

Questions linger on the efficacy of the Lyme disease vaccine

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<http://danielcameronmd.com/there-are-lingering-questions-on-the-efficacy-of-the-lyme-disease-vaccine/>

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The OspA vaccine trial was 78% effective at preventing a culture confirmed erythema migrans rash. But the vaccine was only 48% effective at preventing what the authors referred to as "possible Lyme disease."

"Possible Lyme disease was defined as a flu-like illness (fever, chills, fatigue, headache, joint or muscle aches) with IgM or IgG Western blot seroconversion, or physician-diagnosed erythema migrans with negative laboratory results," according to the LYMERix™ package insert. [2]

The vaccine trial did not address whether their OspA vaccine would prevent other complications of Lyme disease including Lyme encephalopathy or Post-Treatment Lyme Disease Syndrome.

- The OspA vaccine raised other efficacy issues that were not addressed in the meta-analysis. [1]
- The OspA vaccine was minimally effective in subjects vaccinated only twice. [2]
- The efficacy of the OspA vaccine beyond the second year was unresolved. [3]
- The OspA was not evaluated for the *B. garinii* and *B. afzelii* genospecies described in Europe. [3]
- Moreover, the potential for autoimmunity due to molecular mimicry was not addressed. [3]

It would be helpful if these lingering questions were resolved. [The meta-analysis concluded](#) that a new-generation, multivalent OspA-based Lyme borreliosis vaccine might be more effective against all *Borrelia burgdorferi* sensu lato strains.

References:

1. Zhao H, Bao FF, Liu A: Safety, immunogenicity, and efficacy of *Borrelia burgdorferi* outer surface protein A (OspA) vaccine: A meta-analysis. *J Infect Dev Ctries* 2017, 11(1):1-9.
2. FDA Package Insert - LYMERix™
http://www.fda.gov/ohrms/DOCKETS/.../01/briefing/3680b2_03.pdf
3. Steere AC, Sikand VK, Meurice F, Parenti DL, Fikrig E, Schoen RT, Nowakowski J, Schmid CH, Laukamp S, Buscarino C et al: Vaccination against Lyme disease with recombinant *Borrelia burgdorferi* outer-surface lipoprotein A with adjuvant. Lyme Disease Vaccine Study Group. *N Engl J M*

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