



DELAWARE MODERN PEDIATRICS, P. A.

David M. Epstein, M.D.

Lorna Divino, RN, CPNP

300 Biddle Avenue, Suite 206
Springside Plaza, Connor Building

Newark, Delaware 19702

Phone: (302) 392-2077

Fax: (302) 392-0020

www.DMPKids.com

Tick bites and Lyme Disease

Ticks and Lyme Disease can be scary, but Lyme Disease is preventable and curable. Here's how we approach ticks, and Lyme Disease.

Transmission

Certain ticks, most commonly deer ticks, carry bacteria that cause Lyme Disease. In some areas, more than half the deer ticks carry the Lyme "spirochete." In other areas, Lyme is much less common.

Ticks transfer the Lyme bacteria during feeding. However, ticks must feed for a long time to transmit Lyme Disease. If the tick is attached for less than 24 hours, or the tick body is not engorged with blood, then transmission is unlikely.

What kinds of tick might cause disease?

- ✓ **Deer ticks** are the tiniest. The nymphs might be only a millimeter across; adult are not much larger. They are all black, or dark grey.
- ✓ **Lone Star Ticks** look like deer ticks, but they may have a small yellow dot in the middle of their backs. They bite more aggressively than deer ticks. They carry a disease called "STARI", an illness that looks like Lyme Disease (similar red-ring rash and fever). STARI may be treated with the same antibiotics as Lyme Disease. But untreated STARI disease does not have the same long-term effects as untreated Lyme Disease, and in fact it often resolves without treatment. In addition, allergic reactions to red meat have been reported after Lone Star Tick Bites.
- ✓ **Dog ticks** and **Wood ticks** are larger (several millimeters). They are often more brown than black, and may have a striped appearance. They do not carry Lyme Disease. (Occasionally, other infections such as Rocky Mountain Spotted Fever may follow a dog tick bite, but this is quite uncommon.)

If you find a tick attached to your child's skin, remove it with tweezers.

1. Grasp the head with the tip of the tweezers flush against the skin.
2. Gently flip the body up, so that the tick is standing on end.
3. Slowly, but firmly, pull out the tick's mouth parts. Pull straight up, by the head, as close to the skin as possible. (It make take a couple of minutes of gentle traction for the tick to release its grip; be patient!)

Do try to keep the head and mouthparts intact. But don't worry if a bit breaks off and remains in the skin; it will come out eventually, and it doesn't increase the risk of Lyme Disease. The remaining mouth parts do not need to be "dug out" from the skin.

What are the chances of Lyme Disease after a deer tick bite?

Not every tick sighting results in Lyme Disease! In fact, most deer tick bites do not result in Lyme Disease, even in endemic areas.

- ✓ Does the "tick" have legs? If not, then it is not a tick.
- ✓ Is the tick engorged? If it is, then it probably has been on the skin and feeding for a long time. If the tick is moving around or not firmly attached then it has not begun to feed.
- ✓ Is there more than one? The risk of contracting Lyme Disease is higher if 6 or more deer ticks are found at once, especially if they are nymphs.

Signs and Symptoms of Lyme Disease

There three stages: early localized, early disseminated, and late disease.

In the "early localized" stage, a circular rash (called Erythema Chronicum Migrans (ECM)) appears that may be solid red, or have a "bull's-eye" appearance. The rash must be at least 2 inches across to be called ECM.) It may appear 3-10 days after the bite, but generally within a month. Usually the rash appears around the site of the tick bite, but occasionally it will show up elsewhere on the body, or alternatively multiple rings will appear. About 85% of children with Lyme Disease will have the rash. The patient may also feel sick and tired, and may have fever, chills and vague pains.

However, patients will often develop a local reaction to a tick bite, which is not dangerous. If redness and swelling appears (less than 2 inches) around a tick bite

within a couple of days of the bite, this does **not** indicate Lyme Disease. Antibiotic ointment is the only treatment needed.

Early disseminated disease (Stage 2) occurs weeks to months following untreated exposure. Patients may have recurrent fevers, joint swelling, and neurologic involvement such as facial nerve paralysis.

Late disease (Stage 3) may develop months to years after exposure. There may be inflammation of the heart, brain and joints, or an arrhythmia. In our practice, Stage 3 or “chronic” Lyme Disease is highly unusual, especially since early treatment of Lyme Disease (within a few weeks of the tick bite) seems to completely prevent long-term complications.

Treatment

In general, Lyme Disease is completely curable with antibiotics, unless heart or neurological complications have appeared before treatment. Blood tests are necessary to confirm the diagnosis, but we may start antibiotics while waiting for the results of testing. Antibiotics are not indicated for every tick bite! Generally, antibiotics are prescribed only if the child is sick with presumed Lyme Disease, or if there is a higher likelihood of Lyme transmission because of multiple ticks or other circumstances.

Tick bite prevention

- ✓ When in the woods and high grass areas, wear lightweight long-sleeve shirts and pants. Tuck pant legs into the socks. Wear light colored clothing so that ticks can be seen easily.
- ✓ Parents should do a thorough body search, especially in skin folds and the scalp. This can be done every evening if the child has been outdoors. Bath time is a good time to do this.
- ✓ For children older than 2 months old, you can apply insect repellent containing DEET to the clothes. For kids over 2 years, insect repellents containing DEET may be applied to exposed skin, according to the directions. (Wash it off after the day’s outdoor activities!) Lotions containing citronella are less toxic than DEET, but they don’t work as well.
- ✓ Examine pets daily if they roam outdoors.