

Maternal influenza vaccination may be associated with flu protection in infants

October 4 2010

Babies whose mothers who receive influenza vaccines while pregnant appear less likely to be infected with flu or hospitalized for respiratory illnesses in their first six months of life, according to a report posted online today that will appear in the February 2011 print issue of *Archives of Pediatrics & Adolescent Medicine*.

Young children are consistently at higher risk of complications from infection with the [influenza virus](#), according to background information in the article. However, they are ineligible to be vaccinated until age 6 months. "Influenza virus infection in infants is generally more frequent among those aged 6 to 12 months than in the first six months of life, potentially owing to the protection conferred by maternal influenza antibodies acquired transplacentally or through breastfeeding," the authors write. "However, during severe influenza seasons, morbidity and mortality rates among infants younger than 6 months have been reported to exceed those of older infants."

Angelia A. Eick, Ph.D., then of Johns Hopkins Bloomberg School of Public Health, Baltimore, and now of the Armed Forces Health Surveillance Center, Silver Spring, Md., and colleagues conducted a non-randomized observational cohort study on Navajo and White Mountain Apache Indian reservations, where children have a higher rate of severe respiratory infection than the general population. A group of 1,169 women who delivered babies during one of three influenza seasons completed questionnaires about demographics, vaccination status of all family members and flu risk factors. A total of 1,160 mother-infant

pairs then gave blood samples that were assessed for flu antibody presence. Mothers completed a second questionnaire at the end of the flu season and surveillance was conducted throughout to track new influenza-like illnesses.

During the flu season following their birth, 193 (17 percent) of infants were hospitalized for influenza-like illness, 412 (36 percent) had only an outpatient visit for a respiratory cause and 555 (48 percent) had no flu- or flu-like episodes. Infants whose mothers were vaccinated had a 41 percent lower risk of laboratory-confirmed influenza virus infection and a 39 percent reduced risk of hospitalization from influenza-like illness. In addition, those with blood samples available had higher levels of [flu](#) antibodies at birth and at 2 to 3 months than babies born to unvaccinated women.

"Although influenza vaccination is recommended for pregnant women to reduce their risk of influenza complications, these findings provide support for the added benefit of protecting infants from influenza virus infection up to six months, the period when infants are not eligible for influenza vaccination but are at highest risk of severe influenza illness," they conclude. "These findings are particularly relevant with the emergence of 2009 pandemic [influenza](#) A (H1N1) virus, which had a substantial impact on pregnant women and high hospitalization rates among young infants."

More information: Arch Pediatr Adolesc Med. Published online October 4, 2010. [doi:10.1001/archpediatrics.2010.192](https://doi.org/10.1001/archpediatrics.2010.192)

Provided by JAMA and Archives Journals

Citation: Maternal influenza vaccination may be associated with flu protection in infants (2010,

October 4) retrieved 23 April 2024 from <https://medicalxpress.com/news/2010-10-maternal-influenza-vaccination-flu-infants.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.