

The Truth about Flu Shots in Pregnancy

➤ **Recommendations for vaccinating pregnant women are new:**

- **2004:** The Advisory Committee on Immunization Practice (ACIP) of the CDC began recommending vaccination in all pregnant women regardless of trimester. Researchers estimated that an average of 1 or 2 hospitalizations could be prevented for every 1,000 pregnant women vaccinated.
 - **REF:** MMWR: May 28, 2004 / 53(RR06);1-40.
- **2009:** There is insufficient evidence to recommend routine flu shots as the standard of practice for healthy women beginning in early pregnancy.
 - **REF:** Skowronski DM, De Serres G. Is routine influenza immunization warranted in early pregnancy? *Vaccine*. Jul 30;27(35):4754-70. 2009.

➤ **Pregnant woman are not frequently hospitalized for flu:**

- **1998:** Hospitalization ranged from 3.1 per 10,000 women-months in the first trimester to 10.5 per 10,000 in the third trimester.
 - **REF:** Neuzil KM, et al. Impact of influenza on acute cardiopulmonary hospitalizations in pregnant women. *Am J Epidemiol* 1998;148:1094-1102.
- **2004:** Women in the third trimester were hospitalized at a rate (250/100,000 pregnant women), a rate comparable to non-pregnant women who had high-risk medical conditions.
 - **REF:** MMWR: May 28, 2004 / 53(RR06);1-40.
- **2009:** The numbers of pregnant women hospitalized with **pandemic H1N1 infection** are small. Pregnant cases represented 34 of 5,469 H1N1 cases diagnosed during a four month study.
 - **REF:** Jamieson DJ, et al. H1N1 2009 influenza virus infection during pregnancy in the USA. *Lancet*. Aug 8;374(9688):451-8. 2009.

➤ **Vaccinating pregnant women has not reduced hospitalizations.**

- **1997-2002:** A study of 49,585 pregnant women there was no statistically significant difference in rates of illness among vaccinated vs. unvaccinated women (4.5/10,000 vs.4.4/10,000). There were only two admissions per season for pneumonia.
 - **REF:** Black SB, et al. Effectiveness of the influenza vaccine during pregnancy in preventing hospitalizations and outpatient visits for respiratory illness in pregnant women and their infants. *Am J Perinatol* 21:333-339. 2004.

www.PandemicFluOnline.com

www.MedicalVoices.org

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➤ **Pregnant women are generally as healthy as non-pregnant women.**

- **1997-2002:** A study of 49,585 pregnant women, only 4.7% had outpatient visits for influenza-like illness.
 - REF: Black SB, et al. Effectiveness of the influenza vaccine during pregnancy in preventing hospitalizations and outpatient visits for respiratory illness in pregnant women and their infants. *Am J Perinatol* 21:333-339. 2004.
- **2009:** Symptoms of H1N1 influenza infection are similar in both pregnant and non-pregnant general population.
 - REF: Jamieson DJ, et al. H1N1 2009 influenza virus infection during pregnancy in the USA. *Lancet*. Aug 8;374(9688):451-8. 2009.

➤ **Careful examination of the numbers used to mass vaccinate pregnant women reveals:**

- H1N1 occurs infrequently in pregnant women: 34 cases among an estimated 3,392,000 pregnant women in the U.S.
- Among the 5,469 confirmed cases in the study, 0.62% were in pregnant women (34/5,469)
- Hospital admissions among pregnant women were higher than in the general population (11/34 vs. 229/5,469).
- The admission rate for pregnant women was 0.32 per 100, 000 and the estimated admission rate in the general population was 0.076 per 100 000. Hence the statement, “Pregnant women were more than four times more likely to be admitted than was the general population.”
 - REF: Jamieson DJ, et al. H1N1 2009 influenza virus infection during pregnancy in the USA. *Lancet*. Aug 8;374(9688):451-8. 2009.

➤ **Both seasonal flu shots and 2009 H1N1 flu shots are labeled “Pregnancy Category C” drugs, meaning:**

- Animal reproduction studies have not been conducted.
- It is not known whether influenza vaccines can cause harm to the fetus.
- It is not known whether influenza vaccines can affect reproduction capacity.
- It is not known whether influenza viruses from vaccines are excreted in human milk.
 - REF: From a review of all manufacturer package inserts

➤ **Are anti-viral drugs safe to take while pregnant?**

- Both Tamiflu (oseltamivir) and Relenza (zanamivir) are classified as “Pregnancy Category C” drugs, meaning, there is insufficient information to assess potential risks to the fetus.
- In lactating rats, Tamiflu was excreted in the milk. It is not known whether Tamiflu is excreted in human milk.
 - REF: From the package inserts