Dare to Prevent
Preventing Lyme & Other Diseases From Ticks

DareTick Aware
A PA Lyme Prevention Program
Lyme disease is spread through the bite of an infected tick. It is the fastest growing infectious disease in the country.

Pennsylvania has one of the highest rates of Lyme disease of all the states. Across PA, Lyme disease rates have greatly increased over the past several years, representing nearly 40% of all the cases in the U.S., according to Pennsylvania Department of Health Lyme disease data. Lyme disease has been found in all 67 state counties. Tick testing research has found that many ticks are infected with Lyme and other diseases (also called “tick-borne” infections).

The Centers for Disease Control (CDC) estimates that 300,000 people are diagnosed with Lyme disease every year. That number is 1.5x the number of women diagnosed with breast cancer and 6x the number of people diagnosed with HIV/AIDS each year in the U.S.

Lyme disease affects people of all ages. Children ages 5-14 are most at risk for Lyme disease. Adults ages 40-55 are also at high risk.

Lyme and tick-borne diseases are preventable. Awareness is the key. That is why we “**Dare You to Prevent!**” Follow the quick and easy preventive steps listed in this brochure. These steps can help you protect yourself and family members when enjoying the outdoors.
I’m not an outdoorsman. Why do I need to protect myself?

Any time you go outside, there is a risk of tick contact.

**MYTH:** Ticks live only in the woods.

**TRUTH:** Ticks live wherever animals are present (such as the white-footed mouse, birds, deer and more).

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**How Ticks Track Us**

Ticks will wait around for long periods of time before attacking for their next meal.

- **Ticks are active any time of day, year round, even in winter when the temperature is above freezing.**
- **Ticks do not die from frost or snow.** They stay in leaf litter and wait for warmer weather to crawl out and up to look for a meal.
- **Ticks do not jump, fly or drop from trees.** Direct physical contact is needed for a tick to get on you or a pet.
- **Ticks typically crawl up to the top of grass blades, tall weeds or bushes where they will quest (reaching out with their legs) waiting for an animal or you to walk past. They also wait on tree trunks, wood benches and wood picnic tables where there is moisture. They are usually found at heights of 8-12 inches above the ground. Lone Star ticks are more aggressive and will actually stalk and follow you for several feet.**
- **Ticks will latch onto you as you brush by, usually low at the feet or lower leg level. Then, ticks quickly crawl up to dark, moist places on the body (i.e. knees, groin, armpits and hair line) where they will bite and push (or embed) their mouthpart into your skin.**

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**When Ticks are Active**

Peak season for ticks is spring through summer/early fall, but ticks are active every season.

- **SPRING** (March-April) – adult ticks
- **SUMMER** (May-September) – nymph ticks
  (which are the size of a poppy seed or grain of sand)
- **Fall & Winter** (Sept-Dec) – adult ticks
I now see the great risk of ticks. How can I protect myself?

We know it’s not practical to avoid the outdoors altogether. Many of us love being outside for so many reasons! You apply sunscreen to protect yourself from the sun’s harmful rays. Protecting yourself from ticks is just as quick and easy. It takes just 1 MINUTE to spray yourself with tick repellents made for skin AND pre-treat your socks, shoes and clothing with a tick repellent made especially for clothing. Even easier, wear pretreated tick-repellent clothing that you can buy!

Make using tick repellent a part of your daily routine. There is significant evidence that spraying your skin and clothing is the most effective way to reduce tick bites. If you’re in a rush, these should be the two steps that you always take. Gain peace of mind knowing you can enjoy the outdoors safely!

Where Ticks Live

- Meadows and fields with tall grass
- Gardens with ground cover that shades/retains moisture (pachysandra, ivy, etc.)
- Ornamental plantings
- Thick brush
- Wood’s edge – where yards border wooded areas
- Forest edges
- Leaf litter/leaf piles
- Areas around bird feeders
- Base of trees (up to lower 4-5 feet)
- Anywhere it is shaded with high humidity

You also want to avoid areas where tick-attracting rodents make their nests such as:

- Stone walls
- Wood piles
- Tree stumps and fallen logs
- Outside storage sheds

Know the Outdoor Risk Wherever You Go

Ticks don’t just live in the country. There are risks for ticks in the suburbs and cities across the United States, and in other countries too. Plan ahead with clothing and spray supplies. Pay attention while traveling or on vacation. Know and stay away from common tick habitats. Use appropriate skin repellent, treated clothing or clothing repellent.

TIP:
Use two (2) different types of tick repellents to protect yourself...
One for Skin.
One for Clothes.
The most important action you can take is:
1. Spraying your skin with repellent.
2. Spraying your socks and shoes with permethrin.
   It is effective and takes only 1 minute for these 2 steps!

**STEP 1: SPRAY YOUR SKIN**

The following repellents are for your skin and can also be sprayed on your clothing when you head outdoors. To compare product protection time frames and active ingredients, visit [www.epa.gov/insect-repellents](http://www.epa.gov/insect-repellents) as well as [www.palyme.org/dare-2B-tick-aware.html](http://www.palyme.org/dare-2B-tick-aware.html) under our download materials section. Always follow manufacturer’s recommendation for applying skin repellents.

- **Commercial repellents** – repellents with 20% or more DEET (i.e., Ultrathon™ and Cutter® Backwoods); Note: Deet does not kill ticks, it repels them. DEET comes with percentages from 5-100 percent. The higher the concentration the longer amount of time the protection, but the risk of negative health effects goes up too. Use the lowest concentration that provides the protection duration you need.

- **Less toxic repellents** – BioUD™ (tomato plants), Picaridin and IR3535 (i.e., Natrapel® and Bug Guard Plus).

- **Natural repellents** – products with camphor, castor, cedar, citronella, eucalyptus, geranium, lemongrass, lemon eucalyptus, neem, peppermint, lavender and rosemary oils may have repellent benefits (i.e., Buzz Away Extreme®, Avon’s Skin-So-Soft Bug Guard Plus, REPEL’s Lemon Eucalyptus, etc.). Note: natural oils evaporate quickly from the skin and may need to be applied more often. Sprays use varying percentages of the essential oils and this can affect their protection level; be sure to read labels. Not all natural repellents have been fully studied; they do not require EPA registration. Do your research and choose a repellent that best meets your needs. The CDC provides a good overview on natural tick repellents and pesticides at [www.cdc.gov/lyme/prev/natural-repellents.html](http://www.cdc.gov/lyme/prev/natural-repellents.html).

**TIP:**
Keep bottles of insect repellent in your garage to grab and go when you head out to kids sporting events, trips to the park or walking the dogs.

**NATURAL REPELLENTS**
**PROS** = Increasing evidence that they work and risk is less than DEET.
**CONS** = They don’t last as long. Herbals are considered safe by the EPA, but don’t require EPA approval or “proof” studies of effectiveness. Pure lemon eucalyptus essential oil is not recommended. What works is commercial repellents that use 30% oil of lemon eucalyptus.

**DEET REPELLENTS**
**PROS** = They work and last for long periods.
**CONS** = Recent studies have identified concern about DEET as a neurotoxin, particularly at higher concentrations. Spray lightly when applying directly to skin.
STEP 2: SPRAY YOUR CLOTHES

**Permethrin** is an ideal choice for pretreating your clothing and outdoor accessories. *Cautionary note: permethrin is NOT to be used on the skin; follow manufacturer’s application guidelines to safely apply these products.* The U.S. EPA approved pretreated clothing in 2003 as safe for people of all ages, including pregnant women.

**TIP:**
Place a "permethrin sprayed shoes" box by your entrance door to remove shoes. Inside the box, write the date you last sprayed the shoes and the next “spray” date as a reminder to respray them monthly. Always spray outside or in your opened garage.

Permethrin kills ticks that come in contact with treated clothing. A tick need only cross 8-10 inches of permethrin pretreated fabric before it falls off and dies. Permethrin can be sprayed on:

- Clothing – socks, t-shirts, shirts, shorts, pants, sweatshirts (especially any clothing for children, e.g. summer camp)
- Hats
- Shoes
- Backpacks, sporting bags and golf bags
- Picnic/sporting event blankets
- Camping gear such as tents, folding chairs, sleeping bags

**Easy Options for Pretreated Clothing**

Make it easy for yourself. Have your tick-protected clothing ready for any occasion.

1. **Pretreat your own clothes with permethrin** (i.e., Sawyer®, Tick Block, etc.); this takes just a few minutes to spray, a few hours to dry and then it’s good for roughly 4-5 machine washings; shoes, backpacks, etc. should be pretreated on a monthly basis for maximum effectiveness.

2. **Send your clothes to insectshield.org:** have them pretreat your outdoor clothing with permethrin; lasts up to 70 washings.

3. **Purchase clothing pretreated with permethrin:** Cabela’s®, REI®, Orvis, Ex Officio®, Zorrel®, BugBeWear®, Gamehide®, Insect Shield®, Hook & Tackle®, BiteBack®, Kidz Stuff®, LL Bean®, etc.; lasts up to 70 washings.
STEP 3: ADDITIONAL STEPS FOR SUCCESS

If you’re heading out to do some gardening, take a hike or venture into the rough at a golf outing, consider added protection. While steps 1 & 2 of spraying your skin and clothing have the most evidence of reducing tick bites, there are additional options:

- Wear light-colored clothing (treated with permethrin) to see ticks more easily.
- Tuck your pants into your socks.
- Wear long sleeves.
- Wear enclosed shoes (i.e. no flip flops).
- Pull back and secure long hair, especially when gardening.
- Wear a hat.

WHAT IS PERMETHRIN?

Permethrin is a man-made chemical produced by the chrysanthemum flower. It repels and kills ticks on contact. Permethrin has a very low toxicity level to mammals and is not easily absorbed into the skin. It is odorless and will not stain clothing. It has been used as a clothing treatment to prevent tick bites since the 1970s. Permethrin can be purchased through most large sporting goods stores or online. Remember, permethrin is for use on clothing only, not on skin.

WE DARE YOU: protect yourself and family!

It’s Lyme-Time! Time to take ticks and the disease threat seriously. The danger is real. Anyone can be at risk. You can take simple prevention steps to protect yourself, your family and your pets.

Reminder, ticks are found all over PA and are out during most of the year. They are very tiny. You may not see them in time to avoid getting bitten. Be sure to follow the two step rule of spraying clothing and spraying your skin when you venture outdoors. It’s easy to keep safe and takes only one minute to do it. And remember that protecting your pets from ticks also protects you. Be sure to assess your yard and take protective measures so that you can enjoy your property with the peace of mind that ticks aren’t lurking out there. See our Pet Prevention brochure and Yard Prevention brochure for more information.

Additional Resources

- University of Rhode Island TickEncounter Resource Center: www.tickencounter.org
- Pennsylvania Department of Health: www.health.pa.gov
- CDC: www.cdc.gov/lyme/index.html
- Columbia University Medical Center: www.columbia-lyme.org
- Preventing Lyme Disease and other Tick-Borne Infections, by Bob Oley, PE, MSPH
PA Lyme Resource Network offers a collection of Dare 2B Tick Aware Lyme prevention and awareness literature.

- Tick Identification card
- PA Lyme Protection Tips card
- Dare to Prevent brochure (personal prevention)
- Dare to Prevent: Pet Prevention brochure
- Dare to Prevent: Yard Prevention brochure
- Dare to Act brochure (tick checks, what to do if you find a tick on you)
- Dare to Know brochure (early recognition of symptoms)

To learn more about prevention measures, visit our website or social media pages.

www.palyme.org
facebook PA Lyme Resource Network @PALyme1

PA Lyme Resource Network (www.palyme.org) is an all-volunteer 501(c)(3) non-profit organization that provides awareness, education, support, advocacy and resources to navigate Lyme and Tick-Borne Diseases in the state of Pennsylvania. PA Lyme was founded in 2012 by individuals with personal experience with these diseases and provides educational seminars, speakers, patient networking and research updates serving the general public, medical professionals, schools, private businesses and government entities. PA Lyme has the largest network of regionally based support groups in the state. The support groups hold local meetings and events to provide support, education and resources for their local communities.

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