

# Japanese Encephalitis

*Vaccine Information Sheet*

## GENERAL INFORMATION and DISEASE RISKS

Japanese encephalitis is a mosquito-borne viral disease that occurs chiefly in three areas: (1) China and Korea, (2) the Indian sub-continent consisting of India, parts of Bangladesh, southern Nepal and Sri Lanka, and (3) the southeast Asian countries of Burma, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia and the Philippines. Japanese encephalitis also may occur with a lower frequency in Japan, Taiwan, Singapore, Hong Kong and eastern Russia. Since the mosquito that carries the virus breeds in flooded rice fields and pools of water, most human infections occur in rural, agricultural areas in Asia (although occasional cases have been reported from urban locations). Transmission is usually seasonal, following the prevalence of mosquitoes.

The chance that a traveler to Asia will develop Japanese encephalitis is very small. Only certain mosquito species are capable of transmitting Japanese encephalitis. Among persons who are infected by a mosquito bite, only one in 50 to one in 1000 persons will develop the illness.

The majority of infected persons develop mild symptoms or no symptoms at all. However, among persons who develop encephalitis, the consequences of the illness may be grave.

Japanese encephalitis begins as a flu-like illness with headache, fever and often gastrointestinal symptoms. Confusion and disturbances in behavior also may occur at an early stage. The illness may progress to a serious infection in the brain (encephalitis), and in one-third of cases, the illness may be fatal. Infection in pregnant women has been associated with miscarriages.

## PRIMARY PROTECTIVE MEASURES

Travelers should take personal protective measures against mosquitoes, whether they have been vaccinated

or not. The vaccine may not give you 100% protection. Furthermore, depending on where you travel, you may be at risk for other mosquito-borne illnesses.

Mosquitoes carrying Japanese encephalitis are most active during the hours between dusk and dawn. Use mosquito repellent containing DEET (about 30% concentration for adults) and stay in air conditioned or well screened rooms or use mosquito netting. You can also use aerosol room insecticides to kill indoor mosquitoes and apply permethrin (a mosquito repellent/insecticide) to clothing and mosquito netting. Wear long-sleeved shirts, long pants and socks when outdoors to decrease your skin exposure.

## VACCINE

JE-Vax is an inactivated vaccine. The recommended primary series is three doses given at days "zero" (the day of the first shot), seven and 30. The last dose should be given 10 days prior to international travel to ensure adequate immune response and so that adequate medical care can be obtained in the event of delayed adverse reactions. A booster dose may be recommended two or more years after immunization if a person remains in a high risk area.

## WHO SHOULD GET JE-VAX VACCINE

- The U.S. Centers for Disease Control recommends the vaccine to those who work in or have extensive visits to rural areas of the previously mentioned countries during the transmission (usually rainy) season. JE-Vax is recommended for persons who will travel in rural areas for four weeks or more, except under special circumstances such as known outbreaks of Japanese encephalitis.
- Travelers over age 55 who are going to areas during the transmission season should consider receiving the JE-Vax. Older travelers may be more at risk for developing neurological symptoms if infected.
- Laboratory workers with potential for exposure to infectious Japanese encephalitis virus

## WARNINGS AND PRECAUTIONS

If you fit one of the following conditions, you should tell the person providing your immunization:

- Persons with hypersensitivity to proteins of rodent or neural origin
- Persons with moderate or severe illness (with or without fever). Delay vaccine until you are well.
- Persons with hypersensitivity to thimersol or mercury (although you may just experience localized reactions like swelling or rash at the site of the injection)
- Persons with previous adverse reactions to a prior dose of JE-Vax
- Persons who have a past history of allergic reactions to bee stings or medications are more likely to experience adverse effects.
- Pregnant women unless their risk of getting Japanese encephalitis is high

Animal reproduction studies have not been conducted with the JE-Vax. It is not known whether JE-Vax can cause fetal harm when administered to a pregnant woman or whether it can affect one's reproductive capacity. Infection with the Japanese encephalitis virus during the first and second trimesters of pregnancy, however, has been associated with intrauterine infection and miscarriage.

It is not known whether JE-Vax is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when JE-Vax is administered to a nursing woman.

## POSSIBLE SIDE EFFECTS FROM JE-VAX

About 20% of people who receive the vaccine experience some pain, redness and swelling at the site of injection. About 10% of people also experience some chills, muscle pain, nausea, vomiting and/or abdominal pain.

About one in 260 who receives the vaccine experiences a general rash. Rarely, vaccinees may suffer shock or respiratory stress. People with a history of allergies to bee stings or medications appear to have an increased

risk for developing these side effects. If you experience any of these symptoms, call UHS immediately (471-4955) or, if serious symptoms occur, dial 911.

Vaccinees should be observed for 30 minutes after vaccination. Vaccinees should remain in areas with ready access to medical care for 10 days (the time within which most reactions occur) after receiving the JE-Vax. Be on the lookout for side effects up to 17 days after receiving the vaccine. This is the longest time period during which reactions have been reported.

**AS WITH ANY DRUG OR VACCINE, THERE IS A POSSIBILITY THAT AN ALLERGIC OR MORE SERIOUS REACTION MAY OCCUR.**

## THINGS TO DO AFTER RECEIVING THE VACCINE

The following simple treatments can help reduce the severity of any side effects you may experience:

1. Drink eight to 12 glasses of water or fruit juice a day. Avoid alcoholic beverages during this period as they tend to increase the severity of symptoms.
2. If you have symptoms, you may take over-the-counter pain relievers, such as Tylenol or Ibuprofen (e.g., Advil, Nuprin, etc.), as directed on the packaging.
3. To decrease arm soreness, it may be helpful to increase arm activity for a couple of days after the injection.
4. You can participate in your normal activities, but if you are going to exercise or be out in the sun, it is even more important that you stay well hydrated by drinking extra fluids.

**IF YOU FEEL YOU ARE HAVING A REACTION THAT IS MORE THAN A NORMAL REACTION, IT IS IMPORTANT THAT YOU GET IN TOUCH WITH US EITHER BY PHONE OR IN PERSON.**

## REPORTING OF ADVERSE EVENTS

The public health service is interested in finding out if any serious problems may be related to the vaccine you

received, especially those occurring within four weeks after receiving the vaccine.

If you believe that the person receiving the vaccine died or had a serious reaction from the vaccine, call the following number: (512) 471-4955 or 475-8301. Ask the UHS to report the problem on a Vaccine Adverse Event Report form.

*If you think the problem was not reported*, you should report the problem yourself. You can get the form by calling this toll-free number: 1-800-822-7967.

**GET INFORMATION ABOUT POSSIBLE HELP**

A U.S. government program provides compensation for some persons injured by vaccines. For information, call this toll-free number: 1-800-338-2382 **OR contact:**

**The U.S. Claims Court  
717 Madison Place, NW  
Washington, D.C. 20005  
(202) 633-7257**