

Mosquitoes

Mosquitoes are small flying insects that bite people and animals and can spread diseases such as West Nile virus.

Female mosquitoes require blood from humans or other animals to develop eggs. Mosquito larvae live in aquatic habitats and can grow in ponds, bird baths, and any other objects containing standing (non-moving) water. Decrease your chances of getting mosquito bites by reducing standing water around your home, using repellents, and wearing protective clothing when outdoors.



Adult western malaria mosquito, *Anopheles freeborni*.

Minimize mosquito breeding habitats.

- Empty water from unused garden pots and other objects. Store containers upside down, cover, or dispose of them so mosquitoes can't lay eggs.
- Change water in pet dishes, watering troughs, and bird baths every week.
- Avoid overwatering outdoor landscapes, which can lead to standing water.
- Keep litter and garden debris out of street gutters. Remove debris from rain gutters and downspouts annually.
- Seal rain barrels and keep all filters and prefilters clean and free of moisture-retaining debris. Inspect water reservoirs regularly for leaks.
- Remove excess vegetation, stock with mosquito-eating fish, or use *Bacillus thuringiensis* (Bt) products in ponds. Bt is a bacterium that kills mosquito larvae but doesn't affect people, other animals, or plants.
- Maintain water quality in swimming pools with chemical treatments. Keep water off swimming pool covers. Cover or drain water from plastic pools when not in use so mosquitoes can't lay eggs.
- Fill open tree holes with sand or mortar.



Egg raft of encephalitis mosquito, *Culex tarsalis*.

Photos by Jack Kelly Clark

What is West Nile virus?

West Nile virus (WNV) is spread by mosquitoes that get the virus from infected birds. Once infected, mosquitoes then transfer the virus to humans and other animals. Infected humans can become very ill. The disease is most serious in children, elderly, and others with weakened immune systems. For more information about WNV, visit the California Department of Health Services website at westnile.ca.gov.



Culex sp. mosquito larvae.

How do I avoid mosquito bites?

- Ensure doors and windows are properly screened.
- Avoid being outdoors at times of the day when mosquito activity is high in your area. Some mosquito species are active at dawn and dusk, others throughout the day.
- Wear long-sleeved shirts, long trousers, socks, and a hat if you must be outside when mosquitoes are present.
- Use insect repellents containing DEET or picaridin. Oil of lemon eucalyptus is another effective repellent and is derived from natural materials. There are many other products containing other active ingredients that may be less effective and must be reapplied frequently. Check the U.S. EPA website and always follow label directions.
- Outdoor insecticide sprays and other repellent devices vary widely in effectiveness and can temporarily reduce the number of adult mosquitoes but have no lasting effect.
- Citronella candles and mosquito coils burned outdoors work best if there is little air movement.

Contact your county mosquito and vector control agency for local management information regarding mosquitoes and other pests of concern.

What you do in your home and landscape affects our water and health.

- Minimize the use of pesticides that pollute our waterways and harm human health.
- Use nonchemical alternatives or less toxic pesticide products whenever possible.
- Read product labels carefully and follow instructions on proper use, storage, and disposal.

For more information about managing pests, visit ipm.ucanr.edu or your local University of California Cooperative Extension office.