TB and HIV — Frequently Asked Questions

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FIGHT TB
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What is TB?

Tuberculosis is a disease that usually attacks the lungs but can affect almost any part of the body. A person infected with TB does not necessarily feel ill – and such cases are known as silent or "latent" infections. When the lung disease becomes "active", the symptoms include cough that last for more than two or three weeks, weight loss, loss of appetite, fever, night sweats and coughing up blood.

What causes TB?

TB is caused by the bacterium *Mycobacterium tuberculosis*. The bacterium can cause disease in any part of the body, but it normally enters the body though the lungs and resides there.

How is TB spread?

TB is spread from an infectious person to a vulnerable person through the air. Like the common cold, TB is spread through aerosolized droplets after infected people cough, sneeze or even speak. People nearby, if exposed long enough, may breathe in bacteria in the droplets and become infected. People with TB of the lungs are most likely to spread bacteria to those with whom they spend time every day – including family members, friends and colleagues.

When a person breathes in TB bacteria, the bacteria settle in the lungs. If that person's immune system is compromised, or becomes compromised, the bacteria begin to multiply. From the lungs, they can move through the blood to other parts of the body, such as the kidney, spine and brain. TB in these other parts of the body is usually not infectious.

Is TB treatable?

Yes. TB can be cured, even in people living with HIV. DOTS is the internationally recommended strategy for TB control.

DOTS treatment uses a variety of powerful antibiotics in different ways over a long period to attack bacteria and ensure their eradication. Treatment with anti-TB drugs has been shown to prolong the life of people living with HIV by at least two years. It is important that people who have the disease are identified at the earliest possible stage, so that they can receive treatment, contacts can be traced for investigation of TB, and measures can be taken to minimize the risk to others.

However, some strains of bacteria have now acquired resistance to one or more of the antibiotics commonly used to treat them; these are known as drug-resistant strains.

So TB is a growing concern for people working in the AIDS field?

Yes. It is estimated that one-third of the 40 million people living with HIV/AIDS worldwide are co-infected with TB. People with HIV are up to 50 times more likely to develop TB in a given year than HIV-negative people.

Another aspect of the resurgence of TB is the development of drug-resistant strains. These strains can be created by inconsistent and inadequate treatment practices that encourage bacteria to become tougher. The multidrug-resistant strains are much more difficult and costly to treat and multidrug-resistant TB

With effective treatment TB can be cured, HIV managed, and lives saved.

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(MDR-TB) is often fatal. Mortality rates of MDR-TB are comparable with those for TB in the days before the development of antibiotics.

What are the links between HIV and TB?

HIV/AIDS and TB are so closely connected that the term “co-epidemic” or “dual epidemic” is often used to describe their relationship. The intersecting epidemic is often denoted as TB/HIV or HIV/TB. HIV affects the immune system and increases the likelihood of people acquiring new TB infection. It also promotes both the progression of latent TB infection to active disease and relapse of the disease in previously treated patients. TB is one of the leading causes of death in HIV-infected people.

How many people are co-infected with TB and HIV?

An estimate one-third of the 40 million people living with HIV/AIDS worldwide are co-infected with TB. Furthermore, without proper treatment, approximately 90% of those living with HIV die within months of contracting TB. The majority of people who are co-infected with both diseases live in sub-Saharan Africa.

What is the impact of co-infection with TB and HIV?

Each disease speeds up the progress of the other, and TB considerably shortens the survival of people with HIV/AIDS. TB kills up to half of all AIDS patients worldwide. People who are HIV-positive and infected with TB are up to 50 times more likely to develop active TB in a given year than people who are HIV-negative.

HIV infection is the most potent risk factor for converting latent TB into active TB, while TB bacteria accelerate the progress of AIDS infection in the patient.

Many people infected with HIV in developing countries develop TB as the first manifestation of AIDS. The two diseases represent a deadly combination, since they more destructive together than either disease alone.

- TB is harder to diagnose in HIV-positive people.
- TB progresses faster in HIV-infected people.
- TB in HIV-positive people is almost certain to be fatal if undiagnosed or left untreated.
- TB occurs earlier in the course of HIV infection than many other opportunistic infections.

How much of a threat is TB?

According to WHO, TB infection is currently spreading at the rate of one person per second. It kills more young people and adults than any other infectious disease and is the world's biggest killer of women. In 1993, WHO declared TB to be "a global health emergency". Every year 8–10 million people catch the disease and 2 million die from it. About a third of the world's population, or around 2 billion people, carry the TB bacteria but most never develop the active disease. Around 10% of people infected with TB actually develop the disease in their lifetimes, but this proportion is changing as HIV severely weakens the human immune system and makes people much more vulnerable.

What is the impact of TB/HIV on women?

Worldwide, women bear a disproportionate burden of poverty, ill-health, malnutrition and disease. TB causes more deaths among women than all causes of maternal mortality combined, and more than 900 million women are infected with TB worldwide. This year, 1 million women will die and 2.5 million, mainly between the ages of 15 and 44, will become sick from the disease.

Once infected with TB, women of reproductive age are more susceptible to developing TB disease than men of the same age. Women in this age group are also at greater risk of becoming infected with HIV. As a result, in certain regions, young women aged 15–24 with TB outnumber young men of the same age with the disease.

While poverty is the underlying cause of much infection in rural areas, poverty is also aggravated by the impact of TB. In 1996, a study by the World Bank, WHO and Harvard University reported TB as a leading cause of "healthy years lost" among women of reproductive age.

What can be done to combat the spread of TB?

The internationally recommended strategy to control TB, known as DOTS, has five components:

- political commitment to sustained TB control
- access to quality-assured TB sputum microscopy
- standardized short-course chemotherapy, including direct observation of treatment
- an uninterrupted supply of drugs
- a standardized recording and reporting system, enabling assessment of outcome in all patients.

The Global Partnership to Stop TB is a global movement to accelerate social and political action to stop the spread of tuberculosis around the world. The Stop TB mission is to increase access, security and support in order to:

- ensure that every TB patient has access to TB treatment and cure, and protect vulnerable populations from TB
- reduce the social and economic toll that TB exacts from families, communities, and nations.

The Partnership's approach is a coordinated, multinational, multisectoral global effort to control TB.

Why is more collaborative action on TB and HIV important?

HIV/AIDS is dramatically fuelling the TB epidemic in sub-Saharan Africa, where up to 70% of TB patients are co-infected with HIV in some countries. For many years efforts to tackle TB and HIV have been largely separate, despite the overlapping epidemiology. Improved collaboration between TB and HIV/AIDS programmes will lead to more effective control of TB among HIV-infected people and to significant public health gains.

How can TB and HIV/AIDS work be better coordinated?

The World Health Organization's interim policy on collaborative TB/HIV activities[1] gives guidance on what should be done to address the dual TB and HIV epidemic. This includes the identification of collaborative TB/HIV activities and the establishment of TB/HIV coordinating bodies to promote and coordinate the response of the two programmes at all levels.

Avoid missed opportunities

HIV-positive people can easily be screened for TB; if they are infected they can be given prophylactic treatment to prevent development of the disease or curative drugs if they already have the disease. TB patients can be offered an HIV test; indeed, research shows that TB patients are more likely to accept HIV testing than the general population. This means TB programmes can make a major contribution to identifying eligible candidates for ARV treatment.

1 *Interim policy on collaborative TB/HIV activities.* Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.330 and WHO/HTM/HIV/2004.1).

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