New vaccine strategy may fight genital herpes, mouse study suggests

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Electron micrograph of herpes simplex. Source: Centers for Disease Control & Prevention

Approach may also protect against other sexually transmitted infections, researchers say.

(HealthDay)—A new vaccination approach may provide protection against genital herpes as well as other sexually transmitted infections, including HIV, according to a new study involving mice.

The vaccination model developed by researchers at Yale University focuses on tissue in the vagina where viral exposure occurs, rather than the immune system's antibodies, known as T-cells, which circulate throughout the body.

In conducting the study, the researchers recruited T cells to vaginal tissue using what they called a "prime and pull" strategy. They first primed the mice's immune systems by triggering a system-wide T-cell response.

Then, they recruited activated T cells to vaginal tissue by topically applying chemokines, substances that help mobilize immune cells.

The researchers said the strategy could offer protection against genital herpes, caused by the herpes simplex virus, by limiting it's spread into the sensory neurons. They noted this vaccination model may also protect against other sexually transmitted infections, such as HIV-1.

"This new vaccine approach can work with any vaccines that elicit strong T-cell immunity, and will set the stage for protection against infectious diseases by setting up memory T-cells at the site of exposure," study lead author Akiko Iwasaki, professor of immunobiology at Yale School of Medicine and a member of Yale Cancer Center's molecular virology program, explained in a university news release.

"This technology can be potentially applied to other infectious agents that enter through a given portal, such as the genital tract, respiratory tract, the skin, or gut," Iwasaki added.

The researchers noted that genital herpes is the most commonly sexually transmitted infection. Currently, there is no cure for the condition.

The study was published online Oct. 17 in *Nature*.

Experts note that results from animal research, while sometimes promising, are not always replicated in humans.

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