

# What you need to know and what you can do about West Nile virus

*This fact sheet provides basic information only. It must not take the place of medical advice, diagnosis or treatment. Always talk to a healthcare professional about any health concerns you have - and before you make any changes to your diet, lifestyle and treatment.*

## How to protect yourself and your family

West Nile virus (WNV) has arrived in Ontario and we should make sure we know what steps we can take to prepare ourselves and our homes. The Government of Ontario takes this disease seriously. That's why we launched an action plan to fight West Nile virus. This fact sheet is part of that plan, to help educate people about West Nile virus and what people can do to protect themselves and their families.

## What is West Nile virus?

Today, mosquitoes are more than a nuisance. Some can carry the West Nile virus and bites may lead to West Nile virus infection and, in turn, mild or serious illness.

Infection may result in no symptoms, in mild illness such as 'West Nile fever', or in serious neurological illness such as encephalitis (inflammation of the brain).

Everyone is at risk, and precautions are necessary to protect yourself.

*Special care should be taken to ensure children are protected when they are outdoors.*

Protection such as:

- Children over 2 years of age – use insect repellent as directed on the package
- Children under 2 years of age – use mosquito netting around the carriage.

## Tips on how to protect yourself and your family

Protect yourself and your family from mosquito bites by following these simple steps:

- cover up
- use insect repellent
- clean up all around the house

## What are the symptoms of West Nile virus?

It is impossible to tell from a mosquito bite on the skin surface whether the mosquito was carrying an infection such as West Nile virus. Research indicates that approximately four out of five people who are bitten by an infected mosquito do not show any symptoms. While most people who become infected will experience no symptoms or will have very mild illness, for some, the symptoms will be pronounced. For a very rare few, the virus causes serious neurological illness such as encephalitis.

*Your physician has the information available to determine if you need to be tested for West Nile virus.*

Canadian Blood Services expects to have a new test in place by July 2003 that will screen for West Nile virus. They also advise not to donate blood if you are feeling unwell.

If you have donated blood and begin to feel ill after your donation, please contact Canadian Blood Services at 1-888-2-DONATE (1-888-236-6283).

### **Symptoms**

If you have any of the following symptoms, seek medical help. These may be early symptoms of West Nile virus illness, or of many other illnesses, so seek medical attention to find out the cause.

- Fever
- Muscle weakness
- Stiff neck
- Confusion
- Severe headache
- Sudden sensitivity to light

Extreme swelling or infection at the site of the mosquito bite is another reason to seek medical attention. This may or may not indicate West Nile virus infection. If you have concerns, consult your physician.

### **How is the virus spread?**

- West Nile virus is spread to humans by the bite of an infected mosquito. Mosquitoes become infected when they bite an infected bird.
- The virus is not spread by person-to-person contact through touching, coughing, sneezing, or drinking from the same cup.
- There is some evidence that a person can be infected by handling a dead bird, however, the risk is very low. Wear gloves or use a thick plastic bag if you have to handle a dead bird.
- West Nile virus is not known to be transmitted from mammals, such as horses, to humans.

*Gardeners take note. If you like to work outside, avoid early morning and late evening when mosquitoes are most active.*

### **Who is at risk?**

Everyone who is active and outside during the summer months such as gardening, golfing, walking or camping, should take precautions to avoid mosquito bites.

Everyone is at risk from West Nile virus and should make sure they use all the protection measures to avoid contact with mosquitoes.

### **Use insect repellent**

Consider using a personal insect repellent. Use only products that are federally-regulated, such as those that contain DEET (N, N-diethyl-m-toluamide).

The concentration of DEET should be no greater than 30% for adults and no greater than 10% for children. Check the label for more detailed information or ask your pharmacist for assistance. Follow directions for use carefully.

Apply repellent sparingly on exposed skin or on top of clothing. Do not use under clothing. The repellent doesn't have to be applied heavily to be effective – a light coating will do.

*Wash skin with soap and water when you return indoors or when protection is no longer needed.*

### **Time to cover up**

Mosquitoes are attracted to darker, more intense colours so make sure you wear light colours and these types of clothing when going outside between the hours of dusk and dawn:

- Long sleeved shirts or jackets
- Long pants and
- Tuck pants into socks for extra protection

**Additional tips on DEET for children:**

Health Canada advises that DEET-containing repellents are not to be used on children under 6 months of age.

- It recommends that, where there is a high risk of complications to the child from insect bites, DEET may be considered for children aged 6 months to 2 years.

*Apply only once a day.*

- Use sparingly, avoid the face and hands, apply only once a day, and use the least concentrated product (10% or less).
- Health Canada also advises not to apply DEET more than three times a day to children between 2 and 12 years of age.
- For more information, call your doctor and see Health Canada's Web page: [www.hc-sc.gc.ca/pmra-arla/english/index-e.html](http://www.hc-sc.gc.ca/pmra-arla/english/index-e.html) ("Safety Tips on Using Personal Insect Repellents")

*When applying DEET-containing repellents to children, use sparingly, avoid the face and hands, apply only once a day, and use the least concentrated product (10% or less).*

**Tips when using insect repellent**

- Do not use repellent on open wounds, or if skin is irritated or sunburned.
- Do not get in eyes – if this happens, rinse with water right away.
- Wash skin with soap and water when you return indoors or when protection is no longer needed.
- Avoid breathing mist from spray-type repellent. Always apply in a well-ventilated area; never apply spray repellent inside a tent. Do not use near food.
- Check for sensitivity - apply repellent to a small area of skin on the arm and wait for 24 hours before use.

- Read the manufacturer's instructions on the label carefully.

**Clean up - all around the house**

The best way to keep mosquitoes away is to clean up areas where they like to breed. Unlike birds or other insects, mosquitoes do not fly very far and tend to stay close to their breeding sites and normal habitat. Take a look around your house and property and get rid of places that are mosquito-friendly that would make good breeding sites or resting places for mosquitoes.

**Any type of standing water:**

- Clean up and empty containers of standing water such as old tires, flower pots, wheelbarrows, barrels or tin cans that are outdoors.
- Drill holes in the bottoms of used containers so water can't collect.
- Change water in bird baths every other day.

**Swimming or wading pools**

- Immediately remove water that collects on pool covers.
- Make sure the pool's pump is circulating.
- Turn over wading pools when not in use.

**Check eaves and drains:**

- Don't let things pile up. Clear leaves and twigs from eavestroughs, storm and roof gutters throughout the summer.
- Make sure drainage ditches are not clogged.

Check flat roofs frequently for standing water.

**Yard and lawn maintenance:**

Think mosquito prevention when working in the yard.

Lawn cuttings, raked leaves or other decaying debris such as apples or berries that fall from trees should be collected and recycled or mulched so that organic matter does not end up in storm sewers as a food source for mosquito larvae.

- Turn over compost frequently.
- Fill in low depressions in lawn areas.
- Clear out dense shrubbery where mosquitoes like to rest.
- Spread the word. Point out potential mosquito breeding areas to your neighbours.

*The best way to keep mosquitoes away is to clean up areas where they are likely to breed.*

### **Check windows**

- Check window screens for holes and make sure they fit snugly into the window frame, so mosquitoes will not get indoors.
- If you don't have screens, consider keeping windows closed between the hours of dusk and dawn.

### **Mosquito control in your community**

A decision to use mosquito larviciding or adulticiding requires a local risk assessment along with consultation from your local Medical Officer and provincial authorities. In Canada, all pesticides are registered by Health Canada's Pest Management Regulatory Agency (PMRA). Once this agency has made a decision to register a pesticide product in Canada, the Ontario Ministry of the Environment is responsible for regulating its sale and use mainly through training, licensing and permit requirements.

Registered pesticides can be used at two different points in the life cycle of a mosquito; at the larva stage and at the adult stage.

### **About the use of pesticides**

For more information the Ontario Ministry of the Environment can be contacted through MOHLTC INFOLine on questions regarding pesticide use for West Nile virus.

### **Larvicides**

In the larva stage, pesticide products called larvicides are placed in stagnant water which is where mosquitoes prefer to lay their eggs (e.g., storm sewers). Larvicides can only be sold at licensed vendor outlets and applied by trained and licensed applicators or trained technicians. The licensed applicator must obtain a permit issued by the Ontario Ministry of the Environment.

*A permit issued by the Ontario Ministry of the Environment must be obtained prior to the use of larvicides.*

There are a number of larvicides registered by Health Canada. Larvicides that cause minimal impact to the environment and do not present unacceptable risks to human health will be permitted by the Ontario Ministry of the Environment. The public must receive advance notice before the application of a larvicide in their community.

### **Adulticides**

Control of adult mosquitoes involves the application of pesticides called adulticides in late evening when adult mosquitoes are most active and mosquito control is most effective. There are a number of pesticides to control adult mosquitoes registered by Health Canada. For disease control programs Health Canada supports the use of malathion applied by ground equipment in urban areas. Adulticides are applied by trained and licensed applicators. Advance notice must be given to the public before an adulticide is applied in a community.

The use of adulticides might be necessary only when there is a significant risk to human health from West Nile virus and when other disease prevention or mosquito control measures either have failed or would clearly be inadequate to stop the spread of the virus.

Please refer to the fact sheets available for the Ontario Ministry of the Environment that refer to mosquito adulticiding. They outline procedures that the public should know and follow to reduce any potential exposure.

### **Fighting the West Nile virus.**

#### **The Ontario Government's action plan**

Ontario's Ministry of Health and Long-Term Care (MOHLTC) is launching an aggressive seven-point action plan to combat West virus and will be spending \$100 million over the next five years.

#### **1. New lab capabilities.**

We're adding new staff and equipment to provide new provincial testing capabilities, reducing the time it takes to get WNV test results.

#### **2. Tracking the virus.**

The Ministry will be tracking the migration of the virus through reporting of infected birds, livestock and of course, the mosquitoes themselves.

#### **3. Education.**

We'll keep you informed of developments with WNV and advise you on how to protect yourself and your family.

#### **4. Mosquito control.**

Funding is being made available to every Public Health Unit to retain mosquito control personnel for larviciding and, as a last resort, adulticiding.

#### **5. Early Warning.**

A pilot project is being implemented for an early warning system to better track the outbreak of the virus and to be able to make more timely decisions on its management.

#### **6. Community Exposure Study.**

In Halton Region we're conducting voluntary Blood testing to determine how widespread the disease is and the potential it has for spreading.

#### **7. Research.**

The MOHLTC will continue its consultation with communities and with national and international healthcare professionals to advance and maintain an ongoing flow of information on West Nile virus.

### **Find out more about West Nile virus**

#### **Government of Ontario**

Health services and other resources:

[www.health.gov.on.ca](http://www.health.gov.on.ca)

Consumer-friendly health information:

[www.HealthyOntario.com](http://www.HealthyOntario.com)

INFOline: 1-877-234-4343

TTY: 1-800-387-5559

(Open during business hours, this service provides general information on healthcare).

Telehealth Ontario:

1-866-797-0000; TTY 1-866-797-0007

(Open 24/7, this service uses nurse practitioners to answer immediate health concerns).

Or contact your local public health unit.

#### **Some other sources**

Health Canada:

Tel.: 1-866-999-7612; TTY: 1-800-267-1245

[www.hc-sc.gc.ca/english/diseases/west\\_nile.html](http://www.hc-sc.gc.ca/english/diseases/west_nile.html)

Centers for Disease Control and Prevention,

Atlanta, Georgia: Tel.: 1-404-639-3311;

[www.cdc.gov/ncidod/dvbid/westnile/index/htm](http://www.cdc.gov/ncidod/dvbid/westnile/index/htm)

Ministry of the Environment

Tel.: 1-800-565-4923 [www.ene.gov.on.ca](http://www.ene.gov.on.ca)