

## **Japanese Encephalitis Vaccines**

Worldwide, three Japanese Encephalitis (JE) vaccines are in use; however only inactivated JE vaccine (Nakayama-NIH strain) produced by mouse brain is distributed commercially and is available internationally. It shows an overall efficacy of 91%. The vaccine is indicated for people traveling to or residing in endemic or epidemic areas, particularly those spending a month or more in high risk areas in Asia during transmission season. The primary immunization which is scheduled for people aged 4 or above consists of two 1-mL doses administered subcutaneously at an interval of 1 to 2 weeks. However, one additional subcutaneous administration is recommended, a month after the primary immunization, to those who are over 60 years of age or intend to step into highly endemic areas of JE for the first time.

The inactivated mouse brain-derived JE vaccine's neural tissue substrate has raised concern about the possibility of post vaccination neurologic side effects. Anecdotal cases of acute disseminated encephalomyelitis temporally related to vaccination have been reported. Therefore, recommendations of vaccination are conservative because of vaccine neurologic side effects and it is believed that there is a greater risk from the vaccine than from the disease itself. The introduction of other types of JE vaccines with fewer side effects may be considered. Besides, centralized rearing of pigs and implementing effective vector control programmes can contribute to the prevention of JE.