

## Protecting Your Family From Dengue Fever

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**D**engue fever, a tropical, mosquito-borne disease has seen a surprise rise in recent months.

To date, there have been four reported cases of Dengue fever on the island, and all four individuals contracted the virus outside of Guam. Nonetheless, the potential threat of Dengue fever cannot be underestimated. Many neighboring countries, including Indonesia, the Philippines, Vietnam, and Palau, are reporting moderate to high incidence of this disease.

Homeowners play an important role in helping reduce potential breeding sites of the day-biting mosquito that is responsible for transmitting this virus.

Dengue is transmitted by the bite of infected *Aedes* mosquitoes, which are found primarily in urban areas. The Dengue viruses (serotypes called DEN-1, DEN-2, DEN-3, and DEN-4) occur in most of tropical Asia, the Pacific Islands, the Caribbean Islands, Central and South America, and Africa. Dengue viruses are transmitted in nature by day-biting *Aedes* mosquitoes. The most important mosquito vector is the highly domesticated and urban species, *Aedes aegypti*. *Aedes aegypti* has not been recorded on Guam since the early 1940s, but the secondary mosquito carrier, *Aedes albopictus*, is common on Guam and may have replaced the *Aedes aegypti* on Guam.



The viruses that are responsible for Dengue fever are transmitted to humans by the bite of an infected *Aedes* mosquito. The actual time between the mosquito bite and the appearance of symptoms is unknown, but may be between a few days to a week. Fever, headaches, vomiting, and abdominal pain characterize the onset. Respiratory symptoms, such as coughing, are also common. Hemorrhagic symptoms include slight bleeding spots under the skin, rash, bleeding nose, and bleeding gums. The rash usually shows up three to four days

after the onset of other symptoms and begins on the torso, spreading out to the face, arms and legs. In severe cases, the infection may result in circulatory failure, shock, and death. Medical consultation is necessary, especially in cases of severe bleeding.

Dengue viruses are not communicable and person-to-person transmission does not occur. An infected individual is never infectious to other persons, but remains infectious for mosquitoes for about six days. Therefore, an infectious mosquito can transmit the virus from one individual to another. The mosquito carriers of Dengue are day-biters, with peak feeding activity in the morning for several hours after daybreak and in the late afternoon for several hours before dark. However, these mosquitoes may feed throughout the day in the shade, indoors, or on overcast days. To avoid mosquito bites,

persons should be aware of the above feeding behavior. Below are steps one can take to help reduce the potential breeding sites of these insect pests.

### **Breeding Site Reduction**

Water management is essential for effective mosquito control because eggs cannot hatch unless they are on or in water. Tires, often found next to dwellings in close proximity to people, require special mention because they are primary breeding places for mosquitoes. It is important to locate standing water around one's home and eliminate it when possible.

- Remove tin cans, old tires, bucket, glass jars, broken toys, and other containers around the outside of the home or apartment.
- Examine flat roofs after rains, making certain that no water remains.
- Place tight covers over cisterns, cesspools, septic tanks,

rain barrels, and tubs where water is stored.

- Do not over-apply lawn and garden irrigation, which could create puddles in low areas.
- Drain or fill stagnant water pools, puddles, and ditches of swampy areas around the home.
- Eliminate water-holding tree stumps and keep the grass mowed around pools and other bodies of water.
- Check the water in flowerpots and other containers for mosquito larvae.
- Keep drainage ditches clean and flowing.

It is important for people who have just arrived from any country that has high incidence of Dengue fever to get medical attention, especially if they are experiencing any of the symptoms characterized by this disease.

If you have any additional questions regarding mosquito control, contact your local Cooperative Extension Service or Public Health officials.

*This factsheet was part of a series on household insects written for the Pacific Daily News from September 1997 - November 1999. Content has been verified as of January 2017.*