

Eastern Equine Encephalitis (EEE) Virus Confirmed in Mosquitoes from Townsend

DATE: 8/3/20

TOWN: Townsend

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The Massachusetts Department of Public Health (MDPH) announced on 8/3/20 that EEE virus has been detected in mosquitos collected from Townsend, Massachusetts; the mosquitoes are a mammal-biting species. As a consequence of this detection the Massachusetts Department of Public Health has raise the EEE risk level for Townsend to Low.

EEE is a rare but serious illness spread by the bite of an infected mosquito. While EEE can infect people of all ages, people under 15 years of age or over 50 years of age are at greatest risk for serious illness.

By taking a few, common-sense precautions, people can help to protect themselves and their loved ones: In addition to the precautions provided below the MDPH recommendations, based on the current risk level, are underlined.

Avoid Mosquito Bites

- **Be Aware of Peak Mosquito Hours** - The hours from dusk to dawn are peak biting times for many mosquitoes. Consider rescheduling outdoor activities that occur during evening or early morning. If you are outdoors at any time and notice mosquitoes around you, take steps to avoid being bitten by moving indoors, covering up and/or wearing repellent. Avoid outside areas with obvious mosquito activity
- **Clothing Can Help** reduce mosquito bites. Although it may be difficult to do when it's hot, wearing long-sleeves, long pants and socks when outdoors will help keep mosquitoes away from your skin. Use mosquito netting on baby carriages and playpens.
- **Apply Insect Repellent** when you go outdoors. Use a repellent with **DEET** (N, N-diethyl-m-toluamide), **permethrin**, **picaridin** (KBR 3023), **IR3535** or **oil of lemon eucalyptus** [p-methane 3, 8-diol (PMD)] according to the instructions on the product label. DEET products should not be used on infants under two months of age and should be used in concentrations of 30% or less on older children. Oil of lemon eucalyptus should not be used on children under three years of age. Permethrin products are intended for use on items such as clothing, shoes, bed nets and camping gear and should not be applied to skin. Wear mosquito repellent when outdoors, especially between dawn and dusk.

Mosquito-Proof Your Home

- **Drain Standing Water** – Many mosquitoes lay their eggs in standing water. Limit the number of places around your home for mosquitoes to breed by either draining or getting rid of items that hold water. Check rain gutters and drains. Empty any unused flowerpots and wading pools, and change water in birdbaths frequently.
- **Install or Repair Screens** - Some mosquitoes like to come indoors. Keep them outside by having tightly-fitting screens on all of your windows and doors.

While the Board of Health continues to work closely with the MDPH and other agencies, we are also making the MDPH fact sheets for EEE available for dissemination on the Board of Health and Town websites, contacting the Council on Aging and the School Superintendent to inform them of the precautions that be taken to minimize the risk of contracting EEE.

Information about EEE and reports of current and historical EEE virus activity in Massachusetts can be found on the MDPH website at www.mass.gov/dph/mosquito.

EEE (Eastern Equine Encephalitis)

What is Eastern Equine Encephalitis?

Eastern equine encephalitis (EEE) is a rare but serious disease caused by a virus.

How is the EEE virus spread?

The virus that causes EEE is spread through the bite of an infected mosquito. In Massachusetts, the virus is most often identified in mosquitoes found in and around freshwater, hardwood swamps. More information about different types of mosquitoes that can spread the virus can be found on the MDPH website at www.mass.gov/dph/mosquito.

EEE virus particularly infects birds, often with no evidence of illness in the bird. Mosquitoes become infected when they bite infected birds. Although humans and several other types of mammals, particularly horses and llamas, can become infected, they do not spread disease.

How common is EEE in Massachusetts?

EEE is a very rare disease. Since the virus was first identified in Massachusetts in 1938, just over 110 cases have occurred. The majority of cases typically have been from Bristol, Plymouth, and Norfolk counties. However, in an active year human cases can occur throughout the state.

Outbreaks of EEE usually occur in Massachusetts every 10-20 years. These outbreaks will typically last two to three years. The most recent outbreak of EEE in Massachusetts began in 2019 and included twelve cases with six fatalities.

What are the symptoms of EEE?

The first symptoms of EEE are fever (often 103° to 106°F), stiff neck, headache, and lack of energy. These symptoms show up three to ten days after a bite from an infected mosquito. Inflammation and swelling of the brain, called encephalitis, is the most dangerous and frequent serious complication. The disease gets worse quickly and some patients may go into a coma within a week.

What is the treatment for EEE?

There is no treatment for EEE. In Massachusetts, about half of the people identified with EEE died from the infection. People who survive this disease will often be permanently disabled. Few people recover completely.

What can you do to protect yourself from EEE?

Since the virus that causes EEE is spread by mosquitoes, here are some things you can do to reduce your chances of being bitten:

- Schedule outdoor events to avoid the hours between dusk and dawn, when mosquitoes are most active.
- When you are outdoors, wear long pants, a long-sleeved shirt and socks. This may be difficult to do when the weather is hot, but it will help keep mosquitoes away from your skin.
- Use a repellent with **DEET** (N, N-diethyl-m-toluamide), **permethrin**, **picaridin** (KBR 3023), **IR3535** (3-[N-butyl-N-acetyl]-aminopropionic acid) or **oil of lemon eucalyptus** [p-menthane 3, 8-diol (PMD)] according to the instructions given on the product label. DEET products



concentrations of 30% or less on older children. Oil of lemon eucalyptus should not be used on children under three years of age. Permethrin products are intended for use on items such as clothing, shoes, bed nets and camping gear and should not be applied to skin.

- Keep mosquitoes out of your house by repairing any holes in your screens and making sure they are tightly attached to all your doors and windows.
- Remove areas of standing water around your home. Here are some suggestions:
 - Look around outside your house for containers and other things that might collect water and turn them over, regularly empty them, or dispose of them.
 - Drill holes in the bottom of recycling containers that are left outdoors so that water can drain out.
 - Clean clogged roof gutters; remove leaves and debris that may prevent drainage of rainwater.
 - Turn over plastic wading pools and wheelbarrows when not in use.
 - Change the water in birdbaths every few days; aerate ornamental ponds or stock them with fish.
 - Keep swimming pools clean and properly chlorinated; remove standing water from pool covers.
 - Use landscaping to eliminate standing water that collects on your property.
- More information on choosing and using repellents safely is included in the MDPH Mosquito Repellents fact sheet which can be viewed online at www.mass.gov/dph/mosquito. If you can't go online, contact the MDPH at (617) 983-6800 for a hard copy.

Mosquitoes can begin to multiply in any puddle or standing water that lasts for more than four days! Mosquito breeding sites can be anywhere. **Take action** to reduce the number of mosquitoes around your home and neighborhood. Organize a neighborhood clean up day to pick up containers from vacant lots and parks and to encourage people to keep their yards free of standing water. Mosquitoes don't care about fences, so it's important to remove areas of standing water throughout the neighborhood.

Where can I get more information?

- Your doctor, nurse, or health care clinic, or your local board of health (listed in the telephone directory under local government).
- The Massachusetts Department of Public Health (MDPH), Division of Epidemiology at (617) 983-6800 or on the MDPH Arbovirus website (www.mass.gov/dph/mosquito).
- **Health effects of pesticides**, MDPH, Bureau of Environmental Health at 617-624-5757.
- **Mosquito control in your city or town:** Mosquito control in Massachusetts is conducted through nine mosquito control districts. The State Reclamation and Mosquito Control Board (SRMCB) oversees all districts. Contact information for each district can be found online at www.mass.gov/state-reclamation-and-mosquito-control-board-srmcb. You may also contact the SRMCB within the Massachusetts Department of Agricultural Resources at 617-626-1777 or your local board of health.



Key to Color Coding on EEE Risk Map

Risk

What it means

What you can do

Remote

EEE is not usually found in your area

To prepare:

- Know your risk – check regularly at www.mass.gov/dph/mosquito
- Repair screens

Low

EEE may occur in your area

To prevent:

- Wear mosquito repellent between dusk to dawn
- Wear long sleeves and long pants from dusk to dawn
- Use mosquito netting on baby carriages and playpens

Moderate

EEE occurred in your area within the last year and/or there is EEE in mosquitoes in your area now

To prevent, add this:

- Wear mosquito repellent when outdoors, especially between dusk and dawn
- Avoid outside areas with obvious mosquito activity

High

Conditions likely to lead to infection of a person with EEE are occurring in your area

To prevent, add this:

- Adjust outdoor activity to avoid peak mosquito hours (from dusk to dawn)
- Avoid overnight camping, particularly near freshwater swamps where EEE activity is most likely

Critical

Excessive risk from EEE virus exists, a person with EEE infection has been identified in your area

To prevent, add this:

- Cancel or reschedule outdoor gatherings, organized sporting events, etc. to avoid peak mosquito hours (dusk to dawn)