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Tick Protection On & Off the Farm



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Shared Accountability Learning Circles

Women Farmers Aging Strong

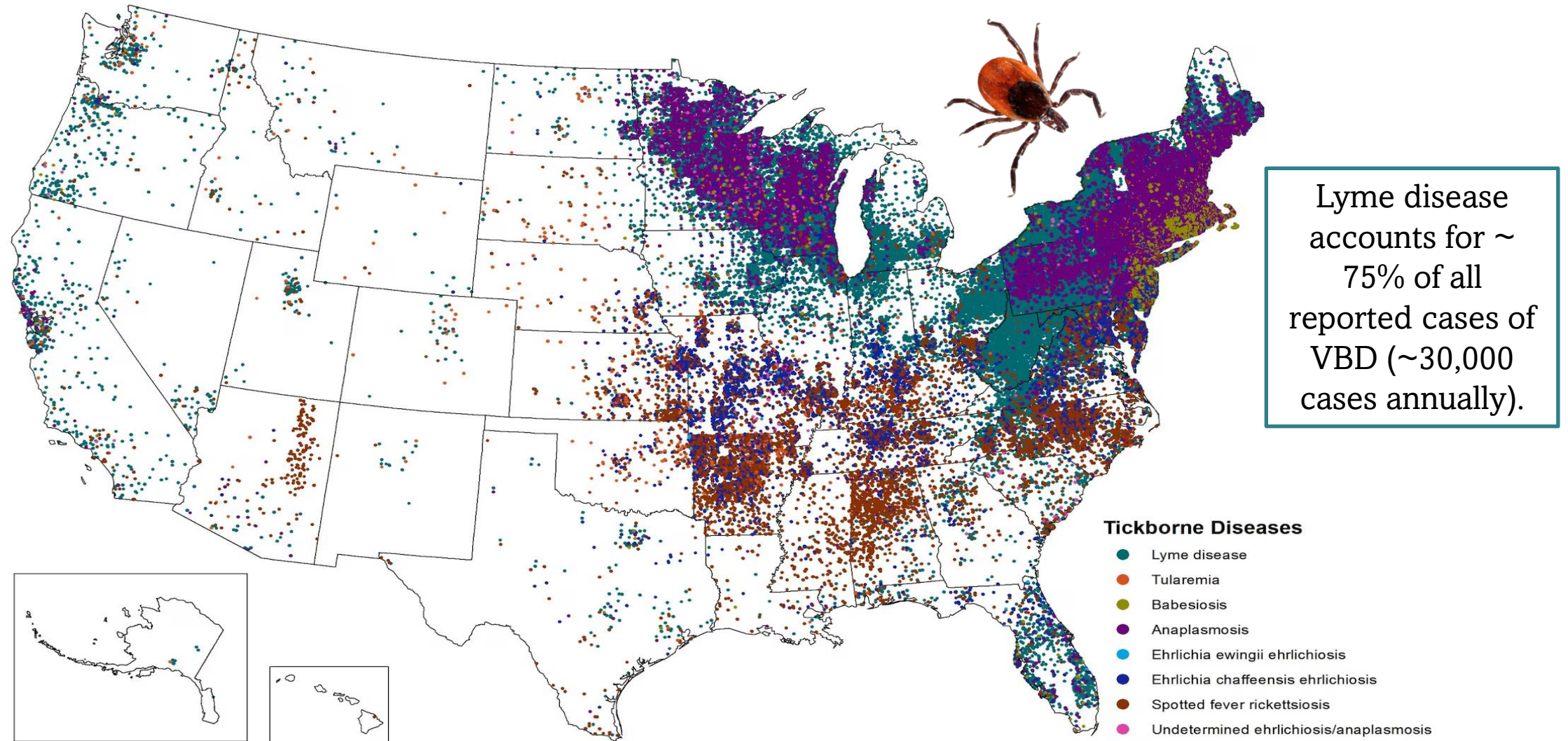
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Reported Cases of TBD (USA) 2019 - 2022



Note: Powassan data not represented on the map. Babesiosis data incomplete for years shown.

Common Tick-Borne Illnesses

Main tick-borne diseases in northern New England:

- Lyme disease (bacteria - *Borrelia burgdorferi*)
- Anaplasmosis (bacteria - *Anaplasma phagocytophilum*)
- Babesiosis (protozoan parasite - *Babesia microti*)
- Hard Tick Relapsing Fever (bacteria - *Borrelia miyamotoi*)
- Powassan/Deer Tick Virus

Other threats:

- Tularemia (bacteria - *Francisella tularensis*)
- Ehrlichiosis (bacteria - *Ehrlichia chaffeensis* / *E. ewingii*)
- Rocky Mountain Spotted Fever (bacteria - *Rickettsia rickettsii*)
- Alpha-gal syndrome 'red meat allergy' (sugar molecule)

General symptoms:

- Flu-like - Fever, headache, joint pain & swelling, muscle aches, fatigue, loss of appetite.
- May take up to 30 days to appear (or not at all).
- Lyme disease 'erythema migrans' / bulls-eye rash (not always!)

TBD are preventable and most are treatable if detected early.



Get To Know Your Ticks

Blacklegged

(*Ixodes scapularis*: Eastern
Ixodes pacificus: Western)



Pixabay

American Dog/Wood

(*Dermacentor variabilis*)



Scott Bolick, iNaturalist

Hard Ticks:
Have a hard
shield/scutum

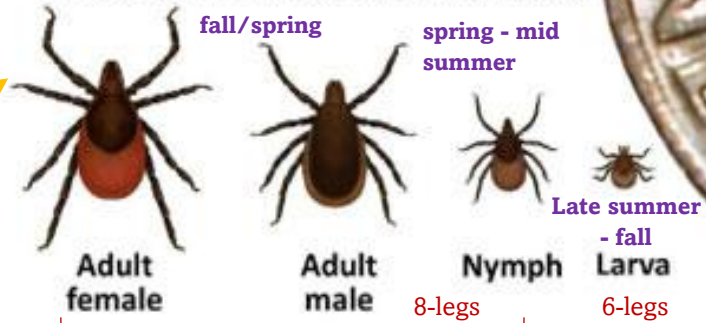
Engorged
(blood-filled)
adult deer tick.



Pixabay

... and others

Blacklegged tick (*Ixodes scapularis*)



Lone Star Tick (*Amblyomma americanum*)



American Dog Tick (*Dermacentor variabilis*)



CDC

Check out [Tick Encounter](#) for Detailed Tick Descriptions.

Asian Longhorned

(*Haemaphysalis longicornis*)



CDC / Anna E. Perea

Lone Star

(*Amblyomma americanum*)



CDC

(These are all adult females)

Different Ticks Pose Different Risks

Blacklegged (*Ixodes* sp.)



Lyme, Anaplasmosis,
Babesiosis, Powassan,
Ehrlichiosis, Relapsing Fever



Lyme,
Anaplasmosis



Lyme,
Anaplasmosis



Lyme,
Anaplasmosis

American Dog/Wood (*Dermacentor* sp.)



Rocky Mtn. Spotted
Fever, Tularemia



Anaplasmosis

Rocky Mtn.
Spotted Fever,
Babesiosis

Cytauxzoonosis
(bobcat fever),
Tularemia

Lone Star (*Amblyomma* sp.)



Southern tick-associated rash
illness (STARI), Ehrlichiosis,
Alpha-gal, Tularemia



Ehrlichiosis,
Rocky Mtn.
Spotted Fever

Cytauxzoonosis
(bobcat fever),
Tularemia

Asian Longhorned (*Haemaphysalis* sp.)



Ehrlichiosis?



Bovine theileriosis
[*Theileria orientalis* Ikeda]



Integrated Tick Management



Tick Checks-Monitoring

- Check for ticks daily after working in the field, forest or with animals. Check animals too.
- Use a mirror to check hard-to-see places.
- Remove ticks immediately.
- Contribute to passive tick id surveillance programs (citizen science).
- Consider sending ticks in for pathogen screening.

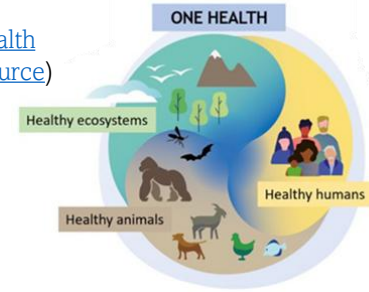


Personal Protection

- Wear protective clothing (light-colored long pants, long-sleeve shirt, permethrin-treated) and tuck pants into socks.
- Use EPA-approved tick repellents (i.e., Deet, Picardin). Read the label!
- Use lint roller on clothes in field after working in or near tick-infested areas.
- Shower daily in peak tick periods
- Put clothes in dryer (10 min) on high heat.
- Develop a Tick Protection Plan.
- Avoid tick habitat during peak tick activity.
- Educate others (family members, employees).



One Health
(image [source](#))



Host Management

- Treat livestock & companion animals to prevent ticks (i.e., vaccines, pills/chews, repellent sprays/wipe, ear tags, collars, pour on/spot, dusts, backrubbers) – Read labels to ensure can be used on ticks on target animal. - Consult veterinarian.
- Treat hosts (i.e., tick tubes/tick box for mice, 4 poster device for deer).
- Deter hosts & hiding places. (i.e., deer fencing for exclusion, keep compost & brush piles away from production areas, cleanup waste grain, hunt/trap to reduce population).



Environmental Treatments



- Mow pastures (reduces humidity tick like)
- Provide buffer strip (10ft) between forest & fence & maintain it (trim tree branches, shrubs & mow).
- Pesticide sprays along fence-forest edges (last resort if all else fails).

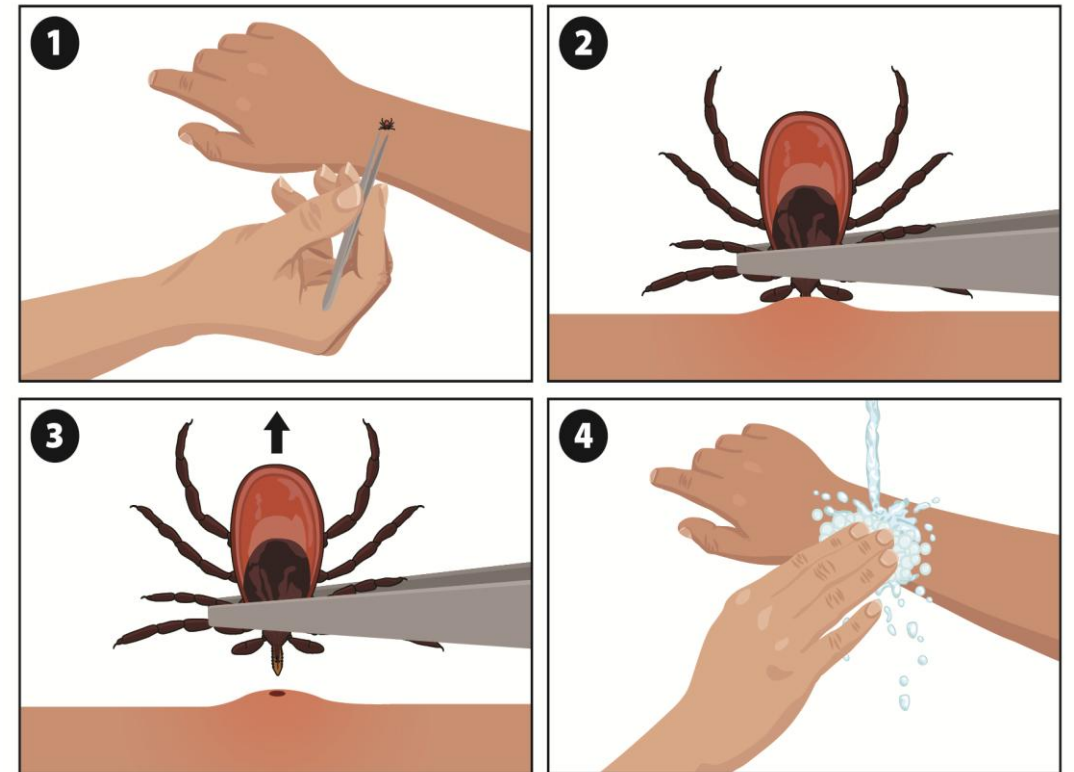
I Found a Tick on Me! Now What?

Remove the Tick:

- Use fine tip tweezers.
- Grab tick by the head, close to skin
- Pull upward with steady, even pressure – do not twist, do not crush between fingers.
- Clean area with soap & water or alcohol.
- Watch for flu-like symptoms or consult physician.

What to Do with the Tick (options)

- Get an ID (picture or save in alcohol) & send to
- Dispose of tick (flush it down toilet, place between tape)
- Send it for Pathogen Testing (also includes ID) testing (note: positive results don't necessarily mean you have been infected).



Resources in Other Languages



[CDC Resources in Languages Other than English](#): Enter “lyme” into search box



[Health Information in Many Languages](#) (VT Dept. of Health): Enter “tick” into search box



Ticks: What you need to know: [Vermont Language Justice Project YouTube Channel](#) (Videos)



NIOSH Fast Facts: [Protecting Yourself from Ticks and Mosquitoes](#) (Spanish)



Check Out Our Resources Pages For More Information!



[VT-TIC](https://vt-tic.org/) (UVM Tick Info Center)

Thank YOU!

Questions? Feel free to reach out!

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Winter tick (*Dermacentor albipictus*) larvae



National Institute of Food and Agriculture
U.S. DEPARTMENT OF AGRICULTURE



College of Agriculture and Life Sciences
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and Environment

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