

## **West Nile Virus protection for employees who work outdoors**

As summer approaches and the grass is growing longer, the pools are opening, and the campers are rolling into the parks, more people are spending time working outside. While it has always been important for outside workers to protect themselves from mosquito bites, this year it is even more important because of West Nile Virus.

West Nile Virus was first found in a bird in Scott County during September of 2001. During 2002, evidence of West Nile Virus was found in all 99 Counties in Iowa. We know that West Nile Virus will be found in Scott County this year as well. The important thing to remember about West Nile Virus is that you have the power to protect yourself from the disease by taking some simple steps.

1. Apply insect repellent containing DEET (N,N-diethyl-m-toluamide), according to directions, to any skin not covered with clothing.
2. When working outdoors, wear light colored clothing that is loose fitting, and has long sleeves, and long pants whenever possible.
3. Try to limit the time that you spend outdoors during dawn and dusk when mosquitoes are most active.

A study of Iowa Department of Natural Resource employees who worked outside during the summer of 2002 showed that none of the workers were ever infected by West Nile Virus. How did they do it? They followed the steps outlined above. You have the power to protect yourself.

The following information is from the Centers for Disease Control and provides more specific information about insect repellent use and safety.

### **How does mosquito repellent work?**

Female mosquitoes bite people and animals because they need the protein found in blood to help develop their eggs. Mosquitoes are attracted to people by skin odors and carbon dioxide from breath. Repellents that have DEET in them repel the mosquito, making the person unattractive for feeding. DEET does not kill mosquitoes; it just makes them unable to locate us.

### **What are some general considerations to remember in order to use products containing DEET safely?**

Always follow the recommendations appearing on the product label

- Use enough repellent to cover exposed skin or clothing. Do not apply repellent to skin that is under clothing.
- Do not apply repellent to cuts, wounds, or irritated skin.
- After returning indoors, wash treated skin with soap and water.
- Do not spray aerosol or pump products in enclosed areas.
- Do not apply aerosol or pump products directly to your face. Spray your hands and then rub them carefully over the face, avoiding the eyes and mouth.

### **How does the percentage of DEET in a product relate to the amount of protection it gives?**

A higher percentage of DEET in a repellent does not mean that your protection is better, just that it will last longer. DEET concentrations higher than 50% do not increase the length of protection. A recent study found:

- A product containing 23.8% DEET provided an average of 5 hours of protection from mosquito bites.
- A product containing 20% DEET provided almost 4 hours of protection.
- A product with 6.65% DEET provided almost 2 hours of protection.
- Products with 4.75% DEET and 2% soybean oil were both able to provide roughly one and a half-hour of protection.

Choose a repellent that provides protection for the amount of time that you will be outdoors. A higher percentage of DEET should be used if you will be outdoors for several hours while a lower percentage of DEET can be used if time outdoors will be limited. You can also re-apply a product if you are outdoors for a longer time than expected and begin to be bitten.

### **Are there any risks due to using repellents containing DEET?**

Use of these products may cause skin reactions in rare cases. If you think you are having a reaction to the product, stop using it, wash the treated skin, and call your local poison control center. There is a national number to reach a Poison Control Center near you: 1-800-222-1222.

If you go to a doctor, take the product with you. Cases of serious reactions to products containing DEET have been related to misuse of the product such as swallowing, using over broken skin, and using for multiple days without washing skin in between use, for example. Always follow the instructions on the product label.

### **How often should repellent be reapplied?**

Follow the directions on the product you are using in order to determine how frequently you need to reapply repellent. Sweating, perspiration, or getting wet may mean that you need to re-apply repellent more frequently. If you are not being bitten, it is not necessary to re-apply repellent.

### **Are non-DEET repellents effective (e.g. Skin-So-Soft, plant-based repellents)?**

Some non-DEET repellent which are applied directly to skin also provide some protection from mosquito bites. However, studies have suggested that other products do not offer the same level of protection, or that protection does not last as long as products containing DEET. A soybean-oil-based product has been shown to provide protection for a period of time similar to a product with a low concentration (4.75%) DEET.

**If you have more questions about insect repellents, visit the Environmental Protection Agency's web site at <http://www.epa.gov> or call the National Pesticide Information Center, a collaborative effort of Oregon State University and the U.S. EPA at <http://npic.orst.edu> or 1-800-858-7378.**

**For more information on West Nile Virus, contact the Scott County Health Department at 563-326-8618 or visit us on-line at [www.scottcountyiowa.com/health](http://www.scottcountyiowa.com/health).**