**West Nile Virus Facts**

**ORIGINS:** West Nile virus (WNV) is a virus that is transmitted by mosquitoes. It has been found in humans, birds, and other animals, typically in Africa, Eastern Europe, and the Middle East. In 1999, WNV was detected in the United States for the first time, and since then it has spread across the U.S.

**TRANSMISSION:** West Nile virus exists in nature through a transmission cycle involving mosquitoes and birds. Mosquitoes become infected with West Nile virus when they feed on infected birds, which may carry the virus in their blood for a few days. Infected mosquitoes can then transmit West Nile virus to humans and animals when biting to take a blood meal. In rare instances, West Nile virus may be transmitted from human to human through organ donation or blood transfusion or from pregnant mother to fetus. These new modes of transmission are still under investigation.

**SYMPTOMATOLOGY:** Most individuals infected with West Nile virus will not have any symptoms or signs of illness. People who do develop illness may experience mild symptoms such as fever, headache, and body aches; occasionally a skin rash and swollen lymph glands may be noticed. These symptoms generally appear 3-14 days following the bite of an infected mosquito. Less than 1% of persons infected with the virus will develop more severe disease with symptoms such as high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and, rarely, death. People ≥ 50 years of age have the highest risk of developing severe illness.

**RISK REDUCTION:** Maryland citizens can reduce their risk of becoming infected with West Nile virus by taking the following steps to avoid mosquitoes:
1. Stay indoors at dawn or early in the evening.
2. Wear long-sleeved shirts and long pants when going outdoors.
3. Spray clothing with repellents containing permethrin or DEET (N, N-diethyl-meta-toluamide), since mosquitoes may bite through thin clothing.
4. Apply insect repellent sparingly to exposed skin and following all package instructions. An effective repellent should contain 30% DEET. Higher concentrations of DEET do not provide additional protection. Contact your local health care provider before applying DEET products to children.
5. Ensure that all window screens in your home or business are intact and do not contain holes. Repair any damaged screens.
PRECAUTIONS: Mosquitoes can breed in as little as 1/4 inch of water. In addition to the personal protective measures listed above, Maryland citizens should take the following precautions to reduce mosquito-breeding sites around their homes and businesses.

- Remove all discarded tires from your property. If tire removal is not possible, puncture or cut tires to prevent water from collecting in them.
- Dispose of tin cans, plastic containers, ceramic pots, or similar water-holding containers.
- Make sure roof gutters drain properly. Clean clogged gutters in the spring and fall.
- Clean and chlorinate swimming pools, outdoor saunas, and hot tubs. If not in use, keep empty and covered.
- Drain water from pool covers.
- Change the water in bird baths at least once a week.
- Turn over plastic wading pools and wheelbarrows when not in use.
- Eliminate any standing water that collects on your property.
- Remind or help neighbors to eliminate breeding sites on their property.
- Check for trapped water in plastic or canvas tarps used to cover boats, pools, etc. Arrange the tarp to allow water to drain.
- Pump out bilges in boats. Store canoes and small boats upside down.
- Remove outdoor pet food and water dishes that are not being used.
- Flush livestock water troughs twice a week.
- Do not leave garbage can lids lying upside down. Be sure water does not collect in the bottom of garbage cans or recycle bins.
- Check around construction sites or do-it-yourself improvements to ensure that proper backfilling and grading prevent drainage problems.
- Check ornamental ponds, tree holes, and water-holding low areas for mosquito larvae. Call the nearest Mosquito Control Office if you find, or suspect mosquito larvae are present.

The Maryland Department of Health and Mental Hygiene is collaborating with the Maryland Department of Agriculture and the Maryland Department of Natural Resources to monitor mosquito, horse, and human populations for evidence of West Nile virus and other arboviruses of public health concern.

For more information about West Nile virus, please contact the Center for Veterinary Public Health at (410) 767-5649 or visit our website at http://edcp.org/html/west_nile.html.

For more information about mosquito control, please contact the Maryland Department of Agriculture at (410) 841-5870 or visit http://www.mda.state.md.us/geninfo/genera9.htm.

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