

By Dr David Rutherford,  
Travel Medicine Physician,  
Fremantle.  
Tel 9336 6630



# Update: Japanese Encephalitis

At the recent International Society of Travel Medicine Conference (ISTM) in Budapest, a new Japanese Encephalitis Vaccine was launched globally (JESPECT™, Intercell Biomedical, distributed by CSL). This more contemporary synthetic vaccine replaces one that was discontinued in 2008 due to concerns over hypersensitivity reactions.

Japanese Encephalitis (JE) is an important mosquito borne disease affecting most of South and South-East Asia. Because the virus is carried by the Culex mosquito, transmission is mainly at dusk, dawn and overnight. Transmission can occur in urban areas in the tropics but the virus typically causes outbreaks in rural areas, classically around rice fields or farming areas as its co-host includes pigs and water birds. Risk of infection is higher in the rainy season, though in the tropics there can be year-round transmission.



There are an estimated 50,000 deaths attributed to this infection each year, mainly affecting children under five living in high risk areas. A larger group is left with residual neurological impairment. Though less common than dengue fever, the outcome of this illness is often more severe. Having said this, most infections are asymptomatic.

The new vaccine is summarized as follows.....

Inactivated vaccine in which the virus is grown in tissue culture.  
Administration: 2 doses, 0.5ml IM given 4 weeks apart, as a separate injection in the deltoid area. Current data supports giving the vaccine at the same time as Hepatitis A vaccine, without incident. Clinical trials, in which we took part, showed a local side effect profile similar to placebo (i.e. the adjuvant). The new vaccine appeared to have a better side effect profile than the older vaccine, with the most commonly reported systemic adverse reactions being headache (25%), myalgia (21%), influenza-like illness (13%) and fatigue (13%). Sero-conversion rates are over 95% and, thus far, are largely maintained at least 12 months.

JE vaccine is only currently licensed in Australia for those over 18 years, based on current data, although a careful risk-benefit needs to be discussed for children at high risk. Currently, it is not recommended for use in children, pregnancy or breastfeeding women.

According to the NHMRC, Indications for travellers would include:

- Long term expatriates to Asia including urban stays, including Japan.
- Cumulative time or travel for >4 weeks to rural areas, including the Torres Straights.
- Consider for shorter duration if visiting rural areas, occupational groups e.g. agriculture, wet season, those over 50yrs, children <10, or those immune-suppressed.

Cost is similar to the older vaccine (which will be its biggest limitation). As always, it is essential to stress the importance of mosquito avoidance measures. The Travel Doctor group is actively monitoring the post launch data and information will be published in the future. ■