

## **Patient Handout – Immunodeficiency Clinic PGIMER, Chandigarh**

# **HIV - The Immune System: A layman's guide**

The following information is intended to supplement, not substitute for, the expertise and judgment of your physician. It is based on the kind of information given to patients who use this medication in other parts of the world.

### ***What Is the Immune System?***

The immune system is composed of many different kinds of blood cells. These cells work together to defend the body against infections and diseases.

When an infection enters inside the body, the immune system gets into action. Some cells signal that an infection has entered the body. Other produce antibodies and extra cells to fight the infection until it is destroyed or disabled. This is called an immune response. What Happens When you get a cold? The immune response gets into action as soon as you catch a cold. When the virus causing cold enters your body, the immune system sees it as an enemy. The immune system makes more cells to fight the cold. After a few days your immune system kills or controls the virus and you feel fine again.

### ***What Happens When HIV Gets in the Body?***

HIV, the virus that causes AIDS, damages and destroys different cells of the immune system.

When these cells are destroyed, the body cannot recognize infections. Even if infections are recognized, the body may be unable to defend itself against them.

HIV can be in the body for several years before it damages the immune system. Until then the infected person can look and feel healthy.

### ***What About Other Infections?***

When HIV damages the immune system a person may get “opportunistic infections”. These are diseases, infections and cancers that use the opportunity of a weak immune system to make their way into the body. One of these infections is called PCP (pneumocystis pneumonia). Another one is Tuberculosis. People with healthy immune systems easily fight off PCP without becoming sick. But PCP can be life-threatening to people with HIV or AIDS who have very weak immune systems.

### ***How Does Early Treatment Help?***

While there is no cure for HIV disease, treatments can be started while an HIV-positive person is healthy. Early treatment can delay the start of symptoms.

The most common treatments limit the ability of the virus to reproduce. They help protect the immune system and improve chances of staying healthy.

Other treatments are available and new ones are being tested all the time. These may

slow the spread of HIV, make the immune system stronger or treat opportunistic infections. People who know early that they are HIV-positive can benefit from early treatment. A doctor can help people with HIV decide on a treatment plan that will work best for them.

### ***Deciding About Treatment?***

One way to decide about treatment is through blood tests. One test counts the number of T-cells in the immune system. T cells are white blood cells that help the body fight infection. HIV destroys these cells.

A person with usually has a high number of T-cells early on in the infection. Over time, that number begins to drop.

Another test checks how much HIV is in the blood. This is called “viral load testing”. The number of T-cells and the HIV viral load determine when and what kind of treatment you should have, and show if treatment is working once you start it.

### ***How Can Keep I My Immune System Strong?***

The body’s ability to defend itself can change over time. It all depends on the health of the immune system. A strong immune system can fight infections, enhance your well-being and maintain or improve your quality of life.

### **There are some easy ways to help keep your immune system strong:**

Reducing stress in your day-to-day life can help your immune system stay strong. Talk with someone you trust about your problems. The support of trusted friends and family could have a big impact on your health.

Eat a healthy, balanced diet. Try to eat some protein, fruit and vegetables, grains and milk products each day. Limit fats. Wash fruits, vegetables and grains before eating them, and keep cooking areas clean.

If you wish to try special diets, or need to maintain your weight, check with a doctor or need to maintain your weight, check with a doctor or nutritional expert first.

Avoid infections. HIV-positive people should not eat raw meat, fish or milk products. Wear gloves when gardening or farming.

Exercise regularly, but don’t over work yourself. Choose exercise you enjoy. Exercise reduces stress and strengthens the body.

Get plenty of rest.

Cut down or stop using alcohol, tobacco and other drugs. Check with your doctor about taking prescription and other drugs. Some drugs can be stressful to the immune system.

Stay active. If you feel healthy, keep working at something you enjoy can reduce stress.

Try other therapies. Some HIV-positive people have used other therapies with success. These may include acupuncture, massage, yoga and meditation.