AIDS- A LIFESTYLE by Harpriya Singh

Cough, Fever, Cold; the very basic illnesses have found a new partner, a virus called Human Immunodeficiency Virus or (HIV). This deadly virus has become a part of an everyday life for most of the population around the world and has become one of the major causes of concern for medical professional s and the general public. Unaware of the symptoms due to a high latent period of infection, many people are unaware about whether they are a carrier for the disease.

According to the Global Fund Organization, 34 million people were diagnosed with HIV/AIDS around the world. This group includes an unaware population consists of pregnant women, adolescents, and a majority of adults. The developing countries are the ones that are affected the most.

The virus can be isolated from a range of body fluids and tissues, the most common being semen, cervical discharge and blood, causing the mode of transmission to be sexual, transplacental, breastfeeding, contaminated blood and sharing of needles. A common misconception about the transfer is by sharing food, clothing or common contact; but there is no such evidence.

HIV belongs to the lentivirus group of retrovirus family. There are two types of HIV viruses; HIV-1 and HIV-2; type 1 being the global strain and type 2 is found more in developing countries. HIV 1 is further divided into 3 types based on DNA sequencing- Group M,N,O. The main cells targeted are the CD4 cells and the T cells; both of which start decreasing in number after the infection entails.

The disease is classified into primary infection, the symptoms of which can occur in about 2-6 weeks in which the patients may suffer from:

- Fever with Rash
- Inflammation of the pharynx (pharyngitis) with cervical lymphadenopathy
- Myalgia- tenderness of pain in the muscles
- Arthralgia- pain in joints
- Headache
- Mucosal ulceration

It may also be asymptomatic, where the patient has no symptoms other than persistent generalized lymphadenopathy. An asymptomatic person can show no signs of symptoms up to about 10 years.

The last being acquired immunodeficiency virus (AIDS) in which opportunistic infections join the already progressing virus.

CD4 cells and T cells are the body's immunity cells which help in fighting disease. Their declining numbers welcome other disease to manifest along with HIV and worsen the condition of the body. The type of infection that will entail is based on the number of CD4 cells. The normal count being 500–1,000 cells/mm3. Any decrease from these numbers is a cause for concern.

CD4 count>500 cells/mm3	
• Acute primary infection	• Persistent generalized lymphadenopathy
• Recurrent vaginal candidiasis	

CD4 count<500 cells/mm3	
• Primary tuberculosis	• Idiopathic thrombocytopenic purpura
• Pneumococcal pneumonia	• Cervical intraepithelial neoplasia II-III
• Herpes Zoster	• Lymphoid interstitial pneumonitis
• Oropharyngeal candidiasis	• Oral hairy leukoplakia
• Extra-intestinal salmonellosis	• Kaposi's Sarcoma

CD4 count<200 cells/mm3	
• Pneumocystis jirovecii pneumonia	• Oesophageal candidiasis
• Mucocutaneous herpes simplex	• Military/extrapulmonary tuberculosis
• Cryptosporidium	• HIV-associated wasting
• Microsporidium	• Peripheral neuropathy

CD4 count<100 cells/mm3	
• Cerebral Toxoplasmosis	• HIV-associated dementia
• Cryptococcal meningitis	• Progressive multifocal leucoencephalopathy
• Non Hodgkin lymphoma	

CD4 count<50 cells/mm3	
• CMV retinitis/ gastrointestinal disease	• Primary CNS lymphoma
• Disseminated MAI	•

In these above tables are a list of infections that occur with decreasing CD4 cell counts.

HIV testing is found at almost all local hospitals and clinics. They are highly recommended for:

1. Antenatal
2. People who are sexually active- multiple sex partners, partners with HIV, homosexuals
3. Termination of Pregnancy
4. Drug dependency
5. Hepatitis B, C,
6. Tuberculosis
7. Lymphoma

Testing is done by a blood sample and is further sent to the labs for investigations by:

1. ELISA- a screening test, for detecting anti-gp120 antibodies
2. Western Blot- confirmatory test; used if ELISA is positive
3. P24 antigen- indicator of viral replication; positive if AIDS is diagnosed
4. CD4 cell count- monitoring immune status; useful for initiating treatment
5. HIV viral load- marker for disease progression; Sensitive for diagnosing HIV

Based on the above mention tests, the treatment is started. Usually if the count is <350 cells/mm3, the treatment is initiated. The regime for combating this disease is based on antiretroviral agents that increase the cell count enough for the body to sustain life. These are the drugs used for HIV/AIDS:

Approved for adult use	Approved for pediatric use
Zidovudine + Lamivudine	Zidovudine + Lamivudine
Zidovudine + Lamivudine + Nevirapine	Stavudine + Lamivudine
Stavudine + Lamivudine	Ritonavir + Lopinavir
Stavudine + Lamivudine + Nevirapine	
Abacavir + Lamivudine	
Zidovudine + Abacavir + Lamivudine	
Lamivudine + Tenofovir	
Lamivudine + Tenofovir + Efavirenz	
Tenofovir + Emtricitabine	
Tenofovir + Emtricitabine + Efavirenz	
Ritonavir + Lopinavir	
Amprenavir + Ritonavir	

In retrospect, AIDS is a life threatening, autoimmune disease and like cancer, it is only treatable not curable. The most that these drugs can do is to increase your life span. As the saying goes, Prevention is better than a Cure; safe steps to avoid having this disease take over your life should be followed. Simple steps, like using protection during sex, avoiding used needles, and getting regular tests can take you a long way. Never think that AIDS will never happen to me, it can happen to anyone.