

Experimental vaccine shows promise in preventing TB

September 25 2018, by E.j. Mundell, Healthday Reporter



(HealthDay)—Tuberculosis remains the most lethal of infectious

diseases worldwide, killing more than 1.6 million people a year. But researchers say a new vaccine might prevent half of full-blown illnesses in infected people who receive the shot.

"We found that the incidence of pulmonary tuberculosis was significantly lower" for people who got the experimental [vaccine](#), called M72/AS01, than for people who received a "dummy" placebo shot, reported a team led by Dr. Olivier Van Der Meeren.

He's head of clinical research at drug maker GlaxoSmithKline, which funded the study along with pharmaceutical company Aeras. The findings were published online Sept. 25 in the *New England Journal of Medicine*.

While largely banished in more-affluent nations, tuberculosis (TB) is still a widespread and often fatal respiratory disease in the developing world.

In fact, there were over 10.6 million cases of TB globally in 2016, noted Helen Cox and Valerie Mizrahi, of the Wellcome Center for Infectious Diseases Research in Africa in Cape Town, South Africa. They wrote an editorial that accompanied the study.

Cox and Mizrahi also noted that TB is becoming resistant to many antibiotics, and "less than a quarter of the estimated 600,000 patients with multidrug-resistant ... tuberculosis received diagnosis and were treated."

So, even a middling effective vaccine would go a long way toward curbing TB's global death toll. One vaccine—called BCG—does exist, but its effectiveness is limited in adults who already carry "latent" TB infection, Van Der Meeren's team explained.

Their new study was a phase 2 trial of the M72/AS01 vaccines carried

out among nearly 3,600 adults in Kenya, South Africa and Zambia. All were latently infected with the TB bacterium and had already received the BCG vaccine.

In the trial, half of participants received two injections of the newer vaccine, while the other half got placebo shots.

After an average 2.3 years of follow-up, the researchers reported that while 22 people in the placebo group went on to develop pulmonary TB, just 10 of those who got the vaccine did so —a 54 percent reduction.

The vaccine appeared safe: While two-thirds of recipients reported side effects, these were limited to injection-site reactions or transient "flu-like" symptoms, the team said.

According to Van Der Meeren's group, the results are "promising" and "support [the vaccine's] further evaluation" in a phase 3 trial.

One U.S. expert agreed that safe, effective TB vaccines are much needed.

"TB is still a worldwide scourge and is easily transmitted via droplets that can be spread easily through talking, laughing and simply being in the same room as an active TB patient," noted Dr. Len Horovitz, a pulmonary specialist at Lenox Hill Hospital in New York City.

"The efficacy of the vaccine was 54 percent in preventing full-blown TB," he said, and "while that may seem low, many vaccines [the influenza vaccine, for example] have a comparable success rate."

The bottom line, according to Horovitz, is that "eliminating half of active cases is still significant, in light of the worldwide prevalence of TB."

More information: Len Horovitz, M.D., pulmonary specialist, Lenox Hill Hospital, New York City; Sept. 25, 2018, *The New England Journal of Medicine*, online

There's more on tuberculosis at the [American Lung Association](#).

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