

STAYING SAFE: LYME DISEASE PREVENTION

July 23, 2015



Howard County Lyme Awareness / Columbia, MD
www.HcLyme.org



Who is Kandice Dickover?

- Founder of Howard County Lyme Awareness Group
 - Started the group over three years ago
 - Realized that this is a huge problem in our area
 - Entire family suffered from tick-borne illnesses
- Lyme patient
 - Bit in 2007, but treated with too little antibiotics
 - Developed issues over the next 4.5 years until finally received a diagnosis of Late Stage Lyme Disease
- Educator
 - Attended numerous tick-borne illness conferences
 - Held public awareness events/spoke at local cub scout & boy scout meetings
- Lyme (TBI) caretaker
 - Watched both sons and husband become very ill
 - Very different presentations (2 had a rash) & different treatment protocols \$\$

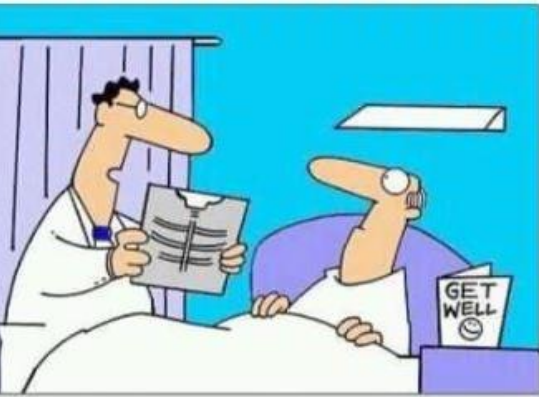
My Story

- Bit in 2007, had bulls-eye rash but given only 10 days of antibiotics and no further follow-up
- Within four months, started suffering from brain fog, strange aches and pains
- Doctors couldn't find anything wrong (negative lyme tests) as symptoms increased over the next 4.5 years (short term/long term memory loss, unrelenting fatigue, severe joint pain-ankles, knees, hips, unexplained heart palpitations, bulging discs in my back, swollen lymph nodes that would come and go, anxiety, loss of words, loss of planning ability, difficulty with concentration/ability to focus and comprehend, difficulty thinking clearly, disorientation, depressive symptoms, loss of word/speech errors, tingling/electrical feeling in feet and legs, migrating muscle pains, white lesions in my brain)
- Misdiagnosed with ADD, Depression, Multiple Sclerosis



Our Story cont.

- Finally received diagnosis of Late Stage Lyme Disease in 2012 and neurologist gave me 30 days of IV Ceftriaxone
- Started educating myself, sought out Lyme Literate Medical Doctor (LLMD) and began treatment journey including long term antibiotics/herbal remedies



The bad news is...you have Lyme disease. The good news is, I don't believe in that disease so you're fine!

- In 2012, my 2 sons and husband all received multiple tick bites at Cub Scout Camp
- Pediatricians insisted they needed bulls-eye rash to have Lyme; argued against testing for Lyme
- Older son immediately had disseminated rash on torso, developed sensitivity to heat, fatigue, depression, short term/long term memory loss (lost math skills and some comprehension skills), joint & muscle pains –antibiotics relieved all physical symptoms within 30 days, cognitive/emotional took 9 months to resolve.
- Younger son started with severe headaches, migrating joint/muscle pain and then developed gastrointestinal issues with daily nausea which lasted over 1 yr. – relieved with combo antibiotics & herbals in < 1.5 years
- Husband developed Plantar fasciitis symptoms, joint pains -sore knees/hobbling around – antibiotics for 9 months cured him – now running ultra-marathons

Lyme Disease Overview

Lyme disease (LD) is an infection caused by *Borrelia burgdorferi* – Bb.

Bb is a type of bacterium called a spirochete.



- A spirochete is shaped like a cork screw.
- Black Legged ticks carry the Bb bacterium and transmit it to their hosts – humans and animals.

Once the Bb bacterium is transmitted it can cause a number of different symptoms.

Lab tests - unreliable (2-tiered ELISA/Western Blot)

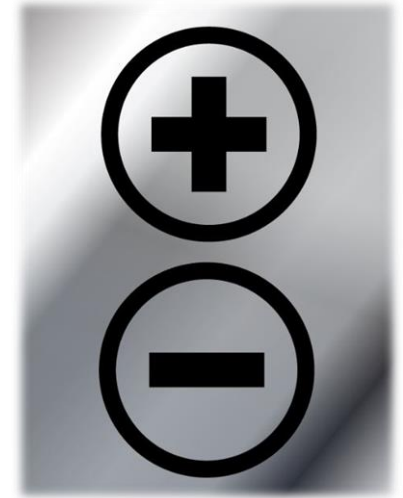
Many insurers refuse to cover Lyme treatment if the patient does not have a positive ELISA test. Even worse many patients are told they do not have Lyme based on a negative test, when they do have the disease.

Let's examine the evidence.



A negative lab test is

- MEANINGLESS!!!!
- A positive is likely positive
- A negative can be negative for many reasons



The CDC, NIH, FDA, etc, all agree that Lyme is a clinical diagnosis which means the HCP looks at the history, physical, and review of systems and if the pieces fit the diagnosis is made. You don't need a lab test to make the diagnosis. You just need courage.

Ticks – Cesspools of Disease



Female deer tick

Deer Ticks: Lyme disease, Babesiosis, Anaplasmosis, Bartonella, Mycoplasma, Borrelia Miyamotoi relapsing fever, Powassan encephalitis (deer tick virus)

Lone Star Ticks: Ehrlichiosis, Rocky Mountain Spotted Fever, STARI disease, Tularemia, Heartland virus, Red Meat Allergy



Female lone star tick

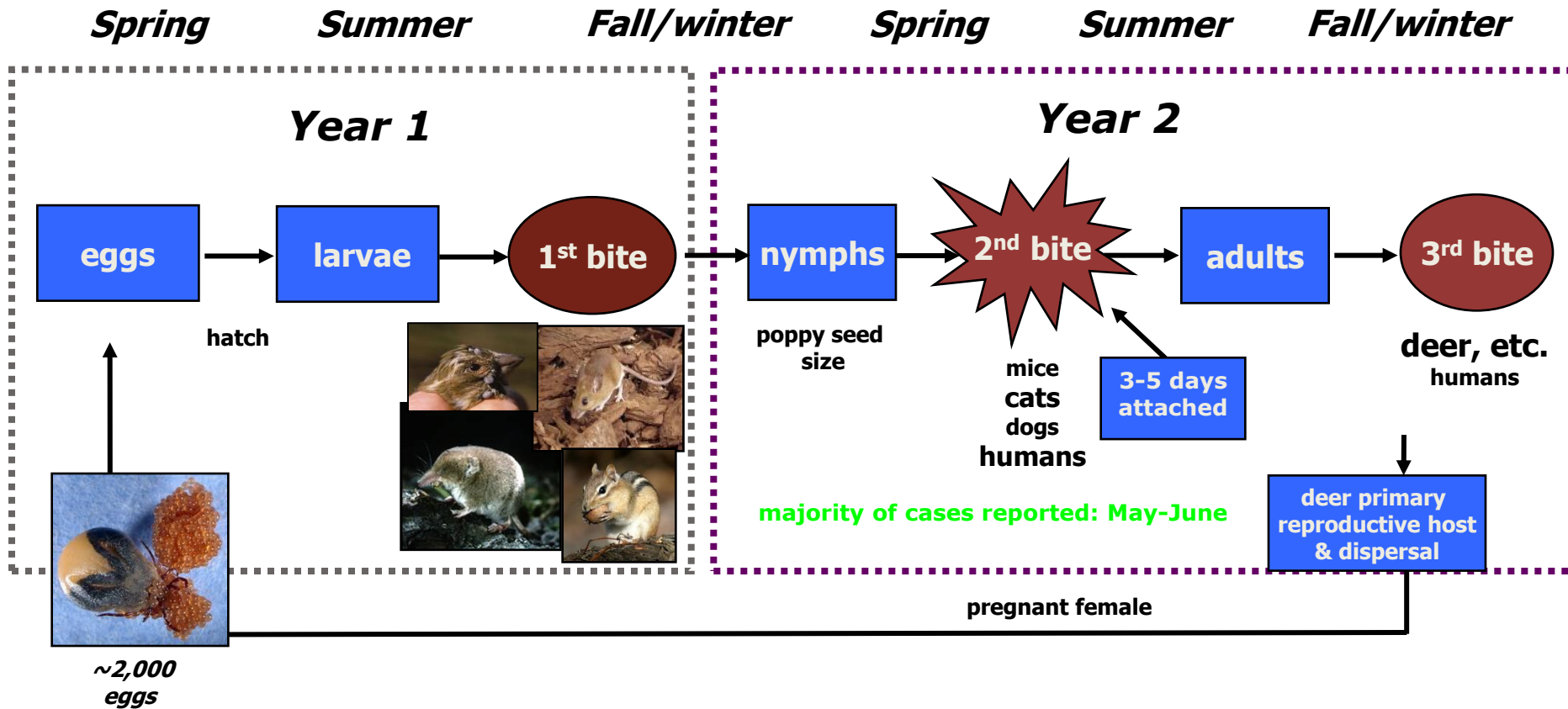


Female American dog tick

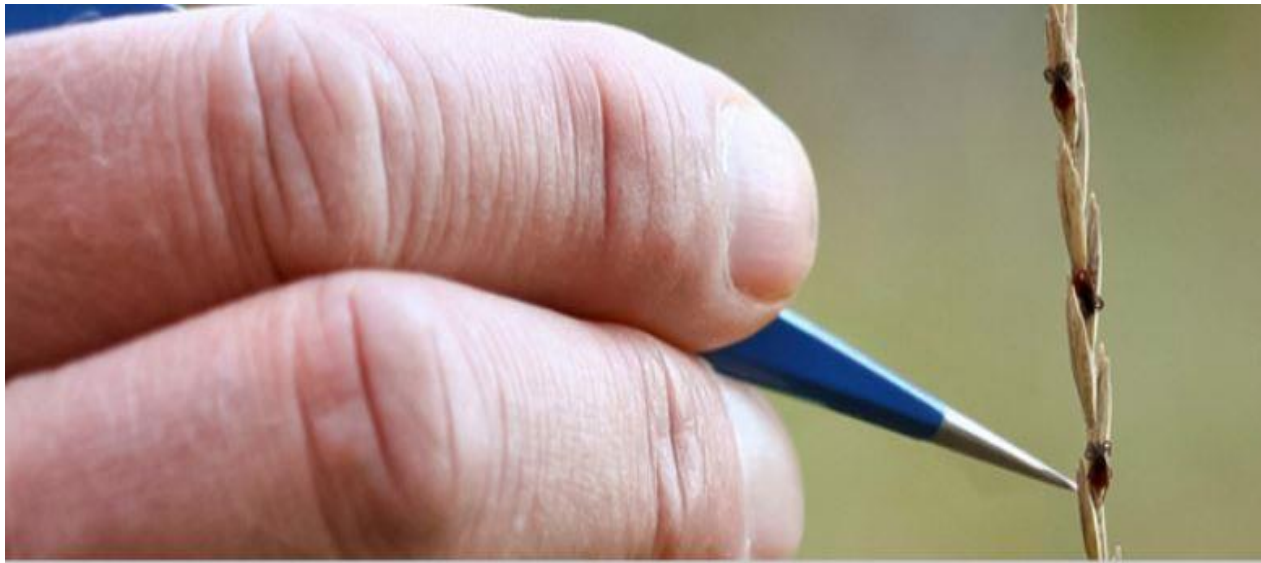
American Dog Tick: Rocky Mountain Spotted Fever, Tularemia, Tick Paralysis, Ehrlichiosis (possibly)

Deer tick development cycle

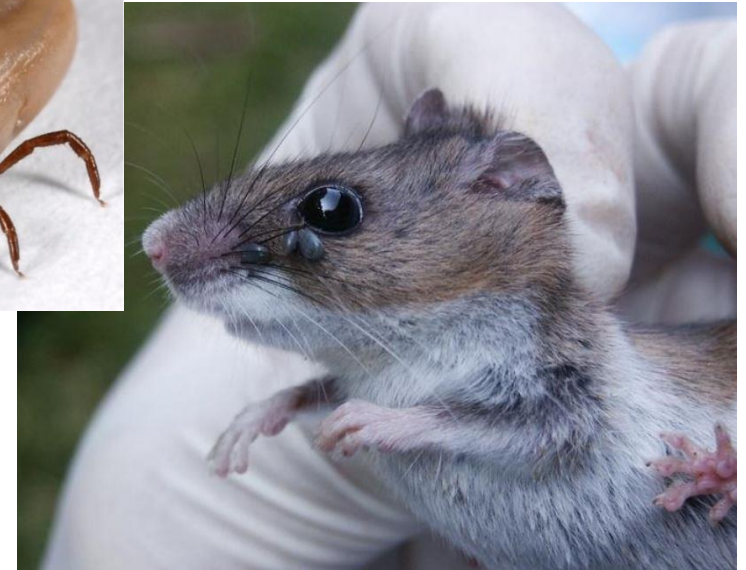
2 years, 4 tick stages, and 3 blood-meal bites



NEVER TRUST ANY TICK...



Deer aren't the only carriers



Personal Protection

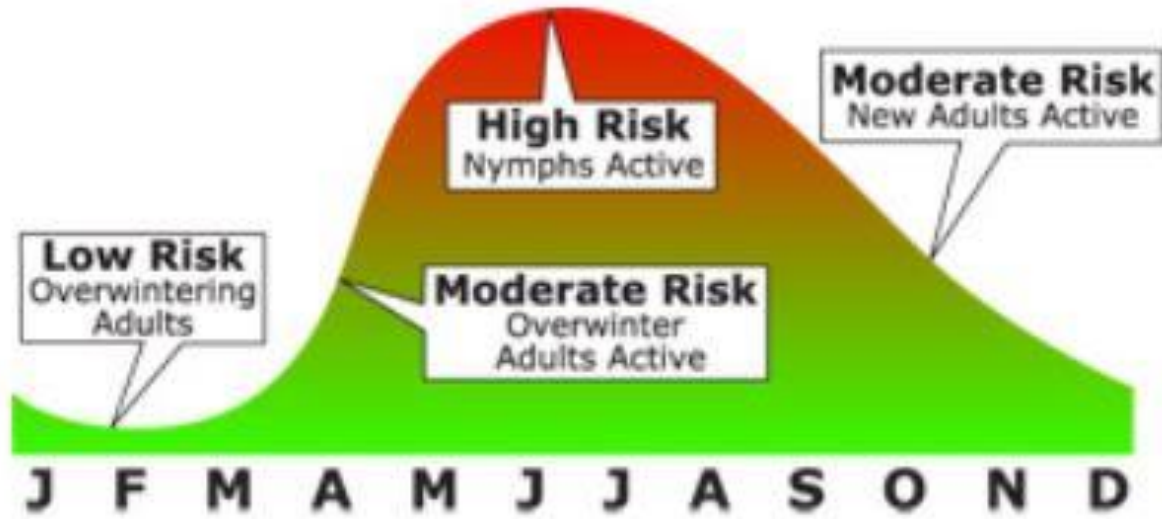
- **Avoid areas known to harbor ticks** such as leaf litter (never jump in leaf piles), woodlands, meadows, ground cover (pachysandra, ivy, etc.), high grass, brushy areas, and transition areas along the grass perimeter of woodlands, gardens, etc. Also avoided should be those places where rodents (mice, chipmunks, etc.) dwell, including in or near stonewalls, woodpiles, tree stumps, fallen logs, and outside storage sheds.



Personal Protection cont.

- Spray clothes, hats, shoes, backpacks, tents, bags, tents, etc. with the chemical **permethrin**, which can be purchased through most large sporting goods stores such as REI, Walmart or Amazon. The clothing will repel and kill ticks through 5 or 6 washings, while shoes, backpacks, etc. will need to be re-sprayed a minimum every 6 weeks. It is good practice to spray shoes the first of each month starting in the spring.





Be Aware of the Highest Risk
Months
of the Year

Treat your shoes.

May

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

June

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
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| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | | | | | |

July

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| 27 | 28 | 29 | 30 | 31 | | |

August

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
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| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
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| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | | | | | | |

How Protected Are You?



3X protection

from ticks latching onto hands or arms and crawling under t-shirt*

5X protection

from ticks latching onto legs and crawling under shorts*



74X protection

from ticks latching onto shoes and crawling up leg

* Most ticks attached under treated clothing were dead

Courtesy of TickEncounter.com



Personal Protection cont.



- **Purchase clothing pretreated with permethrin** from retailers such as REI, Orvis, Ex Officio, and Zorrel. Also check out the website, www.bugbewear.com, for a good selection of permethrin pretreated clothing. The clothing will repel and kill ticks for at least 70 washings or, practically speaking, for the life of the garment. The U.S. Environmental Protection Agency (EPA) approved pretreated clothing in 2003 as safe for people of all ages to wear. The U.S. Centers For Disease Control and Prevention (CDC), the World Health Organization (WHO), the U.S. National Institute For Occupational Health and Safety (NIOSH), and the American Academy of Family Physicians all recommend wearing apparel pretreated with permethrin for disease prevention.



Personal Protection cont.

- Send clothing to Insect Shield, www.insectshield.com, to be treated with **permethrin** for outdoor activities (summer camps, gardening, hiking, hunting, golfing, etc.). The cost is nominal (\$8 to \$10 per item), and well worth every dollar spent.



Repellents

- **Apply tick repellents to exposed skin.** In 2008, the CDC came out with a list of four repellent ingredients that they rated equally as being effective against ticks. The ingredients included the three chemicals DEET, IR3535, and Picaridin and the natural essential oil Lemon Eucalyptus. Any products containing these can generally be counted upon to provide protection against ticks.



Other Repellents on the Market

- There are also a myriad of other products on the market with “natural” ingredients such as castor oil, cedar oil, citronella oil, geranium oil, peppermint oil, lavender, and rosemary oil that may also be effective in repelling ticks. But actual test data on how well these compounds really work to repel ticks is usually not readily available to the general public.



EPA Reviews



- The EPA is required to review and register all insect and tick repellent products that contain chemicals for product safety and efficacy. This same requirement does not apply to “natural” products unless that information is voluntarily provided to the EPA. A listing of all these registered products can be accessed from the EPA website, <http://cfpub.epa.gov/oppref/insect/>. This listing breaks down the tick repellent products by name, hourly protection time, active ingredients, company name, and EPA registration number, and is a great resource for making that all important decision on which tick repellent to use on your skin.

Personal Protection cont.

- **Remove clothing worn outdoors and place in clothes dryer on high heat for 20 to 30 minutes.** This will kill by desiccation any ticks crawling on the clothing.



Personal Protection cont.

- **Conduct full body tick checks after outdoor activities**, as well as at night before bedtime. Ticks like moist areas of the body especially between the toes, behind the knees, in the groin, navel, armpits, behind and in the ears, and on the scalp.

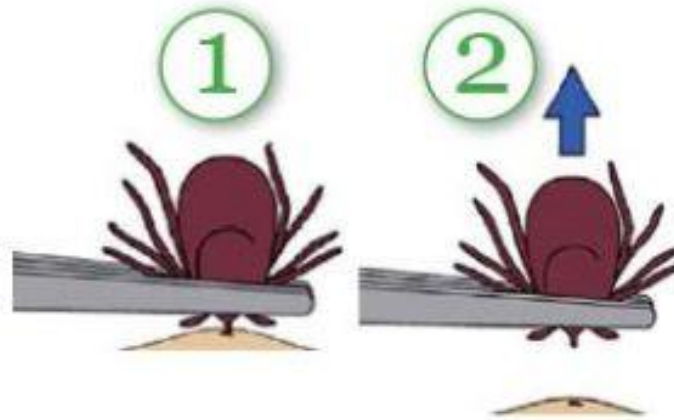


CHECK "BELOW THE BELT" FOR
**POPPY-SEED
SIZED**
OR SMALLER TICKS
WHILE SITTING ON THE TOILET.



Removing Ticks

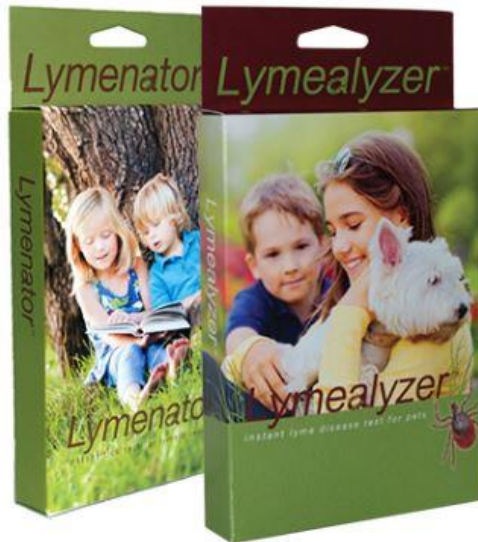
- **Safely remove attached ticks with pointed tweezers and save ticks for future testing.**



- Disinfect area.
- Consider prophylactic antibiotics.
- NEVER twist the tick out or apply soap, petroleum jelly, a hot match, kerosene, alcohol or any other irritant to the tick in an attempt to get it to back out. It can force the tick's fluids into the bite wound.

Tick Testing Kits

- You can purchase test kits through the Amazon website. One such kit, *Lyme-Aid* (\$16), allows you to send the tick to a lab for testing. Another kit, *Lymenator* (\$25), allows you to easily test the tick yourself for Lyme disease with results obtained within 10 minutes of testing.



Tick Resource

- **Keep informed year round about ticks in your area.** An excellent way to do this is through the University of Rhode Island's Tick Encounter Resource Center, www.tickencounter.org. Not only will this site provide you with up-to-date information on tick prevalence in your geographic area, but will also provide you with useful prevention tips important for your family and pets.



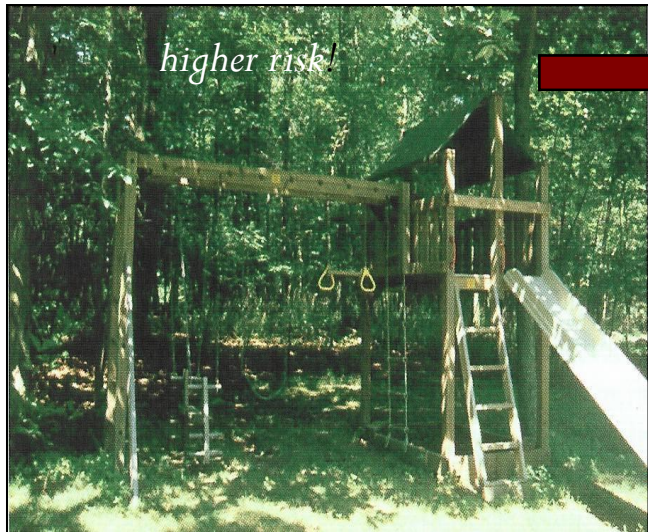
Property Management



- **Create tick-safer zones in commonly used yard and play areas.** Increase sunlight onto property, trim trees and bushes, mow grass, minimize vegetative ground cover, remove leaves and brush, move firewood piles and bird feeders away from house, use hardscape (patios, decks, etc.) and xeriscape (plants not requiring lots of water) and landscape practices.

Property Management cont.

- Move swing sets and play areas away from the edges of woodlands, establish wood chip or gravel buffers along woodland tree lines, stone walls, and under swing sets and children play areas, use plantings that do not attract deer, and install deer fencing.



Property Management cont.

- Use least toxic pesticide application on selective areas of your property.
- Consider using bifenthrin (Talstar), permethrin, cyfluthrin (Tempo), cedar oil, or Essentria IC3 (rosemary oil, geraniol, and peppermint oil). A website that carries a good many pesticide items is, www.domyownpestcontrol.com.



How to Protect Your Pets

- Avoid walking your pets in areas where there are ticks and/or keep them on paved trails.
- Check pets for ticks regularly, especially after walking them.









Protecting Your Pets

- Do not let your pets run free outside.
- Provide a dog enclosure area outside and make it as tick-safe as possible.
- Have your pets wear and/or be treated with tick repellent products as recommended by your veterinarian; Consider treating your dog with the Lyme disease vaccine on the advice of your veterinarian.



Tick Repellents for Pets

|  Tick preventative pet products | Whole body protection | Kills Ticks | Kills ticks on contact | Kills Fleas | Rapid tick detachment | Water Resistant | Safe for cats | Safe for dog/cat households |
|--|-----------------------|-------------|------------------------|-------------|-----------------------|-----------------|---------------|-----------------------------|
|  K9 Advantix II Permethrin* /Imidacloprid* K9 Advantix II website | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓** |
|  Frontline Plus Fipronil* / Methoprene* Frontline.com website | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ |
|  Advantage II Imidacloprid* Advantage II website: dogs cats | ✓ | | | ✓ | | ✓ | ✓ | ✓ |
|  Seresto Collar Flumethrin*/Imidacloprid Seresto website | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
|  Preventic Collar Amatrax* Virbacvet.com website | | ✓ | ✓ | | | ✓ | | |

**contact Bayer Veterinary Services 800-422-9874 for use in mixed households with cats.



Beware!

- Beware pets can be treated themselves but still bring ticks right into your home!
- **Absolutely** do not allow your outdoor pets to lay on the furniture or sleep with you in your bed at night. Any ticks on them can be transferred to chairs, couches, and your bed and then to you.
- Consider spraying Permetherin on dog beds or rugs in case ticks hitch a ride inside. (Read labels if using around cats!)



Resources

- **Lyme Literate Physician Finder**
<http://module.lymediseaseassociation.org/referral/LogIn.php?setcookie=yes>
- **ILADS (International Lyme and Associated Diseases Society)**
<http://www.ilads.org/>
- **LymeDisease.org**- advocates nationally for quality accessible healthcare for patients with Lyme and other tick-borne diseases. Great educational information and research resource. www.LymeDisease.org
- **Maryland Lyme** – Prevention, research, and local information
www.MarylandLyme.com
- **Tick Encounter Resource Center** – excellent resource on ticks & tick testing http://www.tickencounter.org/tick_testing


Watch Recorded Lyme Disease Webinar with Dr. Kathy Spreen

- For more information about Lyme Disease, signs and symptoms, explanation of Lyme tests, and overview of other tick-borne illnesses, watch our recorded webinar at www.HcLyme.org.



THE LYME EPIDEMIC: UNDERSTANDING LYME
& OTHER TICK-BORNE ILLNESSES

May 28, 2015



Howard County Lyme Awareness / Columbia, MD
www.HcLyme.org

Thank you for attending!

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Howard County Lyme Awareness

Website: www.HcLyme.org

Email for support group meeting dates

