

## **Occupation related immunisation**

Unimmunised adults who are eligible to receive publicly funded health and disability services are recommended and funded to receive a primary course of tetanus, diphtheria, and polio vaccines, and if born in 1969 or later two doses of measles, mumps and rubella (MMR) vaccines. Some adults will also be eligible to receive other Schedule vaccines because of a medical condition. <a href="Section-2.1.7 Adult vaccination(aged 18 years and older) in the Immunisation Handbook">Handbook</a> outlines immunisation requirements for adults and funded vaccines for special groups.

 Funded routine and special groups Immunisation Schedule vaccines can be administered by a vaccinator authorised to administer National Immunisation Schedule vaccines without an individual prescription or standing order.

Certain occupations are associated with increased risk of contracting some vaccine-preventable diseases. <u>Table 4.8</u> in the Immunisation Handbook provides vaccine recommendations by occupational group. Additional vaccines and/or booster doses of some vaccines may be recommended but not covered by the National Immunisation Schedule and must be purchased by the individual or their employer.

 If the vaccinator is not authorised to administer the vaccines under a local immunisation programme approved by the Medical Officer of Health, the vaccines MUST be prescribed individually or with a standing order from a registered medical practitioner or nurse practitioner with prescribing rights.

Available vaccines	Recommendations	
Hepatitis A Avaxim, Havrix	Evidence of immunity     Serology is not routinely recommended.     Administer two vaccine doses 6–12 months apart.	
	Only funded for adults who meet the eligibility criteria listed on the Pharmaceutical Schedule.	
Hepatitis B Engerix-B	Evidence of immunity Check immunisation records.  If a complete age-appropriate course of hepatitis B vaccines is documented, check anti-HBs serology.  An anti-HBs level of ≥10IU/L at any time is evidence of long-term immunity, even if antibodies have subsequentlywaned.  If an incomplete age-appropriate course of hepatitis B is documented, administer the required number of doses to complete a primary course of three documented hepatitis B vaccine doses with a minimum of one month between each dose. Heck anti-HBs serology one month after the final vaccine dose.  If there are no documented hepatitis B vaccine doses, even if the person is sure they "had them in the past", do not undertake serology. Administer a primary course of three documented hepatitis B vaccine doses with a minimum of one month between each of the doses. Heck anti-HBs serology one month after the final dose.  #Note: In some circumstances, protection 'as soon as possible' is important to reduce occupational risk. Administration of three hepatitis B vaccine doses at intervals of 0, 1, and 2 months, i.e. a one-month interval between each dose, gives equivalent seroconversion to intervals of 0, 1, and 6 months, if this accelerated schedule is used then we recommend a booster dose at 12 months to ensure long term protection.  Interpretation of serology and responses After completion of three documented hepatitis B vaccine doses:  Anti-HBs levels ≥10IU/L: Evidence of long-term immunity, even if antibodies subsequently wane.  Anti-HBs levels ≥10IU/L: Administer one dose of hepatitis B vaccine and repeat serology one month later.  If repeat serology is <10IU/L; Administer two more doses of hepatitis B vaccine one month apart to complete a second course of three hepatitis B vaccine doses. Repeat serology one month after the final dose.  If anti-HBs levels <10IU/L administer two more doses of hepatitis B vaccine one month apart to complete a second course of three hepatitis B vaccine doses. Repeat serology one month after the final dose.	
Hepatitis A & B Twinrix	<ul> <li>Twinrix is an alternative to the monovalent hepatitis A and hepatitis B vaccines and can be considered when immunisation against both diseases is required.</li> <li>Completion of the primary course of Twinrix and protection against hepatitis A and hepatitis B takes longer than when separate monovalent hepatitis A and hepatitis B vaccines are used.</li> <li>Administer three doses at 0, 1 and 6 months.</li> <li>Twinrix doses are NOT interchangeable with Avaxim, Havrix, or Engerix-B doses. Neither one dose of Twinrix and two doses of Engerix-B, nor two doses of Twinrix and one dose of Engerix-B provide a complete primary course of hepatitis A vaccines.</li> <li>Not a funded vaccine on the Pharmaceutical Schedule.</li> </ul>	

Continued ...

Available vaccines	Recommendations
Influenza	Annual influenza vaccinedose.
Brands vary	Only funded by the National Immunisation Programme for adults who meet the eligibility criteria listed on the Pharmaceutical Schedule, but may be funded by employers.
Pertussis	Refer to the <i>Tetanus, diphtheria, and pertussis</i> vaccineinformation.
Adacel, Boostrix	Only funded for adults who meet the eligibility criteria listed on the Pharmaceutical Schedule. Some healthcare workers may be required to receive a pertussis-containing booster at 5-10 yearly intervals.
Polio IPOL	Three documented doses are funded for unimmunised adults.
	Only funded for adults who meet the eligibility criteria listed on the Pharmaceutical Schedule.
Measles, mumps, and rubella M-M-R II, Priorix	<ul> <li>Two documented doses are funded for eligible unimmunized or for adults shown to be non-immune despite receipt of two doses by serology.</li> <li>Evidence of immunity</li> <li>Serology is not usually required if documented administration of two doses of MMR vaccine<sup>¥</sup>, or</li> <li>Laboratory evidence of immunity or laboratory confirmation of disease.<sup>¥</sup></li> <li>Health care workers or students entering the health care workforce are required by educational institutions or workplaces to have serological confirmation of measles and mumps status; rubella status is not occupationally relevant.</li> <li>In the event of both documented administration of MMR vaccine and laboratory evidence of seronegative status for healthcare workers/occupational health purposes, a further dose of MMR may be given and serology repeated at least one month later.</li> </ul>
	¥Note: Adults born in New Zealand before 1969 are considered immune to measles, mumps and rubella. They do not require any other evidence of immunity against these diseases.
	Non-immune adults meet the eligibility criteria for funded vaccine.
Meningococcal MenACWY, MenB	<ul> <li>MenACWY recommended for armed forces personnel, if living in close quarters and/or deployed to high-risk countries, MenB recommended for armed forces personnel, if living in close quarters.</li> <li>MenACWY and MenB recommended for lab workers if regularly working with <i>meningitidis</i> cultures.</li> <li>Healthcare professionals in very close contact with cases of Meningococcal disease.</li> <li>Funded for adults who meet the eligibility criteria listed on the Pharmaceutical Schedule.</li> </ul>
Tetanus, diphtheria, and pertussis Adacel, Boostrix	<ul> <li>Three documented doses of tetanus and diphtheria containing vaccines are funded for unimmunised adults.</li> <li>A booster dose is funded for adults who require a tetanus-booster immunisation as part of tetanus-prone wound management.</li> <li>A booster dose is funded for adults aged 45 years who do not have four documented doses of tetanus containing vaccine.</li> <li>A booster dose is funded for adults aged 65 years.</li> <li>A minimum interval of 10 years is recommended between booster doses.</li> <li>Only funded for adults who meet the eligibility criteria listed on the Pharmaceutical Schedule, but may be required by some health sector employers every 10 years.</li> </ul>
Tuberculosis	<ul> <li>BCG vaccination is not indicated for adults. The vaccine has a low efficacy in adults and makes the further use of TST/Mantoux tests as a diagnostic tool more difficult.</li> <li>Pre-employment screening should include a TB infection risk assessment questionnaire to identify those at higher risk of prior TB exposure, and an interferon gamma release assay (IGRA, QuantiFERON-TB Gold assay). IGA positive individuals require assessment for latent TB through an appropriate clinical service.</li> </ul>
Typhoid	<ul> <li>Immunisation against typhoid is not recommended for employees working only within New Zealand, including sewage workers, plumbers or other workers in regular contact with untreated sewage.</li> <li>Typhoid outbreaks are rare and risk of exposure in New Zealand is extremely low.</li> </ul>
Varicella Varilrix, Varivax	Evidence of immunity A clinically typical history of previous varicella infection, or Diagnosis of herpes zoster by a health professional, or Documented administration of two doses of varicella vaccine, or Laboratory evidence of immunity or laboratory confirmation of disease. Only funded for adults who meet the eligibility criteria listed on the Pharmaceutical Schedule.

## Call 0800 IMMUNE (0800 466 863) for clinical advice

## References

- Centers for Disease Control and Prevention. Immunization of health-care personnel. Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Morb Mortal Wkly Rep. 2011;60(RR07):1-45.
- Healthcare Logistics. HCL non-funded vaccines consolidated order form. [updated 2020 June 3; cited 2020 July 20].
- Ministry of Health. Guidelines for tuberculosis control in New Zealand, 2019. Wellington: Ministry of Health; 2019.
- Ministry of Health. Immunisation handbook 2017 2nd Edition [Internet]. Wellington: Ministry of Health; 2018 [cited 2020 July 20].
   Available from: https://www.health.govt.nz/publication/immunisation-handbook-2017
- Pharmaceutical Management Agency (PHARMAC). Pharmaceutical schedule [Internet]. Wellington: PHARMAC; 2020 [updated 2020 July 20; cited 2020 July 20]. Available from: <a href="https://www.pharmac.govt.nz/tools-resources/pharmaceutical-schedule/community/">https://www.pharmac.govt.nz/tools-resources/pharmaceutical-schedule/community/</a>

Call 0800 IMMUNE (0800 466 863) for clinical advice