



The Flu Vaccine and Pregnancy

Everyone aged 6 months or older should get a yearly **influenza** (flu) shot—especially pregnant women. Seasonal flu is caused by a **virus** that spreads easily among people. It is most common between October and May. If you are pregnant, the flu can be serious or even life-threatening. Getting a vaccine is the best way to prevent the flu. It also helps protect your baby until he or she can be vaccinated at age 6 months.

This pamphlet explains

- what influenza is
- risks for pregnant women
- vaccination recommendations
- how the flu vaccine works
- safety of the flu vaccine
- what to do if you get the flu

Influenza

The flu is more than a bad cold. It usually comes on suddenly. Signs and symptoms may include fever, headache, fatigue, muscle aches, coughing, and sore throat. It can lead to **complications**, such as **pneumonia**. Some complications can be life-threatening.

Certain people have an increased risk of developing flu complications. These include the following groups:

- People aged 65 years and older
- Children younger than 5 years

- People who have illnesses or conditions like asthma, heart disease, or cancer
- Pregnant women

Risks for Pregnant Women

Even if you are in good health, being pregnant increases your risk of serious illness and complications from the flu. This increased risk is linked to changes in the **immune system** and in other body systems that normally occur during pregnancy. You also have a higher risk of pregnancy complications, such as **preterm** labor

and preterm birth, if you get the flu. You are more likely to be hospitalized if you get the flu while you are pregnant than when you are not pregnant. Your risk of dying from the flu is increased as well.

Vaccination Recommendations

The Centers for Disease Control and Prevention (CDC) recommend that everyone 6 months of age and older—including pregnant women and women who are breastfeeding—get the flu vaccine each year. If you are pregnant, it is best to get the vaccine early in the flu season (October through May), as soon as the vaccine is available. You can get the shot at any time during your pregnancy. If you are not vaccinated early in the flu season, you still can get the vaccine later in the flu season. If you have a medical condition that further increases the risk of flu complications, such as asthma or heart disease, you should think about getting the vaccine before the flu season starts.

There are two types of flu vaccines: 1) a shot and 2) a nasal mist. The flu shot contains a form of the flu virus that is inactivated. It cannot cause disease. The shot can be given to pregnant women at any time during pregnancy. A *live, attenuated influenza vaccine* is available as a nose spray. The nose spray vaccine is not recommended for pregnant women. However, it is safe for women after they have given birth, including those who are breastfeeding.

How the Flu Vaccine Works

The flu vaccine triggers your immune system to make *antibodies* against the flu virus. Antibodies circulate in the bloodstream. If they encounter a flu virus, they “tag” it for destruction by other parts of the immune system. It takes about 2 weeks for the body to build up protective antibodies after you get the flu shot.

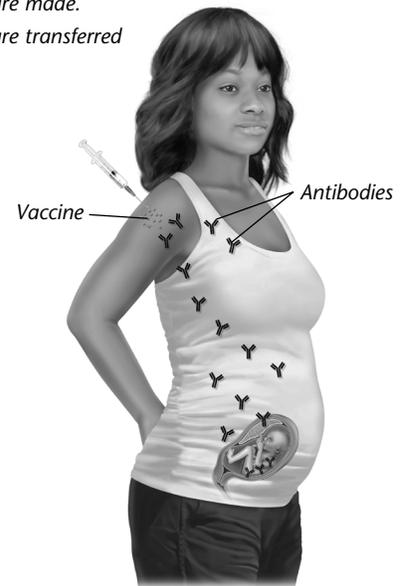
With some types of vaccines, the antibodies that are made remain active for many years. But the types of viruses that cause the flu can change every year. The antibodies made in response to one year’s flu vaccine may not work against the next year’s flu viruses. For this reason, the flu vaccine is updated each year. To be fully protected, you need to get the flu vaccine yearly.

The flu vaccine does “double duty” by protecting both you and your baby. Babies cannot get the flu vaccine until they are 6 months old. When you get a flu shot during pregnancy, the protective antibodies made in your body are transferred to your baby. These antibodies will protect your baby against the flu until he or she can get the vaccine at 6 months of age.

Children younger than 5 years of age also are among those who have a high risk of getting serious flu complications. It is recommended that anyone who comes in contact with your child get a flu shot. This includes babysitters, members of the same household, and family members.

How the Flu Vaccine Protects You and Your Baby

1. Flu vaccine is injected.
2. Antibodies are made.
3. Antibodies are transferred to the baby.



Safety

Vaccines are developed with the highest safety standards. The U.S. Food and Drug Administration approves all vaccines. The CDC continues to monitor all vaccines after they are approved. They have been used for many years in millions of pregnant women and are not known to cause pregnancy problems or birth defects.

There is no scientific evidence that vaccines made with *thimerosal*, a mercury-containing preservative, can cause *autism* or other health problems in babies. Thimerosal-containing vaccines do not cause autism in children born to women who received these vaccines. It is possible to get the flu vaccine made without thimerosal, but experts have not said that the thimerosal-free version is better for any particular group—including children and pregnant women.

Most side effects of vaccines are mild, such as a sore arm or a low fever, and go away within a day or two. Severe side effects and reactions are rare. The CDC keeps track of side effects of and reactions to all vaccines given in the United States. When you receive a vaccine, you should receive a Vaccine Information Statement. This statement lists the possible side effects of and reactions to that vaccine. If you have concerns about vaccine side effects, talk to your *obstetrician* or other member of your health care team.

If You Get the Flu

If you think you have the flu and you are pregnant (or you have had a baby within the past 2 weeks), contact your obstetrician or other health care professional right away. Taking an antiviral medication as soon as possible is recommended. Flu symptoms may include the following:

- Fever or feeling feverish
- Chills
- Body aches
- Headache
- Fatigue
- Cough or sore throat
- Runny or stuffy nose

Antiviral medication is available by prescription. It is most effective when taken within 48 hours of the onset of flu symptoms, but there still is some benefit to taking it up to 4–5 days after symptoms start. An antiviral drug does not cure the flu, but it can shorten how long it lasts and how severe it is. Even if you just think you have the flu, it is best to be on the safe side and contact your obstetrician or other member of your health care team. You also should call your obstetrician or other health care professional if you are pregnant and come in close contact with someone who has the flu. This includes living with, caring for, or talking face-to-face with someone who may have the flu. You may be prescribed an antiviral drug to reduce the risk that you will get the flu.

Finally...

Getting the flu vaccine is an important part of prenatal care. Protect your baby, yourself, and others from the flu by getting the vaccine while you are pregnant. If you think you are getting the flu or have been around anyone with the flu, contact your obstetrician or other member of your health care team as soon as you can. Antiviral medication may make the flu less severe.

Glossary

Antibodies: Proteins in the blood produced in reaction to foreign substances, such as bacteria and viruses that cause infection.

Autism: A group of developmental disorders that range from mild to severe and that result in communication problems, problems interacting with others, behavioral difficulties, and repetitive behaviors.

Complications: Diseases or conditions that occur as a result of another disease or condition. An example is pneumonia that occurs as a result of the flu. A complication also can occur as a result of a condition, such as pregnancy. An example of a pregnancy complication is preterm labor.

Immune System: The body's natural defense system against foreign substances and invading organisms, such as bacteria that cause disease.

Influenza: An infection with the influenza virus that most commonly affects the respiratory tract. Symptoms include fever, headache, muscle aches, cough, nasal congestion, and extreme fatigue. Complications can occur in severe cases, such as pneumonia and bronchitis. There are a number of different influenza virus types, including A, B, and C, and different strains, including 18 H types and 11 N types, e.g. H1N1 or "swine flu."

Live, Attenuated Influenza Vaccine: An influenza vaccine containing live viruses that have been altered to not cause disease. It is given as a nasal spray. It is not recommended for pregnant women.

Obstetrician: A physician who specializes in caring for women during pregnancy, labor, and the postpartum period.

Pneumonia: An infection of the lungs.

Preterm: Born before 37 weeks of pregnancy.

Thimerosal: A preservative used in some vaccines.

Virus: An agent that causes certain types of infections.

This Patient Education Pamphlet was developed by the American College of Obstetricians and Gynecologists. Designed as an aid to patients, it sets forth current information and opinions on subjects related to women's health. The average readability level of the series, based on the Fry formula, is grade 6–8. The Suitability Assessment of Materials (SAM) instrument rates the pamphlets as "superior." To ensure the information is current and accurate, the pamphlets are reviewed every 18 months. The information in this pamphlet does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to the institution or type of practice, may be appropriate.

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