



For more information about the Organization of Teratology Information Specialists or to find a service in your area, call (866) 626-6847 or visit us online at: [www.OTISpregnancy.org](http://www.OTISpregnancy.org).

## **Antiviral Medications to Treat/Prevent Influenza (Flu) and Pregnancy**

This sheet talks about the risks that exposure to antiviral medications to treat or prevent influenza can have during pregnancy. With each pregnancy, all women have a 3% to 5% chance of having a baby with a birth defect. This information should not take the place of medical care and advice from your health care provider.

### ***What are antiviral medications and what do they do?***

Antiviral medications reduce the ability of some influenza viruses to multiply. When used within 48 hours of the start of the symptoms of influenza (the “flu”), these medications can reduce the number of days that you are sick. Some of these medications may also be used to prevent infection with influenza A in people who are at high risk of becoming infected or at a high risk of having serious complications from the flu.

### ***Which antiviral medications are used to treat flu?***

There are four antiviral medications currently approved in the U.S. for treatment of the flu: amantadine (Symmetrel®), rimantadine (Flumadine®), oseltamivir (Tamiflu®), and zanamivir (Relenza®). All four are effective against influenza A viruses. Oseltamivir and zanamivir are also effective against influenza B viruses. Amantadine, rimantadine and oseltamivir may also be used to prevent infection with influenza A.

### ***I am planning on becoming pregnant during the flu season. Can I skip getting the flu vaccine this year, and just take one of these medications if I happen to get sick?***

No. Antiviral medications are not a substitute for the flu vaccine. If you are

planning to become pregnant, or are pregnant, during the flu season, it is strongly recommended that you get the injectable flu vaccine (flu shot) to help prevent infection with the flu while you are pregnant. If you think you might already be pregnant, you should avoid Flumist®. This is the form of flu vaccine that is given through the nose.

### ***I am pregnant and have the flu. Is it safe for me to use an antiviral medication?***

Animal studies on rimantadine, oseltamivir, and zanamivir have not raised concerns for problems when these drugs are used in pregnancy. However, there are no published reports of pregnancy outcomes following exposure to these medications in humans. With no human information we cannot be sure these medications are completely safe but the animal studies do suggest that they would not be associated with a significant increase risk for birth defects.

The information on amantadine is less clear. Some animal studies showed an increase in adverse pregnancy outcome. This has led some to recommend that amantadine should not be given in pregnancy. However, there have been some reports of women who have taken amantadine during pregnancy. These reports suggest that exposure to amantadine would not result in a high risk for birth defects.

During pregnancy there can be an increased risk of complications from the flu

especially in the second and third trimester. If you develop the flu, it is important that you see your doctor to determine if you need to be treated with an antiviral drug. Don't panic if it is needed during pregnancy, or if you find out that you are pregnant and have already used an antiviral drug early in pregnancy. At the present time there is no human information to show that there is an increased risk to the fetus.

***I am pregnant and my husband has the flu. Is it safe for me to take oseltamivir so that I don't get sick?***

During pregnancy the risk of complications from the flu is highest during the second and third trimester. Although the animal studies are reassuring, oseltamivir is not proven completely safe in pregnancy. Your doctor can help you to decide whether you are at a greater risk of complications from flu and would be better off taking oseltamivir to help you avoid getting it. This same approach should be taken if other antiviral medications are being considered.

***I am breastfeeding and have just come down with the flu. Can I take one of the antiviral medications to shorten the number of days that I will be sick?***

It is unknown if any of these medications have the potential to affect a nursing infant. Therefore, caution should be used when considering treatment while breastfeeding. The manufacturers of rimantadine did report adverse effects in nursing rats and one manufacturer of amantadine has raised concern for vomiting, skin rash and effects to the urinary tract. These manufacturers do not recommend use of rimantadine and amantadine while breastfeeding. Given the way that zanamivir is absorbed into the body, it may result in limited amounts in breastmilk. Zanamivir's safety is still unknown. No breastfeeding information is available regarding oseltamivir. As with any exposure during pregnancy or breastfeeding,

the risk versus benefit is best judged by your physician.

*For more information on a related topic see the OTIS fact sheet for **Influenza and the Vaccine during Pregnancy** available at [www.otispregnancy.org](http://www.otispregnancy.org).*

December 2005.

Copyright by OTIS.

Reproduced by permission.



#### References:

Briggs GG et al. (2005) *Drugs in Pregnancy and Lactation*, a reference guide to fetal and neonatal risk. 7th Ed. Baltimore, MD: Williams & Williams.

Laibl VR and Sheffield JS. Influenza and pneumonia in pregnancy. *Clinics in Perinatology*, 2005;32:727-38.

Neuzil KM, Reed GW, Mitchel EF, Simonsen L, Griffin MR. Impact of influenza on acute cardiopulmonary hospitalizations in pregnant women. *Am J Epidemiol*, 1997;148:1094-7.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Guidelines and Recommendations: Influenza Antiviral Medications: 2005-06 – Chemoprophylaxis (Prevention) and Treatment Guidelines, updated 10/21/05; <http://www.cdc.gov/flu>, accessed 12/1/05.

Widelock D, Csizmas L, Klein S. Influenza, pregnancy, and fetal outcome. *Public Health Reports*, 1963;78:1-11.

*If you have questions about the information on this fact sheet or other exposures during pregnancy, call **OTIS** at 1-866-626-6847.*