



WEST NILE VIRUS

By the PHTA Recreational Water Quality Committee

AMONG THE SWIMMING pool health hazards that should be controlled through proper maintenance is the West Nile Virus, which can be spread by mosquitoes breeding in stagnant, poorly sanitized pool water.

According to the U.S. Centers for Disease Control and Prevention, the West Nile Virus is present in all but a few states within the U.S. It is spread through the bites of infected mosquitos.

The infection begins once a person has been bitten by a mosquito carrying the virus. It takes a few days for any symptoms to appear. About 8 out of 10 people will have no symptoms at all. About 2 out of 10 people will develop a fever with other symptoms such as headache, body aches, joint pain, vomiting, diarrhea or rash. The symptoms are similar to the flu. Nearly everyone recovers from this, but the fatigue and weakness can last for weeks or months. Treatment of these symptoms is the same as for flu: rest, fluids, and anti-inflammatory

medications. 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). About 1 in 10 of the people who develop severe illness will die. Hospitalization is required for severe infections.

There are no vaccines for West Nile Virus. The best way to avoid becoming infected is to avoid being bitten by mosquitos.

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 mosquitos. Therefore, one of the best means of controlling the spread of West Nile Virus is to control the habitats that mosquitos need for reproduction. Although mosquito larvae will flourish in standing water, well-maintained

pools and spas will not provide ideal environments for mosquitos for two major reasons: sanitization and filtration.

Since mosquito larvae feed on microorganisms and organic matter, proper use of EPA-registered sanitizers will prevent microorganisms from proliferating in the pool or spa, denying the mosquitos crucial sustenance for development. Moreover, some have reported that chlorine will kill mosquito eggs, effectively preventing them from hatching. 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. A properly maintained pool or spa will severely restrict the food supply for mosquito larvae in the water. ~