

Frequently asked Questions Regarding EEE and Mosquitos

Updated 9/11/2019

I work in Sudbury. How do I get notified of critical Sudbury events such as EEE?

The Reverse 911 system notifies citizens and **non-citizens**, via phone, of critical information affecting the town. To sign up visit:

<https://www.smart911.com/smart911/registration/registrationLanding.action?cdnExternalPath=>

To sign up for Sudbury email alerts:

https://visitor.r20.constantcontact.com/manage/optin?v=001i6pY1oARoQIeN_zYNIG6NNvU99J70D_D

I am concerned about any mosquito spraying including larvicides and adulticides?

The East Middlesex Mosquito Control Project (EMMCP), to which Sudbury belongs, advises the Board of Health on issues regarding mosquitos. Sudbury's control program is a science-based approach managed by entomologist and other professionals. Routine early season helicopter and catch basin larvicide applications and targeted truck mounted adulticide spraying is coordinated based on trapping, historical data, and current conditions.

As a result of the local EEE human infection emergency, spraying was debated. The Sudbury Board of Health deliberated and voted to conduct truck mounted spraying as an effective way to reduce the mosquito population. The Massachusetts Department of Public Health (MDPH) supported this decision. The issue of mosquito control including larvicides and adulticides will be continually reviewed.

Where can I get information about aerial spraying? When is it being conducted? Was my area sprayed? Who is conducting it?

The Massachusetts Department of Public Health in conjunction with the Massachusetts Department of Agricultural Resources notified local officials that emergency spraying would begin on 9/10 and continue for 5-6 days in critically defined areas. Aerial Spraying can be postponed because of weather constraints, such as wind or precipitation. Spraying schedules are not being released. Coverage areas will be defined on the map the day after spraying. <https://massnrc.org/spray-map/MidWorNorSept2019.htm> . For concerns or inquiries call **617-626-1700 and 617-983-6800**. **Sudbury's town website contains information and links to MDPH. Visit <https://sudbury.ma.us/health/2019/09/10/eee-update-9-10-19-mass-dept-public-health-press-release/>**

When are the time periods that we should limit our outdoor exposure?

The types of mosquitos most likely to transmit EEE infection are likely to be out searching for food (targeting animals) at dusk, the time period between when the sun sets and it gets completely dark. The exact timing of this increased activity is influenced by many factors including temperature, cloud cover, wind and precipitation, and cannot be predicted precisely for any given day. Here, the approximate time of sunset and sunrise were used to establish standardized recommendations for avoiding outdoor activities during periods of high EEE risk.

This does not eliminate risk nor does it alleviate the need for the use of repellants or clothing for protection from mosquitos. **Personal protection is critical!**

Please make your own decisions regarding dusk to dawn protection based on the environmental conditions stated above and mosquito activity in your area. **Applying appropriate insect repellent at all times is advised when spending time outdoors!**

Week of	Time of Dusk	Time of Dawn
August 25, 2019	7:30 PM	5:45 AM
September 1, 2019	7:30 PM	5:45 AM
September 8, 2019	7:15 PM	5:45 AM
September 15, 2019	7:00 PM	6:00 AM
September 22, 2019	6:45 PM	6:00 AM
September 29, 2019	6:30 PM	6:15 AM
October 6, 2019	6:30 PM	6:15 AM
October 13, 2019	6:15 PM	6:30 AM
October 20 2019	6:00 PM	6:30 AM
October 27, 2019	6:00 PM	6:45 AM

¹ Adapted from *2019 Arbovirus Surveillance and Response Plan* at www.mass.gov/lists/arbovirus-surveillance-plan-and-historical-data

What is the Town's response to the confirmed case of Eastern Equine Encephalitis (EEE)?

The Sudbury Board of Health convened an emergency meeting on Sunday, September 8th to discuss an organized and appropriate response. The following measures were voted on and approved:

1. The Board voted unanimously to conduct town-wide truck mounted mosquito spraying to reduce the remaining mosquito population as an effective measure to reduce EEE risk. This action is supported by the Massachusetts Department of Public Health (MDPH) and will be conducted by the East Middlesex Mosquito Control Project.
2. The Board voted unanimously to continue advising residents to adhere to all MDPH recommendations and guidelines that can be found at <https://www.mass.gov/guides/eee-in-massachusetts>. These guidelines are continually being revised and residents are encouraged to visit the site frequently.
3. The Board voted unanimously to instruct the Director of Public Health to continue an educational campaign utilizing the town website and MDPH websites as primary methods to distribute information. The Board instructed the Health Director to prioritize EEE response and to attend all town meetings to support Boards and committees.

4. The Board voted unanimously to prioritize continued evaluation of current relevant data on EEE and response, including spraying. The Director must continually advise the Board until the threat is diminished and take appropriate action to protect public health.

All boards, committees, and staff are contributing to and an effective response.

Was the recent case of EEE contracted locally?

Yes

What is Eastern Equine Encephalitis (EEE) virus?

Eastern Equine Encephalitis (EEE) is a rare but serious disease caused by a virus. EEE is a rare disease that is caused by a virus spread by infected mosquitoes. EEE virus (EEEV) is one of a group of mosquito-transmitted viruses that can cause inflammation of the brain (encephalitis). In the United States, approximately 5-10 EEE cases are reported annually. Diagnosis is based on tests of blood or spinal fluid. These tests typically look for antibodies that the body makes against the viral infection.

How does the EEE virus spread to humans?

EEE transmission can occur (through a “bridge vector”) when certain mammal biting mosquito species bite a bird that is ill with the virus, and after the mosquito is infected with the virus it could bite a human or animal and transmit the EEE virus. Disease transmission does not occur directly from person to person.

What is the treatment for EEE?

There is no specific treatment for EEE. Antibiotics are not effective against viruses, and no effective anti-viral drugs have been discovered. Severe illnesses are treated by supportive therapy which may include hospitalization, respiratory support, IV fluids, and prevention of other infections.

What are the symptoms of EEE?

It takes 4 to 10 days after the bite of an infected mosquito to develop symptoms of EEE. Severe cases of EEEV infection (EEE, involving encephalitis, an inflammation of the brain) begin with the sudden onset of headache, high fever, chills, and vomiting. The illness may then progress into disorientation, seizures, and coma. Approximately a third of patients who develop EEE die, and many of those who survive have mild to severe brain damage. Consult your health care provider immediately if you develop any of these symptoms.

How can I protect myself and loved ones?

Prevent mosquito bites. There is no vaccine or preventive drug.

- Use insect repellent containing DEET, picaridin, IR3535 or oil of lemon eucalyptus on exposed skin and/or clothing. The repellent/insecticide permethrin can be used on clothing to protect through several washes. Always follow the directions on the package.
- Avoid spending time outdoors between dusk and dawn when mosquitoes are most active.
- Wear long sleeves and pants when weather permits.

- Have secure, intact screens on windows and doors to keep mosquitoes out.
- Eliminate mosquito breeding sites by emptying standing water from flower pots, buckets, gutters, barrels, and other containers. Drill holes in tire swings so water drains out. Keep children's wading pools empty and on their sides when they aren't being used.
- Personal protection is critical.

What population is most at risk?

Anyone in an area where the virus is circulating can get infected with EEEV. The risk is highest for people who live in or visit woodland habitats, and people who work outside or participate in outdoor recreational activities, because of greater exposure to potentially infected mosquitoes. Persons over age 50 and under age 15 and people with compromised immune systems seem to be at greatest risk for developing severe disease when infected with EEE. Overall, only about 4-5% of human EEE infections result in EEE illness.

Are your pets at risk for EEE?

Although very rare, Dog and Cats are susceptible to EEE virus. Most Dogs and cats recover fully. Horses, llamas and alpacas are all known to be susceptible to EEE. Animals become infected the same way humans become infected: by the bite of an infected mosquito. Treatment, diagnosis and symptoms are the similar to human cases. Call your veterinarian immediately if your pet exhibits any of these symptoms.

Which Mosquito repellent should I use?

Repellents that contain **DEET** (N, N-diethyl-m-toluamide), **permethrin**, **IR3535** (3-[N-butyl-N-acetyl]-aminopropionic acid) or **picaridin** (KBR 3023) provide protection against mosquitoes. In addition, **oil of lemon eucalyptus** [p-menthane 3, 8-diol (PMD)] has been found to provide as much protection as low concentrations of DEET when tested against mosquitoes found in the United States.

DEET products should not be used on infants under 2 months of age. Children older than two months should use products with DEET concentrations of 30% or less. DEET products are available in formulations up to 100% DEET, so always read the product label to determine the percentage of DEET included. Products with DEET concentrations higher than 30% do not provide much additional protection, but do last longer

Explain mosquito surveillance?

The East Middlesex Mosquito Control Project (EMMCP) provides mosquito control services to 26 participating communities located west and northwest of Boston, including Sudbury. Surveillance is included in these services. There is a science and methodology in the control of mosquitos that begins with trapping and identifying species, evaluating quantities, and testing for diseases, most commonly EEE and West Nile Virus. There are multiple traps set in locations that were determined by an entomologist based on prime mosquito breeding habitats. Testing is conducted weekly. It will continue until the first deep hard frost.

What areas are concerning for mosquito breeding?

All areas are concerning but large maple swamps and cedar swamps tend to breed large volumes of concerning species.

Is truck mounted spraying effective?

The Board of Health and MDPH continues to review current data and studies regarding the effectiveness of truck mounted adulticide spraying. Studies show that this method is effective in reducing mosquito populations. Spraying is not arbitrarily done and is conducted and based on a comprehensive control plan.

What is involved in mosquito control?

In addition to surveillance, EMMCP conducts early season helicopter larvicide spraying and catch basin applications. Targeted truck mounted adulticide spraying occurs throughout the summer. Emergency applications based on threat.

How far from the truck is spraying effective?

Approximately 300 ft.

Should I supplement private spraying?

Homeowners should make their own decisions but are strongly advised to review products based on effectiveness and safety data.

Can I opt out of spraying?

This could take up to two weeks to get to EMMCP so it will not be possible to opt out for spraying scheduled for Monday and Tuesday.

If you like to be excluded from truck mounted adulticide spraying:

<https://www.mass.gov/how-to/how-to-request-exclusion-from-wide-area-pesticide-applications>

Will the town's mosquito control plan be revised based on the current case?

The Board of Health, EMMCP, MDPH and the Massachusetts Department of Agricultural Resources are continually assessing and modifying plans based on new information.

Should air conditions be turned off when the truck drives by?

Yes.

Can dead mosquitos be tested?

No.

Is there a natural decline in mosquito later in the season?

Yes, and according to recent surveillance the numbers are trending downward with decreasing temperatures.

Is surveillance near schools increasing?

No. EEE has been confirmed in Sudbury and should be presumed to exist town-wide.

What percentages of mosquitos have EEE?

This is unknown but presumed to be very low.

How can we be notified for Sudbury emergencies if we are not resident?

Anyone can register for emergency notifications through:

<https://www.smart911.com/smart911/registration/registrationLanding.action?cdnExternalPath=>

Links & References

<https://www.mass.gov/service-details/eee-eastern-equine-encephalitis>

<https://www.cdc.gov/easternequineencephalitis/index.html>

<https://www.mass.gov/service-details/wnv-and-eee-in-animals>