

Fact Sheet for Outdoor Workers: West Nile Virus Information

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West Nile Virus (WNV) is a mosquito-borne infection that can cause encephalitis. Since the initial outbreak in 1999, the virus has spread rapidly throughout New York and the United States. Prior to the New York outbreak, the virus had never been identified in the Western Hemisphere. There are about 65 different species of mosquitoes in New York State, but only a small percentage have been associated with WNV. All residents of areas where virus activity has been identified are at risk of getting WNV, but those at highest risk for becoming seriously ill from WNV are people over 50. Even though the chances of a person getting encephalitis are small, New York State continues to take steps to prepare for the occurrence of the virus and to protect New York State residents. This fact sheet outlines some simple steps you can take to reduce your risk of being bitten by mosquitoes. These precautions are designed to protect both the general public and people who work outdoors.

The following questions and answers are provided to help outdoor workers better understand how to protect themselves.

1. Do I need to change my safety practices when working outdoors?

Most mosquitoes are not infected. The chance that any one bite will be from an infected mosquito is very small. You can reduce your risk of disease by reducing mosquito bites. Precautions that you can follow to help reduce the risk of mosquito bites include:

- Reduce mosquito-breeding areas by making sure that wheelbarrows, buckets, and other containers are turned upside down when not being used so that they do not collect standing water.
- Wear shoes, long pants with bottoms tucked into boots or socks, and a long-sleeved shirt when outdoors for long periods of time, or when many mosquitoes are most active (between dusk and dawn).
- Use mosquito repellent according to label directions when outdoors for long periods of time and when mosquitoes are most active.

Insect repellents can be effective at reducing bites from ticks and insects that can transmit disease. But their use is not without risk of health effects, especially if repellents are applied in large amounts or improperly. Most repellent products contain the active ingredients permethrin or DEET. Permethrin-containing products can be used **only on clothing, not skin**. Permethrin kills ticks and insects that come in contact with treated clothes for two weeks or more. Permethrin repellents can cause eye irritation, particularly if label directions have not been followed. Animal studies indicate that permethrin may have some cancer-causing potential. DEET products have occasionally been associated with skin reactions (particularly at concentrations of 50 percent and above) and eye irritation. Under demanding conditions, a two-part approach has been used to protect people from ticks and other biting insects. The approach uses a repellent product containing about 33 percent DEET in a controlled-release formulation on exposed skin along with clothing treated with permethrin. This may meet the needs of individuals spending long periods of time in areas with high populations of active mosquitoes.

The New York State Department of Health recommends the following precautions when using insect repellents:

- Use only what and how much you need for your situation;
- depending on your job, you may need more or less protection.
- Do **NOT** apply insect repellents in enclosed areas.
- Wash treated clothing separately and wash all treated skin after returning indoors.
- When using DEET, put it on your hands first, and then apply to your face.
- DEET can be applied to clothing, but it may damage some synthetic fabrics and plastics.
- Permethrin-treated clothing is effective for two weeks or more; keep treated clothing in a plastic bag when not in use.

2. How can I avoid heat stress on hot, humid days?

If you wear a long-sleeved shirt, long pants, shoes, and socks to reduce the risk of mosquito bites, you might be at greater risk for heat stress on hot, humid days. To avoid symptoms of heat stress, you should:

- Wear light-colored, breathable clothing that allows moisture to evaporate quickly.
- Use extra caution if you are required to wear clothing on the job that limits evaporation -- you could develop heat stress much more quickly.
- Drink plenty of non-alcoholic and non-caffeinated liquids to maintain body hydration.

3. Can I get West Nile Virus from handling dead animals?

There is no evidence that West Nile Virus is spread directly from dead animals to people. However, barehanded contact with dead animals should always be avoided. Use a shovel or wear gloves when handling a dead animal.

4. What can I do to reduce my exposure to pesticide sprays?

As with any pesticide, you should avoid unnecessary exposure. The decision to use pesticide sprays to eliminate adult mosquitoes is made by the local health units, and such measures are carefully considered. Some precautions that you can take to minimize pesticide exposure, if spraying does occur, include:

- If possible, remain inside or avoid the area whenever spraying occurs.
- If you get sprayed directly:
 - Protect your eyes. If you get pesticide spray in your eyes, rinse them immediately with water.
 - Wash clothing separately from other clothing.
 - Wash exposed skin surfaces with soap and water.

5. What steps are taken to ensure proper application of pesticides?

In New York State, applicators of restricted-use pesticides, like mosquito control products, must be certified by the New York State Department of Environmental Conservation or must work under the supervision of a certified applicator. The certification program includes training on the proper handling and use of pesticides. Information on the pesticide label must be followed regarding use of protective measures and equipment. Public sector workers in New York State must also receive information, training, and education about toxic substances in the workplace in accordance with the New York State Right to Know Law. Requirements for using respiratory and personal protective equipment are also enforced by the federal Occupational Safety and Health Administration for private sector workers and by the New York State Department of Labor's Public Employee Safety and Health program for public sector workers in New York State.

For more information, contact the New York State Department of Health (toll-free) at 1-800-458-1158.

Publication 2742

Revised: September 2013