



FACULTY OF APPLIED MEDICAL SCIENCES  
كلية العلوم الطبية التطبيقية



# Impact of environment on tuberculosis cases

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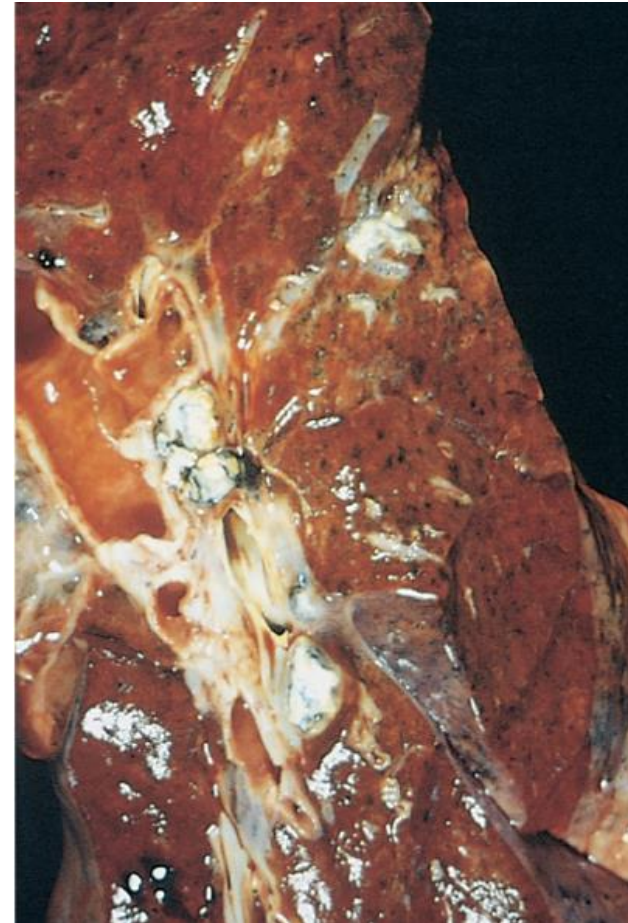
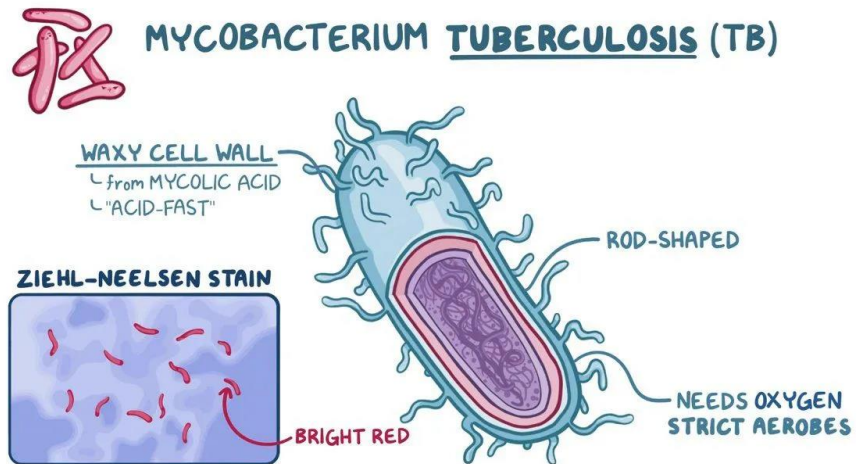
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# Objective

- ▶ **Defining Tuberculosis and environment**
- ▶ **Major environment factors that contribute to tuberculosis**
- ▶ **Tuberculosis incidents statistics based on environment condition**
- ▶ **The relationship type between tuberculosis and environment**
- ▶ **Ways to Reducing tuberculosis cases in general**

# Defining Tuberculosis

Tuberculosis is a communicable chronic granulomatous disease caused by *Mycobacterium tuberculosis*. It usually involves the lungs but may affect any organ or tissue in the body.



# Defining environment

The surroundings or conditions in which a person lives or operates in.



# Major environmental factors that contribute to Tuberculosis

## Factors:

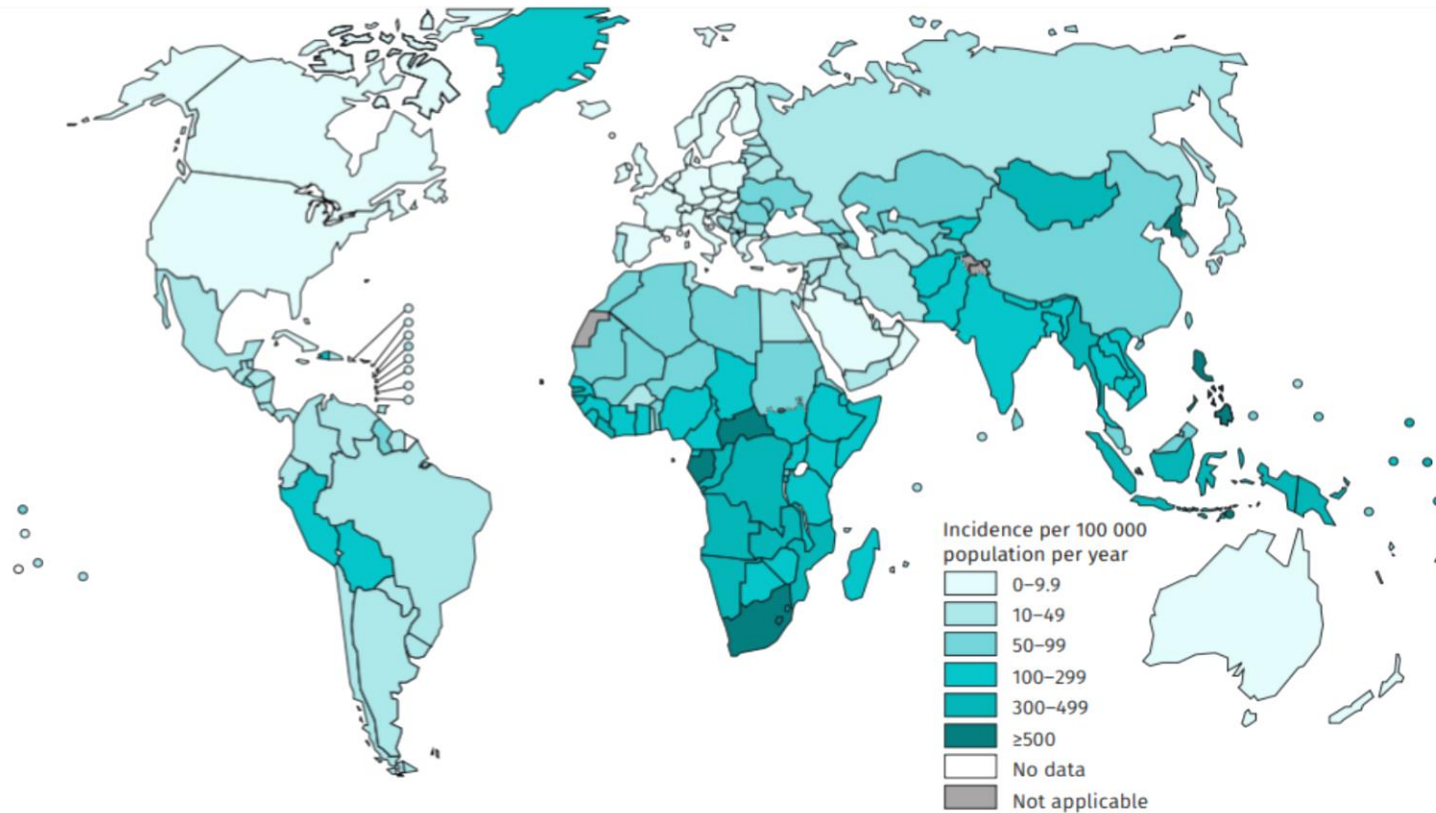
- Indoor/outdoor air pollution
- Tobacco smoke
- Malnutrition
- Excessive alcohol use
- Overcrowded living conditions
- Weak Health care
- Low economical capability of individual and government



All the factors above can be seen in a specific living condition that over one fifth of the worlds population live in, and it is poverty.

# Tuberculosis incidents statistics based on environment condition

- ▶ More than 9 million new cases of TB are diagnosed annually, 55% of them in Asia, 31% in Africa and 14% between Europe, south America and north America.



**Statistics table** : 5 countries each with a unique environment.

Country	Living conditions	number of cases per 100000	Mortality rate (%)
USA	Excellent	2.2	9.0
China	Excellent	58	3.6
India	Good	193	18.6
Libya	Good	59	22.0
Nigeria	Very Bad	219	50.0

# The relationship type between Tuberculosis and environment

The soul cause of tuberculosis is *M.tuberculosis*, therefore nothing else can cause this disease, however condition that allow for the bacteria to survive and spread outside human host can be said to be an underlying cause.

The environment as seen in the previous table, could be said to be the **major** underlying cause of tuberculosis spreading, and rate of mortality.

*The worse the environment is the higher the number of cases*



# Ways to Reducing Tuberculosis cases

## Short term solutions:

The BCG vaccination

Early diagnosis

Case finding

Managing your environment:

- good ventilation
- natural light
- good hygiene

★ Treatment of infected patient ★

## Long term solution:

- Improving health care
- Educating the people
- Improving housing
- Reducing environment pollution

“Raising awareness and creating demand for solutions will not solve the problem,”

# Conclusion

Tuberculosis has been anecdotally linked to environmental conditions through out history but recently scientists are presenting convincing evidence linking the environment with tuberculosis, and many studies have concluded that the environment is a major underlying cause of tuberculosis. Showing that the impact of environment on number of cases to be *great and serious.*

# Reference

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THANK YOU