Bay Area Lyme FOUNDATION NEWS

Committed to making Lyme disease easy to diagnose and simple to cure

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TIP OF THE QUARTER

Bring the Outdoors In



Tick season is year-round in California, Florida and Texas. We are heading into spring in other parts of the country so, as the snow melts, tick season begins. There are ways to avoid ticks while still enjoying the outdoors. There are also key steps you can take to avoid bringing ticks into your home. These include:

Put clothes in a hot dryer for one hour after being in woods.

Take a shower to wash away tough to spot nymph ticks.

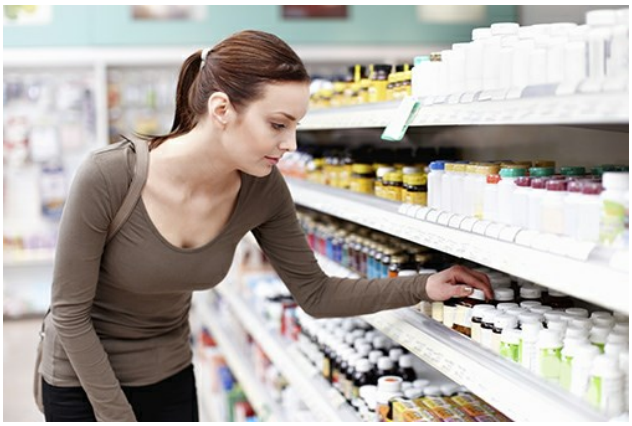
Check common places to which ticks might latch on—under the arms, in and around the ears, inside the belly button, behind the knees, between the legs, around the waist and especially in the hair.

Thoroughly tick-check any animal coming into your home from the outdoors. Ticks love to hitch a ride on a furry passerby. Dogs can suffer from Lyme too.

Check any camping gear. Check coats and daypacks before bringing indoors.

And, don't forget to redo tick checks 3 days after being in woods. If you've missed any ticks the first

Breaking News



Can an Allergy Medication Kill Lyme Disease?

A common antihistamine frequently taken to treat allergy symptoms, loratadine, may be able to help kill Borrelia burgdorferi, the bacteria which causes Lyme disease, according to a new laboratory study conducted by Dr. Jayakumar Rajadas and colleagues at the Biomaterials and Advanced Drug Delivery Lab (BioADD), Stanford School of Medicine. This new study was funded by the Bay Area Lyme Foundation and published in PlosOne (**click here** for full article).

The results show that **loratadine** (trade name: Claritin®) and specifically its metabolite, desloratadine, are able to prevent manganese (Mn) from crossing the cell wall of the bacteria that causes Lyme disease, starving the bacteria and causing it to die in test tubes. The antihistamine accomplishes this by inhibiting the bacteria's transport protein, BmtA (Borrelia metal transporter A).

Manganese is required for certain metabolic processes of Borrelia burgdorferi and also plays an important role in numerous biological processes in the human body. Previous research shows that in general, bacteria scavenge the body for trace metals that circulate in the blood and have developed special adaptations on their cell walls to internalize these metals. These adaptations are called transport proteins, and BmtA is the specialized transport protein for Borrelia burgdorferi. BmtA binds with manganese to bring it into the bacteria, and studies have shown that BmtA and manganese are important in making the bacteria harmful to the human body.

More research is necessary, and the next step is to conduct clinical trials, but this study offers valuable insights into the metabolic activity of Borrelia burgdorferi and may lead to first non-antibiotic, targeted therapy for Lyme disease.

Science Update

Meet Our Scientific Advisory Board

To assist us in achieving our mission of **making Lyme disease easy to diagnose and simple to cure**, we have invited some of the nation's leading Lyme researchers to be part of the Bay Area Lyme Foundation Scientific Advisory Board. We are grateful that their involvement will help us continue to make great strides towards a better understanding of this devastating disease.

Each Board member has vast experience and expertise in Lyme disease or related fields, and has demonstrated a relentless commitment to finding solutions for Lyme patients. Their specialties

time around, and they've had a chance to feed on you, they will be bigger and easier to spot.

Remember, if you do incur a tick bite, **monitor yourself closely for signs of flu like symptoms or a rash**. These may be symptoms of Lyme disease and you need to tell your doctor.

Bay Area Lyme wants everyone to enjoy all the activities the great outdoors brings to your life. Awareness and prevention are the best ways to protect yourself from contracting Lyme disease.

offer a broad perspective on this condition, including ecology, pathogenesis, biomarker research, and disease progression, that is valuable in the continued pursuit of an accurate diagnostic and treatments. The Bay Area Lyme Foundation Scientific Advisory Board consists of the following influential researchers and clinicians:

- **John Aucott, MD**, Assistant Professor, Johns Hopkins School of Medicine, and a renowned Lyme disease clinical research expert
- **Charles Chiu, MD, PhD**, Assistant Professor, Laboratory Medicine and Medicine, Infectious Diseases, Director of UCSF-Abbott Viral Diagnostics and Discovery Center (VDDC) and Associate Director of the Clinical Microbiology Laboratory, University of California, San Francisco, and a leader in the use of advanced genomic technologies for pathogen discovery and clinical diagnostics for blood-borne infections
- **Monica Embers, PhD**, Assistant Professor, Tulane University Health Sciences, and an expert in model systems to facilitate a better understanding of basic mechanisms and improved diagnosis and treatment of Lyme disease
- **Christine Green, MD**, clinician, private practice private clinician, Director of Education and Board Member, International Lyme and Associated Diseases Society (ILADS), and an expert with a perspective from the front lines of clinical Lyme
- **Robert Lane, PhD**, Professor, University of California, Berkeley (Environmental Science, Policy & Management), and expert in the ecology of the bacteria that causes Lyme disease and other tick-borne pathogens
- **Bill Robinson, MD, PhD**, Associate Professor, Stanford University Department of Medicine (Immunology & Rheumatology), member of the Stanford Lyme Working Group (SLWG) and expert on the forefront of Lyme immunology and biomarker discovery
- **Irv Weissman, MD**, Professor, Stanford University (Developmental Biology & Cancer Research), Director, Stanford Institute of Stem Cell Biology and Regenerative Medicine, Director, Ludwig Center for Cancer Stem Cell Research at Stanford University, and thought leader for novel approaches in medicine

These researchers and clinicians have shown a commitment to engaging with other researchers, doctors and the greater Lyme community to solve the scientific and clinical questions of Lyme disease.

Take a Bite Out of Lyme



We are thrilled to see the word spreading since our first **#Lyme4Lyme Challenge** in late August, led by one enterprising young woman, Ms. Shelby Anderson. Inspired by the ALS campaign and determined to raise awareness about Lyme disease, she introduced a new spin on the challenge. With friends and supporters at Western University in Pomona, CA, she challenged folks to eat an entire lime in support of Bay Area Lyme Foundation and our efforts to develop a better diagnostic. And now, a new web challenge has greatly increased awareness about this debilitating disease, thanks to **lymediseasechallenge.org**.

Don't Miss the Party of the Year!



Huey Lewis and The News Will Headline at LymeAid 2015

Cocktails • Dinner • Dancing • Research Update • Live Auction

This exclusive Benefit Dinner & Live Concert brings together brilliant scientists, dynamic business minds and influential philanthropists in an intimate setting at a private estate in Portola Valley. Informative, engaging and inspiring, it's the 2015 benefit you won't want to miss.

Help us surpass last year's LymeAid donations. 100% of all contributions go directly to Scientific Research and Lyme disease prevention.

We graciously thank Huey Lewis and The News for donating their performance to further help us accelerate solutions for Lyme disease.

LymeAid 2015 event details.

Partner Events



Sasquatch Racing offers Bay Area Lyme a valuable opportunity to educate local outdoor enthusiasts who come in regular contact with ticks on the trails. Now in its third year, Sasquatch Racing produces family-friendly trail running events across the Bay Area for novice and experienced runners interested in tackling the 5K, 10K, and Half Marathon race distances.

The first race of the Bay Area Lyme Foundation sponsored Sasquatch Racing series (The Rattlesnake Ramble) saw over 300 runners toe the line and ramble 5K, 10K, or 13.1 miles! With three more events scheduled for 2015, the Sasquatch Racing series continues in its tradition of creating fun, quirky, offbeat and mysterious trail running adventures.

Next up in the series is **The Sasquatch Scramble** 5K/10K/Half on Sun, 4/26 @ Redwood Regional Park in Oakland.

Get Involved

Help us change the field of Lyme disease. Help us continue to support new research and promising projects dedicated to solving this mysterious and poorly understood disease.

In recognition of the generous contributions of private sponsors, we are able to dedicate 100% of every donation dollar directly to project initiatives. Your support funds diagnostic, therapeutic and biorepository projects.

Click here to help make Lyme disease easy to diagnose and simple to cure.

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