



U.S. Centers for Disease Control (CDC) Travelers' Health Alert

Disease Outbreak

East Asia & Pacific > Marshall Islands

10/28/2011

The U.S. Centers for Disease Control (CDC) released the following Travelers' Health Alert on October 28, 2011:

What is the current situation?

For the first time, the Republic of the Marshall Islands is reporting an outbreak of dengue fever. The cases have been seen almost exclusively in the capital, Majuro. The Ministry of Health is advising all residents of the Marshall Islands on mosquito avoidance measures.

What is Dengue?

Dengue fever is the most common cause of fever in travelers returning from the Caribbean, Central America, and South Central Asia. Dengue is reported commonly from most tropical and subtropical countries of Oceania, Asia, the Caribbean, the Americas, and occasionally Africa. This disease is caused by four similar viruses (DENV-1, -2, -3, and -4) and is spread through the bites of infected mosquitoes.

Dengue virus transmission occurs in both rural and urban areas; however, dengue is most often reported from urban settings. For the most up-to-date information on dengue worldwide, see the DengueMap on the CDC website.

How can travelers protect themselves?

Travelers can reduce their risk of infection with dengue fever by protecting themselves from mosquito bites. The mosquitoes that spread dengue usually bite at dusk and dawn but may bite at any time during the day, especially indoors, in shady areas, or when the weather is cloudy.

Travelers should follow the steps below to protect themselves from mosquito bites:

Where possible, stay in hotels or resorts that are well screened or air conditioned and that take measures such as spraying with insecticide to reduce the mosquito population. When outdoors or in a building that is not well screened, use insect repellent on uncovered skin. If sunscreen is needed, apply before applying insect repellent. Look for a repellent that contains one of the following active ingredients: DEET, picaridin (KBR 3023), Oil of Lemon Eucalyptus/PMD, or IR3535. Always follow the instructions on the label when you use the repellent. In general, repellents protect longer against mosquito bites when they have a higher concentration (percentage) of any of these active ingredients. However, concentrations above 50% do not offer a marked increase in protection time. Products with less than 10% of an



active ingredient may offer only limited protection, often no longer than 1-2 hours. The American Academy of Pediatrics approves the use of repellents with up to 30% DEET on children more than 2 months old. Protect babies less than 2 months old by using a carrier draped with mosquito netting with an elastic edge for a tight fit. For more information about the use of repellent on infants and children, please see the "Insect and Other Arthropod Protection" section in *Traveling Safely with Infants and Children* and the "Children" section of CDC's *Frequently Asked Questions about Repellent Use*. For more information on the use of insect repellents, see the information on the *Mosquito and Tick Protection* webpage. Wear loose, long-sleeved shirts and long pants when outdoors. For greater protection, clothing may also be sprayed with a repellent containing permethrin or another EPA-registered repellent. (Remember: don't use permethrin on skin.)

Symptoms and Treatment
Symptoms of dengue include:

fever headache pain behind the eyes joint and muscle pain rash nausea/vomiting mild bleeding, such as nose or gum bleeding or easy bruising Usually dengue is a mild illness, but it can lead to severe dengue, which can be fatal if not treated. People who have been infected with dengue in the past, even if they did not have symptoms or feel sick, are at increased risk of getting severe dengue if they are infected again. People with dengue fever that progresses to severe dengue usually experience warning signs within 48 hours of their fever ending. Anyone with dengue who experiences these warning signs should go to a doctor or emergency room immediately:

Severe abdominal pain or persistent vomiting Red spots or patches on the skin Bleeding from nose or gums Vomiting blood Black, tarry stools (feces, excrement) Drowsiness or irritability Pale, cold, or clammy skin Difficulty breathing There is no specific medicine to cure illness caused by dengue viruses. People who think they have dengue should use pain relievers with acetaminophen (such as Tylenol) to lessen discomfort and reduce fever. Avoid drugs that contain ibuprofen, naproxen, and aspirin. People with dengue should also rest, drink plenty of fluids, and talk to a doctor about their symptoms.

In some cases of severe dengue, hospitalization to replace lost fluids may be needed. Early recognition and treatment of severe dengue can reduce the risk of death.

If you return from a trip abroad and get sick with a fever, you should seek medical care right away. Be sure to tell the doctor or other health care provider about your recent travel.

Information for Health Care Providers

Early and proper diagnosis of dengue is important, as many other diseases may mimic dengue. Health care providers should consider dengue, malaria, chikungunya, and leptospirosis, depending on the itinerary and exposure, in the differential diagnosis of patients who have fever and a history of travel to tropical areas during the 2 weeks before symptom onset.



See the Clinical & Laboratory Guidance on the CDC Dengue website for information about reporting dengue cases and instructions for specimen shipping. Serum samples obtained for viral identification and serologic diagnosis can be sent through state or territorial health departments to:

CDC Dengue Branch
Division of Vector-Borne Infectious Diseases
National Center for Emerging and Zoonotic Infectious Diseases (Proposed)
1324 Calle Cañada
San Juan, Puerto Rico 00920-3860
Telephone: 787-706-2399; fax, 787-706-2496

Additional Links:

For more information about dengue and protection measures, see the following links:

Dengue Fever in *CDC Health Information for International Travel 2012* Mosquito and Tick Protection Questions and Answers: Insect Repellent Use and Safety CDC Dengue website

For more information about dengue in travelers, see

Travel-Associated Dengue Surveillance—United States, 2006–2008 [*MMWR* 2010, 59 (23)]

Travel-Associated Dengue—United States, 2005 [*MMWR* 2006, 55 (25)]. Travel-Associated Dengue Infections—United States, 2001-2004 [*MMWR* 2005, 54 (22)]