



LYME DISEASE

Lyme disease is the most common tick-borne disease in the Northern Hemisphere. It is caused by at least three species of bacteria belonging to the genus *Borrelia*. The disease is named after the town of Lyme, Connecticut, where a number of cases were identified in 1975. Researchers investigated why an unusually large numbers of children were being diagnosed with juvenile rheumatoid arthritis. It was discovered that most of the affected children lived near wooded areas likely to harbor ticks. It was also found the children's first symptoms typically started in the summer months coinciding with the height of tick season. Several of the patients reported having a peculiar skin rash just before developing arthritis symptoms, and many recalled being bitten by a tick. It was discovered that tiny deer ticks infected with a spiral shaped bacterium were responsible for the outbreak of arthritis in Lyme, CT. Ordinary "wood ticks" or "dog ticks" do not carry the infection. The bacterium was named *Borrelia burgdorferi* after Willy Burgdorfer, who discovered the disease was caused by the bacteria infected ticks. The ticks most commonly infected with *B. burgdorferi* usually feed and mate on deer during part of their life cycle. The number of deer ticks has been increasing in all areas of the country. The number of reported cases of Lyme disease has been increasing. Lyme disease has been reported in nearly all states in this country, although most cases are concentrated in the coastal northeast, Mid-Atlantic States, Wisconsin, Minnesota, and northern California.

Special Points of interest:

- *Lyme disease* It is transmitted through a bite from a specific type of tick. The animals that most often carry these insects are white-footed field mice, deer, raccoons, opossums, skunks, weasels, foxes, shrews, moles, chipmunks, squirrels, and horses.

How is Lyme Disease Transmitted? It is transmitted through a bite from a specific type of tick. The animals that most often carry these insects are white-footed field mice, deer, raccoons, opossums, skunks, weasels, foxes, shrews, moles, chipmunks, squirrels, and horses.

What Are the Symptoms of Lyme Disease? Lyme disease can affect multiple body systems and produce a range of symptoms. Not all patients will have all symptoms and many symptoms are not specific to Lyme disease, but can occur with other diseases as well, thus making a diagnosis of Lyme disease very difficult. The incubation period from infection to the onset of symptoms is usually one to two weeks, but can be much shorter, or much longer. Symptoms most often occur from May through September, because the nymphal state of the tick is responsible for most cases. In the early stages of Lyme disease, one may experience flu-like symptoms that can include a stiff neck, chills, fever, swollen lymph glands, headaches, fatigue, muscle aches, and joint pain which usually resolve within a few days or a few weeks. The classic sign of early local infection is a circular, outwardly expanding rash called **erythema migrans**, which occurs at the site of the tick bite three to thirty days after the bite. The rash resembles a bull's-eye pattern and occurs in about 70 – 80 % of patients. After several weeks of being infected and not treated, 60% of patients develop recurrent attacks of painful and swollen joints. This **arthritis** can shift from one joint to another but most commonly affects the knees. About 10 -20% of untreated patients will go on to develop lasting arthritis. Lyme disease can affect the nervous system cause stiff neck, Bell's palsy, numbness, pain, weakness in limbs and even memory loss, change in mood and/or sleeping habits. These symptoms may last for weeks or months and may recur. Less than one out of 10 patients will go on to develop heart problems, such as an irregular, slow heart-beat with dizziness & shortness of breath, these symptoms rarely last more than a few days.

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LYME DISEASE—Continued

How is Lyme Disease Diagnosed? Diagnosis can be difficult because Lyme disease mimics those symptoms of other disorders. The easiest way to diagnose Lyme disease is to see the bull's-eye rash. If there is no rash, antibodies against the infection can be detected in the blood about 3-4 weeks after the onset of a suspected infection. The bacterium is very difficult to isolate or culture from body fluids or tissues. The **ELISA blood test measures** the levels of antibodies against Lyme disease in the body. The **Western blot test** identifies antibodies directed against a panel of proteins found on the Lyme bacteria. This test is ordered when the ELISA test is either positive or uncertain.

How is Lyme disease treated? Antibiotics are effective against Lyme disease in the early stages. The use of doxycycline or amoxicillin taken orally for two to four weeks can speed the healing of the rash and prevent subsequent symptoms such as arthritis or neurological problems. Patients younger than 9 years old, pregnant or lactating are treated only with amoxicillin. IV antibiotics are used for treating more serious cases. Following treatment, some patients still have persistent fatigue and achiness, which can take months to disappear.

How Does One Prevent Getting Lyme Disease? Avoid deer ticks! Most people with Lyme disease become infected during the late spring, summer, and early fall when immature ticks are out looking for their meal. **Tips to prevent tick bites include:**

- Wear light colored clothing with long sleeves when walking in woods to make ticks easier to see.
- Wear shirts tucked into pants and pants tucked into socks or boots.
- Walk in the center of trails in the woods to avoid picking up ticks from overhanging bushes or grass.
- Keep grass trimmed as short as possible.
- Apply tick repellents with DEET or permethrin to your clothing, shoes and socks before going out.
- After a trip outdoors, check yourself, your family and your pets.
- Shower and shampoo your hair if you think that you have been exposed to ticks.
- Check your clothes for ticks and wash them immediately in order to remove any ticks.

REMEMBER if you are bitten by an infected tick, it will not transmit the infection until it has its blood meal. It is important to inspect yourself and your clothing after outdoor activities. Newly attached ticks can be removed before they transmit infection.

Pregnant women should be very careful to avoid tick infested areas since Lyme disease can be transmitted to the unborn child. Lyme disease can also cause a miscarriage.

If you are bitten by a tick, the best way to remove a tick is:

Tug gently but firmly with blunt tweezers near the "head" of the tick until it releases its hold on the skin. To lessen the chance of contact with the bacterium, try not to crush the tick's body or handle the tick with bare fingers. Swab the area thoroughly with an antiseptic to prevent infection. **DO NOT** use kerosene, Vaseline, fingernail polish or a cigarette butt. **DO NOT** squeeze the tick's body with your fingers or tweezers.



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LYME DISEASE—Continued

Is There a Lyme Disease Vaccine? In 1998 the FDA approved a vaccine called LYMErix for Lyme disease. Its entry into clinical practice was slow because it was expensive and usually not reimbursed by insurance companies. Hundreds of vaccine recipients reported that they had developed autoimmune side effects. Some patient advocacy groups filed class action lawsuits against GlaxoSmithKline. Even though the FDA found no connection between the vaccine and autoimmune complaints, the company pulled the vaccine off the market due to poor sales. Currently there is no vaccine on the market for Lyme disease.

What is the Prognosis for People Who Have Lyme Disease? Most people have a full recovery after antibiotic treatment. If symptoms persist, further treatment may be needed. Untreated Lyme disease can cause arthritis or permanent damage to the heart, nervous system or joints. People can get Lyme disease more than once. One does not develop any kind of immunity from having had the disease. The antibody test can remain positive for months to many years after an infection. The presence of antibodies in the blood is not sufficient reason for continued or retreatment with antibodies.

References: www.cdc.gov/lyme/ http://en.wikipedia.org/wiki/Lyme_disease



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ACA RECERTIFICATION PACKETS

Deadline extended to September 1, 2012

ACA recertification packets were mailed out in April, please contact the ACA office if you have not received your packet!

Visit www.acacert.com to download the application form

One Category or Specialty	2 year renewal	\$ 80.00
Two Categories	2 year renewal	\$ 100.00
Three Categories	2 year renewal	\$ 120.00
Instructor- per category	1 year renewal	\$ 80.00

Any recertification postmarked after June 30, 2012 must include \$15.00 late fee.

What to submit to ACA as proof of continuing education:

Certificates of attendance or completion from CE events, Copies of transcripts from classes taken, Official printouts of CE activities from place of employment, and List of CE activities verified by supervisor or manager signature. Documentation must include: date(s) of attendance, title of activity, number of CE credits assigned or amount of time spent, and signature of person issuing or verifying the activity.

ABP CONTINUING EDUCATION INFORMATION

A reminder that ABP, Inc. offers home study continuing education to help you earn CE hours.

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DOUBLE DUTY BEAUTY FOODS—Eat and Apply!

AVOCADO is rich in protective antioxidants and essential fatty acids, which helps keep the skin plump and smooth. Eating avocado helps to replenish the protective layer of fatty acids that surrounds skin cells, keeping moisture in and preventing dehydration. Avocado is good added to a sandwich or in a salad. An avocado face mask may help slow skin's aging process. Research has found that avocado oil applied to the skin can stimulate collagen and elastin production. Make an anti-aging moisturizing mask by pureeing a ripe avocado and mixing it with $\frac{3}{4}$ cup sour cream, which contains lactic acid to help exfoliate dead skin cells. Spread the mixture over your face and leave for 10 minutes and then rinse with water.

Drinking **TEA**, especially green and white varieties, will give you twice the antioxidants of black tea. It will also give you ECGC which is an antioxidant that protects the skin from damage caused by exposure to sun and pollutants. Applying tea to the hair is a natural hair color booster. It can bring out highlights to dyed hair. Chamomile tea applied to blonde hair can revitalize the highlights; black tea perks up brunettes and berry or red teas add a little "oomph" to auburn or red hair. Prepare 8 ounces of tea, let it cool, then saturate the hair, cover with a shower cap for 15 to 30 minutes and then rinse with water.

ALMONDS contain high levels of catalase which is an enzyme that may help slow the graying process by preventing a buildup of hydrogen peroxide in follicles that can turn hair gray. Almonds are good as a snack or be pulverized and added to batter for waffles or pancakes or as a crunchy batter for chicken. Applied to the body, almonds are an exfoliating body scrub. Grind $\frac{1}{4}$ cup of almonds and mix with 2 tablespoons of organic virgin coconut oil to make a paste. Rub all over the body and then rinse with water.

COCOA has a high concentration of flavanols with antioxidant properties help to protect the skin from sun damage. For a richer tasting BBQ sauce, add 1 tablespoon of 70% cocoa powder. For skin benefits, use cocoa as a bath soak. Add $\frac{1}{8}$ cup of unsweetened cocoa mixed with $\frac{1}{3}$ cup to instant fat free dry milk to your tub and soak!

YOGURT is rich in calcium and phosphorus that can strengthen tooth enamel and protect your teeth from cavities. Greek style yogurt is high in protein which is essential for the production of collagen. Try replacing sour cream with fat free plain yogurt in recipes. Yogurt contains lactic acid which is great for sloughing away dead skin cells and unclogging pores. Use full fat plain yogurt as a mask. Apply a thin layer to clean skin and leave on for 10 minutes before rinsing. Mix $\frac{1}{2}$ cup full fat yogurt, 3 tablespoons honey, and one egg yolk. Apply to hair and put on a shower cap for 15 minutes and then rinse and wash your hair as usual.

STRAWBERRIES contain ellagic acid and vitamin C which help protect the skin from environmental damage. High intake of vitamin C is associated with a lower likelihood of wrinkles and skin dryness. Ellagic acid increases the skin's ability to hold moisture and help dark age spots to fade. Make a facial mask by pureeing strawberries in a blender. Then mix in chilled full fat plain yogurt and a squirt of lemon juice. Apply to the face for 20 minutes and then rinse.

Reference: PREVENTION, September 2011.