Fluconazole (Diflucan®)

This sheet is about exposure to fluconazole in pregnancy and while breastfeeding. This information should not take the place of medical care and advice from your healthcare provider.

**What is fluconazole?**

Fluconazole is a medication used to treat yeast and fungal infections. It can be taken orally (by mouth), injected, or given IV (into a vein). It is most commonly used as a single oral dose of 150 mg to treat vaginal yeast infections. For severe fungal infections involving the whole body, higher IV doses of up to 800 mg daily have been used. Fluconazole is sold under the brand name Diflucan®.

The Centers for Disease Control and Prevention (CDC) have posted guidelines for treating vaginal yeast infections; these guidelines recommend topical therapies rather than oral medication.

The product label for fluconazole recommends people who are pregnant not use this medication except in cases of severe or potentially life-threatening fungal infections. For some people, the benefit of using fluconazole in a pregnancy may outweigh possible risks. Your healthcare providers can talk with you about what treatment is best for you.

*I take fluconazole. Can it make it harder for me to get pregnant?*

A study in laboratory animals did not find that fluconazole affected fertility. Studies in humans have not been done to see if fluconazole could make it harder for to get pregnant.

**Does taking fluconazole increase the chance for miscarriage?**

Miscarriage can occur in any pregnancy. There is mixed information on whether taking fluconazole can increase the chance for miscarriage.

One study looking at almost 600 pregnancies suggested an increased chance for miscarriage if any dose of fluconazole was used during early pregnancy. A second study looked at miscarriages among people who filled a prescription for single-dose oral fluconazole for vaginal yeast infection between weeks 7 and 22 weeks of their pregnancy. They found a slightly higher chance of miscarriage than expected. This type of study cannot tell if these people actually used the medication after filling their prescription and also has other study flaws making it hard to confirm that the chance for pregnancy loss was really higher in this group.

Alternatively, two studies involving over 500 pregnancies with low dose oral fluconazole use in the months before or during their pregnancy did not find an increased chance for miscarriage. The FDA issued a statement in October 2019 concluding that available studies do not provide definite evidence of an increased chance for miscarriage with a single 150 mg dose of oral fluconazole.

**Does taking fluconazole increase the chance of birth defects?**

Every pregnancy starts out with a 3-5% chance of having a birth defect. This is called the background risk. The chances of birth defects following use of fluconazole likely depends on the dose and the length of time the medication is used. Most data suggests that the use of low doses of fluconazole (generally a single oral dose of 150 mg) during the first trimester of pregnancy are unlikely to result in a large increase in the chance of birth defects. Two studies found a small increase in risk for cleft lip with or without cleft palate, and a heart defect called ‘transposition of the great arteries. However, a study with over 7,000 people who used lower doses of fluconazole (150 to 300 mg) did not show an increased chance for birth defects.

The information on higher dose exposure is unclear. One study has reported that exposure to a dose higher than 150 mg in the first trimester might increase the chance for a heart defect called septal defects. (The septum is the wall in heart that divides it in two halves).

A pattern of birth defects of the head, face, bones and heart were reported in the five children of four people that took high doses (400 to 1200 mg per day) of fluconazole for many weeks in pregnancy to treat severe fungal infections. These cases on their own cannot prove cause and effect, but the unusual infant findings have raised concern that the...
high dose of fluconazole may be the cause of the birth defects.

In summary, it is unlikely that the use of a single low dose of oral fluconazole during early pregnancy would greatly increase the chance of birth defects. However, the use of high dose fluconazole for many weeks might be associated with an increase in the chance of birth defects in the exposed baby.

**Does taking fluconazole in pregnancy increase the chance of other pregnancy related problems?**

Studies have not found an increase in premature birth (birth before 37 weeks of pregnancy) or low birth weight (weighing less than 5 pounds, 8 ounces (2500 grams) at birth) following a single dose of fluconazole. One study did not find an increased chance for stillbirth with any use of fluconazole.

**Does taking fluconazole in pregnancy affect future behavior or learning for the child?**

Studies have not been done to see if fluconazole can cause behavior or learning issues for a child exposed in pregnancy.

**Breastfeeding while taking fluconazole:**

While it hasn’t been well studied during breastfeeding, fluconazole is commonly prescribed during this time. Fluconazole can enter breast milk, but the dose to the breastfed infant is estimated to be less than the dose that would be given directly to the infant to treat an infection. The treatment of a vaginal infection often requires only a single dose of fluconazole and is unlikely to pose a risk to the breastfed infant. If you suspect your baby has any symptoms from the exposure such as stomach upset or diarrhea, contact your child’s healthcare provider. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

If you have a yeast infection of your breast, your infant might also have oral thrush (a yeast infection in the mouth). In your child does have an infection, they will also need medical treatment, because the amount of fluconazole transferred through breast milk is not enough to treat the nursing child.

**If a male takes fluconazole, could it affect fertility (ability to get partner pregnant) or increase the chance of birth defects?**

There is one study in laboratory animals that found lowered sperm count while the animal was exposed to fluconazole. Sperm counts returned to normal two months after stopping treatment. Studies have not been done in humans to see if fluconazole could affect male fertility. In general, exposures that males or sperm donors have are unlikely to increase the risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures at https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/.

Please click here for references.