A single dose of universal flu vaccine, FLU-v, may provide long-lasting protection against influenza

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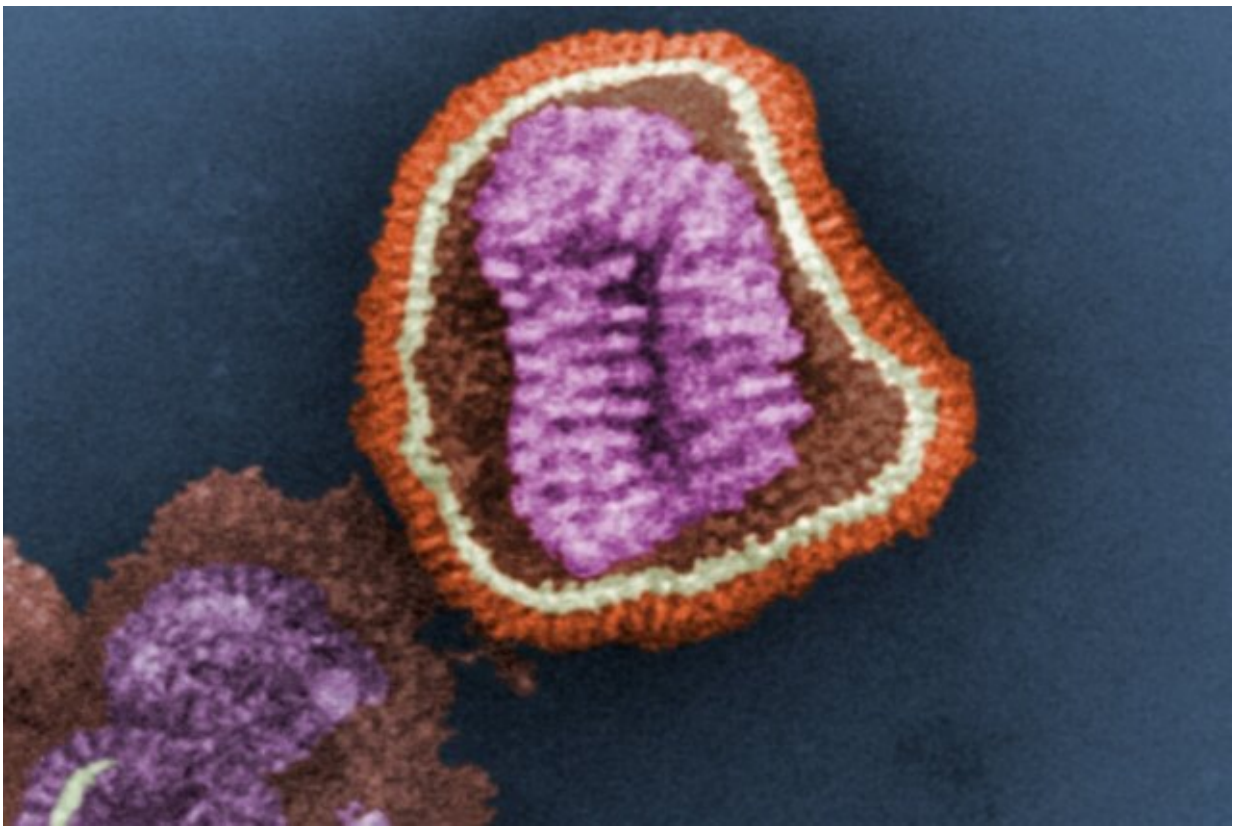

This digitally-colorized transmission electron microscopic image depicts the ultrastructural details of an influenza virus particle. Credit: CDC, Frederick Murphy

A single dose of adjuvanted FLU-v, a synthetic universal flu vaccine, may provide long-lasting protection across a broad spectrum of influenza viruses. Findings from a randomized, double-blind, placebo-controlled trial are published in *Annals of Internal Medicine*.

Currently, the best available prophylactic treatment against influenza is annual vaccination with inactivated or attenuated influenza virus. However, the short time between publication of WHO recommendations on the strains to include in the annual vaccine and the start of the influenza season, coupled with the lengthy eggs or cell-based manufacturing process, means that the availability of doses is limited, and in addition, the prediction may not be correct or influenza strains may mutate, making the vaccine ineffective. FLU-v is a synthetic vaccine allowing all year round manufacturing and designed to provide cross-protection against A and B influenza strains for a broad patient population.

The primary and secondary endpoints were achieved in a Phase 2b study, done within the UNISEC (Universal Influenza Vaccines Secured, European Union-funded consortium for the advancement of universal influenza vaccines) Consortium and funded by the European Commission under the Seventh Framework Programme for Research and Technological Development (FP7). The researchers randomly assigned 175 healthy adults to either an injection of adjuvanted (1 dose) or nonadjuvanted (2 doses) FLU-v or adjuvanted or nonadjuvanted placebo to compare the safety, immune response, and exploratory efficacy of different formulations and dosing regimens. They found that a single dose of adjuvanted FLU-v elicited a greater immune response compared with placebo. Adverse events were mostly mild to moderate injection site reactions.

The authors conclude that a phase 3 trial is warranted to explore efficacy.

More information: *Annals of Internal Medicine* (2020). http://annals.org/aim/article/doi/10.7326/M19-0735