

UNIT-2

National Immunization Schedule

A stylized graphic of a hand with fingers spread, composed of several parallel, slightly curved lines of varying lengths, positioned in the lower right quadrant of the page. The lines are a lighter shade of green than the background.

Learning objectives

- *List the diseases preventable by vaccination under the UIP*
- *Explain the vaccines given under the National Immunization Schedule*
- *Describe the dose, route, site and technique of administration of vaccines.*

National Immunization Schedule

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Under the UIP, vaccines are provided to prevent the following VPDs:

- Diphtheria
- Pertussis
- Tetanus
- Polio
- Measles
- Tuberculosis
- Hepatitis B
- Haemophilus Influenzae Type B related diseases-
ES (bacterial meningitis, pneumonia and others)
- Japanese Encephalitis
- Encephalitis
- Diarrhoeas due to rotavirus
- Rubella
- Pneumococcal disease

The goal of Universal Immunization Programme is to reach out to the following beneficiaries:

Pregnant women

- **As early as possible** - appropriate TT doses

Infants & children

- **At birth** - HepB, BCG, OPV
- **Before age 1 year - for Full Immunization**
 - 3 doses of OPV, 3 doses of Rotavirus (where applicable), 3 doses of Pentavalent, 2 doses of fractional IPV, 3 doses of PCV (where applicable), MR vaccine -1st dose , JE 1st dose (where applicable)
- **Before age 2 years - for Complete Immunization**
 - MR vaccine - 2nd dose, DPT booster, Polio booster and JE 2nd dose (where applicable)

OPV – oral polio vaccine; BCG – bacillus Calmette-Guerin; Hep B – hepatitis B;

PCV – Pneumococcal Conjugate Vaccine

DPT – diphtheria–pertussis–tetanus

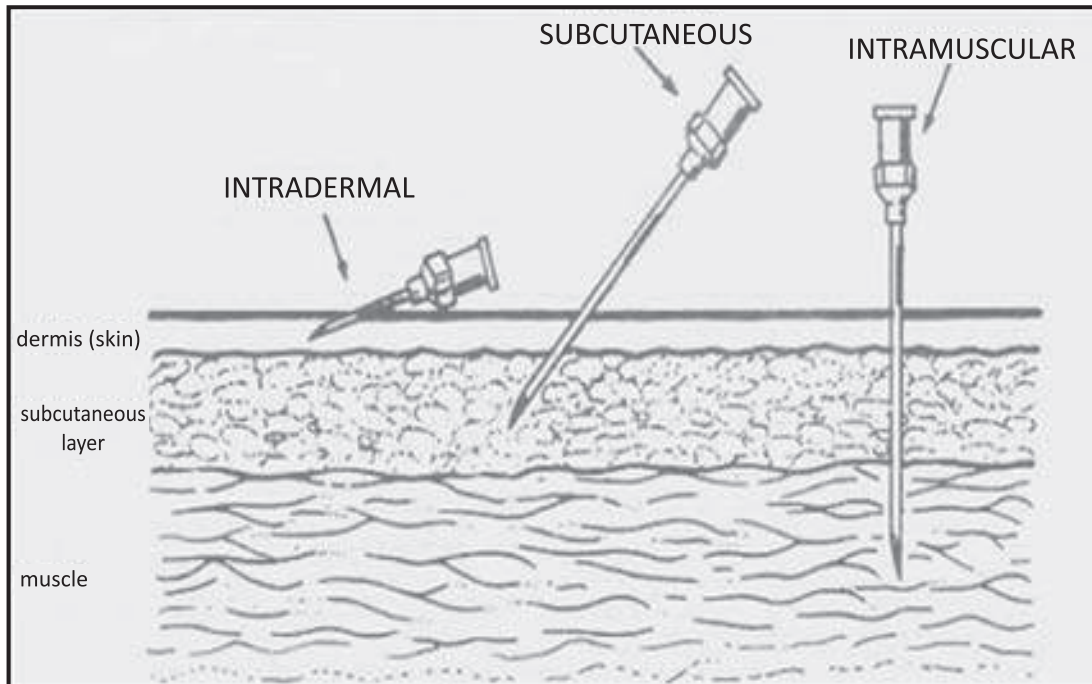


Fig. 2.1. Different needle positions for vaccine administration

National Immunization Schedule

Table 2.1. National Immunization Schedule for infants, children and pregnant women

Vaccine	Due age	Max age	Dose	Diluent	Route	Site
For Pregnant Women						
TT-1	Early in pregnancy	Give as early as possible in pregnancy	0.5 ml	NO	Intra-muscular	Upper Arm
TT-2*	4 weeks after TT-1*		0.5 ml	NO	Intra-muscular	Upper Arm
TT- Booster	If received 2 TT doses in a pregnancy within the last 3 years*		0.5 ml	NO	Intra-muscular	Upper Arm

Vaccine	Due age	Max age	Dose	Diluent	Route	Site
For Infants						
BCG	At birth	till one year of age	(0.05 ml until 1 month) 0.1ml Beyond age 1 month	YES Manufacturer supplied diluent (Sodium chloride)	Intra-dermal	Upper Arm - LEFT
Hepatitis B - Birth dose	At birth	within 24 hours	0.5 ml	NO	Intra-muscular	Antero-lateral side of mid-thigh - LEFT
OPV-0	At birth	within the first 15 days	2 drops	-	Oral	Oral
OPV 1, 2 & 3	At 6 weeks, 10 weeks & 14 weeks	till 5 years of age	2 drops	-	Oral	Oral
Pentavalent 1, 2 & 3** (Diphtheria+ Pertussis + Tetanus + Hepatitis B + Hib)	At 6 weeks, 10 weeks & 14 weeks**	1 year of age	0.5 ml	NO	Intra-muscular	Antero-lateral side of mid-thigh - LEFT
Fractional IPV (Inactivated Polio Vaccine)	At 6 & 14 weeks	1 year of age	0.1 ml	NO	Intra-dermal	Upper Arm - RIGHT
Rotavirus‡ (Where applicable)	At 6 weeks, 10 weeks & 14 weeks	1 year of age	5 drops	NO	Oral	Oral
Pneumococcal Conjugate Vaccine (PCV) (Where applicable)	At 6 weeks & 14 weeks At 9 completed months - booster	1 year of age	0.5 ml	NO	Intra-muscular	Antero-lateral side of mid-thigh - RIGHT
Measles / Rubella 1st dose ##	At 9 completed months-12 months.	5 years of age	0.5 ml	YES Manufacturer supplied diluent (Sterile water)	Sub-cutaneous	Upper Arm - RIGHT
Japanese Encephalitis – 1 @ (Where applicable)	At 9 months-12 months@	15 years of age	0.5 ml	YES - Manufacturer supplied diluent (Phosphate Buffer Solution)	Sub-cutaneous	Upper Arm - LEFT
Vitamin A (1st dose)	At 9 months	5 years of age (1 lakh IU)	1 ml	-	Oral	Oral

Vaccine	When to give	Max age	Dose	Diluent	Route	Site
For Children						
DPT Booster-1	16-24 months	7 years of age	0.5 ml	NO	Intra-muscular	Antero-lateral side of mid-thigh – LEFT
Measles / Rubella 2nd dose ##	16-24 months	5 years of age	0.5 ml	YES Manufacturer supplied diluent (Sterile water)	Sub-cutaneous	Upper Arm - RIGHT
OPV Booster	16-24 months	5 Years	2 drops	NO	Oral	Oral
Japanese Encephalitis – 2 @ (Where applicable)	16-24 months @	till 15 years of age	0.5 ml	YES Manufacturer supplied diluent (Phosphate Buffer Solution)	Sub-cutaneous	Upper Arm - LEFT
Vitamin A \$ (2nd to 9th dose)	At 16 months. Then, one dose every 6 months.	up to the age of 5 years	2 ml (2 lakh IU)	-	Oral	Oral
DPT Booster-2	5-6 years	7 Years of age	0.5 ml	NO	Intra-muscular	Upper Arm
TT	10 years & 16 years	16 Years	0.5 ml	NO	Intra-muscular	Upper Arm

* Give TT-2 or Booster doses before 36 weeks of pregnancy. However, give these even if more than 36 weeks have passed. Give TT to a woman in labour, if she has not previously received TT.

** Pentavalent vaccine is introduced in place of DPT and HepB 1, 2 and 3.

‡ Rotavirus vaccine is being introduced in phases.

MR vaccine introduced in phases replacing measles vaccine in the UIP schedule. **If first dose delayed beyond 12 months ensure minimum 1 month gap between 2 MR doses.**

@ JE Vaccine has been introduced in select endemic districts. **If first dose delayed beyond 12 months ensure minimum 3 months gap between 2 JE doses.**

\$ The 2nd to 9th doses of Vitamin A can be administered to children 1-5 years old during biannual rounds, in collaboration with ICDS.

➤ Human Papilloma Virus (HPV) Vaccine – presently not in schedule.

➤ Td - Tetanus diphtheria to replace TT - to be added in schedule

The goal of UIP is to provide every child and pregnant woman protection from vaccine preventable diseases