

MAINE PUBLIC HEALTH ALERT NETWORK SYSTEM



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****ADVISORY – Important Information****

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TO: Hospitals (Cumberland & York Counties); Infection Control Practitioners (Cumberland & York Counties); Public Health-Required, Southern Maine RRC; Lab Facilities (Cumberland & York Counties); County EMA Directors (Cumberland & York Counties).

FROM: Dora Anne Mills, M.D., M.P.H., Public Health Director

SUBJECT: Eastern Equine Encephalitis

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Maine Center for Disease Control and Prevention (Maine CDC)
(Formerly Bureau of Health)

October 8, 2008

The Maine Center for Disease Control and Prevention (Maine CDC) within the Maine DHHS is reporting that a pool of mosquitoes, collected on September 30, 2008 from the town of Arundel in York County, has tested positive for Eastern Equine Encephalitis (EEE). Test results for additional pools from this location are currently pending. Numerous other mosquito pools previously collected this year from Arundel and York County have come back negative for both EEE and West Nile virus (WNV).

The Maine CDC within Maine DHHS and the Maine Department of Agriculture are alerting physicians, veterinarians, and other health care providers of this EEE activity, and encouraging personal protection and clinical awareness to prevent human infections. For further questions or concerns, please contact the Maine CDC epidemiologist on-call at: 1-800-821-5821.

Prevention

The best way to avoid the transmission of EEE is to prevent mosquito bites. It is important for our overall health to enjoy the outdoors, and with a few simple steps, we can also reduce the chances of being bitten by mosquitoes. While temperatures have been falling in many parts of the state, until there has been a hard frost, there will continue to be mosquito activity. Residents are advised to take the following steps to prevent mosquito bites:

- Use insect repellent on skin and clothing certified as effective by the federal Centers for Disease Control and Prevention
- Wear long-sleeved shirts, long pants and socks when outdoors
- Place mosquito netting over infant carriers when you are outdoors with infants

Mosquitoes are generally most active during dusk and dawn.

Human Clinical Features

- Symptoms of EEE typically appear 4 -- 10 days after the bite of an infected mosquito
- Symptoms range from mild flu-like illness to encephalitis, coma, and death.
- EEE case fatality rate is 35-50%
- Approximately 35% of people who survive EEE will have mild to severe neurological deficits

Diagnostic Tests for EEE Infection

Clinical Suspicion: EEE infection can be suspected in a person based on clinical symptoms and patient history. Diagnosis relies on a high index of suspicion and on results of specific laboratory tests. EEE or other arboviral infections should be seriously considered in any individual – but especially those over age 50 or younger than age 15 - who has onset of unexplained encephalitis or meningitis in the late summer or early fall. The local presence of EEE enzootic activity should further raise the index of suspicion.

Laboratory Tests: Laboratory testing is required for a confirmed diagnosis. The most efficient diagnostic methods are:

- Detection of IgM antibody to EEE in serum collected 3-10 days after onset of illness (note: if a specimen collected less than 10 days after onset of illness is negative, a convalescent serum should be collected and tested for IgM antibody 2-3 weeks after the first collection date).
- Detection of IgM antibody to EEE in CSF collected within 8 days of illness onset (for persons with neuroinvasive disease).

Because other arboviral infections can cause indistinguishable clinical presentations, public health testing for EEE infection in Maine is accompanied by testing for West Nile virus (WNV) and St. Louis Encephalitis (SLE) virus infections. Confirmatory testing of IgM ELISA positive specimens is performed using the plaque-reduction neutralization test (PRNT) at the US Centers for Disease Control and Prevention. The PRNT is useful in ruling out possible false positive results and in distinguishing cross-reactions that can occur between different arboviral infections.

Diagnostic testing of serum and cerebrospinal fluid for EEE infection (and related arboviral infections) is available free of charge through the Maine CDC's Health and Environmental Testing Laboratory. Maine CDC **requests that all specimens for arboviral testing be submitted to Maine CDC's Health and Environmental Testing Laboratory (HETL), rather than commercial laboratories.** For information on obtaining and submitting specimens for diagnostic testing call 1-800-821-5821 or go to:
<http://www.maine.gov/dhhs/boh/ddc/arbovirus/>.

Additional information can be found by visiting the following sites:

US CDC EEE Website
<http://www.cdc.gov/ncidod/dvbid/arbor/eeefact.htm>

Maine Department of Agriculture Animal Health Website
<http://www.maine.gov/agriculture/ahi/index.html>