



Protection against Japanese B Encephalitis



Background:

Japanese B Encephalitis is a viral disease transmitted by mosquitoes. Over 50,000 cases are reported to occur each year. The disease is found in over 25 countries throughout the world. These are mainly in South East Asia as can be seen from the following list of endemic countries;

Australia, Bangladesh, Bhutan, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar (Burma), Nepal, Pakistan, Philippines, Russia, Singapore, Sri Lanka, Taiwan, Thailand, Trust Territory, Vietnam, Pacific Islands.

Transmission Profile:

The disease is transmitted through the bite of an infected female culex mosquito. In the majority of cases these may occur within rural areas of the endemic countries and especially in regions where pig farming is found. Transmission can occur in urban areas but this is uncommon.

Disease Profile:

Patients with the disease usually present within the first week or two of having been bitten by an infected mosquito. They will usually develop distinct symptoms of a 'flu like illness with muscle pains and headache. Following this initial phase patients frequently present with vomiting and diarrhoea. These early gastrointestinal symptoms are then followed by more severe neurological signs as the virus effects the patients brain tissue. Seizures and paralysis are then seen and the condition carries a mortality rate of between 10% to 40%. In up to 80% of those who survive there may be residual neurological findings. This is not a pleasant disease and it causes many deaths each year in the endemic countries.

Risk of Disease:

It is reported that the risk of Japanese B Encephalitis is approximately 1/1,000,000 for normal short term travellers to some of the endemic countries. This risk rises to approximately 1/5,000 for those living in rural areas for more than one month in the endemic countries. This is particularly the case between May to September in South East Asia or between the months of July to December in parts of North India/Pakistan/Bangladesh. In the majority of years only a very small number of 'standard' tourists will become infected.

Outcome:

There is no specific form of therapy against Japanese B Encephalitis and so it is essential that those at risk are as well protected against the disease as possible. This protection takes two forms;

- ❑ *general protection against mosquito bites*
- ❑ *specific vaccination against the disease.*

Protection against Mosquitoes:

As with many arboviral (arthropod borne viral) diseases the main protection rests in taking all possible care against being bitten. The mosquitoes which transmit Japanese B Encephalitis tend to bite mainly in the evening time though day biting in shady areas may also occur. In regions of the world where Japanese B occurs the transmission of both Malaria and Dengue fever are usually reported. Avoiding all mosquito bites is essential.

Vaccination:

There is a killed vaccine against the disease which can be used in those at high risk. The vaccine is given on four occasions (days 0, 7-14, 28 and a final vaccine after 1 year). This should give a 2 to 3 year protection against the disease. It is suggested that cover for up to 3 months can usually be achieved by giving the vaccine on two occasions (day 0, 7-14)

Contraindications to the Vaccine:

Patients with a previous history of reaction to this vaccine should not be revaccinated. Also the vaccine should not be given to those with a history of allergy to rodents or a severe reaction to wasp stings. Those pregnant should also not be vaccinated unless the risk of the disease is felt to be considerable.

Reactions:

Unfortunately in the early 1990's a number of reactions were associated with the use of Japanese B Encephalitis vaccine. From these figures it was estimated that significant reactions could occur with this particular vaccine in 4 to 8 of every 10,000 doses. Since this time it appears that there are now very few reactions occurring to the vaccine. The vaccine is now available in many Western countries following extensive monitoring. However, problems can occur and so patients are generally not given the vaccine if they need to travel away from contact with their travel health provider within 10 days after their final injection. **This means that almost 6 weeks if required before travel for a standard course of vaccine against Japanese B Encephalitis.**

Who should be Vaccinated:

Nevertheless, this figure of possible vaccine related reactions makes the vaccine unacceptable for wide spread use in the short term traveller and so it is only recommended for those felt to be at significant risk. **This is usually only those who will be visiting or living in the infected regions of an endemic country, those mentioned earlier in this leaflet, for more than 2 to 4 weeks .** An exception to this general rule may be for those travellers who will be highly exposed to mosquitoes in high-risk rural regions during exploration trips or extensive trekking holidays.

PLEASE NOTE:

The information contained in this leaflet is of a very general nature. Specific health care information should be sought by every individual traveller and this information must only be used as an information guideline.

National Travel Vaccine Appointment Tel 1-850-48 76 74

Web Address: www.tmb.ie

This leaflet has been prepared using information supplied from W.H.O. Center for Disease Control (US) and other International sources.

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