



Northwestern Health Unit

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 or treatment.

What is West Nile Virus?

The West Nile virus is a mosquito-borne virus, infection may result in no symptoms, in mild illness such as 'West Nile fever', or in serious neurological illness such as encephalitis.

When was West Nile virus first discovered?

It was first reported in 1937 in the West Nile region of Uganda.

What are the symptoms of West Nile virus?

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.

Can one tell if a mosquito bite is serious?

Most mosquito bites cause itching and minor irritation. It is impossible to tell from a

mosquito bite on the skin surface whether the mosquito was carrying West Nile virus. Infection with the West Nile virus may result in no symptoms of illness, in mild illness such as 'West Nile fever', or in serious neurological illness such as encephalitis.

Research indicates that of those who are infected with West Nile virus, about one out of five of those individuals will show symptoms. Most people who become infected will experience no symptoms or have very mild illness.

Is there a test 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 become ill with symptoms suggestive of West Nile virus within 14 days, see a doctor right away. He or she will contact Canadian Blood Services if West Nile virus infection is suspected.



How is the virus spread?

West Nile virus is spread to humans by the bite of an infected mosquito. Mosquitoes become infected by biting an infected bird. The virus is not spread by person-to-person contact through touching or the oral or respiratory route, such as coughing, sneezing, or drinking from a shared cup. It does not appear to be spread directly from birds to humans; however, individuals should avoid handling of dead birds. West Nile virus is not known to be transmitted from mammals, such as horses, to humans. International research has linked transmission of West Nile virus through blood transfusion, and further study is being done to confirm if the virus can be passed from a mother to her unborn child and through breast milk.

What about the use of pesticides to control mosquitoes?

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 Ministry of the Environment is responsible for regulating its sale and use mainly through training, licensing and permit requirements.

How are pesticides used to kill mosquitoes?

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

Larvicides

In the larva stage pesticide products called larvicides are placed in stagnant water which is where mosquitoes prefer to lay their eggs for the larva to hatch (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 Ministry of the Environment. There are a number of larvicides registered by PMRA. Larvicides that cause minimal impact to the environment and do not present unacceptable risks to human health will be permitted by the 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 PMRA. Adulticides are applied by trained and licensed applicators. Advance notice must be given to the public before an adulticide is applied in a community.

Individuals can take steps to minimize their exposure by knowing when pesticide spraying will be carried out in their community, and by remaining indoors during application in the immediate area.

How can I protect myself and my family against West Nile virus?

Protect yourself and your family by following these simple steps:

1. Covering up

Mosquitoes are most active between dusk and dawn. When outside during this time, cover up. Mosquitoes are attracted to darker, more intense colours so make sure you wear light coloured clothing, including long sleeved shirts or jackets, long pants and tuck pants into socks for extra protection.

2. Using insect repellent

Use only those insect repellents that are federally regulated, such as those that contain DEET (N, N-diethyl-m-toluamide). The amount of DEET in the insect repellent should be no greater than 30% for adults and no greater than 10% for children.

- Apply repellent sparingly on exposed skin and clothing. Do not use under clothing.
- Do not use repellent on open wounds or irritated or sunburned skin.
- Do not get repellent 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.

3. Cleaning 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. Look around your house and property and get rid of places that are mosquito-friendly.

4. Removing 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.
- Change water in bird baths every other day.

5. Checking swimming or wading pools:

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

6. Always checking and clearing eaves and drains:

- 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.

7. Regular yard and lawn maintenance:

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.

- The compost pile is not off limits to mosquitoes. Turn over compost frequently.
- Fill in low depressions in lawn areas
- Clear out dense shrubbery where mosquitoes like to rest.

What about the use of DEET on 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. Health Canada also advises not to apply DEET more than three times a day to children between 2-12 years of age.

Where can I get more information?

The best way to get healthy is to get informed. There are many health information sources available to you. This Fact Sheet is one of them. Here are some others.

Government of Ontario

For information about health services and resources :

www.health.gov.on.ca

For consumer-friendly health tips and information :

www.HealthyOntario.com

INFOline: 1-877-234-4343;

TTY: 1-800-387-5559

Telehealth Ontario:

1-866-797-0000;

TTY: 1-866-797-0007

INFOline is open during business hours and can provide general information on healthcare.

Telehealth Ontario is a 24/7 service which uses nurse practitioners to answer your immediate health concerns.

Some other sources

Health Canada:

Tel.: 1-866-999-2991;

TTY: 1-800-267-1245

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

[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

For more information please contact the
Northwestern Health Unit:

Tel: 1-807-468-3147

www.nwhu.on.ca