



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.

Chicken Pox (Varicella) and the Vaccine and Pregnancy

This sheet talks about the risks that exposure to chicken pox or the vaccine 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 is chicken pox?

Chicken pox, also called varicella, is a viral infection that usually occurs in childhood. The most common symptom is a rash, which first appears as small, reddish spots or pimples. These spots blister and then scab over. New spots appear for up to 3-5 days. Often a fever and body aches occur before the rash appears. Pneumonia occurs in 10-15 percent of teenagers and adults who have chicken pox.

Is chicken pox contagious?

Yes, chicken pox is highly contagious. A person who has chicken pox is contagious 1-2 days prior to breaking out and until all their spots are scabbed over. If you have never had chicken pox before, there is a 90 percent chance that you will catch it if someone in your house has it. Infection occurs less often after exposure in other places, such as a school.

The period between the time a person is exposed to chicken pox and the time he/she develops symptoms is the incubation period. For chicken pox, the incubation period ranges from 7 to 21 days.

I don't think I ever had chicken pox and have recently been exposed? Is there anything I can do?

The first thing you should do is have your health care professional do a blood test to see if you have any antibodies to the chicken pox virus. Up to 95 percent of women who do not think or know if they ever had chicken pox will have antibodies on a blood test.

You are not immune if a blood test shows you do not have antibodies to the chicken pox virus. If you are not immune, you are at risk for being infected. In that case, you may take zoster immune globulin (ZIG) after being directly exposed. ZIG is a blood product that contains high levels of chicken pox antibodies. ZIG causes chicken pox infection to be less severe. In some cases, ZIG may help prevent infection. Some experts say that chicken pox is more severe in pregnancy and recommend nonimmune pregnant women get ZIG after direct exposure. ZIG must be given as soon as possible within 4 days of the first exposure. It is unknown whether ZIG will help prevent chicken pox infection in the fetus. ZIG does not appear to cause birth defects.

I'm pregnant and have just been exposed to chicken pox. I had chicken pox when I was a child. Is there any risk to my baby?

When a person has chicken pox, he/she makes antibodies to the virus. These antibodies last a long time and make a person immune to chicken pox. People who are immune most likely will not develop chicken pox if they are exposed again. But you should be sure that you had chicken pox and not some other similar disease.

I had chicken pox at 10 weeks of pregnancy. Is my baby at an increased risk for birth defects?

Most babies born to women who have chicken pox in pregnancy are normal. However, 1-2 percent of the babies whose mothers had chicken pox in pregnancy have one or more birth defects due to the infection.

The virus that causes chicken pox infects the fetus 25 percent of the time. Sometimes, infection of the fetus causes a pattern of birth defects called the varicella embryopathy. The birth defects seen include scars, eye problems, poor growth, underdevelopment of an arm or leg, small head size, delayed development and/or mental retardation. Some babies may have only one of these problems while others have some or all.

The greatest risk for birth defects is when the mother develops chicken pox between 8 and 20 weeks of pregnancy. The risk for birth defects due to chicken pox infection in the first trimester of pregnancy is 0.5-1 percent. When chicken pox occurs between 13 and 20 weeks of pregnancy, the risk for birth defects appears to be 2 percent.

Is there any test I can have in pregnancy to see if my baby has birth defects from my chicken pox infection?

During a targeted ultrasound, a doctor uses sound waves to take a very close look at the fetus. Between the 18th and 20th weeks of pregnancy, the doctor may be able to see limb defects and brain problems that may have been caused by chicken pox infection. Usually several ultrasound exams are needed to check for growth problems. Sometimes the ultrasound can show extra amniotic fluid, liver problems, or severe swelling of the fetus that the chicken pox may have caused. Ultrasound

cannot pick up all birth defects that can be caused by chicken pox in pregnancy.

My due date is in 3 weeks, and I have just been exposed to chicken pox. Is there any risk to my baby if I develop chicken pox at this stage of pregnancy?

If you develop chicken pox 5 days or less before delivery or 1-2 days after delivery, there is a 20-25 percent chance your newborn baby could develop chicken pox. Chicken pox infection in this time period is called congenital varicella. Congenital varicella can be very severe, and there is a 30 percent chance the baby could die if he/she is not treated with ZIG.

If chicken pox develops between 6 and 21 days before delivery, there is still a chance your newborn could develop congenital varicella. However, because your baby will get some of your newly-made chicken pox antibodies, the congenital varicella would probably be mild.

What is shingles?

After an individual has chicken pox, the virus remains inactive in the nerves of the spine. If the virus is activated again, it causes shingles. Shingles are painful blisters that are usually only on a small area of the body.

My co-worker has shingles. Is there any risk to my baby?

If you have had chicken pox before, you have antibodies to the chicken pox virus. Because this virus is the same one that causes shingles, your antibodies will prevent the virus from multiplying in your body. Your exposure to shingles will not cause you to develop chicken pox or shingles, so there is no risk to your baby.

If you are not immune to chicken pox, there is a very small chance that you will develop chicken pox. Because shingles is usually limited to one area of the body, spread of the virus through the air is rare. But, infection can occur after direct contact with the shingles rash.

I'm 8 weeks pregnant and just developed shingles. Can shingle's harm my baby?

In a large study of chicken pox exposure during pregnancy there was no evidence of fetal harm in 366 pregnant women who developed the shingles.

I have never had chicken pox and just received the varicella vaccine. How long must I wait before becoming pregnant?

The vaccine maker recommends waiting three months before trying to conceive. This is based on the waiting period for other vaccines that use a live virus. Some people develop a rash from the varicella vaccine. If a rash is present, it is possible to infect another person.

The American Academy of Pediatrics recommends a woman wait one month after receiving the

varicella vaccine before becoming pregnant. There are reports of normal babies born to women who conceived one month or less after getting the vaccine.

I am 6 weeks pregnant. I received the varicella vaccine last week. Will this hurt my baby?

The company who makes the vaccine has compiled a registry of pregnant women who received the vaccine. As of March 2002 they had pregnancy outcomes on 462 women who received the vaccine. There was no increase in the rates of major malformations above the baseline of 3-5% and no reports of other adverse outcomes.

I am pregnant and have never had chicken pox. Is it okay for my child to receive the vaccine?

The vaccine uses a live but weakened chicken pox virus. Some people get a rash after they get the vaccine. Only when this rash is present is there a chance to infect someone else. Children with weakened immune systems (i.e. from cancer therapy) can pass the virus on to others. These people then develop a mild case of chicken pox.

To date, no cases of chicken pox have occurred after exposure to healthy children who have received the varicella vaccine. The American Academy of Pediatrics states that pregnancy in a mother or other household member is not felt to be a reason to avoid giving a child the vaccine.

August 2002.

Copyright by OTIS.

Reproduced by permission.



References:

- Bai PVA and John TJ. 1979. Congenital skin ulcers following varicella in late pregnancy. *J Pediatr* 94:65.
- Balducci J, et al. 1992. Pregnancy outcome following first-trimester varicella infection. *Obstet Gynecol* 79:5.
- Bialecki C and Feder HM. 1989. Questions and controversies about varicella-zoster infections. *Hosp Prac*.
- Brunell PA. 1990. Varicella in the womb and beyond. *Pediatr Inf Dis* 9:770.
- Committee on Infectious Diseases. 1995. Recommendations for the use of live attenuated varicella vaccine. *Pediatr* 95:791.
- Enders G, et al. 1994. Consequences of varicella and herpes zoster in pregnancy: Prospective study of 1739 cases. *Lancet* 343:1547.
- Enders G. 1984. Varicella-zoster virus infection in pregnancy. *Prog Med Virol* 29:166.
- Freij BJ and Sever JL. 1988. Herpes virus infections in pregnancy. *Clin Perinatol* 15:203.
- Gershon AA. 1994. Varicella vaccine. *Isr J Med Sci* 30:482.
- Higa K, et al. 1987. Varicella-zoster virus infections during pregnancy: Hypothesis concerning the mechanisms of congenital malformations. *Obstet Gynecol* 69:214.
- Jones KL, et al. 1994. Offspring of women infected with varicella during pregnancy: A prospective study. *Tera* 49:29.
- Laforet EG and Lynch CL. 1974. Multiple congenital defects following maternal varicella: Report of a case. *N Engl J Med* 236:534.
- Merck Varivax Registry Report. March 2002
- Paryani SG, and Arvin AM. 1986. Intrauterine infection with varicella-zoster virus after maternal varicella. *N Engl J Med* 314:1542.
- Pastuszak AL, et al. 1994. Outcome after maternal varicella infection in the first 20 weeks of pregnancy. *N Engl J Med* 330:901.
- Preblud, SR et al. 1986. Varicella-zoster infection in pregnancy. *N Engl J Med* 315:1416.
- Prober CG, et al. 1990. Consensus: Varicella-zoster infections in pregnancy and the perinatal period. *Pediatr Inf Dis J* 9:865.

Merck Research Laboratories Varivax Registry:

1-800-986-8999