

## Tick identification

- Are dog ticks always larger than deer ticks? No, it depends on where each tick is in the life cycle but just because a tick is larger doesn't mean it's a dog tick. We use the scutum, or shield on the back of the tick, to identify the type of tick. A deer tick has a dark red/brown scutum whereas the dog tick has a white markings or racing stripes on the scutum.
- Are tick larvae infectious? No, they need a blood meal in order to become infected.
- How many blood meals to ticks take? Three, one to get through each stage in their lifecycle.

## Reducing tick habitat around your home

- Questions come up about spraying around the home, let them know we'll cover this in the "Choosing and Applying Personal Repellants" video.
- Are there plants that will keep deer away? We get this question often; there are resources online that give this information.
- Example: <https://bonnieplants.com/library/keeping-deer-out-of-the-garden/>
- How short does the lawn need to be? Mow your lawn regularly.
- Is leaf litter helpful or a concern? Leaf litter needs to be cleared because it creates a tick habitat.
- What can you make a yard barrier with? Crushed rocks, wood chips, or larger rocks for a rock wall.
- What's the recommendation on bird feeders? Maine CDC does not recommend bird feeders in the summer, but if you want one, make sure it is on the edge of your lawn because fallen seeds attract rodents which could carry ticks.

## How to perform a tick check

- How often should you perform a tick check? After every time you are in a tick habitat, or at least once per day.
- Do I need to check my pets for ticks? Yes, your pets can pick up ticks any time they are in a tick habitat.
- What do you do with a tick after it's removed? The best way to kill a tick after it's removed is to put it in rubbing alcohol which will dry it out. You can find out more about removal and disposal of ticks by watching our tick removal video.

## How to remove a tick

- Why is it important to get close to the head versus squeezing the belly of a tick? If you squeeze the belly you'd be pushing the stomach contents into the skin increasing your risk of infection.
- What happens if the head of the tick is left in? It is not that big of a deal if the head of the tick is not fully removed, your body will expel it similar to a splinter...the body of the tick is no longer attached with the bacteria to transmit disease.
- What is the best way to kill a tick you find on your body? Put in rubbing alcohol.
- Can I submit a tick to test for Lyme or other diseases? While the Maine CDC doesn't recommend submitting ticks for disease testing, because it will not tell you if the tick passed the disease to you, there are a couple places that do test ticks for disease. They are:

- UMass Laboratory of Medical Zoology: <https://www.tickreport.com/>, & Medical Diagnostic Laboratories in New Jersey, <http://www.mdlab.com/> Phone Number: (877-269-0090)
- Analytical Services, <http://www.analyticalservices.com/tick-testing.html>
- U Conn Vet Lab, <http://cvmdl.uconn.edu/service/tick.php>
- Do you recommend using tweezers, a tick spoon, or a tick key?\_It does not matter which one you use. The important thing is to remove the tick quickly and safely.
- Will flushing the tick kill it? No, it will not. Alcohol is the best way to kill a tick.

### **Tickborne Diseases in Maine: Lyme Disease**

- If you've been bitten and don't know what kind of tick should you have your provider treat you? Each provider follows different procedures. In general, you should monitor for symptoms after being bitten.
- Will my doctor test me for Lyme? If;
  - the tick is identified as a deer tick and was attached for more than 24 hours
  - it is less than 72 hours since the original bite
  - more than 20% of the ticks in your area are known to be infected, or you do not have problems taking doxycycline.
- You can also send the tick for identification to the University of Maine:  
<http://extension.umaine.edu/ipm/tickid/submit/>
- How is Lyme disease diagnosed? Lyme disease is diagnosed through clinical evaluation and can be confirmed through laboratory testing.
- What is the treatment for Lyme disease? Lyme disease can be easily treated if it's detected in the early stages with oral antibiotics. If found later, intravenous antibiotics may be given.
- If I'm pregnant and was recently infected with Lyme, how will it affect my pregnancy? Pregnant women should stay away from all tick areas as Lyme can be transmitted to an unborn child, although it is extremely rare. It could also cause the mother to miscarry her child or deliver a stillborn child in rare instances. Contact your OBGYN to discuss further.
- Is there a vaccine for Lyme disease? No, currently there is no vaccine.
- Can I get Lyme disease again after being successfully treated for it? Yes, you can get Lyme disease again if you do not take proper steps and are bitten by an infected deer tick.
- Can I get Lyme disease from another person? No, Lyme is not passed from person to person.
- How many people in Maine die each year from Lyme disease? No known deaths have occurred in Maine from Lyme disease.

### **Tickborne Diseases in Maine: Anaplasmosis**

- How long does it take to transmit this disease? We currently do not know how long the tick has to be attached to transmit anaplasmosis.
- Can I get anaplasmosis and Lyme from the same tick? Yes, you can get up to four diseases from the same tick (anaplasmosis, babesiosis, Lyme, and Powassan).
- How is anaplasmosis treated? With oral antibiotics.

- Is prophylaxis effective for anaplasmosis? There is no data to support its prevention of anaplasmosis. The best defense is watching for symptoms after a tick bite.
- How serious is anaplasmosis? Anaplasmosis can put you in the hospital, and patients have died from anaplasmosis.
- Is anaplasma the same as erlichia? No- they used to have similar names, but are different diseases transmitted by different ticks.

### **Tickborne Diseases in Maine: Babesiosis**

- What is the treatment for babesiosis? Babesia requires a two drug therapy.
- How serious is babesiosis? Babesiosis can cause hospitalization and/or death.
- Can babesiosis be transmitted via blood transfusion? Yes. For this reason, those who have had babesiosis are excluded from donating blood.
- Is there more than one species of Babesia? Yes, b. microti is the most commonly identified species.

### **Tickborne Diseases in Maine: Powassan Encephalitis**

#### **Mosquito Biology**

- Do male mosquitoes bite humans? Only the female mosquitoes feed on humans, the male mosquitoes feed on plant nectar.
- How much water is necessary for mosquitoes to breed? As little as a water bottle cap-full.
- How long to mosquitoes live? On average female mosquitoes live eight days, but in ideal conditions they can live up to two weeks. Male mosquitoes live about four days on average.

#### **Mosquito Habitat**

- How often does standing water need to be emptied? Different sources will say different time periods but Maine CDC recommends once a week
- How many species of mosquitos are there in Maine? There are 45 known species in Maine, less than half are known to be able to carry disease.

#### **Reducing Mosquito Habitat Around Your Home**

- How often does standing water need to be emptied? Different sources will say different time periods but Maine CDC recommends once a week
- Do dragonflies and bats eat mosquitos? Yes they do, but not enough to make a difference.
- Are products like mosquito dunks and magnets effective? They can be, but make sure to read and follow directions carefully.

#### **Protect Yourself From Mosquito-borne Diseases**

- Are we at risk for Zika? We are currently not at risk for Zika from mosquitoes here in Maine; we do not have these types of mosquitoes. There is still a risk for transmission from travel and sexual transmission.
- There is more information is on our website.
  - <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/zika/>
- Where mosquitoes feed on birds is it recommended to not feed birds in the summer? It is not recommended to feed birds in the summer as the bird food dropping can also bring along rodents and ticks, and bird baths can bring mosquitoes

### **Choosing and applying personal repellents**

- Note: Permethrin is toxic and needs to be sprayed outside and let dry before allowing on your skin and is toxic to cats
- Are botanical products effective? They do not require EPA approval, so they are not subject to safety and efficacy standards. Maine CDC cannot guarantee safety or effectiveness. The natural repellent approved by the EPA is the oil of lemon and eucalyptus.
- What about 100% DEET? 100% DEET is no more effective than 50% DEET.
- What is safe for children? The CDC and American Pediatrics Association approves up to 30% DEET for children older than 2 months. DEET should not be used on children under 2 months of age. Oil of Lemon and Eucalyptus is also not recommended for children under the age of 2 years.

### **How to Choose a Residential Pesticide Applicator**

- Where can I find a licensed pesticide application company in Maine? The Maine State Pesticide Control Board offers a list of licensed companies offering tick and mosquito control services.
  - <http://www.maine.gov/dacf/php/gotpests/bugs/tick-mosquito-companies.htm>