

Lyme rash reappearance probably signals new infection, study says

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It's even more likely when bull's-eye rash shows up on different part of body.

(HealthDay)—If you've had Lyme disease in the past and you develop another bull's-eye rash—the hallmark of Lyme disease—you probably have a new infection rather than a relapse of your initial infection, according to a small new study.

One implication of the study might be that since people don't suffer relapses from Lyme infection, it's not necessary to treat them with long-term antibiotics as a preventive measure.

For people whose symptoms do recur, it's especially likely that it's from a new infection if the rash shows up in a different site than the initial infection. It's also especially likely to be a new infection if it occurs during the prime tick season, which is from late spring through the

summer, the study authors said.

"When people take the relatively short course of antibiotics that are ... recommended by the Infectious Diseases Society of America, the infection is likely to be cured," said the study's lead author, Dr. Robert Nadelman, a professor of medicine in the division of infectious diseases at New York Medical College in Valhalla, N.Y.

"But be aware that if you live, work or do recreation in an area with ticks, you can get tick bites again, and you can get Lyme again," he added. "If you see a tick on you, remove it promptly; take precautionary steps to try to avoid getting ticks on you."

Results of the study are published in the Nov. 15 issue of the *New England Journal of Medicine*.

The bull's-eye rash (called erythema migrans) that is usually the first clue that someone has been infected with [Lyme disease](#) generally disappears after treatment, according to study background information. But the rash comes back in about 15 percent of people who have had Lyme. Currently available tests can't differentiate between a new infection or a recurrent one. This can lead people to believe that they have a long-standing infection that requires long-term antibiotic therapy.

Ratner and his colleagues wanted to assess just how often a new bull's-eye rash is linked to a new infection or a recurrent one. To do this, they tested 22 skin or blood samples from 17 people who'd had a Lyme infection and then had a second, third or fourth episode of a new bull's-eye rash.

The researchers ran genetic tests on the samples to see if the strains of *Borrelia burgdorferi* were the same or different in each infection. *B. burgdorferi* is the bacterium transmitted by ticks to humans to cause

Lyme disease.

None of the consecutive episodes of bull's-eye rashes was linked to the same strain of the bacteria.

"We found that in every single case, the subsequent infection was new," Nadelman said.

In addition, Nadelman said all of the new infections occurred during the tick-biting season—late spring to summer—and all of the rashes occurred at sites that were different from the initial infection. What these findings point to, he said, is a need for tick prevention.

One physician said the new findings lend more support to his current clinical practice.

"This study helps to solidify the confidence in what we're already doing," said Dr. Bruce Hirsch, an attending physician in [infectious diseases](#) at North Shore University Hospital, in Manhasset, N.Y. He said he already treats new rashes as new infections, and avoids prolonged antibiotic use in people with Lyme disease.

Hirsch added that for some people, it can take a while to get over a Lyme disease infection, even after the bacteria have been destroyed by antibiotics.

"An [infection](#) can sometimes take a toll on the body, requiring a significant recovery period, and it uses a tremendous amount of energy to get over some infections," he said.

More information: Learn more about Lyme disease, including how to prevent it, from the [U.S. Centers for Disease Control and Prevention](#).

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