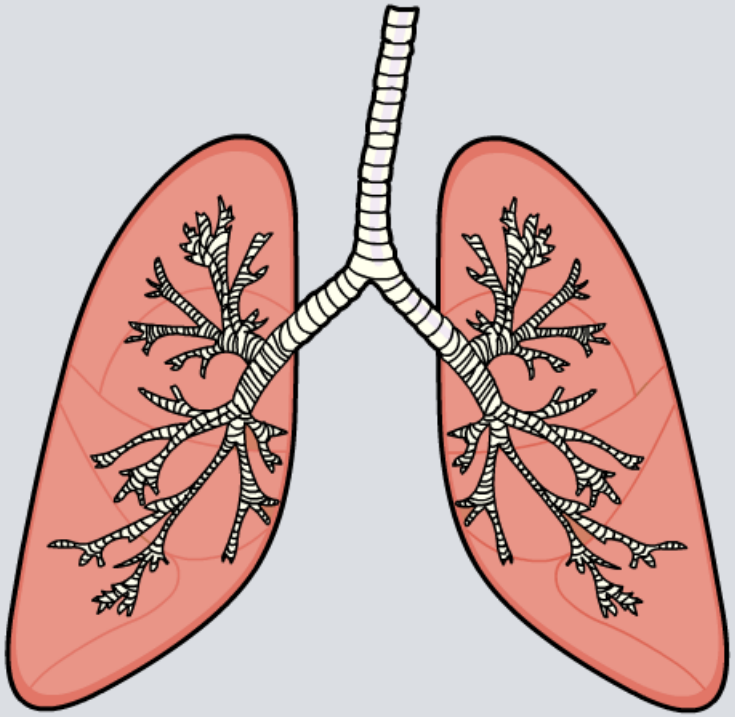
Tuberculosis



What is tuberculosis?

Tuberculosis (TB) is an infectious disease caused by the bacteria *Mycobacterium tuberculosis*.

The bacterium has a thick waxy coat, allowing it to lie dormant in the body for many years.

The TB bacteria attack the respiratory system, causing coughing, fever and fatigue.

How do you think TB is transmitted?

TB facts and figures: 2004

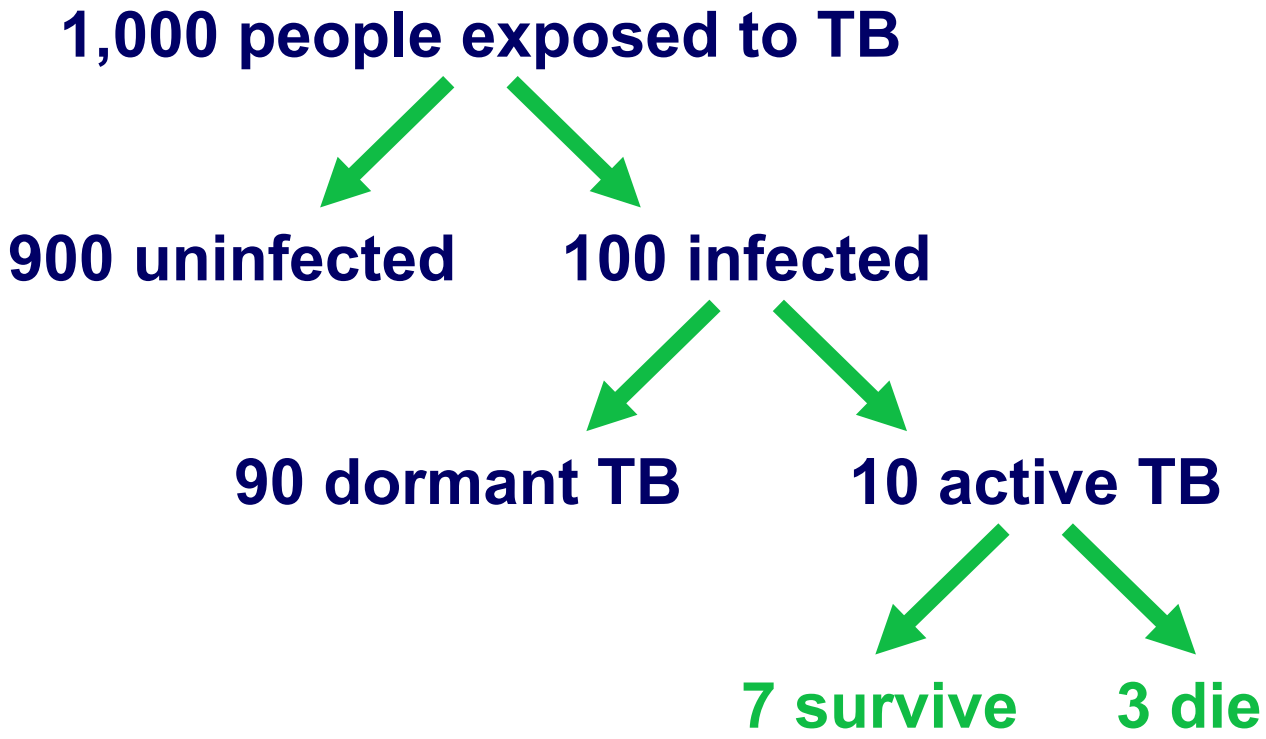
TB is one of the world's most serious diseases.

Region	Incidence (thousands)	Prevalence (thousands)	Mortality (thousands)
Africa	2,573	3,741	587
Americas	363	466	52
Eastern Mediterranean	645	1,090	142
Europe	445	575	69
South-East Asia	2,967	4,965	535
Western Pacific	1,925	3,765	307
Total	**8,918**	**14,602**	**1,692**

Healthy people can fight TB

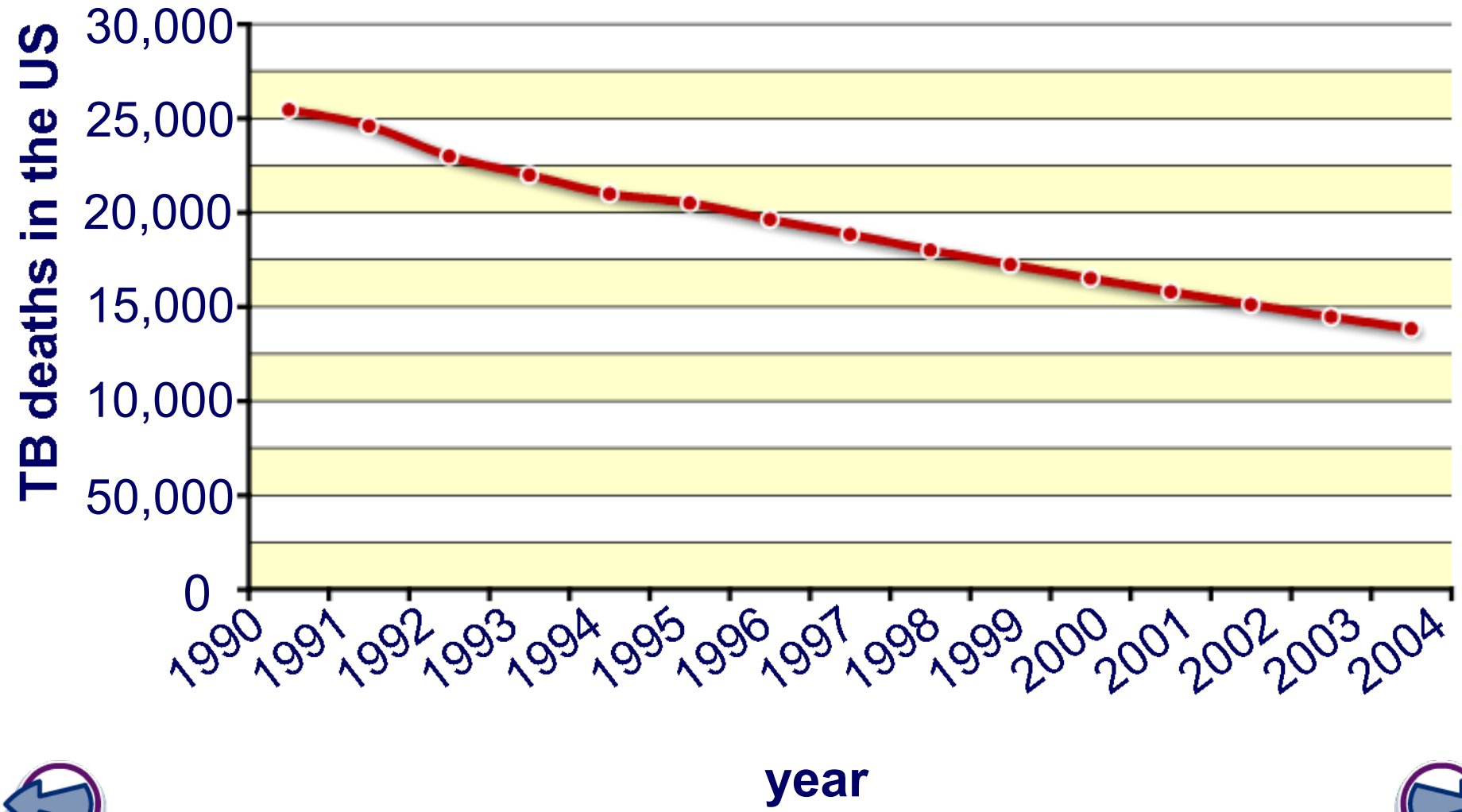
Only 10% of healthy people exposed to TB develop the active disease. People most at risk are those who:

- have a weakened immune system
- live in squalid or overcrowded conditions.



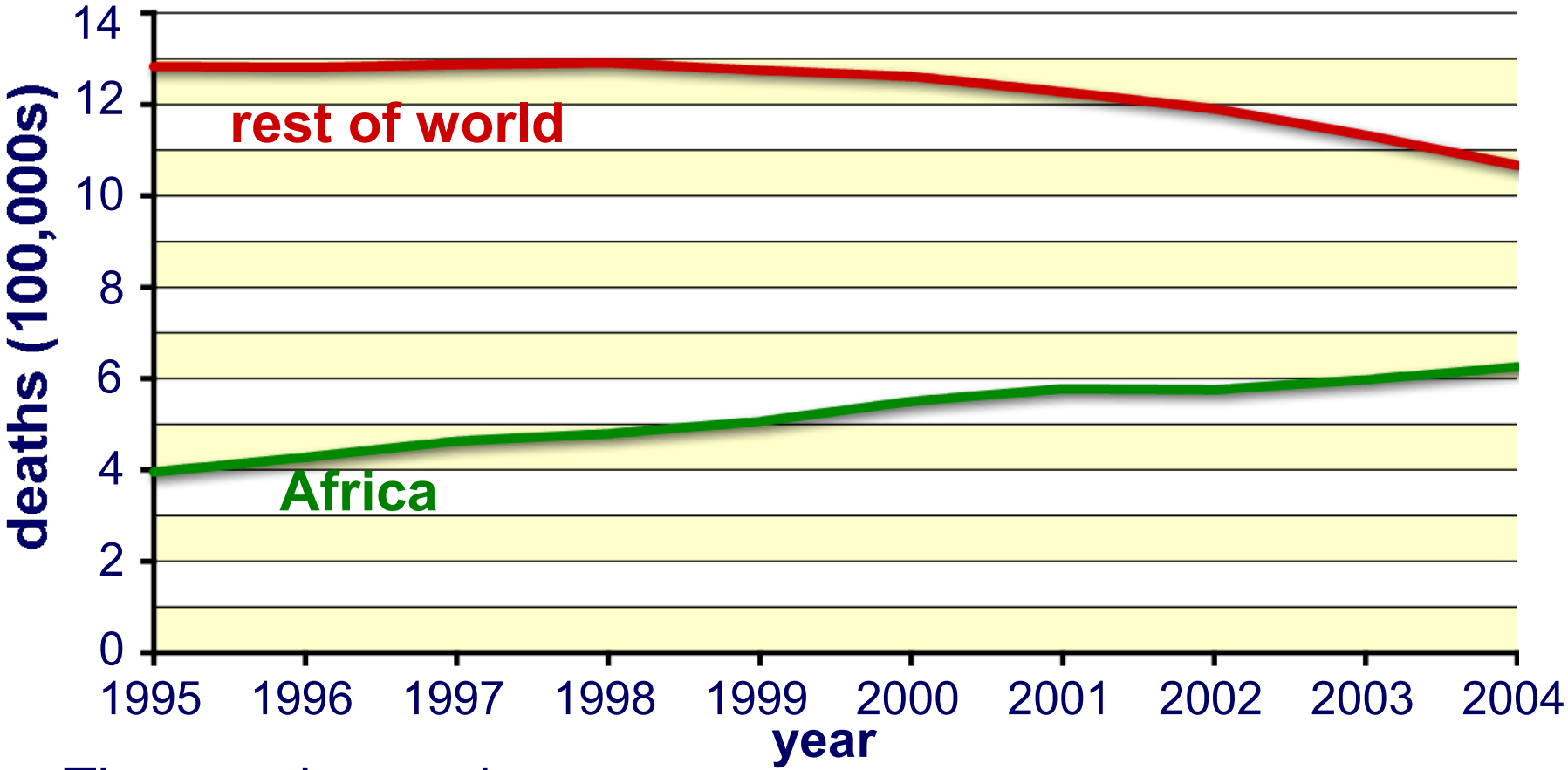
US TB deaths (1990–2004)

Infectious diseases usually decline as living conditions and standards of healthcare improve over time.



Deaths from TB infections

What is different about TB death rates in Africa compared with the rest of the world?



They are increasing.

How is TB treated?

TB is treated with a 6-month course of antibiotics. Three or four different antibiotics are taken daily to fight the many drug-resistant strains.

Why does the treatment last for 6 months?

To ensure that dormant bacteria are also killed.

The BCG vaccine for TB was developed in 1921. It is 50-80% effective, but is too expensive for use by developing countries to vaccinate whole populations.

Directly Observed Treatments System

To lower the costs of treating TB in developing countries, healthcare workers are paid to make sure patients swallow every pill they are prescribed. This is the **Directly Observed Treatments System (DOTS)**.

DOTS helps prevent drug-resistant TB from increasing, and limits the number of patients who relapse and need more expensive treatments.

Drug resistance can evolve in just three months but new antibiotics can take years to develop.

True or false?