD4 cells in the first place. Just one entry inhibitor is on the market and it is called Maraviroc (Celsentri).

Integrase Inhibitors: Prevents HIV from inserting its genetic code into a CD4 cells genetic material.

Integrase Inhibitors include Raltegravir (Isentress), Elvitegravir (Vitekta) and Dolutegravir (Tivicay)