



# Travel Vaccines: A Comprehensive Guide

**Vaccine requirements and recommendations for specific countries change, so it is important to be kept up to date by reliable information sources.**

At the core of any productive pre-travel encounter is the process of assessing travel-related risks, and addressing them through an individualised risk management plan. These risks can be further categorised into four groups as follows:

**Preventable risks:** Those risks identified pre-travel that can be nearly completely eliminated by interventions such as immunisation or chemoprophylaxis.

**Avoidable risks:** Risks that can be avoided through counselling leading to behaviour change such as safe sex practices, or staying out of fresh water sources to avoid schistosomiasis.

**Manageable risks:** Those risks that can be self managed through stand-by treatment for such conditions as traveller's diarrhoea.

**Unexpected risks:** These risks may not be anticipated pre-travel but with appropriate contingency planning such as carrying adequate travel medical insurance.

Travel vaccines therefore fall under the preventable management plan.

## Routine immunisations

Before considerations for travel to specific destinations it is important to ensure the traveller is up-to-date with their routine immunisations for their appropriate age, according to our Expanded Programme for Immunisation schedule [EPI]. It is important to realise that the common

diseases of childhood do cause serious illness in nonimmune adults, whether they are travelling or at home. Cost of vaccinations is far less than running the risk of hospitalisation or possible medical evacuation.

## Routine vaccinations by disease

### Diphtheria, tetanus, pertussis and polio

Diphtheria vaccination is recommended for most developing countries and especially for travel to eastern Europe and the Russian states.

One of the most common injuries whilst travelling is a simple cut or abrasion. Hence travellers to countries where health services may be difficult to access should be offered a booster if they have not had a tetanus vaccination in the last five years.

Pertussis outbreaks are becoming common and reports of travelling groups being infected are not unusual.

Polio outbreaks are being continually reported in the Indian subcontinent, parts of Africa and the Middle East. Therefore all travellers older than 18 years should receive a booster vaccination, which will give lifelong immunity.

Vaccination for all of these diseases are combined in one injection, Adacel Quadra or Boostrix Tetra, which are also known as the 'travellers tetanus' vaccines.

SA is one of the few countries in the world where a single tetanus vaccination is still available, Tetovax.

## Measles, mumps and rubella

Measles and mumps outbreaks continue to be recorded in the developed world due to breakdown in childhood immunisation. Therefore it remains a significant threat to non-immune children and adults and vaccination is recommended. Priorix and Trimovax are the vaccinations available. Egg sensitivity is no longer considered a contraindication to vaccination.

## Varicella

Varicella can have very serious sequelae in both children and adults and immunisation is recommended at 18 months of age. Varilrix is the available vaccine. It can be given as a single vaccine up to 13 years of age thereafter two doses are recommended to be administered at least six weeks apart.

## Influenza

Influenza is one of the most common vaccine-preventable illnesses suffered by travellers and far more vaccine coverage needs to be provided, as many trips have been adversely affected. This is especially important for travel to continents in the winter months (which is the traditional flu season). Vaxigrip, Fluarix and Inluvac are our available influenza vaccines.



## About the author

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# The smart dual protection against Hepatitis A and Typhoid Fever

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Inactivated Hepatitis A Vaccine

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Combined Purified Vi Polysaccharide Typhoid  
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REFERENCE: 1. Overbosch D, Peyron F, Picot N et al. Combined typhoid fever and hepatitis A vaccine: comparison of immunogenicity and safety to concomitant monovalent vaccine over 3 years. *J Travel Med.* 2005; 12:319-26.

[S4] **VIVAXIM®**. Hepatitis A (inactivated, adsorbed) and Typhoid polysaccharide vaccine. Each immunizing dose (1.0 ml) contains purified *Salmonella typhi* Vi (Ty 2 strain): 0.025 mg, phosphate buffer solution containing: sodium chloride, disodium phosphate dihydrate, sodium dihydrogen phosphate dihydrate and water for injection. Traces of endotoxin: not more than 150 IU/mg. Hepatitis A virus (inactivated): 160 units. Preservatives (phenoxylethanol 2.5 µl, and formaldehyde 12.5 µg), aluminium hydroxide hydrated: 0.3 mg of Al, medium 199 (Hanks) in water for injection supplemented with polysorbate 80, traces of neomycin, and traces of endotoxin: not more than 10 IU/ml. Reg No.: 41/30.1/0025. **NAME AND ADDRESS OF BUSINESS APPLICANT:** sanofi-aventis South Africa (Pty) Ltd., Reg no.: 1996/10381/07, 2 Bond Street, Grand Central Ext. 1, Midrand, 1685. Tel: (011) 256 3700. Fax: (011) 256 3707. [www.sanofi-aventis.com](http://www.sanofi-aventis.com) ZA150.12.08.05



### **Pneumoccal disease**

Pneumonia remains one of the common reasons for travel health insurance claims. Therefore, for large travelling groups and those over 65 years, Pneumovax 23 should be offered. It is also advised for all travellers with chronic medical conditions especially cardiorespiratory disease and those with diabetes.

### **Hepatitis B**

In SA universal vaccination is routine for neonates and adolescents. Given the risk of hepatitis B infection becoming chronic in the younger age group, with risk of cirrhosis and hepatocellular carcinoma. Hepatitis B vaccination should be offered to all non-immune travellers. Engerix B, Herbiovac and Euvax are the available vaccines. The combined hepatitis A and B vaccine Twinrix 720/20 can be given as a three dose schedule: 0, 1 and 6 months apart for children aged 1 to 15 years. The same formulation has been approved for rapid administration consisting of four doses at 0, 7 and 21 days, with a booster one year later. This accelerated regime should be restricted to adults, and only when there is limited time to departure.

### **Area specific vaccines**

#### **Hepatitis A**

Hepatitis A is the most common vaccine-preventable disease occurring in travellers. The risk of contracting hepatitis A has been estimated as 1 in 1000 per month of travel to an endemic area and as much as 1 in 50 for those trekking through high endemic areas. Avaxim and Havarix are vaccines available with paediatric formulations as well. One booster after six months will give long term immunity. Avaxim 80 can be used in individuals from two years upwards.

The active vaccine can be given on the day of departure as immunity is achieved faster than the incubation period, should exposure occur. Hepatitis A vaccine should be offered to virtually all travellers. A recently launched combination with Salmonella typhi (Typhoid Vi) polysaccharide vaccine, Vivaxim, is suitable for travellers aged 16 years and older and is proving a very useful combination for travellers into Africa and

Asia. The follow-up booster for Hepatitis A is given as a single vaccine 6-8 months later to get long term immunity. The typhoid protection lasts for three years.

#### **Typhoid**

Typhoid is a food- and water-borne disease and can result in severe illness and death. If untreated, mortality rates of 10%-20% can occur due to toxemia, bowel perforation and haemorrhage.

Typhoid vaccination is recommended for travellers to endemic areas, where drinking water is unsafe or hygiene poor. Due to resistant strains in SE Asia vaccination is strongly recommended for all backpackers. Typhim Vi and Typherix are the two vaccines available and give protection 2-3 weeks after dose.

#### **Rabies**

Rabies carries the highest fatality rate of any vaccine-preventable disease. If one considers all the possible travel activities anticipated in a country where rabies is an endemic problem, the potential for animal bites is much larger than one realises.

Many cases of travel-related rabies infection are associated with the exposed person grossly underestimating the significance of the incident and not seeking medical care until the onset of symptoms.

Rabies exposure during travel could be viewed as avoidable, manageable and potentially preventable using different strategies, including bite avoidance counselling, rabies vaccine post-exposure prophylaxis (PEP) and pre-exposure prophylaxis (PrEP).

Pre-exposure prophylaxis simplifies the management of subsequent exposure as it obviates the need for rabies immunoglobulin. It needs to be done well in advance of departure as vaccines are administered on days 0, 7, 21 or 28. There is no need for travellers to have regular boosters: only boost in event of exposure. Verorab and Rabipore are the vaccines available.

#### **Meningococcal disease**

The tetravalent meningococcal polysaccharide vaccines, Mencevax and Menomune are recommended for travellers to areas in which meningococcal disease is endemic, like the sub-Saharan African meningitis belt. It is also a

mandatory vaccination for all pilgrims attending the Hajj or Umrah.

#### **Yellow fever**

Vaccination for yellow fever is a legal requirement for all travellers travelling to or from, or transiting through, yellow fever endemic countries. A yellow fever vaccination waiver letter may be issued only on well-considered medical grounds. Stamaril is the vaccine available and should be administered 10 days prior to departure. The vaccine should only be given if it is definitely required for travel to at-risk areas and then only following careful appraisal with the patient regarding need and possible contraindications. Travellers to yellow fever areas should be advised that the relevant certificate should be carried at all times to avoid possible revaccination at a border post and/or quarantine.

#### **Cholera**

Long term travellers to highly endemic countries may be at increased risk of contracting this water-borne disease. Travellers with lowered gastric immunity such as achlorhydria associated with prolonged proton pump inhibitor medication or who wish to have a higher level of protection should be offered the vaccine.

Dukoral is an oral, killed recombinant B subunit/whole cell vaccine effective against both cholera and enteropathic *Escherichia coli*. It is given in two doses, one week apart. If the time lapse between doses is greater than six weeks the dose schedule must start again. Protection begins one week after last dose and lasts for six months.

Japanese encephalitis and European Tick-borne encephalitis vaccines are not discussed as they are not available in SA.

### **In conclusion**

If travellers are unable to recall whether they have been vaccinated then assume they have not and vaccinate them. Primary immunisations need never be repeated, booster doses are all that are required. If previous vaccine courses have not been completed then complete the course.

*References on request.*