

Flu nasal spray provides similar protection against influenza as flu shot, study finds

15 August 2016



Credit: National Cancer Institute

A study led by McMaster University researchers has found that, contrary to recent reports, flu nasal sprays provide similar protection against influenza as standard flu shots.

Published today in the scientific journal *Annals of Internal Medicine*, the study shows that the nose spray had a similar effect to the standard flu shot. Previous recommendations from the Centers for Disease Control's Advisory Committee on Immunization Practices (ACIP) had previously called for nasal sprays, or live attenuated [influenza vaccine](#) (LAIV), not be used during the 2016-2017 flu season.

Dr. Mark Loeb, lead author of the study, says his team's findings challenge the ACIP's recommendations towards flu shots, or inactivated vaccines.

"Our study is the first blinded randomized controlled trial to compare the direct and indirect effect of the live [vaccine](#) versus the inactivated vaccine," said Loeb, a professor in McMaster's Department of Pathology and Molecular Medicine.

"Our results are important because in previous years the live vaccine had first been preferred for children. In fact, as late as June 2014, the live vaccine was preferred. Then, subsequently, it was no longer preferred and now not recommended at all. Our trial showed no difference between the two in protecting entire communities."

For the study, Loeb's team conducted a three-year trial in a Hutterite colony, where people live communally and are relatively isolated from cities and towns, to determine whether vaccinating children and adolescents with the flu nasal spray provided better direct and community protection than the standard flu shot.

The researchers randomly assigned 1,186 children in 52 Hutterite colonies in Alberta and Saskatchewan, Canada to receive either the [nasal spray vaccine](#) or the flu shot and also followed 3,425 community members who did not receive a [flu vaccine](#).

Average vaccine coverage among children in the nasal spray group was 76.9 per cent versus 72.3 per cent in the [flu shot](#) group.

The original intention of the study was to show that [nasal spray](#) vaccines would provide better protection than [flu](#) shots, but Loeb says the conclusions of the study are now especially important, given the ACIP's recommendations.

"The ACIP's decision was an unprecedented decision in influenza vaccine policy-making for children. Our study challenges previous studies because our results show conclusively that the vaccines show similar protection when both direct and indirect effects are taken into account."

Loeb says his team will continue to study herd immunity with different vaccine formulations by vaccinating children. They are also looking at the effect of repeated vaccination of [children](#).

More information: *Annals of Internal Medicine*,
www.annals.org/article.aspx?doi=10.7326/M16-0513

Provided by McMaster University
APA citation: Flu nasal spray provides similar protection against influenza as flu shot, study finds (2016, August 15) retrieved 5 May 2021 from <https://medicalxpress.com/news/2016-08-flu-nasal-similar-influenza-shot.html>

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