

Seasonal influenza vaccination during pregnancy may reduce risk of stillbirth

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Seasonal influenza vaccination may guard against stillbirth, a new study published in *Clinical Infectious Diseases* and available online suggests. Researchers in Western Australia analyzed data from nearly 60,000 births that occurred during the southern hemisphere's 2012 and 2013 seasonal influenza epidemics, and found that women who received the trivalent influenza vaccine during pregnancy were 51 percent less likely to experience a stillbirth than unvaccinated mothers.

The retrospective study used midwives' records to examine a cohort of 58,008 births: 52,932 to mothers who had not received the vaccine and 5,076 to mothers who had been vaccinated during pregnancy. All births took place in Western Australia between April of 2012 and December of 2013. The adjusted risk of stillbirth among vaccinated mothers was 51 percent lower than the risk among women who had not been vaccinated.

Researchers also observed that stillbirth rates increased after periods of influenza virus circulation and decreased during the months prior to the [influenza season](#), although the seasonal differences were not statistically significant. The study's results are consistent with those of a 2000 study in Switzerland that recorded increased incidence of stillbirth in relation to the northern hemisphere's influenza season, as well as with similar research conducted during the influenza A/H1N1 pandemic.

"During the 2009 H1N1 pandemic, we saw a similar reduction in stillbirths following vaccination," said study author Annette Regan, MPH, of the Western Australia Department of Health. "Our results are

particularly exciting since they show we can get the same protection during seasonal epidemics, which occur every winter. Unfortunately, we know that about 40 percent of [pregnant women](#) go unvaccinated, missing out on these benefits."

The U.S. Centers for Disease Control and Prevention recommends annual flu vaccination for everyone 6 months of age and older, including pregnant women during any trimester of their pregnancy. Pregnancy puts women at an increased risk of developing serious complications related to influenza, including acute respiratory distress syndrome and pneumonia. Infection during pregnancy has also been linked to fetal mortality and premature births. But concern for the safety of the fetus dissuades many expectant mothers from vaccination.

The new study's findings not only support the safety of influenza vaccination during pregnancy, but also suggest that vaccination protects against stillbirth. The authors noted that the protective benefits they observed "may be an underestimate of the true effect measure" due to the methods of data analysis employed in their study.

Over 3 million stillbirths occur worldwide each year, and in developed countries, stillbirth accounts for 70 percent of infant deaths around the time of birth. Establishing a connection between influenza season and stillbirth could have global implications for infant mortality.

Further research is needed to confirm the possible links between stillbirth, influenza season, and vaccination, the study's findings indicate. But the researchers are hopeful that their data will be useful for communicating vaccination's potential health benefits to expectant mothers and health care providers.

"I'm hoping results like these can convince more pregnant women to get vaccinated each year," Regan said.

Fast Facts

In this retrospective cohort study, women in Western Australia who received the seasonal trivalent influenza vaccine during pregnancy showed a 51 percent lower risk of experiencing a stillbirth than unvaccinated expectant mothers. Observed rates of stillbirth increased just after periods of influenza virus circulation, suggesting a link between incidence of stillbirth and the [influenza](#) season. Over 3 million stillbirths occur worldwide each year, and in developed countries, [stillbirth](#) accounts for 70 percent of infant deaths around the time of birth.

Provided by Infectious Diseases Society of America

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