EPI Update for Friday, May 27, 2005

Center For Acute Disease Epidemiology

Iowa Department of Public Health

Items for this week's EPI Update include:

- **It's Tick Season**
- **Mosquitoes are More Than Just a Summertime Nuisance**
- **May is Hepatitis Awareness Month - Perinatal Hepatitis B Program**
- **Meeting Announcements and Training Opportunities**

It's Tick Season

As the weather warms up and people spend more time outdoors, the chances of encountering ticks increases. The most prevalent species of ticks found in Iowa that bite humans are the American Dog Tick (*Dermacentor variabilis*), the Deer Tick (*Ixodes scapularis*), and the Lone Star Tick (*Amblyomma americanum*). Although these unwanted guests are more of an annoyance than a health threat, they should be taken seriously and removed. Always use personal protective measures against tick bites when venturing out (<http://www.cdc.gov/ncidod/dvbid/lyme/prevent.htm>).

Lyme disease is the most common tick-borne disease reported in Iowa, however, only 49 confirmed cases were reported last year. The percentage of deer ticks in Iowa estimated to be infected with the organism that causes Lyme disease (*Borrelia burgdorferi*) is around eight to ten percent. The chance of being infected with the organism is actually much lower, and in fact it is less than three percent. Research shows that the deer tick must be attached for more than 24 hours (typically 48 to 72 hours) to transmit the organism. Additionally, the nymph stage of deer ticks (pre-adults) are more likely to transmit the organism than adult deer ticks. Because feeding nymphs are rarely noticed due to their small size, they are more likely to feed for at least 48 to 72 hours.

The Infectious Disease Society of America (IDSA) **does not** recommend giving antibiotics just because someone has been bitten by a tick. In addition, IDSA **does not** recommend testing deer ticks for *Borrelia burgdorferi*, except as a research tool. Treatment by a medical provider should not be based on the results of testing deer ticks but **rather on evaluation of the patient**.

For example, if a deer tick is positive for the Lyme disease organism, but the patient has no symptoms, antibiotic treatment would not be recommended. On the other hand, if a deer tick is negative, but the patient has the typical erythema migrans rash, and/or other symptoms consistent with Lyme disease, and appropriate diagnostic tests support or confirm Lyme disease, we would recommend treating the patient with doxycycline or another appropriate antibiotic. If a patient has had one tick on them, they very easily

could have had another that went unnoticed. Approximately seventy-five percent of people with confirmed Lyme disease **did not** find a tick on them, nor do they recall having been bitten by a tick.

The recommendation by CDC, IFDSA and IDPH for persons who find ticks attached to them is to watch for fever or a rash at the site of attachment for 30 days. If these symptoms occur, they should see their medical provider to be assessed for Lyme disease or one of the other diseases that can be transmitted by ticks (for example, human granulocytic ehrlichiosis, Rocky Mountain spotted fever or babesiosis).

For the IDSA's guidelines on treatment of Lyme disease, please go to: <http://www.journals.uchicago.edu/CID/journal/issues/v31nS1/000342/000342.web.pdf>

More information about tick-borne diseases is available on the CDC's website at: <http://www.cdc.gov/ncidod/ticktips2005/>

Mosquitoes are More Than Just a Summertime Nuisance

They ruin barbecues, outdoor baseball games and quiet evenings relaxing on the deck. It's once again the time of year to protect yourself against these buzzing pests. Besides ruining your summertime activities, some carry dangerous diseases that are transmittable to humans. In Iowa, these can include diseases like West Nile virus and La Crosse encephalitis. Applying a mosquito repellent that contains a recommended active ingredient is the best way to avoid getting bitten and the best way to prevent diseases such as West Nile virus. Currently there are **four recommended active ingredients registered** with the U.S. Environmental Protection Agency (EPA) for use in mosquito repellents:

1. DEET (should not be used on children under 2 months of age)
2. Permethrin
3. Picaridin
4. Oil of lemon eucalyptus (should not be used on children under 3 yrs of age)

Products containing DEET and permethrin have been recommended in past years. New 2005 Guidance now includes the addition of picaridin and oil of lemon eucalyptus. However DEET was, and still is, the preferred repellent. Not only can DEET protect you against mosquitoes but provide protection for several other arthropods including ticks. Instructions to use include:

- DEET, picaridin, and oil of lemon eucalyptus can be applied directly to the skin.
- Permethrin is only recommended for use on clothing, shoes, bed nets and camping gear.
- Permethrin should not be applied directly on skin.

There are many products on the market that claim to offer protection against mosquitoes - don't fall for these marketing schemes. Some of these, "bug zappers, citronella candles, and bat houses," are all ineffective ways to repel mosquitoes.

Bug Zappers
While bug zappers do kill insects, they mostly attract beneficial insects such as moths and ladybugs. The mosquito's drive for a blood meal is much stronger than an annoying UV light-they'll almost always bypass the bug zapper and go directly towards you. In fact a Notre Dame University study in South Bend, Indiana showed that people with a bug zapper in their backyard were bitten 10 percent more than people without one because the bug zappers attracted mosquitoes but did not kill them.

And the Citronella Candles?
Citronella candles and smoking coils repel mosquitoes, but you have to stay in the smoky plume to be protected, which is nearly impossible to do.

And Bat Houses?
Bats are indiscriminate feeders and will eat any sort of insect that flies by. They don't concentrate on mosquitoes and very rarely have any substantial effect on the mosquito population.

Refer to IDPH's website for fact sheets containing additional information on mosquito repellents including safe use and age recommendations:

<http://www.idph.state.ia.us/adper/cade_content/mosquito_repellents.pdf>
<http://www.idph.state.ia.us/adper/cade_content/epi_manual/deet.pdf> .
Information can also be found on the CDC's website:
<http://www.cdc.gov/ncidod/dvbid/westnile/prevention_info.htm> .

May is Hepatitis Awareness Month - Perinatal Hepatitis B Program
All pregnant women should be routinely tested for HBsAg during an early prenatal visit in each pregnancy. Prenatal serological specimens can be submitted to the University Hygienic Laboratory (UHL) for anyone who is unable to pay for this service or to any laboratory performing a standard test for HBsAg. An HBsAg-positive specimen must be reported to the Iowa Department of Public Health (IDPH), Center for Acute Disease Epidemiology (CADE), by telephone at 800-362-2736, fax at 515-281-5698 or by mail at IDPH, 321 East 12th Street, Des Moines, Iowa, 50319.

Serology reports are referred to the Bureau of Disease Prevention and Immunization for follow-up when a female is found to be positive for hepatitis B and is pregnant. The delivery hospital is notified that the newborn is at risk for transmission of hepatitis B virus and that hepatitis B immune globulin and hepatitis B vaccine should be administered within 12 hours of birth. The infant should receive subsequent vaccinations at 1 month and 6 months of age. Breast-feeding is not contraindicated.

The Iowa Perinatal Hepatitis B Recommended Policies and Procedures are available to medical providers and contain the following information:

Hospital Policy and Procedure Recommendations
Follow-Up of Household and/or Sexual Contacts
Intervention Guidelines for Exposed Infant
Screening of Pregnant Women

Perinatal Hepatitis B Recommended Policies and Procedures <http://www.idph.state.ia.us/common/pdf/immunization/hep_b_perinatal_testing_policy.pdf>

For more information on viral hepatitis, visit the Iowa Department of Public Health Hepatitis Program Website <http://www.idph.state.ia.us/adper/hepatitis.asp>

Meeting Announcements and Training Opportunities
None