

# Influenza vaccination of pregnant women helps their babies

February 21 2012

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Vaccinating pregnant women against the influenza virus appears to have a significant positive effect on birth weight in babies, according to a study published in CMAJ (*Canadian Medical Association Journal*).

The study, a [randomized controlled trial](#) involving 340 healthy pregnant women in Bangladesh in the [third trimester](#), looked at the effect of immunization with the influenza vaccine on babies born to vaccinated mothers. It was part of the Mother'sGift project looking at the safety and efficacy of pneumococcal and influenza vaccines in pregnant women in Bangladesh. The participants were divided into two groups, one with 170 women who received the influenza vaccine, and the second who received the pneumococcal vaccine as a control. Researchers compared the weight of babies born in two periods, one in which there was circulation of an influenza virus and one with limited circulation.

Babies that are small for their [gestational age](#) are at increased risk of health and other issues over their lives.

The researchers found that there were fewer babies who were small for their gestational age born to mothers in the influenza vaccine group when the virus was circulating, with 25.9% who were small compared with 44.8% in the control group. When the virus was dormant, the proportion of small-for-gestational-age births was similar in both groups. During the period with circulating influenza virus, the mean [birth weight](#) was 3178 g in the influenza vaccine group and 7% higher than 2978 g in the control group. The rate of premature births was lower in the

influenza vaccine group as well.

"We found that immunization against influenza during pregnancy had a substantial effect on mean birth weight and the proportion of infants who were small for gestational age," writes Dr. Mark Steinhoff, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, with coauthors. "Our data suggest that the prevention of infection with seasonal influenza in [pregnant women](#) by vaccination can influence fetal growth," state the authors.

The researchers calculate that 10 maternal influenza vaccinations given year-round prevented one small-for-gestational-age birth, dropping to 6 vaccinations during the period in which the [influenza virus](#) was circulating.

The study was conducted by a team of US and Bangladeshi researchers from the Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio; Johns Hopkins University, Baltimore, Maryland; Emory University, Atlanta, Georgia; the International Centre for Diarrheal Disease Research, Dhaka, Bangladesh; and the Centers for Disease Control and Prevention, Atlanta, Georgia.

The authors suggest that if further research supports their findings, adding an [influenza vaccine](#) to routine vaccination programs during pregnancy could help children have a better start in life.

**More information:** Study online:  
[www.cmaj.ca/lookup/doi/10.1503/cmaj.110754](http://www.cmaj.ca/lookup/doi/10.1503/cmaj.110754)

Provided by Canadian Medical Association Journal

Citation: Influenza vaccination of pregnant women helps their babies (2012, February 21)  
retrieved 20 March 2024 from <https://medicalxpress.com/news/2012-02-influenza-vaccination-pregnant-women-babies.html>

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