

**Table 3.2.1: Dose and routes of administration of commonly used vaccines in adult travellers (the lower age limit for the adult dosage varies with individual vaccines – please refer to the product information)**

Vaccine (adults)	Brand name	Dose (adults)	Route	Dosing intervals	Duration of immunity and/or booster recommendations
<b>Routinely recommended vaccines (not specifically related to travelling overseas)</b>					
Diphtheria-tetanus (dT)	ADT Booster	0.5 mL	IM	A primary course is 3 doses of dT-containing vaccine, given a minimum of 4 weeks apart; followed by booster doses 10 and 20 years after.	Prior to travel, adults should receive a booster dose of dT (or dTpa if not given previously), if more than 10 years have elapsed since their last dose of dT-containing vaccine.  For persons undertaking high-risk travel, consider giving a booster dose of either dTpa or dT (as appropriate) if more than 5 years have elapsed since their last dose of dT-containing vaccine.
Diphtheria-tetanus-pertussis (dTpa)	Boostrix or Adacel	0.5 mL	IM		
Diphtheria-tetanus-pertussis-inactivated poliomyelitis (dTpa-IPV)	Boostrix-IPV or Adacel Polio	0.5 mL	IM		
Hepatitis B	Engerix-B	1.0 mL	IM	0, 1, 6 months or 0, 1, 2, 12 months or 0, 7, 21 days and 12 months*	A completed series probably gives life-long immunity.
	H-B-Vax II	1.0 mL	IM	0, 1, 6 months	
Influenza (seasonal)	Various	0.5 mL	IM	Single dose	As different strains circulate from year to year, annual vaccination with the current formulation is necessary.
Measles-mumps-rubella	Priorix	0.5 mL	SC/IM	Australians born during or since 1966 who do not have documented evidence of having received 2 doses of measles-, mumps- and rubella-containing vaccine should receive at least 1 dose of MMR vaccine before travel	A 2-dose schedule provides long-lasting immunity.
	M-M-R II	0.5 mL	SC		
Pneumococcal	Prevenar 13 or Pneumovax 23	0.5 mL	IM	Single dose, for older adults, and younger adults with predisposing medical conditions – refer to 4.13 <i>Pneumococcal disease</i>	Recommendations vary according to age, Indigenous status and predisposing conditions – refer to 4.13 <i>Pneumococcal disease</i> .
Poliomyelitis	IPOL	0.5 mL	SC	For unvaccinated adults, 3 doses with minimum interval of 1 to 2 months between doses	A booster dose 10-yearly is only necessary if travelling to a poliomyelitis endemic country.
	Combination vaccines (dTpa-IPV)	Refer to Diphtheria-tetanus-pertussis-inactivated poliomyelitis (dTpa-IPV) above and 4.14 <i>Poliomyelitis</i> .			
Varicella (chickenpox)	Varilrix or Varivax Refrigerated	0.5 mL	SC	If there is a lack of reliable history of chickenpox or the person is non-immune, and has not been vaccinated in childhood  0, 4 weeks if aged $\geq 14$ years	A 2-dose schedule provides long-lasting immunity.

Selected vaccines based on travel itinerary, activities and likely risk of disease exposure					
Hepatitis A	Avaxim	0.5 mL	IM	0, 6–12 months	A completed series probably gives life-long immunity.
	Havrix 1440	1.0 mL	IM	0, 6–12 months	
	Vaqta Adult formulation	1.0 mL	IM	0, 6–18 months	
Hepatitis A/B combined	Twinrix (720/20)	1.0 mL	IM	0, 1, 6 months or 0, 7, 21 days and 12 months*	A completed series probably gives life-long immunity to both hepatitis A and B.
Hepatitis A/typhoid combined	Vivaxim† <i>Note:</i> Only for use in persons ≥16 years of age	1.0 mL (mixed vaccine)	IM	Single dose	A dose of monovalent hepatitis A vaccine given 6–36 months later probably gives life-long immunity. The duration of protection against typhoid is probably 3 years.
Japanese encephalitis	The vaccine brand and doses required, including booster doses, depend on the age at which the vaccine course is commenced and other factors (refer to 4.8 <i>Japanese encephalitis</i> ).				
Meningococcal ACW <sub>135</sub> Y (quadrivalent conjugate 4vMenCV)‡	The vaccine brand and doses required, including booster doses, depends on the age at which the vaccine course is commenced and other factors (refer to 4.10 <i>Meningococcal disease</i> ).				
Rabies (pre-exposure prophylaxis)	Mérieux Inactivated Rabies Vaccine	1.0 mL	IM/SC	0, 7, 21–28 days	Boosters are not recommended for frequent travellers unless they are at ongoing, high occupational risk of exposure – then either measure rabies antibody titres (and boost if titres are reported as inadequate) or give a single booster dose 2-yearly.
	Rabipur Inactivated Rabies Virus Vaccine	1.0 mL	IM	0, 7, 21–28 days	
Typhoid	Vivotif Oral	A single oral capsule per dose	Oral	One capsule each on days 1, 3, 5 (3-dose course), and preferably also day 7 <sup>§</sup> (4-dose course)	If the person is at ongoing risk, repeat the course after 3 years if a 3-dose course was given initially; repeat the course after 5 years if a 4-dose course was given initially.
	Typherix or Typhim Vi	0.5 mL	IM	Single dose	Give 3-yearly boosters if the person is at ongoing risk.
Yellow fever	Stamaril	0.5 mL	IM/SC	Single dose	A 10-yearly booster dose is only recommended for: – certain persons (i.e. those who received their initial dose while pregnant or when infected with HIV, and those at high risk of infection due to travel or occupation) if they are at ongoing risk of yellow fever virus infection – travellers who need to meet country-specific vaccination entry requirements. Refer to 4.23 <i>Yellow fever</i> .

\* This 'rapid' schedule should be used only if there is very limited time before departure to endemic regions.

† Vivaxim is registered for use in persons aged ≥16 years.

‡ 4vMenCV is preferred. However, 4vMenPV is a suitable alternative for travellers aged ≥7 years when the need for repeat doses is not anticipated (refer to 4.10 *Meningococcal disease*).

§ A 4th capsule of oral typhoid vaccine on day 7 is preferred (refer to 4.21 *Typhoid*).

### 3.2.5 Vaccinating the traveller with special risk factors

Refer to 3.3 *Groups with special vaccination requirements* and the disease-specific chapters in Part 4 for recommendations for travellers who are either pregnant or immunocompromised.

Children should receive relevant travel vaccines, according to age-specific dosage and schedules as shown in Table 3.2.2; further information relating to administration is provided in the relevant disease-specific chapters in Part 4.

Particular effort should be made to encourage the families of recent migrants to Australia to seek health advice before travelling to their country of origin to visit relatives and friends.<sup>17</sup>

**Table 3.2.2: Recommended lower age limits of travel vaccines for children\***

Vaccine	Lower age limit	Dose/route	Dosing intervals
<b>Hepatitis A</b>			
Avaxim	2 years	0.5 mL IM	2 doses: 0 and 6–12 months
Havrix Junior	2 years	0.5 mL IM	2 doses: 0 and 6–12 months
Vaqta Paediatric/Adolescent formulation	1 year	0.5 mL IM	2 doses: 0 and 6–18 months
<b>Hepatitis A/B combined</b>			
Twinrix Junior (360/10)	1 year	0.5 mL IM	3 doses: 0, 1 and 6 months
Twinrix (720/20)	1 year	1.0 mL IM	2 doses: 0 and 6–12 months <sup>†</sup>
<b>Japanese encephalitis</b>			
JEspect	2 months (to <3years) <sup>‡</sup>	0.25 mL IM	2 doses: 0 and 28 days
	3 years <sup>‡</sup>	0.5 mL IM	2 doses: 0 and 28 days
Imojev	9 months <sup>§</sup>	0.5 mL SC	Single dose
<b>Meningococcal ACW<sub>135Y</sub></b> (quadrivalent conjugate 4vMenCV)			
Menveo	2 months	0.5 mL IM	Varies by age at time of vaccination and vaccine brand. Refer to Table 4.10.3 in 4.10 <i>Meningococcal disease</i>
Menactra	2 years	0.5 mL IM	
Nimenrix	12 months	0.5 mL IM	
<b>Meningococcal ACW<sub>135Y</sub></b> (quadrivalent polysaccharide 4vMenPV)			
Mencevax ACWY	7 years <sup>¶</sup>	0.5 mL SC	Single dose
Menomune	7 years <sup>¶</sup>	0.5 mL SC	Single dose
<b>Rabies</b>			
Mérieux Inactivated Rabies Vaccine	No lower age limit	1.0 mL IM/SC	Pre-exposure: 3 doses: 0, 7, 21–28 days
Rabipur Inactivated Rabies Virus Vaccine	No lower age limit	1.0 mL IM	3 doses: 0, 7, 21–28 days
<b>Typhoid</b>			
Vivotif Oral	6 years	Oral capsule	One capsule each on days 1, 3, 5 (3-dose course), and preferably also day 7 <sup>#</sup> (4-dose course)
Typherix	2 years	0.5 mL IM	Single dose
Typhim Vi	2 years	0.5 mL IM	Single dose
<b>Yellow fever</b>			
Stamaril	9 months <sup>**</sup>	0.5 mL IM/SC	Single dose

\* Refer also to minimum ages in Table 2.1.5 *Minimum acceptable age for the 1st dose of scheduled vaccines in infants in special circumstances*.

† This schedule is not recommended if prompt protection against hepatitis B is required (refer to 4.5 *Hepatitis B*).

- ‡ JEspect can be administered to children aged  $\geq 2$  months to  $< 18$  years in circumstances where an alternative is not available or is contraindicated (refer to 4.8 *Japanese encephalitis*).
- § Imojev can be administered to persons aged  $\geq 9$  months (refer to 4.8 *Japanese encephalitis*).
- ¶ 4vMenCV is preferred. However, 4vMenPV is a suitable alternative for travellers aged  $\geq 7$  years when the need for repeat doses is not anticipated (refer to 4.10 *Meningococcal disease*).
- # A 4th capsule of oral typhoid vaccine on day 7 is preferred (refer to 4.21 *Typhoid*).
- \*\* Yellow fever vaccine is contraindicated in infants  $< 9$  months of age. (Vaccination may be considered in outbreak control situations for infants from 6 months of age.) (Refer to 4.23 *Yellow fever*.)

### 3.2.6 Further information

International travellers' health risks are changing constantly. Up-to-date information and knowledge of the changing epidemiology and occurrence of outbreaks of a variety of infectious and emerging diseases is essential. Useful online information sources include:

- the World Health Organization (WHO) for disease outbreak news ([www.who.int](http://www.who.int)), and its *Travel and health* section ([www.who.int/topics/travel/en](http://www.who.int/topics/travel/en)) for more specific advice on travel and health, including travel vaccination recommendations
- *Travelers' health* section of the United States Centers for Disease Control and Prevention (CDC) website ([wwwnc.cdc.gov/travel](http://wwwnc.cdc.gov/travel))
- *Travel health and quarantine* section of the Australian Government Department of Health website ([www.health.gov.au/internet/main/publishing.nsf/Content/health-publth-strateg-quaranti-index.htm](http://www.health.gov.au/internet/main/publishing.nsf/Content/health-publth-strateg-quaranti-index.htm))
- *Smartraveller* – the Australian Government's travel advisory and consular information service, which provides up-to-date advice regarding health, safety and other risks of specific destinations to Australian travellers ([www.smartraveller.gov.au](http://www.smartraveller.gov.au)).

Comprehensive technical advice on international travel and health, including but not limited to vaccinations, is available in the latest editions of the WHO publication *International travel and health* (available at [www.who.int/ith/en](http://www.who.int/ith/en)) and the US Centers for Disease Control and Prevention (CDC) publication *Health information for international travel* (the 'Yellow book') (available at [www.cdc.gov/travel](http://www.cdc.gov/travel)).

The Ministry of Health of Saudi Arabia's requirements and recommendations for travellers on pilgrimage to Mecca (Hajj and Umra) are published annually in the *Weekly Epidemiological Record* of the WHO ([www.who.int/wer](http://www.who.int/wer)).<sup>8</sup>

### References

A full reference list is available on the electronic *Handbook* or website [www.immunise.health.gov.au](http://www.immunise.health.gov.au)

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