HIV is the acronym used to indicate the human immunodeficiency virus, a virus capable of damaging the immune system by destroying white blood cells and exposing the patient to an increased risk of contracting serious infections and some types of cancer.

**AIDS is a condition of acquired immunodeficiency**

That is, a lack of immune defenses, and is the last stage of HIV infection (especially thanks to current therapies to date not all patients with HIV develop AIDS). HIV is mainly transmitted through unprotected sexual intercourse, sharing infected needles following contact with the blood of an infected person (women can infect their children during pregnancy or during childbirth, if not treated). The first symptoms of HIV infection may simply be swollen lymph nodes and the appearance of flu-like symptoms, but many patients do not develop any symptoms until after years.

To date, there is no cure for permanent recovery, but medicine has many drugs that fight HIV infection and reduce the risk of infecting others. People who are diagnosed and treated early can live with the disease for a long time, just like anyone else.

The following is the second part of the discussion on the HIV virus, for other information (causes, symptoms, transmission, ...) click here. Photograph of the red bow, symbol of the fight against AIDS iStock.com/Jannoon028Dangers

The ultimate effect of the HIV virus in the human body is to weaken the immune system by triggering the appearance of the acquired immunodeficiency syndrome, therefore it is not surprising that the complications are a direct consequence in the form of infections and other diseases from which the body does not he is more able to defend himself.

However, it should be noted that, following the therapy scrupulously, the body is able to maintain an active and alert immune system and therefore the probability of incurring these consequences is drastically reduced.

**Opportunistic infections**

Opportunistic infections (infections that take advantage of a person's weakened immune system) are the most common complication of HIV / AIDS and include all those aggressions from which the body defends us every day without even realizing it:

Candidiasis: This is an infection caused by a very common and usually harmless species of fungus (candida); if the fungus does not find obstacles to proliferation it can cause infections of the skin, nails and mucous membranes (for example vagina, penis, mouth, ...) throughout the body. HIV-infected people often have problems with Candida, particularly in the mouth and vagina, but it only becomes a serious problem when it becomes infected

- esophagus (digestive tract),
- lower respiratory tract (such as the trachea and bronchi, or the deeper lung tissue).
Invasive cervical cancer: This tumor initially affects the cervix, which is the terminal part of the uterus that protrudes into the vagina, and then spreads to other parts of the body.

Coccidioidomycosis: This disease is caused by the fungus Coccidioides immitis; the infection usually occurs by inhalation of fungal spores that can cause pneumonia, but it is a common pathology more than anything else in South America.

Cryptococcosis: This disease is caused by the fungus Cryptococcus neoformans, which typically penetrates through the lungs and can cause pneumonia. It can spread to the brain, causing dangerous swelling, or it can infect any part of the body.

Cryptosporidiosis: This diarrheal disease is caused by the parasitic protozoan Cryptosporidium. Symptoms include abdominal cramps and severe watery diarrhea. Cytomegalovirus: This is a virus that does not normally cause particular symptoms in the healthy body, but which on the contrary represents a serious threat in case of a weakened immune system. It can cause pneumonia, gastroenteritis, encephalitis, retinitis, ...

**HIV-related encephalopathy: The exact cause is still unknown, but it is a severe inflammation of the brain.**

Herpes simplex: The herpes simplex virus (HSV) is a very common virus that for most people does not cause any major problems, other than an annoying fever on the lip or a genital herpetic manifestation. HSV is generally acquired sexually or from an infected mother during childbirth. In most people with healthy immune systems, the virus is inactive most of the time, except in occasional stressful situations. In people with severely damaged immune systems, HSV can cause bronchitis, pneumonia and esophagitis.

Histoplasmosis: This disease is caused by the fungus *Histoplasma capsulatum*, a microorganism capable of infecting the lungs and causing symptoms similar to flu or pneumonia. People with weakened immune systems risk severe involvement of other organs as well.

Isosporiasis is an infectious parasitic disease that involves the intestine, the epidemiology has increased especially after the spread of the HIV virus. Kaposi’s sarcoma: This cancer is caused by a virus called Human Herpesvirus 8. It causes abnormal and uncontrolled growth of small blood vessels, potentially anywhere in the body, manifesting as pink or purple spots. It becomes life-threatening when it affects internal organs such as the lung, lymph nodes or intestines.

Lymphoma: These are cancers that affect lymph nodes and the lymphatic system in general, such as non-Hodgkin’s lymphoma and Hodgkin’s lymphoma.

Tuberculosis: This is an infection caused by the bacterium Mycobacterium tuberculosis. Tuberculosis spreads airborne, with the bacterium being released when a person with active tuberculosis coughs, sneezes or talks.

Breathing in the bacteria can lead to infections in the lungs. Symptoms of tuberculosis in the lungs include cough, fatigue, weight loss, fever, and night sweats. Although the disease usually occurs in the
lungs, it can affect other parts of the body as well, most often the larynx, lymph nodes, brain, kidneys, and bones.

Mycobacterium avium complex (MAC): Mycobacterium Avium Complex is a serious disease caused by common bacteria that can cover the lungs, intestines, bone marrow, liver and spleen. The bacteria responsible are widespread and can be found in water, soil, dust and food. They are therefore present in the body of most people. A healthy immune system is able to control the microorganisms that cause MAC, but those with very weakened immune systems can develop this disease.

**Pneumocystis carinii pneumonia and recurrent pneumonia in general.**
Progressive multifocal leukoencephalopathy: This is a rare and mostly fatal viral disease characterized by progressive damage or inflammation of the myelin in multiple locations, thereby damaging the brain and spinal cord.

Salmonellosis: Bacteria belonging to the Salmonella genus usually enter the body through the ingestion of contaminated food or water. Salmonella infection (salmonellosis) can affect anyone and usually causes a self-limited disease with nausea, vomiting and diarrhea; in patients with weakened immune systems they can cause much more serious infections with the risk of causing dangerous septicemia (blood infection).

Toxoplasmosis of the brain: Toxoplasmosis is an infection that, with the exclusion of pregnant women, does not generally cause major problems and only manifests itself with flu symptoms for a few days; in subjects with weakened immune systems it can instead cause much more serious consequences with important complications affecting the internal organs.

AIDS wasting syndrome, characterized by the involuntary loss of more than 10% of body weight due to prolonged diarrhea and fever, which can cause a significant loss of lean mass.