

FACT SHEET

The West Nile Virus and Its Impact on Pools and Spas

Brought to you by the PHTA Recreational Water Quality Committee (RWQC)

I. INTRODUCTION

According to the U.S. Centers for Disease Control and Prevention (CDC), the West Nile Virus exists in all but a few states within the United States. West Nile Virus is most commonly spread through the bites of infected mosquitoes after they feed on infected birds. In a very small number of cases, West Nile has spread through exposure in a laboratory setting, blood transfusion and organ donation and from mother to baby during pregnancy, delivery or breast feeding. West Nile Virus is not spread person to person by coughing, sneezing or touching an infected person or from touching or eating infected birds or mammals. There are no vaccines for West Nile Virus. The best way to avoid becoming infected is to prevent mosquito bites.

II. GENERAL DESCRIPTION

West Nile Virus infections begin once a person has been bitten by a mosquito carrying the virus. It typically takes three to 14 days for symptoms to appear, and 8 out of 10 people typically will have no symptoms at all. About one in five people will develop a fever with other symptoms such as headache, body aches, joint pains, vomiting, diarrhea, or rash. For this group, most people recover completely, however fatigue and weakness can last for weeks or months.

About 1 in 150 people develop a severe illness affecting the central nervous system such as encephalitis (inflammation of the brain) or meningitis (inflammation of the membranes that surround the brain and spinal cord). Recovery from severe illness might take several weeks or months. Some effects to the central nervous system might be permanent. About 1 in 10 of the people who develop severe illness affecting the central nervous system will die. Hospitalization is required for severe infections.

III. PREVENTION

Standing water in swimming pools, hot tubs and spas can be a source for mosquitoes that carry West Nile Virus. Mosquitoes reproduce by laying their eggs in standing water and the hatching 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 standing water from flowerpots, cans, unused tires, pool covers, clogged gutters, etc. in order to limit their breeding habitat. Well-maintained pools, hot tubs and spas do not provide ideal environments for mosquitoes for two major reasons: sanitization and filtration.

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Proper use of EPA-registered sanitizers will prevent microorganisms from proliferating in the pool, hot tub or spa.

Proper filtration requires circulation of the water volume passing through filter media to reduce the organic matter that will contribute to the proliferation of mosquito larvae. 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, thereby restricting the food supply for mosquito larvae in the water.

IV. 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, hot tub or spa. Never allow the pool, hot tub or spa water to operate without a sanitizer or become stagnant. An untreated or stagnant pool, hot tub 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 standing 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 any time of day, but most species are exceptionally active from dusk until dawn. Wearing mosquito-resistant clothing and correctly applying DEET-containing repellents in accordance with the directions on the label will decrease your chances for being bitten.

V. SUMMARY

In summary, pool, hot tub and spa owners should be careful to maintain adequate levels of EPA-registered sanitizers and a consistent program of physical maintenance. The employment of a service professional can help ensure this. 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.