



Powassan Virus Fact Sheet: Powassan Virus Frequently Asked Questions (FAQ)

What is Powassan virus?

Powassan (POW) virus is related to some mosquito-borne viruses, including West Nile virus. The virus is named after Powassan, Ontario, where it was first discovered in 1958. Two types of Powassan virus have been found in North America.

How do people get infected with POW virus?

POW virus is passed to people by ticks:

- One type of POW virus is carried by *Ixodes scapularis* (known as the blacklegged tick or deer tick), the same tick that transmits Lyme disease, human anaplasmosis, and babesiosis. The blacklegged tick is common in many wooded areas of north central, east central, and southeast Minnesota.
- Another type of POW virus is carried by *Ixodes cookei*, a related tick species that usually feeds on woodchucks or other medium-sized mammals instead of humans. *I. cookei* has also been found in wooded areas in Minnesota.

A tick needs to be attached to a person for a certain length of time before it can cause disease. This time interval is not known for POW virus, but it may be shorter than the attachment time needed for Lyme disease (24-48 hours) or anaplasmosis (12-24 hours).

What type of illness is caused by POW virus?

- POW virus infects the central nervous system and can cause encephalitis (inflammation of the brain) and meningitis (inflammation of the membranes that surround the brain and spinal cord).
- Signs and symptoms of disease caused by POW virus can include but are not limited to fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, and memory loss.
- About 10% of patients reported with POW virus infection die from their infection, and long-term problems may persist among those who survive. However, it is possible that some people infected with POW virus experience milder illness or do not have any symptoms.

How common is POW disease?

Physician-diagnosed POW disease is very rare. Fewer than 60 cases have been identified in the U.S. and Canada since 1958. From 2008-2010, six cases of POW encephalitis or meningitis have been reported in Minnesota. These cases lived in or had visited wooded areas in north central or east central counties (Cass, Carlton, Hubbard, Itasca, or Kanabec).

It is possible that other cases of suspected viral encephalitis or meningitis during times of peak tick-borne disease transmission (May to October) are due to POW virus.



When and where are people at risk for POW virus?

POW virus is found in northern parts of North America and northeast Asia. Initial laboratory testing in 2009-2010 found blacklegged ticks infected with POW virus in parts of north-central, east-central, and southeastern Minnesota, areas highly endemic for other tick-borne diseases such as Lyme disease.

It is possible that people are at risk of infection with POW virus anywhere the blacklegged tick is found. The blacklegged tick is common in many wooded and brushy areas of north central, east central, and southeast Minnesota. This tick is most active from spring until mid-summer and again in the fall.

What is the risk of POW disease in Minnesota?

We believe that the risk of infection with POW virus in Minnesota is low. However, it is a very serious disease.

How can people protect themselves from POW virus and other tick-borne infections?

Repellents are important tools in preventing tick-borne illness. They are especially important in preventing POW disease because of its severity and possibly shorter transmission time. When spending time in wooded or brushy habitat in north central, east-central, and southeast Minnesota, people should protect themselves against tick bites by wearing repellents containing DEET or permethrin.

Other precautions include wearing long pants and light-colored clothing, staying away from the brush and woods, and doing thorough tick checks after spending time in the woods. These precautions are most important from late spring until mid-summer, and again in the fall months, when blacklegged ticks are active.

People should seek medical care if they develop fever, chills, rash, headache, body aches, altered mental status, or other signs and symptoms of tick-borne illness after doing outdoor activities in these areas.

Additional information can be found on the Preventing Tick-borne Disease web page at <http://www.health.state.mn.us/divs/idepc/dtopics/tickborne/prevention.html>.

Question/concerns?

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