Berberine

This sheet is about exposure to berberine in pregnancy and while breastfeeding. This information is based on published research studies. It should not take the place of medical care and advice from your healthcare provider.

What is berberine?

Berberine is an ingredient found in many plant species, including goldthread, huang lian, Oregon grape, and barberry. It has been used to treat many conditions, such as diarrhea, diabetes, and high cholesterol. It has also been used for weight loss.

Berberine is available as a supplement sold over the counter. In general, it is suggested to speak with your healthcare provider before taking any supplements. Many supplements are not recommended for use during pregnancy unless your healthcare provider has prescribed them to treat a medical condition. This is because they are not well-regulated or studied for use in pregnancy. For more detail on supplements, please see the fact sheet at https://mothertobaby.org/fact-sheets/herbal-products-pregnancy/.

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

It is not known if berberine can make it harder to get pregnant. There is some information to suggest berberine might increase fertility and pregnancy rates in people with polycystic ovary syndrome (PCOS).

Does taking berberine increase the chance of miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. It is not known if berberine can increase the chance of miscarriage. One study suggests that berberine might cause uterine contractions. As there can be many causes of miscarriage, it is hard to know if a medication, the medical condition being treated, or other factors (such as age, health, other exposures) are the cause of a miscarriage.

Does taking berberine increase the chance of birth defects?

Birth defects can happen in any pregnancy for different reasons. Out of all babies born each year, about 3 out of 100 (3%) will have a birth defect. We look at research studies to try to understand if an exposure like berberine might increase the chance for birth defects in a pregnancy.

It is not known if using berberine can increase the chance of birth defects. The research on berberine is limited to one report looking at 218 pregnancies exposed to huang lian (which contains berberine). Of those, three babies had nervous system defects, and three had defects in their genitals.

Does taking berberine in pregnancy increase the chance of other pregnancy-related problems?

Studies have not been done to see if berberine can increase the chance of pregnancy-related problems such as preterm delivery (birth before week 37) or low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth).

Berberine can change how bilirubin (a yellowish pigment that is made during the breakdown of red blood cells) binds to serum albumin (the main protein in blood plasma). This can cause a buildup of bilirubin in the brain, which can lead to brain damage and other issues. While information on this is very limited, one author suggests avoiding herbs and products that contain berberine during pregnancy.

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

Studies have not been done to see if berberine can increase the chance of behavior or learning issues for the child.

Breastfeeding while taking berberine:

Berberine can pass into breastmilk, but it is not known how much. It may raise the risk of bilirubin buildup in a baby's brain, which can lead to brain damage and other problems, especially in newborns. Also, because berberine is a supplement, it is not recommended for use during breastfeeding unless your healthcare provider has prescribed it to

treat a medical condition. Be sure to talk to your healthcare provider about all your breastfeeding questions.

If a man takes berberine, could it affect his fertility or increase the chance of birth defects?

Studies have not been done in humans to see if berberine could affect men's fertility (ability to get a partner pregnant) or increase the chance of birth defects. In general, exposures that fathers or sperm donors have are unlikely to increase 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.

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