

Jamestown Canyon Virus in Pennsylvania

VECTOR MANAGEMENT

Pennsylvania
Department of
Environmental Protection



What is Jamestown Canyon Virus?

Jamestown Canyon virus (JCV) can cause encephalitis (inflammation of the brain) and is passed to people from the bite of infective mosquitoes. It was first discovered in Jamestown Canyon, Colorado in 1961. An average of 23 people are affected annually in the United States, with most cases occurring in the upper Midwest states. There has been one reported case of JCV human illness in Pennsylvania in 2013 and one positive horse in 2024. JCV was first detected in mosquitoes in Pennsylvania in 2023.

How is JCV Transmitted?

Jamestown Canyon virus is spread to people by infected mosquitoes and is not spread by coughing, sneezing, or contact with someone who is infected. The mosquito species involved in JCV transmission differ than the species involved in West Nile virus transmission and are aggressive biters. Mosquito species involved in JCV transmission are typically associated with flooding events. In nature, JCV is maintained in deer, elk, and other ungulates. Most JCV cases occur between April and September.

What are JCV Symptoms?

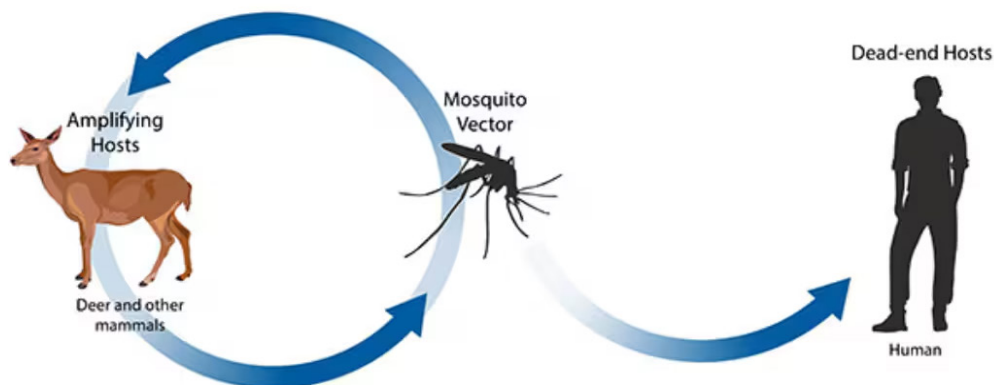
Many people infected with JCV do not have symptoms. For people with symptoms, the time from infection to feeling sick ranges from a few days to 2 weeks. Initial symptoms are mild and flu-like but can develop to severe with stiff neck, difficulty speaking, loss of coordination, confusion, or seizures.

Jamestown Canyon virus can cause severe disease, including infection of the brain (encephalitis) or the membranes around the brain and spinal cord (meningitis). About half of patients reported with symptomatic JCV disease are hospitalized. Deaths associated with JCV infection are rare.

How is JCV Diagnosed and Treated?

Reach out to your healthcare provider if you or a family member might have JCV. After evaluating signs and symptoms, your doctor can perform laboratory testing of blood or spinal fluid. There is no cure or vaccine, nor do antibiotics have any effect on JCV. Treatments such as rest, fluid intake, and over-the-counter pain medications are used to treat symptoms. Patients with severe symptoms can be hospitalized to receive support for hydration, pain medication, and nursing care.

Jamestown Canyon Virus Transmission Cycle



Jamestown Canyon Virus in Pennsylvania

How Can I Protect Myself?

The best way to protect against Jamestown Canyon Virus is by preventing mosquito bites. Mosquitoes that can transmit JCV are aggressive biters. In addition to breeding in flooded woodlands and meadows, these mosquitoes can also breed in artificial containers.

If you are experiencing mosquito bites while enjoying the outdoors, please take these protective measures:



- Wear long sleeves and pants.
- Use insect repellents containing DEET, picaridin, or oil of lemon eucalyptus.
- Limit activity during dusk and dawn, when mosquitoes are most active.



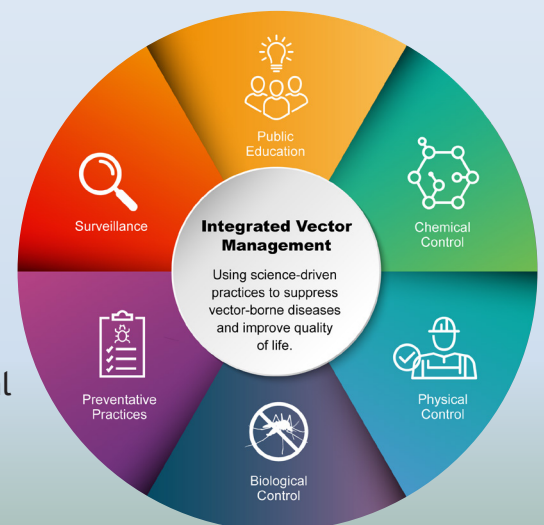
Please visit our website at
www.dep.pa.gov/westnile



What Else is Being Done for Protection Against Mosquitoes?

The Pennsylvania Department of Environmental Protection and participating counties implement various tools and strategies to control mosquito populations. This reduces the transmission of mosquito-borne disease and allows the public to enjoy outdoor spaces.

Our integrated pest management plan (IPM) incorporates mosquito surveillance, public outreach and education, source reduction, and larval and adult control.



Please visit our website where you can learn more about mosquito control in your area and see what efforts are made to combat other mosquito-borne diseases such as West Nile virus. You can also find your county contact should you have any mosquito concerns.