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Flu vaccine's worm turns in caterpillar experiment

Shot proves useful in test, is faster than egg vaccine

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Chicago - Genetically engineered flu vaccine made from yellow-striped caterpillars instead of hen eggs has been shown for the first time to keep people from getting the flu, scientists say.

The results are preliminary but suggest the insect method could be a quicker, easier alternative to the lengthy, antiquated egg-based procedure now used. It could also lead to a more rapid response to a pandemic, the study authors say.

The experimental vaccine used in a study of 451 adults during the 2004-05 flu season was designed to protect against three common influenza strains. Among participants who got a single high-dose injection, at least two-thirds had a strong immune response and none developed the flu that season.

More than half of those given a lower dose had a strong immune response and two got the flu. By contrast, seven patients who received a dummy vaccine got the flu.

Vaccine-related side effects were mostly mild and included pain at the injection site and headaches.

Larger studies are needed to confirm the results.

The research was funded by the vaccine's maker, Protein Sciences Corp. The company designed the study with lead author Dr. John Treanor, a flu specialist at the University of Rochester in Rochester, N.Y.

The results appear in today's Journal of the American Medical Association.

The current method takes about nine months each year. It relies on hens laying millions of eggs. Live flu viruses injected into the eggs multiply, and then the eggshells are broken and the viruses are inactivated and are treated to create vaccine.

The experimental method uses fall army worms, abundant caterpillars that are vulnerable to a bug virus.

Scientists replace a gene from that virus with a flu virus gene, then inject it into the worm, where it makes more flu virus.

The process takes about a month less than the egg method and doesn't involve using live flu virus.