

# BPaL treatment for TB

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**In news-** Results of a ZeNix phase III clinical trial has found that the BPaL treatment regimen remains effective against highly drug-resistant strains of tuberculosis(TB) with a reduced dosage.

## **Key results-**

- The results from the trial was led by the TB alliance.
- **ZeNix is a clinical trial testing the BPaL regimen, which consists of Pretomanid, Bedaquiline and Linezolid.**
- The trial was commissioned to evaluate if the efficacy of the BPaL drug regimen can be maintained while reducing its toxicity through a lower dose and shortening the duration of Linezolid.
- It was found that **BPaL treatment remains effective against highly drug-resistant TB strains.**
- The **success rate for trial participants** receiving a variable dosage of linezolid (600-1200mg) as part of the BPaL regimen was between **84 to 93 per cent.**

## **What is Tuberculosis (TB)?**

- TB is a contagious infection, in which the TB bacteria attack the lungs, but they can attack any part of the body such as the kidney, spine, and brain.
- Latent TB doesn't have symptoms, in which case, a skin or blood test can verify its presence.
- Signs of active TB disease include: A cough that lasts more than 3 weeks, Chest pain, Coughing up blood, Feeling tired all the time, Night sweats, Chills, Fever, Loss of appetite, Weight loss.
- While the term tuberculosis was coined by Johann Schonlein in 1834, it is believed that the infection has been around for 3 million years.
- In the 1700s, TB was called "the white plague" due to

the pale appearance of the patients.

- TB was called “phthisis” in ancient Greece, “tabes” in ancient Rome, and “schachepheth” in ancient Hebrew.
- It was also known as “consumption” in the 1800s.
- During the Middle Ages, TB of the neck and lymph nodes was called “scrofula” and was believed to be a different disease from TB in the lungs.
- According to WHO, each day, nearly 4000 lose their lives to TB and close to 28,000 people fall ill with this preventable and curable disease.
- WHO aims to end TB by 2030.

### **Do you know?**

- The Global TB Report 2021 stated that the mortality rate due to all forms of TB between 2019 and 2020 increased by 11 per cent in India.
- In absolute numbers, the total number of estimated deaths from all forms of TB, excluding HIV, for 2020 was 4.93 lakh (4.53-5.36 lakhs) in the country, 13 per cent higher than the 2019 estimate.
- It’s useful to remember that India is also one of the top high-burden countries for MDR/RR-TB as estimated by the WHO for 2021–2025.

### **Initiatives by India-**

- India has 30% of the world’s TB cases.
- TB has been made an essential part of Comprehensive Primary Health Care and is now integrated with Ayushman Bharat Health and Wellness Centres (HWCs), the largest comprehensive health care and health protection programme in the world.
- The National TB Management Framework makes a strong case for elimination efforts from a health sector struggle to coordinate the collective endeavour of the government, the private sector, civil society, corporates and other stakeholders.

- India has committed to the United Nations General Assembly to end TB by 2025, five years ahead of the deadline given in the Sustainable Development Goals.
- India has experimented successfully with the public-private partnership model, which is now being replicated in more than 242 districts with the coalition of the government and the civil society (JEET Project).
- The concerted effort of the National TB Elimination Programme (NTEP) has to its credit the world's biggest DOTS Therapy by treating nearly 20 million people in 15 years.
- In the State TB Index of 2020, Gujarat, Andhra Pradesh and Himachal Pradesh were the top three best-performing states for tuberculosis control under the category of states with 50 lakh population.