Japanese encephalitis is a mosquito-borne viral disease that occurs in rural areas of Asia and the Pacific region, although occasional cases have been reported in urban areas. It is one of 70 flaviviruses and is closely related to similar viruses found in Australia, such as Murray Valley encephalitis, Kunjin, Alfuy, Stratford and Kokobera virus.

Only 1 in 250 infections among vulnerable individuals in endemic areas leads to symptoms. The disease begins as a flu-like illness with headache, fever and gastrointestinal symptoms; confusion and disturbances in behaviour may also occur at this early stage. The illness can in some cases progress to a serious infection of the brain that can prove fatal in 5-30% of cases. Another one third of cases survive with serious neurological effects, such as paralysis, and the remaining third will recover without further problems.

The elderly and pregnant women are at highest risk of developing symptomatic infections. Children under the age of 10 years who develop a symptomatic infection are more likely to die or have permanent disabilities if they survive.

Japanese encephalitis is found in many part of Asia, the Indian subcontinent, Southeast Asia and China, however it has ranged beyond its traditional boundaries, with cases also occurring in Indonesia, Torres Strait, Papua New Guinea and one case in North QLD.

Japanese encephalitis is mainly found in rural areas around rice paddies where pigs, wading birds and humans live close together, however it can occur in or near many Asian cities. The occurrence has greatly decreased in some areas such as Singapore, Japan and Korea due to urbanisation and the use of vaccines, however in other areas the incidence is increasing due to deforestation, population growth, the spread of agricultural irrigation and global warming.

Transmission occurs in the northern regions of China, Siberia, Korea and Japan in the warmer months of May to October. Further south the peak season is from March to October. In some tropical areas of Southeast Asia and India, transmission depends on the monsoonal rain and bird migration patterns, whereas in areas where there are abundant pigs, rice paddies and birds, transmission can be year-round.

Travelvax believes that the risk to short-term travellers and people who confine their travel to urban centres and use appropriate insect bite prevention measures is very low. Expatriates, travellers living for prolonged periods (over 30 days) in rural, particularly agricultural, areas and repeat travellers to locations where Japanese encephalitis is endemic or epidemic are at greater risk. Travellers with extensive unprotected outdoor exposure in rural areas, particularly during the evening and at night - especially those engaging in activities such as bicycling, camping or engaged in certain occupational activities in rural area - may be at high risk, even if their trip is brief. Insect prevention measures are paramount.

Travellers are advised to stay in screened or air-conditioned rooms, or to use bed nets impregnated with Permethrin* when such accommodation is unavailable. Bite avoidance measures such as the use of insecticide, repellents and protective clothing to avoid mosquito bites are also important.

Inactivated virus vaccine (JEspect) or

Attenuated live viral vaccine (Imojev)
SCHEDULE

JEspect:

- 2 intramuscular doses, one given on day 0, the second on day 28. The Australian Technical Advisory Group on Immunisation (ATAGI) recommends that JEspect can be used in children aged ≥2 months to <18 years, but only in circumstances where an alternative is not available (e.g. in infants aged ≥2 months to <9 months) or is contraindicated.
- The vaccine dosage is 0.25ml for children aged ≥2 months to <3 years.
  - Children >2 months to <18 years. 2 doses: One dose is given on day 0 and a second on day 28. Currently booster doses are not recommended.
  - Adults over 18 years of age. 2 doses: One on day 0 and the second on day 28. Boosters can be given after 12-24 months, if at continued risk of infection.

Imojev:

- Children ≥9 months to <18 years, one dose is given on day 0. Currently a booster dose can be given after 1 to 2 years, if at continued risk of infection.
- Adults over 18 years of age, a single dose. Boosters not required.

SCHEDULE (ACCELERATED)

As per Australian Immunisation Handbook: An accelerated primary course of JEpect (2 doses, each of 0.5 ml, 7 days apart) may be considered for adults who are at imminent risk of exposure to JE virus.

LEVEL OF PROTECTION

JEspect:

- 96% after 2 doses (28 days apart)

Contraindications: Should not be administered to individuals who have previously experienced a serious reaction to this vaccine or who are known to be hypersensitive to any of the vaccine components. Individuals who show hypersensitivity reactions after receiving the first dose should not be given the second dose.

Imojev:

- 94% after 14 days

Contraindications: Should not be administered to individuals who have previously experienced a serious reaction to this vaccine, who are known to be hypersensitive to any of the vaccine components or are unable to receive a live vaccine.

POSSIBLE SIDE EFFECTS

JEspect:

Approx 40% of subjects experience adverse reactions and they usually occur in the first 3 days following vaccination. Side effects are usually mild and only in the first few days.

Most commonly reported were:

- 26% headaches
- 21% aches and pains
- 13% flu like illness
- 13% fatigue

Imojev:

Approximately 40-50% of subjects reported one or more of the following adverse reactions, most of which resolved within 3 days:

- Fatigue, feeling unwell, injection site pain
- Headache, muscular pain.
Feeling hot, chills, dizziness
Injection site redness, itching, swelling
Joint pain
Diarrhoea, nausea, abdominal pain, vomiting
Throat pain, shortness of breath, runny nose, cough, wheezing, nasal congestion
Rash

More information on Japanese Encephalitis is available during your pre-travel consultation with Travelvax. Call 1300 360 164 for the location of the clinic nearest to you.