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Conservation/Forestry/Zoning Office*

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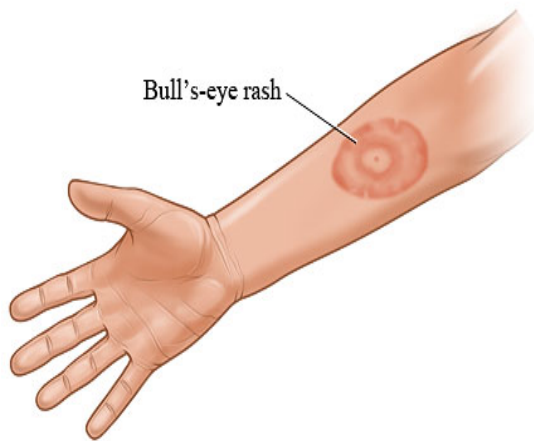
4/1/2017

Wisconsin Arboviruses

It is tick and mosquito season again, and we at the county conservation department want to make sure everyone knows how to protect themselves from mosquitos, ticks and the diseases associated with them. Spring and early summer is the time of the year that has the highest densities of ticks and mosquitoes. The adult parasites from last season are coming out of dormancy and new generations are hatching out to flood the environment. All the below diseases can occur in the state of Wisconsin. Below is information on recognizing the symptoms of the diseases and the appropriate treatments associated with them.

Tick-borne Diseases

#1. Lyme Disease. Transmitted by the deer tick (AKA the black-legged tick). By far the most commonly reported disease in the state. Main symptom is a circular or bulls-eye



rash that grows in size around the bite mark. Lyme disease can sit dormant in a person for years. Left untreated, it causes meningitis, facial palsy, and arthritis. There is no 100% successful treatment for Lyme disease later in life. Early treatment is key. Within 72 hours of pulling a fully attached deer tick off (It takes 24 hours of attachment for a tick to spread an infection to the person) it is crucial to go to a hospital and receive Doxycycline. This antibiotic is covered by most Medicare and insurance plans. Out of pocket costs for generic Doxycycline are around \$33 for 60 capsules.

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#2. Babesiosis. Transmitted by the deer tick. This disease is becoming more common and is sometimes present in ticks also carrying Lyme disease. Signs of infection are flu-like symptoms, anemia and jaundice that can last from days to months. Symptoms take 3 weeks to months to show. Babesiosis is occasionally fatal. Treatment is antibiotics used in Malaria treatment and sometimes blood transfusions.

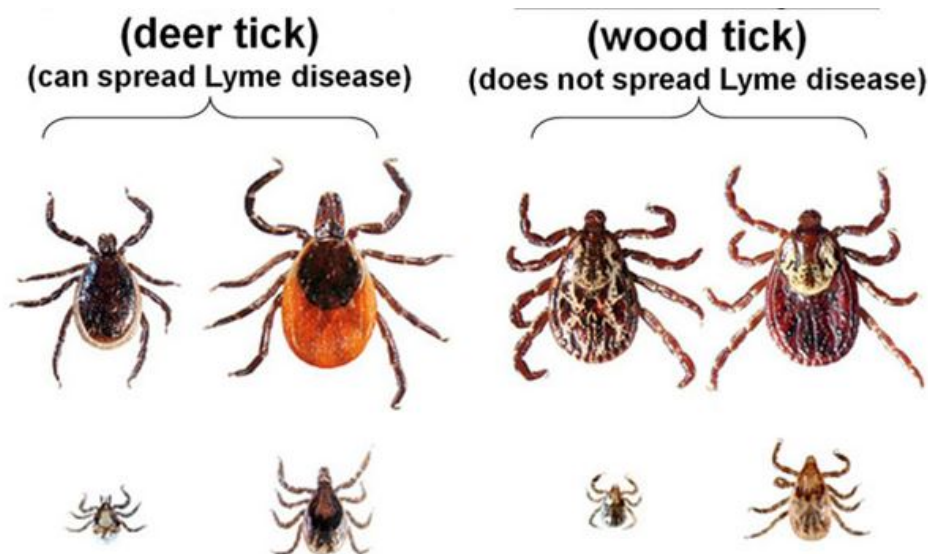
#3. Anaplasmosis. Transmitted by the deer tick. Anaplasmosis is the second most reported tick borne disease in Wisconsin. It has mild flu-like symptoms or no symptoms at all. Elderly may experience difficulty breathing and renal failure. Signs show 1-2 weeks after bite. Treatment is Doxycycline for 2 weeks.

#4. Ehrlichiosis. Transmitted by deer ticks. Uncommon in Wisconsin. Similar symptoms to Anaplasmosis and same treatment.

#5. Powassan (POWV) Virus. Transmitted by the deer tick. Rare. Signs and symptoms include acute onset of fever, muscle weakness, confusion, headache, nausea, vomiting, and stiff neck. Severe illness can include confusion, paralysis, speech difficulties, memory loss, and encephalitis (swelling of brain). No vaccine to prevent infection or medications to treat an infection.

#6. Rocky Mountain Spotted Fever. Transmitted by the wood (dog) tick. Rare in Wisconsin. RMSF is characterized by a sudden onset of moderate to high fever (which can last for two or three weeks), severe headache, fatigue, deep muscle pain, chills and rash. The rash begins on the legs or arms may include the soles of the feet or palms of the hands and may spread rapidly to the trunk or rest of the body. Treatment includes Doxycycline.

#7. Tularemia. Transmitted by the wood (dog) tick and deer fly. Rare. Symptoms are an ulcer at the site of infection and swelling of lymph glands in armpit or groin. Antibiotics used to treat tularemia include streptomycin, doxycycline. Treatment usually lasts 10 to 21 days. Most people fully recover.



*Sizing of these ticks is not to scale. Adult deer ticks are much smaller than adult wood ticks.

Mosquito-borne Diseases

#1. West Nile Virus (WNV). Hasn't been reported in Menominee County since 2013. Transmitted by mosquitos only. Not transmissible from birds to people or people to people. Signs WNV is in the environment include sick or dead crows, ravens, and blue jays. There is no treatment for West Nile Virus. Less than 1% of infected persons require hospitalization. Those infected retain lifelong immunity.

#2. La Crosse Encephalitis. Uncommon. The disease is characterized by fever headache, nausea, seizures, vomiting, fatigue (tiredness), and lethargy. There is no treatment. Most patients survive and retain lifelong immunity.

In all situations, prevention is the best method to staying healthy. When in tick habitat one should wear light-colored long-sleeved shirts, and light-colored pants tucked into socks to easily see ticks and keep them on the outside of clothing. Repellent on clothing and shoes can prevent ticks and mosquitos from biting. Immediate removal of ticks found on the body will reduce chance of infection. Sending clothing through the dry cycle will desiccate any missed ticks remaining on the clothes. When removing ticks, use a narrow tweezers to grasp the tick as close to the head as possible. Pinching the body of the tick will squeeze the ticks saliva and stomach contents (which house the bacteria and viruses that cause disease) into the blood stream and increase the chance of infection.

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