

Higher-dose flu vaccine more effective in older adults than standard-dose

By ACSH Staff — August 14, 2014



Influenza (the flu) is a systemic viral infection which usually

wreaks most of its havoc upon the respiratory system. While most cases are not life-threatening (although it can be very uncomfortable and cost a week's work or loss of school), it results in the hospitalization of more than 200,000 people per year according to the CDC. Influenza complications can be deadly each year between 5,000 and 50,000 Americans die from it and adults 65 years of age and older are especially vulnerable. Unfortunately, antibody response and protection provided by the flu vaccine decrease with age, so standard vaccines used on the younger population are not as effective in the older population. One strategy to solve this problem involves higher doses of antigen in influenza vaccines for seniors, adding further evidence to a [previous recommendation](#) [1].

Dr. Carlos DiazGranados, M.D. and colleagues [set out to determine](#) [2] if a higher-dose influenza vaccine improves protection against the virus in seniors compared to a standard-dose influenza vaccine. In the study, recently published in the *New England Journal of Medicine*, about 32,000 participants 65 years of age and older were either given a high-dose, trivalent, inactivated influenza vaccine (IIV3-HD) or a standard-dose vaccination (IIV3-SD). The high-dose contained four times as much hemagglutinin (HA), the antigen that provokes the protective immune response, as the standard-dose.

Participants were instructed to contact the study site if they experienced any respiratory symptoms, and were also contacted by a call center twice weekly for the duration of the illness-surveillance trial. If participants suffered any respiratory problems, laboratory testing for influenza confirmation was conducted.

Of those in the high-dose group, 228 participants developed lab-confirmed influenza, compared to 301 in the standard-dose group. The overall efficacy was 24.2%, suggesting that about one quarter of influenza cases could be prevented by using IIV3-HD instead of IIV3-SD. Both vaccinations were observed to be equally safe.

The study took place over two highly different influenza seasons, yet the high-dose vaccine

showed significant efficacy in both years. This result provides reassurance that the higher-dose vaccine is more effective in years characterized by highly varying influenza strains and activity. However, more studies are necessary to determine the effects in years where the strains circulating vary from the strains observed in the study.

The researchers also noted that although there was a clinical benefit, the study does have limitations: all of the participants in the study were relatively healthy without any moderate or severe acute illnesses.

ACSH's Dr. Gilbert Ross says, This should be a no-brainer for seniors, considering that there is no downside to vaccinating seniors with the higher dose flu vaccine. This recommendation has the potential to save thousands of lives, and doctors and older Americans should be made aware that seniors should receive the higher dose version of the vaccine.

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[1] <http://acsh.org/2014/01/high-dose-flu-vaccine-offers-better-protection-seniors/>

[2] http://www.medpagetoday.com/InfectiousDisease/URItheFlu/47200?xid=nl_mpt_DHE_2014-08-14&utm_content=&utm_medium=email&utm_campaign=DailyHeadlines&utm_source=ST&utm_medium=email