



Non-Profit Org.
U.S. Postage
PAID
Seneca Falls, NY
Permit No. 29

**Pediatric
Lyme Disease**

**DPG John
Gridley**



The northeast U.S. should prepare for a surge in Lyme disease next spring. And we can blame fluctuations in acorns and mouse populations.

So reports Dr. Richard S. Ostfeld, a disease ecologist at the Cary Institute of Ecosystem Studies in Millbrook, New York. What do acorns have to do with illness? Acorn crops vary from year to year, with boom-and-bust cycles influencing the winter survival and breeding success of white-footed mice. These small mammals pack a one-two punch: they are preferred hosts for black-legged ticks and they are very effective at transmitting *Borrelia burgdorferi*, the bacterium that causes Lyme dis-

ease.

"We had a boom in acorns, followed by a boom in mice. And now, on the heels of one of the smallest acorn crops we've ever seen, the mouse population is crashing," Ostfeld explains. "This spring, there will be a lot of *Borrelia burgdorferi*-infected black-legged ticks in our forests and parks looking for a blood meal. And instead of finding a white-footed mouse, they are going to find other mammals -- like us."

For more than two decades, Ostfeld, Cary Institute forest ecologist Dr. Charles D. Canham, and their research team have been investigating connections among acorn abundance, white-footed mice, black-legged ticks, and Lyme disease. In 2011, acorn crops were the heaviest recorded at their Millbrook based research site. And mouse population followed suit, peaking in this summer. The scarcity of acorns this fall will set up a perfect storm for human Lyme disease risk. Black legged ticks take three blood meals -- as larva, as nymphs, and as adults. Larva ticks that will feed on 2012's booming mouse populations will soon be in need of a nymphal meal. These tiny ticks -- as

small as poppy seeds -- are very effective at transmitting Lyme to people. The last time the research site experienced a heavy acorn crop (2006) followed by a sparse acorn crop (2007), nymphal black-legged ticks reached a 20-year high.

So be aware when outdoors. Unlike white-footed mice, who can be infected with Lyme with minimal cost, the disease is debilitating to humans. Left undiagnosed, it can cause chronic fatigue, joint pain, and neurological problems. It is the most prevalent vector borne illness in the U.S., with the majority of cases occurring in the Northeast. So if you think that a tick as bitten you or someone that you know, get it tested and insist on a blood test. We are trying to educate citizens and physicians about the impending surge in Lyme disease. So again be aware when outdoors.

If you know of someone with Lyme disease that is in need of financial assistance just give me or any member of the Lyme disease foundation a call. As always "Thank you all" for your help. Because without your donations and help we could not do what we do. That is help children.