

## The Road to End Tuberculosis (TB)

### Why in news?

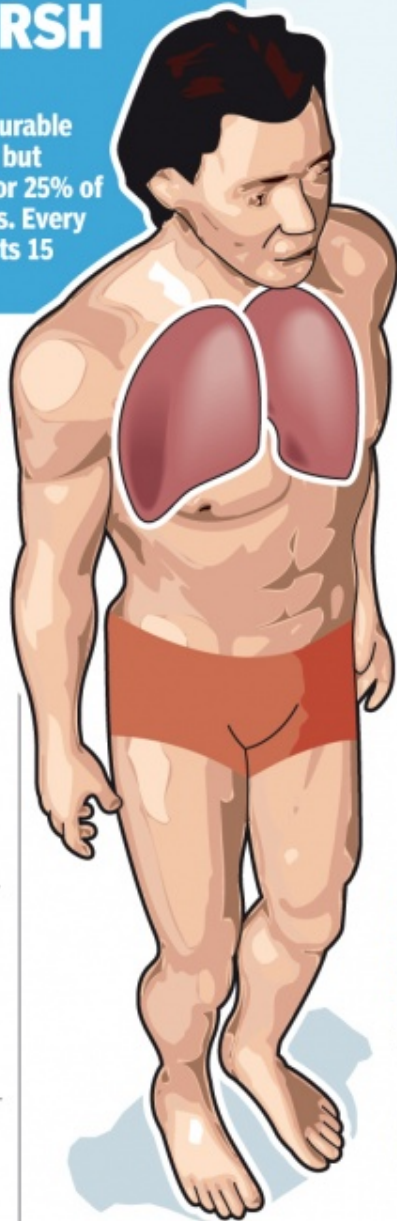
India's G20 presidency this year and the Varanasi Stop TB board meeting could provide a perfect platform to end TB.

### What is Tuberculosis?

- **About** - Tuberculosis is a serious infectious and contagious disease that generally affects lungs.
- **Cause** - TB is caused by a *bacterium* known as *Mycobacterium tuberculosis*.
- **Transmission** - TB bacteria spread through the air from one person to another
- When a person with TB disease of the lungs or throat coughs, speaks, or sings, TB bacteria can get into the air.
- **Symptom** -
  - Pain in the chest
  - Coughing up blood and sputum (phlegm from deep inside the lungs weakness or fatigue
  - Weight loss and loss of appetite
  - Chills and fever
  - Sweating at night
- **Treatment** - Drugs include Isoniazid (INH), Rifampicin, Pyrazinamide and Ethambutol (HRZE) in daily doses

# THE HARSH COUGH

Tuberculosis is curable and preventable but India accounts for 25% of the world's cases. Every year, India reports 15 lakh new cases



## WHAT ARE THE SYMPTOMS?



Cough with sputum and blood



Chest pain



Weakness



Weight loss



Fever



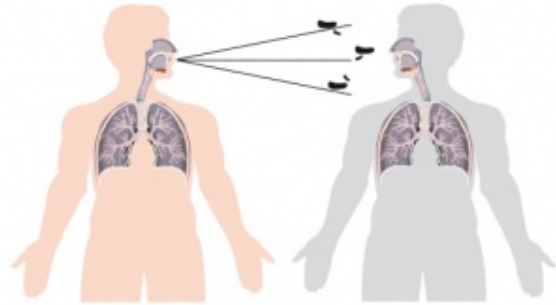
Night sweats

## WHAT IS TUBERCULOSIS?

TB is an infectious, airborne disease that commonly affects the lungs. It is caused by the Mycobacterium tuberculosis bacteria



## HOW DOES IT SPREAD?



Through the air – if an infected person coughs, sneezes or speaks and others breathe in the air

## ESTIMATED NEW TB CASES (ALL FORMS) PER 100,000 POPULATION



**1/3** of the world's population has latent TB, which means they have been infected by the bacteria but are not ill and cannot transmit the disease

## PREVALENCE

People registered for treatment (2011)

India **15 lakh**  
TN **79,830**

## STUDY FINDINGS

No. of TB patients **10,477**    Incidence among elderly **259**  
No. over 60 **1,485**    Incidence in other patients **142**  
Male-female ratio in elderly **4:1**    (per 100,000 population)

**38%** of elderly unlikely to respond to treatment

## WHO IS AT RISK?

(Source: WHO Global Tuberculosis Report 2012; Revised National Tuberculosis Control Programme 2011; REACH)



Children



People with HIV



Smokers



Elderly

Treatment is less effective in people with diabetes, hypertension and cardio vascular diseases

## Status of TB in India

- Most of the TB statistics for India are collected by the government National Tuberculosis Elimination Program
- The NTEP then passes their figures to the World Health Organisation (WHO).
- The WHO TB statistics for India for 2021 give an estimated incidence figure of 2,590,000 million cases

*An estimate of 2.8 million TB cases with TB killing more than 4,00,000 occur in India every year*

## What are the measures taken by India to eradicate TB?

- **The National Tuberculosis Elimination Programme(NTEP)** - Aims to strategically reduce TB burden in India by 2025.
- It was previously known as Revised National Tuberculosis Control Programme (RNTCP).
- The government reached over a billion people in 632 districts/reporting units.
- **The National Strategic Plan for TB Elimination** - It was launched to achieve the target of ending TB by 2025 in a mission mode.
- It is a multi-pronged approach which aims to detect all TB patients with an emphasis on reaching TB patients seeking care from private providers and undiagnosed TB in high-risk populations
- **Ni-kshay Poshan Yojana(NPY)(Nutritional Support to TB)** - It helps to meet the nutritional requirements of TB patients, especially the underserved
- From 2018 till present, around Rs. 1,707 crore has been disbursed to more than 65 lakh people on TB treatment across the country
- **Patient Provider Support Agencies (PPSA)** - To engage the private sector, Patient Provider Support Agencies (PPSA) have been rolled out across 250 districts through the domestic setup and JEET initiative
- **Universal Drug Susceptibility Testing (UDST)** - To ensure every diagnosed TB patient is tested to rule out drug resistance before or at the time of treatment initiation itself.
- **Pradhan Mantri TB Mukh Bharat Abhiyaan** - To bring together all community stakeholders to support those on TB treatment and accelerate the country's progress towards TB elimination.
- **Ayushman Bharat - Health and Wellness Centres** - To decentralize comprehensive primary healthcare including TB care services at the grassroots level.
- **Bedaquiline and Delamanid** -Newer drugs like Bedaquiline and Delamanid have also been made available for management of DRTB.

## What are the global measures to eradicate TB?

- **End TB Strategy** - by World Health Organization (WHO)
- It serves as a blueprint for countries to reduce TB incidence by 80%, TB deaths by 90%, and to eliminate catastrophic costs for TB-affected households by 2030.

- **World Development Report (1993)** - Published by the World Health Organization (WHO).
- The 1993 World Development Report labelled TB treatment for adults as the best buy among all developmental interventions.
- **The Global Fund** - A worldwide movement to defeat HIV, TB and malaria and ensure a healthier, safer, more equitable future for all.
- **The Stop TB Partnership** - Brings together expertise from a broad spectrum of country, regional, and global partners in our shared mission to revolutionize the TB space and end TB by 2030
- **Sustainable Development Goal 3** - To end TB epidemic by 2030

### What are the challenges to eradicate TB?

- Lack of clarity on definitions of 'end' TB
- Poor primary health-care infrastructure in rural areas
- Unregulated private health care leading to widespread irrational use of first-line and second-line anti-TB drugs
- Unpasteurized milk or dairy products made from raw milk is another potential source of TB for humans
- Lack of awareness
- Multidrug-resistant TB (MDR TB)

*Multidrug-resistant TB (MDR TB) is caused by an organism that is resistant to at least isoniazid and rifampin, the two most potent TB drugs*

### What is the need of the hour?

- Development and wide use of an adult TB vaccine
- To lower production cost so as to make few available anti-TB drugs to everyone
- Inventing injection-free and oral pills for TB
- Use of AI-assisted handheld radiology with 90-second reporting and 95% accuracy for diagnosing TB.

### References

1. [The Hindu | Ending TB](#)
2. [PIB | Measures By India](#)
3. [The Quint | Definition Of TB](#)