



MotherToBaby

Medications & More During Pregnancy & Breastfeeding  
Ask The Experts

Fact Sheet

by the **Organization of Teratology Information Specialists (OTIS)**

For more information about us or to find a service in your area,  
call **(866) 626-6847**. Visit us online at **www.MotherToBaby.org**.

Find us! Facebook.com/MotherToBaby or @MotherToBaby on Twitter

## Ciprofloxacin

In every pregnancy, a woman starts out with a 3-5% chance of having a baby with a birth defect. This is called her background risk. This sheet talks about whether exposure to ciprofloxacin may increase the risk for birth defects over that background risk. This information should not take the place of medical care and advice from your health care provider.

### ***What is ciprofloxacin?***

Ciprofloxacin is an antibiotic used to treat a variety of bacterial infections. It is part of a group of antibiotics called “quinolones or fluoroquinolones.”

### ***Is there an increased chance for miscarriage if I take ciprofloxacin during the first trimester?***

When taken in the recommended doses, ciprofloxacin is unlikely to increase the chance for miscarriage.

### ***Is there an increased chance for birth defects or pregnancy problems if I take ciprofloxacin during the first trimester?***

Most studies did not find an increased chance for birth defects when women took ciprofloxacin or other quinolone antibiotics during the first trimester of pregnancy. Because these studies generally included women taking ciprofloxacin for only five to seven days, the effects of long-term use are not well known. However, there was not an increased chance for birth defects in a small number of babies exposed to longer periods of use.

### ***Is there an increased chance for harmful effects for the baby if I take ciprofloxacin in the second or third trimester?***

Based on a small number of pregnancies that have been studied, there does not seem to be an increased chance for harmful effects on the baby if ciprofloxacin is taken later in pregnancy.

### ***Will ciprofloxacin affect my baby's joints?***

Probably not. In studies looking at children and adults, ciprofloxacin was found in higher amounts in the joints compared to other parts of the body. Some animal studies found that some of the exposed animals developed a condition where there is damage to the joints (called arthropathy). Because of this, there have been concerns that ciprofloxacin in pregnancy could have an effect on the baby's developing joints. One human study looking at children who were exposed to ciprofloxacin during pregnancy found no problems in their joints or in the crawling, standing, or walking of the babies. The ciprofloxacin use in these studies occurred early in pregnancy, and it is not known if use later in pregnancy could cause joint problems.

### ***Is ciprofloxacin recommended for use during pregnancy?***

Ciprofloxacin is generally not used in pregnancy or by children except for infections that cannot be treated with other antibiotics. It is unlikely that ciprofloxacin has a harmful effect on children and babies. However, ciprofloxacin and its effect on joint development are still being studied and current studies are not enough to prove that there is no risk. Because other antibiotics have been better studied and used widely in pregnancy, it is recommended to use those other antibiotics when possible. If the infection does not respond to that treatment, then you and your health care provider may decide to use ciprofloxacin.

### ***I have been exposed to anthrax and I am pregnant. Should I take ciprofloxacin?***

Ciprofloxacin is often the medication used to treat anthrax infections. If the type of anthrax you have is not treatable with other antibiotics, it is likely that the benefits of treating an anthrax infection outweigh the risk of using ciprofloxacin. Be sure to talk with your health care provider about which medication is right for you.

### ***Can I take ciprofloxacin if I am breastfeeding?***

The American Academy of Pediatrics considers ciprofloxacin to be usually compatible with breastfeeding. This is based on a small number of studies and the known benefits of breastfeeding. In a study of 10 mothers taking ciprofloxacin, the infant received only a small amount of the medicine from the breast milk. Even though no joint problems in babies exposed through breast milk have been reported, until more is known, you may wish to discuss the use of a better studied antibiotic to treat your infection with your health care provider. Like many other antibiotics, maternal use of ciprofloxacin may cause problems in the infant such as diarrhea and yeast infection. Be sure to talk to your health care provider about all your choices for breastfeeding.

### ***What if the father of the baby takes ciprofloxacin?***

There are no studies looking at possible risks to a pregnancy when the father takes ciprofloxacin. In general, exposures that fathers have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures and Pregnancy at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

### **Selected References:**

- AAP Committee on Drugs. 2001. The transfer of drugs and other chemicals into human milk. *Pediatrics* 108:776-789.
- ACOG Committee Opinion. 2002. Management of asymptomatic pregnant or lactating women exposed to anthrax. *Int J Gynecol Obstet* 77:293-295.
- Berkovitch M, et al. 1994. Safety of the new quinolones in pregnancy. *Obstet Gynecol* 84(4):535-538.
- Bomford JAL, et al. 1993. Ciprofloxacin use during pregnancy. *Drugs* 45(S3): 461-462.
- Gardner D, et al. 1992. Simultaneous concentrations of ciprofloxacin in breast milk and in serum in mother and breast-fed infant. *Clin Pharm* 11:352-354.
- Kabeya CM, et al. 1995. Ciprofloxacin for multiresistant enteric fever in pregnancy. *The Lancet* 346:307-308.
- Kaplan YC & Koren G. 2015. Use of ciprofloxacin during breastfeeding. *Can Fam Physician* 61(4):343-4.
- Leung D, et al. 1995. Treatment of typhoid in pregnancy. *The Lancet* 346:648.
- Loebstein R, et al. 1998. Pregnancy outcome following gestational exposure to fluoroquinolones: a multicenter prospective controlled study. *Antimicrob Agents Chemother* 42(6):1336-1339.
- Meaney-Delman D et al. 2013 Prophylaxis and treatment of anthrax in pregnant women. *Obstet Gynecol.* 122(4):885-900
- Nahum G, et al. 2006. Antibiotic use in pregnancy and lactation. *Obstet Gynecol* 107(5):1120-1138.
- Padberg S, Wacker E, et al. 2014. Observational cohort study of pregnancy outcomes after first-trimester exposure to fluoroquinolones. *Antimicrob. Agents Chemother.* 58(8): 4392-4398.
- Polacheck H, et al. 2005. Transfer of ciprofloxacin, ofloxacin and levofloxacin across the perfused human placenta in vitro. *Eur J Obstet Gynecol* 122:61-65.
- Schaefer C, et al. 1996. Pregnancy outcome after prenatal quinolone exposure: evaluation of a case registry of the European Network of Teratology Information Services (ENTIS). *Eur J Obstet Gynecol* 69:83-89.
- Schluter G. 1989. Ciprofloxacin: toxicologic evaluation of additional safety data. *The Am J Med* 87(5A):S37-S39.
- Stahlmann R, et al. 1998. Chondrotoxicity and toxicokinetics of sparfloxacin in juvenile rats. *Antimicrob Agents Chemother* 42(6):1470-1475.

April, 2016