

Sting of Summer

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(Registered Nurse, Bachelor of Nursing, Pretty Nice Gal)

Bev Stevenson is a veritable human encyclopedia of somewhat useless, mostly amusing but occasionally helpful stories and dubious facts. She works as an Emergency Nurse in Calgary, a Stand Up Comic, and is a Strathcona Resident.

Who could have predicted Calgary's June 2005 torrential rainfall and flooding after so many years of near-drought conditions? After the rain, the benefits of green fields and happy flowers were offset by the proliferation of mosquitoes. We all know how annoying those critters can be, but let's explore how dangerous mosquitoes can be to your health.

Mosquito Bites

Did you know that only female mosquitoes bite? She is attracted to you not only by your charm and quick wit, but by your body heat, perspiration, lactic acid and the carbon dioxide that you exhale with every breath – even from up to 100 feet (36 meters) away! Her saliva contains proteins that help thin your blood so that she can drink her fill (about 5 microliters of blood per bite). Yum! Your body reacts to those proteins with swelling and itching of the 'bite sites' which, incidentally are called 'wheals'. (No, I didn't spell it wrong!)

How should you treat mosquito bites?

Keep the bite areas clean, wash with soap & water. Try to avoid scratching the wheals even though they might be itchy and irritating. You can use Calamine Lotion or over-the-counter cortisone creams for the itch. Some folks recommend applying ice for a few minutes at a time. My mom's idea of baking soda and water paste applied to the bites seems to help, too.

Mosquito-Bourne Diseases

Mosquitoes can carry some nasty diseases that are caused by viruses, bacteria and parasites such as:

- **Malaria** (actually a parasite that grows in the bloodstream), a potentially fatal condition, produces symptoms such as

fever, chills, and muscle aches. It is only prevalent in tropical and subtropical areas. >whew!<

- **Yellow Fever** produces similar symptoms that can also be fatal, and is found only in Africa. Unfortunately treatment is symptomatic only (ie there is no cure).
- **Dengue** (den gay) Fever, a virus that causes flu-like symptoms to hemorrhagic fever; a very dangerous disease in children. Dengue made its way to the United States in 1985.
- **Viral Encephalitis**. Symptoms include high fever, stiff neck, headache, confusion and fatigue. It is becoming more prevalent in the Eastern United States.
- **West Nile Virus**. Now, here's one that can occur here in Alberta. Read on!

Quick Factlettes:

- There were 325 cases of confirmed West Nile Virus in Canada in 2002. Of those, only two were detected in Alberta, all of which are believed to have been contracted outside of the province.
- The first confirmed evidence of the virus was found in an infected bird near Camrose in July 2003.
- In Alberta, West Nile Virus is most likely to be transmitted to humans only by the mosquito *Culex Tarsalis* (Good thing not all 43 Alberta mosquito species mosquitoes carry it, hey?)
- The risk of contracting the illness in Canada is quite low.
- Human infection occurs when a mosquito carrying the virus from a previous 'meal' (an infected bird or animal) then bites YOU. (That means that not all mosquitoes are carrying the disease.)

West Nile Symptoms

Most people infected with West Nile Virus don't get sick and probably are unaware that they have it.

Some infected persons will develop flu-like symptoms such as fever, headache and body aches within 2 – 15 days of infection, sometimes accompanied by mild rash or swollen lymph glands.

One in five infected persons will develop West Nile Fever evidenced by severe headache and body aches and possibly a rash.

Older persons and those suffering from weak immune systems or chronic medical conditions are of course at greater risk of developing more serious symptoms (from everything, not just West Nile Virus) such as inflammation of the brain and/or spinal cord (meningitis or encephalitis).

Even fewer infected humans will develop West Nile Neurological Syndrome; severe headache, high fever, stiff neck, vomiting, drowsiness, altered mental status, weakness and paralysis. This syndrome can cause death. Lasting effects are possible but poorly understood at this point and it is uncertain whether humans can develop long-lasting immunity after they've been infected. It's just a better idea altogether to avoid getting the disease in the first place!

Other Mosquito Bite Problems

Some folks are allergic to mosquito bites, developing severe inflammation at the wheals, dizziness, nausea and generalized malaise. Just scratching itchy bites can invite infection by giving bacteria an entrance into open areas in the skin. Local infection is evidenced by swelling, redness and perhaps pus in the wound.

Worsening infection, *Cellulitis* (a fancy medical name for an infection of the tissue), can ensue. The infected site becomes red, swollen, painful, and hot to touch, and usually requires treatment with oral antibiotics. Left untreated, cellulitis can worsen and spread causing general malaise and fever. Occasionally 'tracking' of redness & infection is visible up a limb following along the blood vessels. Treatment of cellulitis includes intravenous antibiotics, pain & fever control. In the worst-case scenario, untreated cellulitis can lead to a body-wide infection sepsis, and it is possible that an affected limb could be lost. Septic persons are quite ill and require aggressive treatment in hospital.

What can you do to minimize your risk?

The Health Canada Website recommends:

- Limit time outdoors at dawn and dusk when mosquitoes are most active
- Wear light-colored long-sleeved shirts, long pants, and a hat when outdoors.
- Use insect repellents. Read and follow the manufacturers' directions for safe use. For more detailed information on how to use insect repellent correctly and safely, please refer to the following website: <http://www.pmra-arla.gc.ca/english/pdf/pnotes/deet-e.pdf>
- Make sure that door and window screens fit tightly and have no holes.
- Remove standing water from your yard. Sources can include pool covers, saucers under flowerpots, pet bowls and wading pools. Empty and clean birdbaths twice a week, and clean eaves troughs regularly to prevent clogs that can trap water.

Other ideas:

Always follow directions when using DEET sprays with children. DEET is now considered to be relatively safe for use on children in moderation and at concentrations <30%.

Infants should NOT be sprayed excessively with DEET formulas, or exposed to prolonged periods to the great outdoors until they have developed some immune mechanisms.

If you have an ornamental pond, consider stocking it with fish that eat mosquito larvae or add a fountain to circulate the water

If you plan any travel to tropical countries, you should contact Calgary's Travel Clinic (located at 323 7th Avenue SE 237-6696) long before your departure date for more information about what prophylactic medication or shots you should have before you leave.

Don't let mosquitoes bug you!