

# Flu Vaccine Safety and Pregnancy



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# Why should pregnant people get a flu shot?

- ▶ Pregnant women and their babies are at increased risk for influenza-related complications.
- ▶ Pregnant women are also more likely to be hospitalized with flu

# Flu vaccine

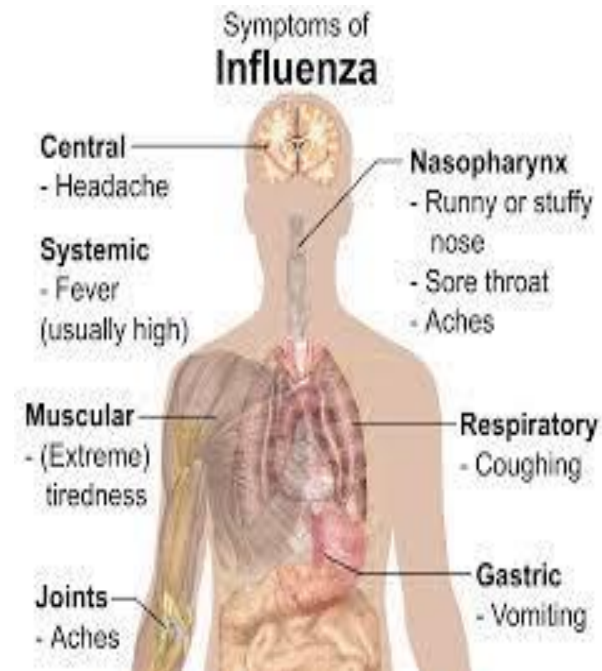
- ▶ The **first** and most important step for flu prevention
- ▶ Treatment with **flu antiviral drugs** is our **second** line of defense against flu

# Influenza

- ▶ Influenza virus **types A and B** are common causes of acute respiratory illness.
- ▶ Influenza A viruses are the principal cause of epidemics and worldwide pandemics

# Symptoms

- Sudden onset of fever
- Cough (usually dry)
- Headache
- Muscle pain(Myalgia )and joint pain
- Sore throat
- Shortness of breath
- Rhinorrhea
- Malaise



# High risk symptoms:



- ▶ Dehydration
- ▶ Difficulty breathing/shortness of breath
- ▶ Chest pain
- ▶ Mental status changes
- ▶ Obstetric complications,
- ▶ These patients should be referred immediately to an **emergency department** or equivalent setting for evaluation, possible admission, and treatment

# Flu complications

- ▶ Pneumonia
- ▶ bronchitis
- ▶ sinus infections
- ▶ ear infections



# Increased severity of influenza in pregnancy

- ▶ Heart rate and oxygen consumption increase
- ▶ Lung capacity decreases
- ▶ Shift away from cell-mediated immunity



# Influenza in the pregnancy

- ▶ Increased risk for spontaneous abortion
- ▶ Preterm delivery
- ▶ Low birth weight
- ▶ Birth of a small for gestational age infant
- ▶ Fetal death

- ▶ Increased risk of congenital abnormalities
- ▶ Cleft lip
- ▶ LBW
- ▶ Neural tube defects
- ▶ Hydrocephaly
- ▶ Congenital heart defects

# Comorbidities

- ▶ Chronic cardiac
- ▶ Pulmonary disease
- ▶ Diabetes mellitus
- ▶ Chronic renal diseases
- ▶ Malignancy
- ▶ Immunosuppression
- ▶ Increase the risk of complications in pregnant patients.

# Seasonal flu epidemics

- ▶ During winter, October to march in the northern hemisphere
- ▶ April to September in the southern hemisphere
- ▶ In tropical and subtropical countries, seasonal influenza can happen all year round



# Why should pregnant people get a flu shot?

- ▶ Influenza (flu) is more likely to cause **severe illness** in pregnant
- ▶ Changes in the **immune system, heart, and lungs** during pregnancy make pregnant people (and people up to two weeks postpartum) more prone to severe illness from flu, including illness resulting in **hospitalization**.
- ▶ Flu also may be harmful for a pregnant person's **developing baby**.
- ▶ A common flu symptom is **fever**, which may be associated with **neural tube defects** and other adverse outcomes for a developing baby. Getting vaccinated also can help protect a baby after birth from flu (the pregnant parent passes antibodies)
- ▶ **A Flu Vaccine is the Best Protection Against Flu**



# Is it safe for pregnant people and their developing babies to get a flu shot?

## ► Yes

- Flu shots have been given to millions of people over many years with an excellent safety record.

- Flu shots given during pregnancy help protect both the pregnant parent and the baby from flu during any trimester of their pregnancy.



**Yes!**

# Which vaccine is the best?

Pregnant women should get a flu shot

**NOT**

the live attenuated vaccine (LAIV)

**Or**

nasal spray





# Benefits of vaccination

- ▶ Reduce the risk of flu-associated **acute respiratory infection** in pregnant people by up to **one-half**.
- ▶ Reduced risk of being **hospitalized** 40 percent
- ▶ Vaccination helping to **protect their babies** for the first several months after their birth



# Best time for vaccination

- ▶ Annual influenza vaccination is recommended for all persons aged  $\geq 6$  months who do not have contraindications, including pregnant and postpartum patients
- ▶ September and October are generally good times to be vaccinated

# Can flu vaccination result in miscarriage?

- ▶ Multiple studies have shown that people who have received flu shots during pregnancy have not had a higher risk for spontaneous abortion (miscarriage).



# ACOG and CDC recommend flu vaccination

- ▶ Pregnant people get a flu vaccine during **any trimester** of their pregnancy because flu poses a danger to pregnant people and a flu vaccine can prevent serious illness and hospitalization, during pregnancy

# What side effects have pregnant people experienced from flu shots



- ▶ Soreness, redness, and/or swelling from the shot
- ▶ Headache
- ▶ Fever
- ▶ Muscle aches
- ▶ Nausea
- ▶ Fatigue
- ▶ If side effects occur, they usually begin soon after the shot is given and generally last for 1-2 days.

# Severe allergic reactions

- ▶ Anyone with a severe, life-threatening allergy to any of the vaccine ingredients **should not get the shot.**



# Can pregnant people with egg allergies get vaccinated?

- ▶ Pregnant people should tell the person giving the shots if they have any severe allergies or if they have ever had a severe allergic reaction following a flu shot.

Should not get the shot.



# How is the safety of flu vaccines in pregnant people monitored?

- ▶ The benefits of flu vaccination will still vary, depending on characteristics of the person being vaccinated for example, their [health and age](#)
- ▶ [CDC and FDA](#) monitor flu vaccine safety during pregnancy during each flu season



## Can a breastfeeding person get a flu vaccine?

- ▶ Yes
- ▶ People who are breastfeeding should get a flu vaccine
- ▶ Getting vaccinated reduces pregnant parents' risk of getting sick and of passing the flu on to their babies
- ▶ especially important for children younger than 6 months old since they are too young to receive flu vaccine themselves.



# Thanks

