



Typbar TCV Vaccine

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Why in News

Hyderabad-based **Bharat Biotech** has developed a **typhoid vaccine (Typbar TCV)** which has **better efficacy** than the previously used vaccinations in preventing typhoid fever.

- Typbar TCV is a type of **conjugate vaccine** which has already been pre-qualified by the **World Health Organisation's Strategic Advisory Group of Experts on Immunization (WHO-SAGE)**.
- Currently, two typhoid vaccines viz. Polysaccharide Typhoid Vaccine and Live, Weakened Typhoid Vaccine are used in India. However, their efficacy is lower than the conjugate vaccine as they offer 60-70% protection, unlike the conjugate vaccine which confers nearly 82% protection.

Typbar TCV

- It is a **type of conjugate vaccine**. **Conjugate vaccines** are made using a combination of two different components. In Typbar TCV, an **antigen** is **chemically linked to a carrier protein** to create more powerful combined immune response.
The conjugate vaccine can be given to babies as young as six months, while the other two typhoid vaccines — **polysaccharide typhoid vaccine** and **live, weakened typhoid vaccine** cannot be given to children below two years of age.
- Its **single dose** is effective in preventing typhoid in children aged **9 months to 16 years**. It confers protection two-three weeks after the administration.
- Typhoid bacteria can be treated with antibiotics but the microbes have **developed resistance against multiple antibiotics**.
Extensively drug-resistant (XDR) typhoid outbreaks have been found in **India, Bangladesh, and Pakistan**.

- Typbar TCV is the **world's first clinically proven conjugate** Typhoid vaccine. Bharat Biotech has been supplying the typhoid conjugate vaccine to Pakistan since 2017. **Pakistan is also the first country** to introduce the **typhoid conjugate vaccine** as part of its **national immunisation programme**.

Typhoid

- Typhoid fever is caused by the highly contagious **Salmonella Typhi bacteria**. The bacteria spread through **contaminated food or water**.
- **Symptoms** are prolonged fever, headache, nausea, loss of appetite, and constipation or sometimes diarrhoea.
These are often non-specific and clinically non-distinguishable from other febrile illnesses.
- Clinical severity varies and severe cases may lead to **serious complications** or even **death**.
- According to the WHO, a large proportion of **severe typhoid** fever cases occur in **children aged below two years**.

Source: TH