

# Universal Programme

# Immunisation

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*Source: National Health Portal*

## Background

Immunization Programme in India was introduced in 1978 as the 'Expanded Programme of Immunization' (EPI) by the Ministry of Health and Family Welfare, Government of India. **In 1985, the programme was modified as the 'Universal Immunization Programme' (UIP)** to be implemented in a phased manner to cover all districts in the country by 1989-90 with the one of largest health programme in the world.

Ministry of Health and Family Welfare, Government of India provides several vaccines to infants, children and pregnant women through the Universal Immunisation Programme.

## About immunization

Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines are substances that stimulate the body's own immune system to protect the person against subsequent infection or disease.

## Vaccines provided under UIP:

### BCG

- BCG stands for **Bacillus Calmette-Guerin vaccine**. It is given to infants to protect them from tubercular meningitis and disseminated **TB**.
- BCG vaccine is given at birth or as early as possible till 1 year of
- Route and site- BCG is given as an intradermal injection

in the left upper arm.

## **OPV**

- OPV stands for **Oral Polio Vaccine**. It protects children from **poliomyelitis**.
- OPV is given at birth called zero dose and three doses are given at 6, 10 and 14 weeks. A booster dose is given at 16-24 months of age.
- Route and site – OPV is given orally in the form of two drops.

## **Hepatitis B vaccine**

- Hepatitis B vaccine protects from Hepatitis B virus infection.
- Hepatitis B vaccine is **given at birth** or as early as possible within 24 hours. Subsequently, 3 are given at 6, 10 and 14 weeks in combination with DPT and Hib in the form of pentavalent vaccine.
- Route and site- Intramuscular injection is given at the anterolateral side of mid-thigh

## **Pentavalent Vaccine**

- Pentavalent vaccine is a combined vaccine **to protect children from five diseases Diphtheria, Tetanus, Pertussis, Haemophilis influenza type b infection and Hepatitis B**.
- Three doses are given at 6, 10 and 14 weeks of age (can be given until one year of age).
- Route and site- Pentavalent vaccine is given intramuscularly on anterolateral side of mid-thigh

## **Rotavirus Vaccine**

- It gives **protection to infants and children against rotavirus diarrhoea**. It is given in select states (**recently in August 2019 expanded to all the states and UTs**).

- When to give – Three doses of vaccine are given at 6, 10, 14 weeks of age.
- Route and site-5 drops of vaccine are given orally.

## PCV

- PCV stands for Pneumococcal Conjugate Vaccine. **It protects infants and young children against disease caused by the bacterium Streptococcus pneumonia.** It is given in select states.
- The vaccine is given as two primary doses at 6 & 14 weeks of age followed by a booster dose at 9 months of age
- Route and site- PCV is given as an intramuscular (IM) injection in the outer right upper thigh. It should be noted that the pentavalent vaccine and PCV are given as two separate injections into opposite thighs.

## FIPV

- FIPV stands for Fractional Inactivated Poliomyelitis Vaccine. It is used to **boost protection against poliomyelitis.**
- Two fractional doses of IVP are given intradermally at 6 and 14 weeks of age.
- Route and site- It is given as an intradermal injection at the right upper arm.

## Measles/ MR vaccine

- The measles vaccine is used to **protect children from measles.** In few states Measles and Rubella a combined vaccine is given to protect from Measles and Rubella infection.
- The first dose of Measles or MR vaccine is given at 9 completed months to 12 months (vaccine can be given up to 5 years if not given at 9-12 months age) and the second dose is given at 16-24 months.
- Route and site – Measles Vaccine is given as a

subcutaneous injection in the right upper arm.

## **JE vaccine**

- JE stands for Japanese encephalitis vaccine. It gives **protection against Japanese Encephalitis** disease. JE vaccine is given in select districts endemic for JE.
- JE vaccine is given in two doses the first dose is given at 9 completed months-12 months of age and the second dose at 16-24 months of age.
- Route and site- It is given as a subcutaneous injection.

## **DPT booster**

- DPT is a **combined vaccine; it protects children from Diphtheria, Tetanus, and Pertussis.**
- DPT vaccine is given at 16-24 months of age is called as DPT first booster and DPT 2nd booster is given at 5-6 years of age.
- Route and site- DPT first booster is given as an intramuscular injection in the anterolateral side of the in the left leg. DPT second booster is given as an intramuscular injection in left upper arm.

## **TT**

- **Tetanus toxoid** vaccine is used **to provide protection against tetanus.**
- Tetanus toxoid vaccine is given at 10 years and 15 years of age when previous injections of pentavalent vaccine and DPT vaccine are given at scheduled age.
- Pregnant women-TT-1 is given early in pregnancy; and TT-2 is given 4 weeks after TT-1. TT booster is given when two doses of TT are given in pregnancy in the last three years.
- Route and site- TT is given as Intramuscular injection in the upper arm.