

## Frequently Asked Questions

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### What is Powassan virus disease?

Powassan (POW) virus disease is a rare, but often serious disease that is caused by a virus spread by infected ticks. Approximately 75 cases of POW virus disease were reported in the United States over the past 10 years. POW virus is one of a group of arthropod-borne viruses (arboviruses) that can cause inflammation of the brain (encephalitis).

### How do people get infected with Powassan virus?

POW virus is transmitted by the bite of an infected tick. POW virus is not transmitted directly 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 the 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 POW virus. The risk is highest for people who live, work or recreate in brushy or wooded areas, because of 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 POW virus do not develop any symptoms. POW 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 POW virus disease. Treatment for severe illnesses may include hospitalization, respiratory support, and intravenous fluids.

### How can I reduce the chance of getting infected with Powassan virus?

The best way to prevent POW virus disease is by protecting yourself from tick bites. There is no vaccine against POW virus.

- 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 after 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.

## Symptoms & Treatment

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### Symptoms

- Many people who become infected with Powassan (POW) virus do not develop any symptoms.
- The incubation period (time from tick bite to onset of illness) ranges from about 1 week to 1 month.
- POW virus can infect the central nervous system and 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.
- Approximately half of survivors have permanent neurological symptoms, such as recurrent headaches, muscle wasting and memory problems.
- Approximately 10% of POW virus encephalitis cases are fatal.

### Treatment

- There are no vaccines or medications to treat or prevent POW virus infection.
- If you think you or a family member may have POW virus disease, see your health care provider for evaluation and diagnosis.
- Persons with severe POW illnesses often need to be hospitalized. Treatment may include respiratory support, intravenous fluids, and medications to reduce swelling in the brain.

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