Would hunters take a Lyme disease vaccine? We asked

Asher Albertson (left) was one of seven hunters (and one hiker) who spoke with a reporter at the Busch Shooting Range in Weldon Spring, Mo., in May about whether they would consider getting a potential new Lyme disease vaccine. "I would think about it. You know, I'd talk to my physician about it," Albertson said. "Full disclosure, I'm also a physician." (Kyle Pyatt/KFF Health News/TNS)

Bram Sable-Smith, KFF Health News

It's tick season, possibly the worst in a decade.

More and more Americans are being exposed to these parasites as climate change expands the range where they can survive. That means more people are also exposed to the bevy of health conditions they can cause, such as Rocky Mountain spotted fever, the alpha-gal-triggered red meat allergy, and, most common of all, Lyme disease.

For the latter, there may be some additional protection on the horizon. Pharmaceutical companies Pfizer and Valneva announced this spring they plan to seek regulatory approval for a vaccine to protect against lyme disease. A previous vaccine for Lyme became available in the late 1990s but was pulled only three years later due to lawsuits, public fear of side effects, and a lack of interest.

It's unclear whether this latest stab at a Lyme disease vaccine will get a warmer reception if it's approved, especially in the postcovid era of vaccine skepticism.

For a sense of how it might go over with rural populations at high risk of Lyme, KFF Health News spoke with a group of hunters.

Few people spend more time in the woods exposed to ticks.

At the same time, as a collective, hunters skew conservative, rural, and male, according to a survey from the Theodore Roosevelt Conservation Partnership. And these are identities associated with increased hesitancy about or resistance to vaccines, according to Ashley Kirzinger, associate director for Public Opinion and Survey Research at KFF, a health information nonprofit that includes KFF Health News.

At the same time, few people spend more time in the woods exposed to ticks and the possibility of Lyme disease.

Left untreated, Lyme can cause a variety of symptoms, from fevers, chills, and headaches to arthritis, shooting pains, and inflammation of the brain and spinal cord, according to the Centers for Disease Control and Prevention. About 476,000 people in the U.S. may be diagnosed and treated for Lyme disease each year, the CDC says; that's at least in part because the range of places where cases have been reported has "expanded significantly" since 1995.

So would hunters get the Lyme vaccine if it became available?

"Given my proclivity for the outdoors, absolutely," said Jess Manganelli, one of seven hunters (and one hiker) who spoke with KFF Health News on a recent Saturday at the Busch Shooting Range in Weldon Spring, Missouri, just outside of St. Louis.

Of the eight, Manganelli, who had been hunting turkeys the weekend before, was the most positive toward the vaccine. Six others said they would consider it but would want more information about its safety and effectiveness as well as their risk for contracting the disease.

But Manganelli was the only one who believed she may have previously contracted Lyme disease, although she was never formally diagnosed with it. Two years ago, she experienced muscle weakness, tiredness, fatigue, swelling, and headaches after a tick bite, but when she went to urgent care she was told they didn't test for Lyme.

Nearly all the hunters knew someone who had had Lyme disease — an old roommate, a family member, friends, a former student. Lyme can be difficult to diagnose and to treat and is often misdiagnosed at first. Many of the hunters witnessed their acquaintances navigating those challenges and struggling with sometimes debilitating symptoms.

That familiarity among the hunters in Missouri was unsurprising to author and conservationist Steven Rinella, host of the hunting show *MeatEater*.

"I'm a turkey hunter. In talking about turkey hunting, you talk about ticks as much as you talk about turkeys," Rinella said. "Just the nature of turkey hunting puts you into exposure. You're sitting for long periods of time trying to use vegetation for concealment."

In fact, both Rinella and his older son contracted Lyme disease 13 years ago during a bluegill fishing trip in the Hudson Valley in New York. His son developed Bell's palsy, a sudden paralysis on one side of the face, but recovered quickly after a course of oral antibiotics. Steven Rinella's symptoms, on the other hand, lingered for months, leaving him unable to walk down stairs without a handrail or to ride a bike. He ended up receiving intravenous antibiotic treatments for a month.

"I thought my life had changed," Rinella said, "but I recovered, as far as I know."

That experience is one reason Rinella said he would absolutely consider getting a Lyme vaccine if it proved safe and provided considerable protection against the disease. Unlike with some other diseases, prior infection does not provide permanent immunity, so a person who has had Lyme could still benefit from a vaccine.

Knowledge of similar challenges influenced the thinking of the hunters in Missouri as well.

Jeremy Hollingshead said he may be less inclined to take a vaccine owing to his former roommate's experience with Lyme disease, which is not to say the experience was pleasant. In fact, Hollingshead said he thinks his old pal is still dealing with lingering effects of it 10 years later. But Hollingshead has spent his whole life in the woods, and of hundreds of people he knows who have done the same, he knows of only one of them contracting Lyme.

"I know it was a bad outcome for him," Hollingshead said, but he thinks the odds of getting Lyme himself seem pretty slim.

Meanwhile, Julian Barnes said seeing a relative struggle with Lyme makes him more open to a potential vaccine. It took a long time for doctors to come to that diagnosis, and finding a good treatment has been equally difficult.

"I would say I am vaccine-hesitant, generally speaking," Barnes said. "But Lyme, I've seen the way it affects people in my life."

"I would definitely have to really understand the vaccine, how it works," Barnes added.

The new, four-dose vaccine candidate technically missed one of the bars set out in trials because not enough participants contracted Lyme. Still, the companies say it's about 75% effective in reducing cases, and they plan to submit it to regulators for approval. A Pfizer spokesperson said there were no updates to share on the company's regulatory efforts when contacted by KFF Health News in June.

Health and Human Services Secretary Robert F. Kennedy Jr. was a noted anti-vaccine activist before taking over as head of the agency that oversees vaccine approvals, and he's remade it in ways that have prompted some vaccine makers to pull back on development.

But he's also been an advocate on Lyme disease. In May, he announced an initiative to combat Lyme disease. And during his Senate confirmation hearings, he said his family had been deeply affected by Lyme disease and that nobody would work harder than he would to find a vaccine or treatment.

If the vaccine is approved by the FDA, an endorsement from Kennedy would go a long way, according to KFF's Kirzinger, particularly among supporters of his Make America Healthy Again movement, who tend to be more vaccine-skeptical.

"They trust him as much as they trust their own doctors to tell them what to do with their health and for health information," Kirzinger said. "If he comes out as a strong proponent of this vaccine and says, 'Look what my administration did, and we made this available,' I would imagine there would be less vaccine resistance among that group."

Kirzinger also said this vaccine could be ripe for misinformation. New polling from KFF shows people who don't have a trusted medical provider as well as those who use social media and AI for health information are more likely to believe common vaccine myths.

Only one of the hunters who spoke with KFF Health News said they definitely would not be interested in a Lyme vaccine if it became available.

"I kind of hand it off to God and the body he gave me. I'm pretty durable," JP Cummings said. But even while he's not interested in it for himself, he's curious to see what his fellow hunters do as more information comes out.

"Hunters care about the wildlife; hunters care about health," Cummings said. "They love the wildlife, they love their deer, and they love their fellow hunters."

(KFF Health News is a national newsroom that produces in-depth journalism about health issues and is one of the core operating programs of KFF — the independent source for health policy research, polling and journalism.)

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