



### Which outdoor workers are at risk of West Nile virus (WNV) exposure?

Workers at greatest risk of exposure include those working outdoors when mosquitoes are actively biting, such as farmers, ranchers, foresters, landscapers, groundskeepers, painters, roofers, pavers and construction workers.

### Where are mosquitoes most commonly found?

Mosquitoes lay their eggs in any standing body of water that persists for more than four days. Stagnant pools, ponds, watering troughs, irrigation ditches, rain barrels, manure lagoons and other stagnant bodies of water provide ideal breeding grounds and will lead to increased mosquito populations. Weedy, bushy and wooded work environments also may have large mosquito populations.

### When are mosquitoes most active?

The mosquito, *Culex tarsalis*, that is likely responsible for most of the WNV transmission in North Dakota is most active from dusk to dawn. When possible, avoid working outdoors during mosquitoes' peak activity times. When this is unavoidable, use personal protection such as protective clothing and insect repellent containing DEET or another EPA recommended repellent to reduce the potential for exposure.

### How can I protect myself when working outdoors?

You can reduce your risk of disease by reducing mosquito bites. Precautions to prevent mosquito bites include:

- Use a mosquito repellent containing DEET, picaridin, IR3535, oil of lemon eucalyptus or permethrin.
  - The longer the protection you need, the higher the percentage of DEET, picaridin, etc. needed. As the concentration of DEET, picaridin, etc. increases, the duration of activity increases; for example, a concentration of about 24 percent DEET has been shown to provide an average of five hours of protection. Always follow the directions on the manufacturer's label.
  - Apply repellent to your face by spraying repellent on your hands, and then use your hands to apply the repellent to your face.
  - Do not apply repellent to skin that is under clothing.
- 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).
- Spray clothing with products containing DEET or permethrin, as mosquitoes may penetrate thin clothing. **Permethrin should be used only on clothing; do not apply it directly to skin.**

### Can I get WNV from handling dead animals?

There is no evidence that West Nile virus can be spread directly from animals to people. However, gloves should be worn whenever dead animals are handled.

### Additional Information:

Is available at [www.ndhealth.gov/wnv](http://www.ndhealth.gov/wnv) or by calling the North Dakota Department of Health at 800.472.2180.

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