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Acyclovir (Zovirax[®])/Valacyclovir (Valtrex[®]) and Pregnancy

This sheet talks about the risks that exposure to acyclovir or valacyclovir 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 acyclovir?

Acyclovir or Zovirax[®], as it is commonly known, is an antiviral medication used to treat cold sores and genital herpes caused by the herpes virus. It is also prescribed to treat chickenpox and shingles due to the related herpes virus. The FDA approved its use in 1984. Unfortunately, it does not cure the disease and infections can return at a later time. Acyclovir is prescribed as a cream or ointment (topical use), oral tablets, or intravenous liquid to relieve pain, speed recovery, and prevent viral shedding. More recently, acyclovir has been used in combination with AZT to treat AIDS patients.

Is valacyclovir the same as acyclovir?

Valacyclovir is very similar to acyclovir and is often used to treat the same types of infections. A common name for it is Valtrex[®]. Since valacyclovir is changed to acyclovir once in the woman's body, the effects on the pregnancy and breastfeeding are thought to be the same.

I take acyclovir/valacyclovir as needed to treat herpes. Should I stop using it before I try to get pregnant?

No. You should not stop taking any medications without first talking with your doctor. As with any medication that is taken during pregnancy, the benefits to the mother and baby should outweigh the possible risks when deciding whether to continue its use.

Can acyclovir/valacyclovir use by my partner or myself make it more difficult for me to become pregnant?

In animal studies, high doses of acyclovir affected sperm production. A follow-up study in 20 men did not find lower sperm production when they were given high doses for six months. There have not been any studies that looked at the effect of

acyclovir on female reproduction. At this point, it does not appear to have a negative effect.

Does exposure to acyclovir/valacyclovir cause an increased risk for miscarriage or infant death?

Miscarriages from acyclovir use during the first trimester were less than the expected number in the general population. Of the 425 first trimester pregnancies in the registry, 11% resulted in miscarriages. In general, about 15% of all pregnancies result in a miscarriage during the first-trimester. There were no reports of pregnancy loss during the second trimester and less than 1% in the third trimester.

I have been taking acyclovir/valacyclovir for genital herpes and just found out that I am pregnant. Could it cause birth defects during the first trimester?

The most common use for acyclovir is to treat genital herpes. Up to half of all acyclovir users are women of childbearing age and many have become pregnant while taking the drug. An oral medication or one taken intravenously can enter the baby's body and has been found in the umbilical cord and amniotic fluid. A pregnancy registry was started by the manufacturer, Glaxo Wellcome Co. and the Centers for Disease Control (CDC) to look at the effects of acyclovir on the developing baby. Of the 311 births after first trimester exposure to acyclovir, no increase in birth defects beyond the general population was noted. Animal studies with exposures during the first-trimester also confirm these results. The pregnancy registry ended on 4/30/99, but the manufacturer requests that exposures to acyclovir or valacyclovir during pregnancy be reported to its voluntary reporting system at the Glaxo Wellcome Inc. Customer Response Center by calling 1-888-825-5249.

I have a cold sore on my lip, could acyclovir ointment cause birth defects?

Topical use of acyclovir ointment has not been well-studied but is not suspected of causing birth defects because it is not easily absorbed through the skin.

Can I use acyclovir/valacyclovir during my second or third trimester?

Based on the manufacturer's pregnancy registry and other animal studies, it appears that acyclovir use in the second and third trimesters of pregnancy do not increase the risks to the developing baby. Of the 69 births after second trimester exposures to acyclovir and of the 106 births after third trimester exposure, no increase in birth defects was noted. Despite the small numbers from each group, these results are reassuring.

Are there any situations in which using acyclovir/valacyclovir during pregnancy is necessary for the health of the mother and baby?

Acyclovir is often prescribed during pregnancy when the mother has a primary genital herpes infection. A "primary" infection means it is the first time for the infection. Primary infection can be life threatening or lead to severe complications in the pregnancy. A rare but serious infection called varicella pneumonia also requires treatment with acyclovir, which is often given intravenously. No side effects were seen in these babies after treatment with acyclovir.

Can acyclovir get into my baby's body?

Yes, acyclovir can get into the baby's body but the amount measured was very low and did not cause health problems. The baby's kidneys are able to remove acyclovir from the body.

Can I use acyclovir/valacyclovir while breastfeeding my baby?

The American Academy of Pediatrics has approved the use of acyclovir while breastfeeding. Acyclovir does enter breast milk; however, the amount of medication the baby would receive is very low. Based on the data available, acyclovir does not cause health concerns for the baby. If the medication is used as a cream or ointment on the nipples, the area should be cleaned prior to nursing. Acyclovir is commonly given to newborns and does not typically cause problems for the baby.

Is there a concern for birth defects if my partner was taking acyclovir/valacyclovir when I became pregnant?

Since acyclovir does not cause changes in the genetic material of the sperm, your partner's use of acyclovir is unlikely to increase the risk for birth defects.

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References:

- Andrews EB, et al. 1992. Acyclovir in pregnancy registry: six years' experience. The Acyclovir in Pregnancy Registry Advisory Committee. *Obstet Gynecol* 79:7-13.
- Andrews EB. 1994. Acyclovir does not increase risk in pregnancy. *Am Pharm NS34:NS36*.
- Boyd K and Walker E. 1988. Use of acyclovir to treat chickenpox in pregnancy. *Br Med J (Clin Res Ed)* 296:393-394.
- Braig S, et al. 2001. Acyclovir prophylaxis in late pregnancy prevents recurrent genital herpes and viral shedding. *Eur J Obstet Gynecol Reprod Biol* 96:55-58.
- Brocklehurst P, et al. 1990. Acyclovir, herpes, and pregnancy. *Lancet* 336:1594-1595.
- Brown ZA and Baker DA. 1989. Acyclovir therapy during pregnancy. *Obstet Gynecol* 73:526-531.
- Centers for Disease Control. 1993. Pregnancy outcomes following systemic prenatal acyclovir exposure – June 1, 1984-June 30, 1993. *MMWR*. 42:806-809.
- Douglas JM, Jr., et al. 1988. A double-blind, placebo-controlled trial of the effect of chronically administered oral acyclovir on sperm production in men with frequently recurrent genital herpes. *J Infect Dis* 157:588-593.
- Fletcher CV. 1992. The placental transport and use of acyclovir in pregnancy. *J Lab Clin Med* 120:821-822.
- Frenkel LM, et al. 1991. Pharmacokinetics of acyclovir in the term human pregnancy and neonate. *Am J Obstet Gynecol* 164:569-576.
- Kimberlin DF, et al. 1998. Pharmacokinetics of oral valacyclovir and acyclovir in late pregnancy. *Am J Obstet Gynecol* 179:846-851.
- Klug S, et al. 1992. Acyclovir in pregnant marmoset monkeys-oral treatment. *Teratology* 45:472.
- Hale T. 2000. *Medications and Mother's Milk*. 9th edition. Amarillo, TX: Pharmasoft Publishing.
- Leen CL, et al. 1987. Acyclovir and pregnancy. *Br Med J (Clin Res Ed)* 294:308.
- Mamede JA, et al. 1995. Chronic effects of azidothymidine and acyclovir on pregnant rats. *Gen Pharmacol* 26:523-526.
- Moore HL, et al. 1983. Preclinical toxicology studies with acyclovir: teratologic, reproductive and neonatal tests. *Fundam Appl Toxicol* 3:560-568.
- Mutalik S, et al. 1997. Oral acyclovir therapy for varicella in pregnancy. *Int J Dermatol* 36:49-51.
- Prober CG. 2001. Management of the neonate whose mother received suppressive acyclovir therapy during late pregnancy. *Pediatr Infect Dis J* 20:90-91.
- Sheffield JS, et al. 2002. Acyclovir concentrations in human breast milk after valacyclovir administration. *Am J Obstet Gynecol* 186:100-102.
- Smego RA, Jr. and Asperilla MO. 1991. Use of acyclovir for varicella pneumonia during pregnancy. *Obstet Gynecol* 78:1112-1126.
- Spangler JG, et al. 1994. Uses and safety of acyclovir in pregnancy. *J Fam Pract* 38:186-191.
- Stiffman MN and Adam P. 1997. Acyclovir in pregnancy for primary prevention of neonatal herpes. *J Fam Pract* 44:29-30.
- Stahlmann R, et al. 1992. Acyclovir in pregnant marmoset monkeys-intravenous treatment. *Teratology* 45:453.
- Stray-Pedersen B. 1990. Acyclovir in late pregnancy to prevent neonatal herpes simplex. *Lancet* 336:756.
- Tyring SK, et al. 2002. Valacyclovir for herpes simplex virus infection: long-term safety and sustained efficacy after 20 years' experience with acyclovir. *J Infect Dis* 186 Suppl 1:S40-S46.

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