

New Zealand Vaccination Schedule

During Pregnancy

Immunizations during pregnancy are crucial to protect both the pregnant person and the baby, as antibodies can pass through the placenta.

* **Tetanus, Diphtheria, Whooping Cough (Tdap/Pertussis):** Recommended from 16 weeks of each pregnancy. This helps protect the newborn from whooping cough, which can be very dangerous for infants before they can be vaccinated.

* **Influenza (Flu):** Recommended at any stage of each pregnancy. Protects against severe flu illness in the pregnant person and potentially offers some protection to the baby after birth.

* **COVID-19 Vaccine:** If not up to date, a free COVID-19 vaccine is available at any stage of pregnancy.

Infants and Children

Immunizations are given at specific ages to provide optimal protection.

* 6 Weeks:

* **Rotavirus (RV1):** First dose (oral vaccine).

* **Diphtheria, Tetanus, Whooping Cough, Polio, Hepatitis B, Haemophilus influenzae type b (DTaP-IPV-HepB/Hib):** First dose.

* **Pneumococcal Disease (PCV13):** First dose.

* 3 Months:

* **Rotavirus (RV1):** Second dose (oral vaccine, **must be given before 25 weeks of age**).

* **Diphtheria, Tetanus, Whooping Cough, Polio, Hepatitis B, Haemophilus influenzae type b (DTaP-IPV-HepB/Hib):** Second dose.

* **Meningococcal B (MenB):** First dose (**can be given from 8 weeks**).

* For children at **high risk of pneumococcal disease**, an **additional dose of PCV13** may be given.

* 5 Months:

* **Diphtheria, Tetanus, Whooping Cough, Polio, Hepatitis B, Haemophilus influenzae type b (DTaP-IPV-HepB/Hib):** Third dose.

* **Pneumococcal Disease (PCV13):** Second dose.

* **Meningococcal B (MenB):** Second dose (**can be given from 4 months**).

* 12 Months:

* **Measles, Mumps, Rubella (MMR):** First dose.

* **Pneumococcal Disease (PCV13):** Third dose.

* **Meningococcal B (MenB):** Third dose.

New Zealand Vaccination Schedule

* 15 Months:

- * **Measles, Mumps, Rubella (MMR):** Second dose.
- * **Haemophilus influenzae type b (Hib-PRP):** Booster dose.
- * **Chickenpox (Varicella - VV):** Single dose.

* 4 Years:

- * **Diphtheria, Tetanus, Whooping Cough, Polio (DTaP-IPV):** Booster dose.

Adolescents

* 9-13 Years:

* **Human Papillomavirus (HPV9):** Two doses, given at least 6 months apart. This vaccine protects against certain cancers caused by HPV.

- * **Tetanus, Diphtheria, Whooping Cough (Tdap):** Booster dose (from 11 years of age).

Adults

* 45 Years:

- * **Tetanus, Diphtheria, Whooping Cough (Tdap):** Booster dose.

* 65 Years:

- * **Tetanus, Diphtheria, Whooping Cough (Tdap):** Booster dose.

* **Influenza (Flu):** Annual dose (also recommended annually for all eligible age groups, but free for 65+).

- * **Shingles (rZV):** Two doses, given 2 to 6 months apart.

Other Important Vaccinations

* **COVID-19 Vaccine:** Available and free for everyone aged 5 years and over. Booster doses are recommended based on age and previous vaccination/infection status.

* **Catch-up Immunisations:** Free catch-up vaccines are available for eligible people up to age 20 (except for HPV, which is free up to and including age 26). Eligibility and the number of doses can vary based on age.

* **Special Circumstances:** Additional vaccinations may be recommended for individuals with certain medical conditions, those travelling overseas, or those in specific risk groups (e.g., healthcare workers).

New Zealand Vaccination Schedule

New Zealand National Immunisation Schedule – Core Vaccines

Common Name	Generic Name / Antigen(s)	Vaccine Type	Route of Administration
Hepatitis B	Hepatitis B surface antigen (HBsAg)	Recombinant protein	Intramuscular (IM)
Diphtheria, Tetanus, Pertussis	DTaP (Diphtheria, Tetanus, acellular Pertussis)	Inactivated toxoid & subunit	IM
Polio	IPV (Inactivated Polio Vaccine - types 1, 2, 3)	Inactivated virus	IM or Subcutaneous (SC)
Haemophilus influenzae type b (Hib)	PRP-T (Polyribosylribitol phosphate-tetanus toxoid conjugate)	Conjugate vaccine	IM
Pneumococcal	PCV13 (13-valent), occasionally PCV10	Conjugate vaccine	IM
Measles, Mumps, Rubella (MMR)	Live attenuated viruses	Live attenuated	SC or IM
Rotavirus	Live attenuated human rotavirus	Live oral vaccine	Oral
Varicella (Chickenpox)	Live attenuated varicella-zoster virus	Live attenuated	SC or IM

New Zealand Vaccination Schedule

HPV (Human Papillomavirus)	HPV types 16, 18 (and others in quadrivalent/nonavalent forms)	Virus-like particle (VLP)	IM
Meningococcal B	Recombinant protein + OMV (outer membrane vesicles)	Recombinant protein	IM
Meningococcal ACWY	Conjugate polysaccharide (A, C, W, Y)	Conjugate vaccine	IM
Influenza (Annual)	Inactivated influenza virus (trivalent or quadrivalent)	Inactivated	IM
COVID-19 (as required)	mRNA (e.g., Pfizer-BioNTech, Comirnaty)	mRNA vaccine	IM
Tuberculosis (for high-risk infants)	BCG (Bacille Calmette-Guérin)	Live attenuated	Intradermal

New Zealand Vaccination Schedule

1. Live Attenuated Vaccines

Definition: Contain a weakened (attenuated) form of the live virus or bacteria that replicates poorly in the body, enough to provoke an immune response but not cause illness in healthy individuals.

Examples	MMR (Measles, Mumps, Rubella), Varicella, Rotavirus, BCG
Mechanism	Replicates in host → mimics natural infection → strong cellular & humoral immunity
Pros	Long-lasting immunity, often after 1-2 doses
Cons	Not suitable for immunocompromised, requires cold chain
Route	SC, IM, or oral

2. Inactivated (Killed) Vaccines

Definition: Contain virus or bacteria that has been killed or inactivated by chemicals or heat.

Examples	Polio (IPV), Influenza (injected), Hepatitis A (not currently on NZ schedule)
Mechanism	Non-replicating → safer, but weaker immune response compared to live vaccines
Pros	Safe in immunocompromised individuals
Cons	Often requires boosters
Route	IM or SC

3. Subunit, Recombinant, Polysaccharide, and Conjugate Vaccines

These use specific parts of the microbe (like protein or sugar) to trigger immunity, sometimes enhanced by conjugation.

a. Subunit / Recombinant Protein Vaccines

Examples	Hepatitis B, HPV, Meningococcal B
Mechanism	Only key antigens are used → safer, focused immune response
Notes	Often made via recombinant DNA tech (e.g., yeast or bacterial systems)
Route	IM

New Zealand Vaccination Schedule

b. Polysaccharide Vaccines

Examples	Older meningococcal or pneumococcal vaccines
Mechanism	Use sugars from bacterial capsule; T-cell independent → poor in children <2 years
Cons	Weak memory response

c. Conjugate Vaccines

Examples	Hib, PCV13, Meningococcal ACWY
Mechanism	Sugar antigens linked to protein → recruits T-cell help → better in infants
Pros	Stronger, longer-lasting response in all age groups
Route	IM

4. Toxoid Vaccines

Definition: Made using inactivated bacterial toxins (toxoids) rather than the bacteria itself.

Examples	Diphtheria, Tetanus
Mechanism	Immune system targets the inactivated toxin → neutralizing antibodies
Pros	Highly stable and safe
Cons	May need periodic boosters
Route	IM

5. mRNA Vaccines

Definition: Delivers messenger RNA that encodes a viral protein (e.g., spike protein), prompting the body to make and react to it.

Examples	COVID-19 mRNA vaccines (e.g., Pfizer/Comirnaty)
Mechanism	mRNA enters cells → cells make antigen → immune response
Pros	Fast to produce, highly effective
Cons	Requires cold storage, new tech
Route	IM

New Zealand Vaccination Schedule

Points To Remember

RotaVirus Vaccine is Contraindicated in Infants with History of Bowel Surgery (eg. intussusception and major gut anomalies)

Immediately post administration is when an infant vomits, do not repeat the dose since the rate of absorption is high.

First dose of Rotavirus Vaccine Must be given before the age of 15 weeks, otherwise it is contraindicated.

For **Mothers with HBsAg Positive**, Neonate should get Vaccinated with Hepatitis-B Vaccine and Administered Hepatitis-B Immunoglobulin within 12 Hours of Birth.

Last Routine **School Age Vaccination is given at 11 years**

Verbal Consent of Parents are Enough to get the Child Vaccinated

If a School Child refuses vaccine, document the refusal and withhold vaccination (Gillick competence)

Live vaccines are not given to patients who are immunocompromised.