HIV Infection: Opportunistic Infections

The immune system is the part of your body that fights off infections. The Human Immunodeficiency Virus (HIV) attacks cells in your immune system called the helper T cell. As your T cells become damaged, your immune system weakens. Your body then has trouble fighting off infections.

What are opportunistic infections?

Opportunistic infections (OIs) are illnesses caused by common germs. These germs are found in the air, soil and water around us. The germs that cause OIs are not a problem for people with healthy immune systems. They are a threat to people with a weak immune system.

What does the helper T cell count have to do with opportunistic infections?

HIV infection causes a very slow fall in the T cell count. This may take many years. Helper T cells are also known as CD4 cells. CD4 cells “help” the body to stay strong from infection. As T cell counts get lower, the chance of infection increases because your body can't fight off the germs.

- A normal CD4 cell count is 500 to 1600.
- The lower the CD4 cell count, the more the HIV virus is in the body (viral load). It shows the progression of infection.

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• When CD4 cells drop to levels of 200-350 or lower, your doctor may use antiretroviral therapy (ART) for treatment. ART is used to keep the viral load of HIV under 100,000 and prevent OIs.
  ▶ Counts of less than 200 CD4 cells can put your health at risk for pneumonia, toxoplasmosis, and drug resistant bacteria, such as mycobacterium avian complex (MAC).

• Doctors may also test for another type of T cell called CD8 cells. CD8 cells are called “suppressor” cells because they make the immune system weak. Doctors will check your levels of CD4 cells to CD8 cells.
  ▶ A normal CD4 to CD8 level is 1 to 2 CD4 cells for every 1 CD8 cell.
  ▶ Persons infected with HIV may have many more CD8 cells than CD4 cells. Treatment will improve your CD4 levels.

**Signs of Opportunistic Infections**

The first signs of OIs are fevers and white patches on your tongue, back of throat and inside cheeks. Other signs are dry cough, diarrhea, tiredness and weight loss. If you have any of these signs and symptoms that do not go away after 3 to 5 days, call your doctor. You must identify OIs early to begin treatment. The sooner you are treated the less sick you will become.

Talk to your doctor or others on your health care team if you have questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.