



Media centre

Tuberculosis

Fact sheet N°104

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Key facts

- Tuberculosis (TB) is second only to HIV/AIDS as the greatest killer worldwide due to a single infectious agent.
- In 2013, 9 million people fell ill with TB and 1.5 million died from the disease.
- Over 95% of TB deaths occur in low- and middle-income countries, and it is among the top 5 causes of death for women aged 15 to 44.
- In 2013, an estimated 550 000 children became ill with TB and 80 000 HIV-negative children died of TB.
- TB is a leading killer of HIV-positive people causing one fourth of all HIV-related deaths.
- Globally in 2013, an estimated 480 000 people developed multidrug resistant TB (MDR-TB).
- The estimated number of people falling ill with TB each year is declining, although very slowly, which means that the world is on track to achieve the Millennium Development Goal to reverse the spread of TB by 2015.
- The TB death rate dropped 45% between 1990 and 2013.
- An estimated 37 million lives were saved through TB diagnosis and treatment between 2000 and 2013.

Tuberculosis (TB) is caused by bacteria (*Mycobacterium tuberculosis*) that most often affect the lungs. Tuberculosis is curable and preventable.

TB is spread from person to person through the air. When people with lung TB cough, sneeze or spit, they propel the TB germs into the air. A person needs to inhale only a few of these germs to become infected.

About one-third of the world's population has latent TB, which means people have been infected by TB bacteria but are not (yet) ill with the disease and cannot transmit the disease.

People infected with TB bacteria have a lifetime risk of falling ill with TB of 10%. However persons with compromised immune systems, such as

people living with HIV, malnutrition or diabetes, or people who use tobacco, have a much higher risk of falling ill.

When a person develops active TB (disease), the symptoms (cough, fever, night sweats, weight loss etc.) may be mild for many months. This can lead to delays in seeking care, and results in transmission of the bacteria to others. People ill with TB can infect up to 10-15 other people through close contact over the course of a year. Without proper treatment up to two thirds of people ill with TB will die.

Who is most at risk?

Tuberculosis mostly affects young adults, in their most productive years. However, all age groups are at risk. Over 95% of cases and deaths are in developing countries.

People who are infected with HIV are 26 to 31 times more likely to become sick with TB (see TB and HIV section). Risk of active TB is also greater in persons suffering from other conditions that impair the immune system.

Over half a million children (0-14 years) fell ill with TB, and 80 000 HIV-negative children died from the disease in 2013.

Tobacco use greatly increases the risk of TB disease and death. More than 20% of TB cases worldwide are attributable to smoking.

Global impact of TB

TB occurs in every part of the world. In 2013, the largest number of new TB cases occurred in the South-East Asia and Western Pacific Regions, accounting for 56% of new cases globally. However, Africa carried the greatest proportion of new cases per population with 280 cases per 100 000 population in 2013.

In 2013, about 80% of reported TB cases occurred in 22 countries. Some countries are experiencing a major decline in cases, while in others the numbers are dropping very slowly. Brazil and China for example, are among the 22 countries that showed a sustained decline in TB cases over the past 20 years. In the last decade, the TB prevalence in Cambodia fell by almost 50%.

Symptoms and diagnosis

Common symptoms of active lung TB are cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.

Many countries still rely on a long-used method called sputum smear microscopy to diagnose TB. Trained laboratory technicians look at

sputum samples under a microscope to see if TB bacteria are present. With three such tests, diagnosis can be made within a day, but this test does not detect numerous cases of less infectious forms of TB.

Diagnosing MDR-TB (see Multidrug-resistant TB section below) and HIV-associated TB can be more complex. A new two-hour test that has proven highly effective in diagnosing TB and the presence of drug resistance is now being rolled-out in many countries.

Tuberculosis is particularly difficult to diagnose in children.

Treatment

TB is a treatable and curable disease. Active, drug-sensitive TB disease is treated with a standard six-month course of four antimicrobial drugs that are provided with information, supervision and support to the patient by a health worker or trained volunteer. Without such supervision and support, treatment adherence can be difficult and the disease can spread. The vast majority of TB cases can be cured when medicines are provided and taken properly.

Between 2000 and 2013, an estimated 37 million lives were saved through TB diagnosis and treatment.

TB and HIV

At least one-third of people living with HIV worldwide in 2013 were infected with TB bacteria, although they did not become ill with active TB. People living with HIV are 26 to 31 times more likely to develop active TB disease than people without HIV.

HIV and TB form a lethal combination, each speeding the other's progress. In 2013 about 360 000 people died of HIV-associated TB. Approximately 25% of deaths among HIV-positive people are due to TB. In 2013 there were an estimated 1.1 million new cases of TB amongst people who were HIV-positive, 78% of whom were living in Africa.

WHO recommends a 12-component approach of collaborative TB-HIV activities, including actions for prevention and treatment of infection and disease, to reduce deaths.

Multidrug-resistant TB

Standard anti-TB drugs have been used for decades, and resistance to the medicines is widespread. Disease strains that are resistant to a single anti-TB drug have been documented in every country surveyed.

Multidrug-resistant tuberculosis (MDR-TB) is a form of TB caused by bacteria that do not respond to, at least, isoniazid and rifampicin, the two

most powerful, first-line (or standard) anti-TB drugs.

The primary cause of MDR-TB is inappropriate treatment. Inappropriate or incorrect use of anti-TB drugs, or use of poor quality medicines, can all cause drug resistance.

Disease caused by resistant bacteria fails to respond to conventional, first-line treatment. MDR-TB is treatable and curable by using second-line drugs. However second-line treatment options are limited and recommended medicines are not always available. The extensive chemotherapy required (up to two years of treatment) is more costly and can produce severe adverse drug reactions in patients.

In some cases more severe drug resistance can develop. Extensively drug-resistant TB, XDR-TB, is a form of multi-drug resistant tuberculosis that responds to even fewer available medicines, including the most effective second-line anti-TB drugs.

About 480 000 people developed MDR-TB in the world in 2013. More than half of these cases were in India, China and the Russian Federation. It is estimated that about 9.0% of MDR-TB cases had XDR-TB.

WHO response

WHO pursues six core functions in addressing TB.

1. Provide global leadership on matters critical to TB.
2. Develop evidence-based policies, strategies and standards for TB prevention, care and control, and monitor their implementation.
3. Provide technical support to Member States, catalyze change, and build sustainable capacity.
4. Monitor the global TB situation, and measure progress in TB care, control, and financing.
5. Shape the TB research agenda and stimulate the production, translation and dissemination of valuable knowledge.
6. Facilitate and engage in partnerships for TB action.

The WHO's Stop TB Strategy, which is recommended for implementation by all countries and partners, aims to dramatically reduce TB by public and private actions at national and local levels such as :

1. pursue high-quality DOTS expansion and enhancement. DOTS is a five-point package to:
 - a. secure political commitment, with adequate and sustained financing
 - b. ensure early case detection, and diagnosis through quality-assured bacteriology
 - c. provide standardized treatment with supervision and patient

support

- d. ensure effective drug supply and management and
 - e. monitor and evaluate performance and impact;
2. address TB-HIV, MDR-TB, and the needs of poor and vulnerable populations;
 3. contribute to health system strengthening based on primary health care;
 4. engage all care providers;
 5. empower people with TB, and communities through partnership;
 6. enable and promote research.

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