Sometimes there are multiple, secondary skin rashes. This large rash should not be confused with the harmless red spot that usually is seen immediately after receiving the bite. Many people have a small redness at the site of the bite, which is a normal sensitivity to the bite itself. (If you are uncertain, contact your doctor.)

Although a majority of infected persons develop the classic red rash, many do not. Other common symptoms of early Lyme Disease— with or without the rash— are flu-like, and include fatigue, headache, neck stiffness, jaw discomfort, pain or stiffness in muscles or joints, slight fever, swollen glands, or redness in the eyes. A persistent, non-swelling pain in the neck or back, or a muscle weakness may indicate that you have Chronic Lyme Disease.

If untreated, Lyme Disease can progress to more serious stages. In these later stages of the disease, the joints, the heart, and the central nervous system can be involved. One example is called “Aseptic meningitis” with sudden joint pains, swelling, and fever. These symptoms usually occur in a single joint, or can appear in one joint after a few days, and occur in another joint. Heart symptoms, which can occur within weeks after the initial illness, are weakness, and an irregular heartbeat. Still other patients may develop weakness of facial muscles— drooping of an eyelid or a corner of the mouth, or a formation of the eyes.

**Treatment**

Lyme Disease, Ehrlichiosis, and Babesiosis are treatable. Naturally, they are easier to treat when infections are detected early. Even in their later stages, these diseases can usually be treated medically. Antibiotics are the treatment of choice for Lyme Disease and Ehrlichiosis. Babesiosis is treated with a combination of drugs. Your physician will choose the best treatment for your particular case.

**Prevention**

Be aware of and avoid tick habitats such as tall grass, bushes, brush, and woods. If you go into such habitats, wear shoes and appropriate clothing— hat, long-sleeved shirt, and long pants tucked into socks. The use of tick repellents on the outside of clothing may be helpful.

Before coming indoors, brush off your clothing. Once inside, remove all clothing, check for any attached or unattached ticks, and promptly wash the clothing. Family members can help each other with tick inspection. Remove and dispose of any unearthed ticks. If you find ticks that are attached to you, follow the procedure outlined under “Removal of Ticks.”

Monitor the bite area and be alert for early symptoms, such as an expanding rash or flu-like signs over the next month or so.

Since pets that are allowed outdoors can cause us to come in contact with ticks, frequently inspect your pet and remove any attached or unattached ticks. Use tick-control pet products that your veterinarian recommends. These preventative measures are important to help protect pets because they can also get Lyme Disease and Ehrlichiosis.

**Five Steps to Prevention**

1. **Avoid tick habitats.**
2. **Dress properly** if you must go into a tick habitat.
3. **Check for, and remove, any ticks on your family members as soon as possible** after leaving a tick habitat.
4. **Check pets** for ticks and use tick-controlled pet products.
5. **Consult with your doctor and veterinarian about available vaccines.**

**Related Disorders**

**Ehrlichiosis**

**Babesiosis**

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Lyme Disease

Lyme Disease is an infection caused by the bacterium Borrelia burgdorferi, which is transmitted by the bite of certain species of ticks. The disease often starts as a small red spot or rash on the skin and can cause various symptoms if left untreated. The Centers for Disease Control and Prevention (CDC) have identified more than 47 states as having reported cases of Lyme Disease.

Transmission

Ixodes ticks are active in the northeast and midwest and when people are exposed to tick-infested areas through outdoor activities.

Removal

Lyme Disease can be effectively treated with antibiotics, and early recognition and treatment are crucial.

Symptoms

The symptoms of Lyme Disease can vary widely, and the disease can take a long time to manifest. Some common symptoms include:

- Fatigue
- Headache
- Enlarged lymph nodes
- Skin rashes
- Muscle pain
- Fever

Diagnosis

Diagnosing Lyme Disease requires a complete medical history, physical examination, and laboratory testing. If you think you may have Lyme Disease, it is important to seek medical attention promptly.

Treatment

Early detection and treatment of Lyme Disease greatly increases the likelihood of a positive outcome. In most cases, antibiotics are effective in curing the disease.

Prevention

Preventing Lyme Disease involves avoiding tick-infested areas and taking precautions when outdoors. Clothing and insect repellent can also help protect against ticks.

Babesiosis

Babesiosis is an infection caused by the malaria-like protozoan Babesia microti. Since the late 1980s, the disease has spread from the islands off the New England coast to the mainland. In the United States, two closely related tick species — Ixodes scapularis and Ixodes pacificus — have been identified as harboring and transmitting the Lyme Disease bacteria.

Transmission

Typically, the disease is transmitted through the bites of black-legged ticks, the species that carry the bacteria.

Symptoms

The symptoms of Babesiosis can range from mild to severe and life-threatening. Effective antibiotic treatments are available, and early detection and treatment are crucial.

Diagnosis

Diagnosis of Babesiosis requires a complete medical history, physical examination, and laboratory testing. If you think you may have Babesiosis, it is important to seek medical attention promptly.

Treatment

Effective antibiotic treatments are available for Babesiosis, and early detection and treatment are crucial.

Prevention

Preventing Babesiosis involves avoiding tick-infested areas and taking precautions when outdoors. Clothing and insect repellent can also help protect against ticks.

Ehrlichiosis

Ehrlichiosis is an infection caused by the intracellular bacteria Ehrlichia chaffeensis and Ehrlichia ewingii, which are transmitted by the bite of certain species of ticks. The disease can be asymptomatic or can cause various symptoms if left untreated.

Transmission

Ehrlichiosis is typically transmitted through the bites of black-legged ticks, the species that carry the bacteria.

Symptoms

The symptoms of Ehrlichiosis can range from mild to severe and life-threatening. Effective antibiotic treatments are available, and early detection and treatment are crucial.

Diagnosis

Diagnosis of Ehrlichiosis requires a complete medical history, physical examination, and laboratory testing. If you think you may have Ehrlichiosis, it is important to seek medical attention promptly.

Treatment

Effective antibiotic treatments are available for Ehrlichiosis, and early detection and treatment are crucial.

Prevention

Preventing Ehrlichiosis involves avoiding tick-infested areas and taking precautions when outdoors. Clothing and insect repellent can also help protect against ticks.