**Disease Fact Sheet**

**Powassan Virus Disease**

**What is Powassan virus disease?**
First discovered in 1958 in Canada, Powassan virus disease is a rare, but often serious disease that is caused by a virus spread by infected ticks. Powassan virus is one of a group of arthropod-borne viruses (arboviruses) that can cause inflammation of the brain (encephalitis). Approximately 100 cases of Powassan virus disease were reported in the United States over the past 10 years. Ohio has never reported a case.

**How do people get infected with Powassan virus?**
Powassan virus is transmitted by the bite of an infected tick. Powassan virus has been found in *Ixodes cookei* (groundhog tick), *Dermacentor andersoni* (wood tick), *Ixodes scapularis*, *Ixodes spinipalpus* and *Ixodes marxi* ticks. In Ohio, the greatest concern would be *Ixodes cookei* and *Ixodes scapularis*. Powassan virus is not directly transmitted from person-to-person.

**Where and when have most cases of Powassan virus disease occurred?**
Most cases have occurred in the northeastern and Great Lakes regions of the United States during late spring, early summer, and mid-fall when ticks are most active.

**Who is at risk for infection with Powassan virus?**
Anyone bitten by a tick in an area where the virus is commonly found can get infected with Powassan virus. The risk is highest for people who live, work, or recreate in brushy or wooded areas because of the greater exposure to potentially infected ticks.

**How soon do people get sick after getting bitten by an infected tick?**
The incubation period (time from tick bite to onset of illness) ranges from one week to one month.

**What are the symptoms of Powassan virus disease?**
Many people who become infected with Powassan virus do not develop any symptoms. Powassan virus can cause encephalitis (inflammation of the brain) and meningitis (inflammation of the membranes that surround the brain and spinal cord). Symptoms can include fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, and seizures.

**How is Powassan virus disease diagnosed?**
Diagnosis is based on a combination of signs and symptoms and laboratory tests of blood or spinal fluid. These tests typically detect antibodies that the immune system makes against the viral infection.

**What is the treatment for Powassan virus disease?**
There is no specific medicine to cure or treat Powassan virus disease. Antibiotics are not effective against viruses, and no effective antiviral drugs have been discovered. Treatment for severe illnesses may include hospitalization, respiratory support, and intravenous fluids.

**Is there a vaccine for Powassan virus disease?**
There is no human vaccine for Powassan virus disease, and none are currently being developed.
How can I reduce the chance of getting infected with Powassan virus?
The best way to prevent Powassan virus disease is by protecting yourself from tick bites.
- Avoid contact with ticks by avoiding wooded and bushy areas with high grass.
- Apply insect repellents to bare skin according to label instructions.
  - Repellents containing DEET can be applied to exposed skin but only last a few hours.
  - Clothing and gear can be treated with permethrin, which remains protective through several washings.
- Find and remove ticks immediately before they have a chance to bite and attach.
  - Bathe or shower (preferably within 2 hours of being outdoors) to wash off and find ticks on your body.
  - Conduct a full-body tick check. Parents should thoroughly check children, especially in their hair.
  - Also examine clothing, gear, and pets.

What should I do if I think a family member might have Powassan virus disease?
If you are concerned that someone you know might have Powassan virus disease, consult a healthcare provider.

For more information, please visit these websites:
- CDC Powassan Virus Disease: www.cdc.gov/powassan
- CDC Ticks: www.cdc.gov/ticks
- U.S. Environmental Protection Agency (EPA) Registered Insect Repellents: www.epa.gov/insect-repellents
- CDC Insect Repellent Use and Safety: www.cdc.gov/westnile/prevention/
- CDC Powassan Human Case Maps: wwwn.cdc.gov/arbovernet/maps/ADB_Diseases_Map/