Propranolol

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 propranolol 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 propranolol?
Propranolol is a drug known as a beta-blocker. Brand names for this drug are Inderal®, Detensol®, Novo-Proanol®, Deralin®, and Cardinol®. Beta-blockers are used to treat high blood pressure, some heart conditions, overactive thyroid, tremors, and migraines. MotherToBaby has a general fact sheet on beta-blockers which can be found at: https://mothertobaby.org/fact-sheets/beta-blockers/pdf/

How long does propranolol stay in the body? Should I stop taking it before I try to get pregnant?
People eliminate medications from their bodies at different rates. On average, it takes about a day for most of the propranolol to be gone from the body. You should not stop taking this medication without first talking with your healthcare provider. For some people, stopping this medication abruptly could have an adverse effect on the heart. If you do get pregnant while taking propranolol, tell your health care provider.

Can the use of propranolol cause a miscarriage?
Studies on pregnant women have not been done to see if there is any increase in miscarriage while taking propranolol in early pregnancy.

Can taking propranolol in the first trimester cause a birth defect?
There is not enough information available to know if first trimester use of propranolol can cause birth defects. Propranolol did not cause birth defects when given to animals early in pregnancy. A study of a large number of pregnancies found that beta-blockers did not cause heart defects in babies.

Can taking propranolol cause other pregnancy complications?
Propranolol has been associated with reduced growth of the baby. However, it is not clear if this happens because of the propranolol, the health condition that the propranolol is used for, or both.

Can taking propranolol near delivery cause problems for the baby?
Propranolol use in late pregnancy may cause the baby to have symptoms of the drug acting on its heart, blood vessels, and metabolism. Symptoms would include slowed heart rate and low blood sugar.

I am breastfeeding, can I take propranolol?
Yes. A small amount of propranolol enters breastmilk. A breastfed infant would likely receive less than 1 percent of the mother’s dose. If you are worried about any symptoms that the baby has, contact the child’s health care provider. Be sure to talk to your health care provider about all your breastfeeding questions.

What if the father of the baby takes propranolol?
Men taking propranolol may develop erectile dysfunction (ED). In general, exposures that fathers have do not increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet on Paternal Exposures (https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/pdf/).
Selected References:

- Smith MT et al. Propranolol, propranolol glucuronide, and naphthoxylactic acid in breast milk and plasma. Ther Dru Monit. 5:87-93.
- Xie RH, et al. 2014. Beta-blockers increase the risk of being born small for gestational age or of being institutionalised during infancy. BJOG. 121(9):1090-6.