

# Antiphospholipids: Targets for New Lyme Tests

According to a new study published in *The Journal of Clinical Investigation*, a new test could help detect Lyme disease in individuals infected by *Borrelia spp.* pathogens sooner, which could lead to earlier effective treatment for patients.



In this study, researchers looked at antibody responses to host phospholipids in mice and humans using an antiphospholipid ELISA. Investigators found that several environmentally acquired phospholipids including phosphatidylserine, phosphatidic acid, and borrelial phosphatidylcholine, are the targets of antibodies that show up in early Lyme infection. These same antiphospholipids were found in the mouse model and in patients with acute infection.

This new test predicted early *Borrelia* infection with higher sensitivity than the current two-tier standardized testing methods. Further study showed that titers for antiphospholipids declined after patients received antibiotic therapy.

Current tests for Lyme disease identify antibodies produced in response to an infection, but these can take weeks to develop, and as a result, the current standardized tests can fail to detect half of the positive cases in the first two weeks of infection and may only identify 85% of infections even after a month. Antibody levels can also remain elevated in the body after Lyme disease has been cleared, making treatment response difficult to ascertain.

Researchers suggest that additional studies are required to determine if these antiphospholipid titers will be useful where current standardized antibody testing fails, such as in early diagnosis of Lyme disease, antibiotic response of treatments, and in the diagnosis of reinfected individuals.

**Read the full text study article here**

**Read the *Boston Globe* article here**

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