



# MID-JERSEY PEDIATRICS

[www.midjerseypeds.com](http://www.midjerseypeds.com)

**33 Brunswick Woods Drive  
East Brunswick, NJ 08816  
(732) 257-4330**

**25 Kilmer Drive  
Building #3, Suite 107  
Morganville, NJ 07751  
(732) 972-6888**

## LYME DISEASE

During the summer, children run to play in the grass, parental concerns about deer ticks and Lyme disease return in full force. Although Lyme disease is very common in New Jersey, it is probably less common and far less dangerous than most people imagine.

Lyme disease can affect people of all ages, but nearly half of all cases occur in children and adolescents. It is caused by the bacterium *Borrelia burgdorferi*. These bacteria are carried by deer ticks and are injected into the skin when the tick bites a human.

The first sign of Lyme disease is often a rash, called erythema migrans (see picture). This rash starts as a small red dot that may look like a mosquito bite, and then expands to a large ring, up to 12 inches in diameter, often with central clearing. At the time of the rash, patients may also experience joint pains, muscle aches, and other flu-like symptoms (fatigue, headaches, fever, chills, etc.). About one-half of patients with Lyme disease remember having a rash and only one-third of them remember being bitten by a tick.



If Lyme disease is not treated in this early stage, pain and swelling of a joint, especially the knee, may develop. This arthritis may migrate from one joint to another. The heart may also be affected by Lyme disease, causing an abnormal rhythm, but this is much less common. The neurologic symptoms of Lyme disease seem to be the most difficult to diagnose. The most common is damage to the facial nerve, which causes a facial droop.

Lyme disease is diagnosed by a combination of history, physical exam and lab tests. If the rash of Lyme disease is present, no lab test need be done. If there is no rash and Lyme disease is suspected, a blood test is usually performed. The blood test will become positive 4 – 6 weeks after the tick bite has occurred.

If Lyme disease is diagnosed, the treatment is antibiotics. For children under nine years old, amoxicillin is usually used. For children nine years old or older, doxycycline is recommended. The antibiotics are taken orally for 3-4 weeks, depending on the stage of the disease. If the child has heart disease or severe neurologic symptoms, intravenous antibiotics are usually required. Most children with Lyme disease who receive antibiotics do extremely well, especially if they are treated early in the course of their illness. Occasionally, a second course of antibiotics is necessary if the child does not respond well to the initial treatment. There is no need to retest a child for Lyme disease after the antibiotics are completed. In fact, the tests for Lyme disease will remain positive for many months after treatment, even when the disease is completely gone.

To help prevent Lyme disease, children should be checked for ticks every night after they have been playing outside in the grass. The deer tick is flat, very small (about the size of a pin head) and has eight legs. The adult male is black and the female is brown and black. They can grow to three times their normal size when they are engorged with blood. Even if an infected deer tick bites a child, the odds of the child developing Lyme disease are extremely low if the tick is removed within 24-48 hours.



Children should be encouraged to wear light-colored, long pants and long sleeve shirts when hiking in the woods or rolling in the grass near woods. They should tuck the legs of their pants in their socks or boots as well. An insect repellent containing DEET (N -Diethyl-metaltoluamide) may be sprayed on the clothing, but avoid the child's hands and face.

While these suggestions may prevent some cases of Lyme disease, it is impossible to prevent them all. If a child develops a large rash with or without flu-like symptoms, or complains of joint pains, he/she should be seen by a physician. If Lyme disease is present and antibiotics are promptly taken, most children should do fine, with no long term problems.