



# The West Nile Virus and Its Impact on Pools and Spas

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According to the U.S. Centers for Disease Control and Prevention (CDC), the West Nile Virus is in all but a few states within the U.S., and the most significant mode of transmission is via mosquito bites. In order to gauge West Nile's potential impact on pools and spas, one needs to consider a few simple facts about the virus and the mosquitoes that carry it.

First, people usually become infected with the West Nile Virus after being bitten by a mosquito carrying the virus. The CDC points out that while most people who receive the virus will have no symptoms, some will develop an illness called West Nile Fever. Since the illness is relatively mild and short lived, infected persons may never seek medical attention. However, a small number of individuals, perhaps less than 1 out of 100, develop potentially fatal diseases called West Nile Encephalitis or West Nile Meningitis. These life-threatening illnesses result in the inflammation of the brain or the area around it and require hospitalization.

Second, mosquitoes reproduce by laying their eggs in standing water and the hatchling larvae require microorganisms and detritus (decaying organic matter) in order to survive and develop into adult mosquitoes. Therefore, one of the best means of controlling the spread of West Nile Virus is to control the habitats that mosquitoes need for reproduction. For this reason, the CDC recommends draining water from flower pots, cans, unused tires, pool covers, clogged gutters, etc. in order to limit their breeding habitat.

Although mosquito larvae will flourish in standing water, well-maintained pools and spas will not provide ideal environments for mosquitoes for two major reasons: Sanitization and Filtration. As stated previously, mosquito larvae require sufficient levels of microorganisms and organic matter for survival and development. Proper use of EPA- registered sanitizers will prevent microorganisms from proliferating in the pool or spa. Moreover, some have reported that chlorine will kill mosquito eggs, effectively preventing them from hatching. In addition, the regimen of regular, physical maintenance (brushing, vacuuming, filtration and backwashing) drastically reduces the amount of organic matter that the larvae need to grow. Clearly, a properly maintained pool or spa will severely restrict the food supply for mosquito larvae in the water.

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## **FACT SHEET—West Nile Virus**

### ***Helpful Tips for Homeowners***

Following these simple rules will help prevent the spread of mosquitoes around your home and reduce your chances of being bitten.

- Always maintain the appropriate levels of an EPA-registered sanitizer in your pool or spa. Never allow the pool or spa water to operate without a sanitizer or become stagnant. An untreated or stagnant pool or spa will provide mosquito larvae with adequate supplies of microorganisms and organic debris needed for their development into adult mosquitoes.
- Don't neglect maintenance. Brushing, vacuuming, and filtration will reduce the availability of organic debris that mosquito larvae need to survive.
- Make certain that the water is properly balanced.
- At least once a week, drain stagnant water sources such as: pool covers, flowerpots, buckets, pet dishes, birdbaths, etc. Remember, by limiting the areas where mosquitoes can breed, we can also slow the spread of the West Nile Virus.
- Mosquitoes can bite at anytime of day, but most species are exceptionally active from dusk until dawn. Wearing mosquito-resistant clothing and using DEET-containing repellents will decrease your chances for being bitten.

In summary, people can continue to enjoy the myriad healthful benefits associated with pool and spa use, but should be careful to maintain adequate levels of EPA-registered sanitizers and a consistent program of physical maintenance. The CDC has compiled valuable information about West Nile Virus as well as other mosquito-borne diseases. Those interested in obtaining additional information should visit the CDC website at [www.cdc.gov](http://www.cdc.gov).