

General Questions and Answers

Q: What is West Nile Virus?

A: West Nile Virus is a mosquito-borne virus that results in no symptoms in 70-80 % of the population, in 20% of the population it results in flu-like symptoms and in less than 1% of the population it results in severe illnesses such as encephalitis (inflammation of the brain) or meningitis (inflammation of the lining of the brain and spinal cord).

Q: How is West Nile Virus spread?

A: West Nile virus is spread to humans by the bite of an infected mosquito. A mosquito becomes infected by biting a bird that carries the virus. West Nile Virus is not spread by person-to-person contact such as touching, kissing or caring for someone who is infected.

Q: What are the odds that a mosquito that bites me will give me West Nile Virus?

A: Mosquito bites are a common occurrence, and less than 1% of mosquitoes are carriers for West Nile Virus.

Q: What are the symptoms of West Nile Virus?

A: 70 - 80% of people who are bitten by a mosquito that is infected with the West Nile Virus will have no symptoms because their immune system is able to fight the virus effectively. 20% will experience mild illness with fever, headache and body aches and will fully recover. Some individuals, particularly the elderly, those who are currently dealing with other health concerns and people with suppressed immune systems, are at risk of having complications. West Nile Virus can cause encephalitis (inflammation of the brain) that

results in rapid onset of severe headache, high fever, stiff neck, confusion, loss of consciousness (coma), paralysis and muscle weakness. Death might occur in some instances.

Q: What is the incubation period in humans (i.e., time from infection to onset of disease symptoms) for West Nile encephalitis?

A: Usually 5 to 15 days.

Q: A mosquito has bitten me. Should I be tested for West Nile Virus?

A: No. Most mosquitoes are not infected with the West Nile Virus. Illnesses related to mosquito bites are rare. However, you should see your naturopathic doctor or medical doctor if you develop symptoms such as high fever, confusion, muscle weakness, severe headaches, stiff neck, or if your eyes become sensitive to light. Patients with mild symptoms recover completely, and do not require any specific medication or laboratory testing.

Q: Should I use insect repellents to prevent being bitten by mosquitoes?

A: Prevention is always an integral part of health. There are a number of natural and chemical insecticides. The chemical insecticides, such as those with DEET are known to offer protection, but there are also potential side effects ranging from skin reactions to neurological problems, especially with young children. Natural insecticides are an effective and safe way of repelling mosquitoes, but they may have to be applied more frequently. It is important to consider your current state of health and to weigh the risks of the insect repellent versus the risk of side effects or illness when determining which insect repellent is best for you.

West Nile Virus – General Patient Guidelines for Prevention

Prevention of West Nile Virus (WNV) can be looked at from three perspectives:

- 1) Immune health to prevent the risk of illness from WNV
- 2) Not allowing mosquitoes a breeding environment.
- 3) Avoidance of mosquito bites.

1) Immune health to prevent the risk of illness from WNV.

People don't get sick from WNV because they don't use the right precautions; they get sick because they have a weakened immune system. If you have any concerns or indications that your immune system is not functioning optimally, then work with your naturopathic doctor to address your specific health concerns. Some general recommendations for maintaining a strong immune system include:

Proper nutrition and strong digestive function:

- At least 4 servings of fresh fruit and vegetables a day to ensure adequate fiber;
- Garlic, onions, thyme and oregano help boost the immune system and fight off viruses;
- Avoid sugar, caffeine and alcohol which depress immune function and
- Drink 6-8 glasses of water a day to ensure that toxins are easily removed from the body.

General hygiene guidelines:

- Ensure adequate rest and sleep;
- End showers with cold water to boost the immune system;
- Spend five to ten minutes a day focusing on your breathing; spend twice as long on the exhalation as the inhalation;

- Remember that emotional stress can depress the immune system;
- Engage in stress reduction exercises, meditation, massage or acupuncture to lower stress.

2) Do not allow mosquitoes a breeding environment

- Standing, stagnant water is a breeding ground for mosquitoes (mosquitoes can breed in any puddle that lasts more than 4 days).
- Remove all containers where rainwater collects or where there is stagnant water. This includes toys around the yard; standing water in old tires, cemetery urns, buckets, plastic covers and drain gutters.
- Empty and change the water in bird baths, fountains, wading pools, rain barrels and potted plant trays at least once a week if not more often; keep swimming pools treated and circulating.

3) Avoid mosquito bites

- Mosquitoes are most active at dawn, dusk or in the early evening, especially during days of high heat and humidity (April to October). Therefore, when going outside in the evening, wear long sleeves and light colored long pants with high boots or the pant legs pulled close to the calf.
- Make sure window and door screens are 'bug tight' and replace your outdoor lights with yellow 'bug' lights; use camping nets when camping outdoors.
- Essential Oils: 20 drops Eucalyptus oil, 20 drops Cedar wood oil, 10 drops Tea Tree oil, 10 drops Geranium oil mixed with 2 oz carrier oil. Mix together and test on a small area of the skin for sensitivities. Apply to the skin avoiding the eye area. Or look for other natural insect repellents that use essential oils such as citronella or lavender oil. There are a number of excellent natural bug repellants on the market, look for those

manufactured by: St. Francis Herbs, Aubrey, Thursday Plantation and EcoTrend.

- Other options for repelling mosquitoes: plant marigolds around the yard, the flowers give off a smell that bugs don't like; pure vanilla (Mexican / Dominican Republic) mixed 1/2 and 1/2 with water can be applied to the skin to repel mosquitoes or apply Avon 'Skin so Soft' hand cream or bath oil.

Note:

Insect repellents with a high concentration of DEET (N,N-diethyl-meta-toluamide) are effective, however DEET is a slightly toxic compound. DEET is not a natural product and the research behind DEET is focused primarily on the insect repellent properties not the long-term health risks. There are numerous precautions around the use of DEET products due to potential risks and side effects of its use, especially prolonged or continued use. The percentage of reported side effects is not high, but the known toxic effects of DEET products are of greatest risk to young children because of the increased absorption through the skin and range from mild allergic skin reactions to nervous system problems.

There is increasing research that indicates that caution should be taken if you choose to use DEET products. It is important to weigh the risk of illness from WNV against the risk of side effects from DEET. To further understand the risks of DEET consult your naturopathic doctor.

If any symptoms appear consult your health care provider, naturopathic doctor or the CAND for a referral.

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