

Drugomics of Human Immuno Deficiency Virus

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INTRODUCTION

The Human Immunodeficiency Viruses are two species of lentivirus which specifically infects only humans. This further leads to Acquired Immuno Deficiency Syndrome (AIDS). AIDS causes a progressive failure of the immune system by allowing life-threatening opportunistic infections and cancers. Depending on the HIV subtype, the average survival time after infection with HIV is estimated to be 9 to 11 years when left without treatment.

HIV transmission is done through direct contact with blood, semen, breast milk, or other bodily fluids that contain the virus. HIV mainly targets the immune system and invades the T cells, which are white blood cells that fight infection.

After invading the virus T cells, it replicates. Therefore the cells burst by releasing several viral cells that go on to invade other cells present in the body.

HIV MEDICATION

HIV medication helps you in lowering viral load, to fight against infections and improve your life span. Misuse or taking medication incorrectly also may lead to HIV transmission to other people. These medications induce controlling the growth of virus, improve your immune system, may slow your body system and further prevent the transmission of HIV to others.

There are more than 25 antiretroviral drugs which were approved by FDA to treat HIV infection. These drugs are divided into 6 groups based on their action. The combination of these drugs is said to be antiretroviral therapy. Missing the dose may also lead to many complications as the missing of dose leads to release of drug resistant strains of HIV.

The type of medication to be given to a HIV patients depends on some factors such as their T cell count, the person's viral load, the severity of their case, their strain of HIV, other chronic health conditions which also known as comorbidities, how far the HIV has been spread and other medications that they're taking to avoid interactions between their HIV drugs and their other drugs.

The combination of drugs include Integrase Strand Transfer Inhibitors (INSTIs), Nucleoside/Nucleotide Reverse Transcriptase

Inhibitors (NRTIs), Combination NRTIs, Rarely used NRTIs such as didanosine (Videx, Videx EC) and stavudine (Zerit), Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTIs), Cytochrome P4503A (CYP3A) inhibitors, Protease inhibitors (PIs), Fusion inhibitors, Post-attachment inhibitors, Chemokine Coreceptor antagonists (CCR5 antagonists), Entry inhibitors, Combination drugs and Multiclass combination drugs or Single-Tablet Regimens (STRs).

The side effects of HIV drugs include diarrhea, dizziness, headaches, fatigue, fever, nausea, rashes and vomiting. These drugs may cause side effects for weeks frequently. If the side effects get worse or last longer for several weeks then the patient must be taken to a healthcare provider. They suggest easy ways to decrease the side effects or even they may prescribe different types of drugs in combination.

HIV drugs can often cause serious or even long-term side effects. These side effects depend upon the type of HIV drugs used for the treatment. A healthcare provider can offer more information. There is no cure for HIV till now, but prescribed medicines can help to slow down the progression of the virus. Drugs can also improve the symptoms of HIV to make the condition of living more comfortable.

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