

Beta-Blockers

The safety of beta-blockers during pregnancy or breastfeeding

The information provided below is for readers based in the United States of America. Readers outside of the United States of America should seek the information from local sources.

THIS MEDICATION CAN CAUSE HARM TO YOUR BABY:

Beta-blockers taken during pregnancy can cause your baby to be born smaller than normal and with low blood sugar or low heart rate. These medications may also increase the risk of birth defects when taken during pregnancy.

What are beta-blockers?

Beta-blockers are medications that relieve strain on your heart, reduce your heart rate, decrease blood pressure, and make it easier for your heart to pump blood. Types of beta-blockers that are available include: propranolol (Inderal), metoprolol (Lopressor, Toprol-XL), nadolol (Corgard), bisoprolol (Zebeta), acebutolol (Sectral), atenolol (Tenormin), labetalol (Normodyne), carvedilol (Coreg), and timolol (Blocadren). These medications are only available by prescription from your doctor.

What are beta-blockers used to treat?

Beta-blockers are used to treat high blood pressure, heart failure, angina (chest pain), heart disease, arrhythmias (abnormal heart rhythms), and migraines. They can also be used after a heart attack to help prevent further heart problems.

Beta-blockers are the most frequently used group of medications to treat heart conditions in expecting moms. These medications are also commonly used to treat high blood pressure during pregnancy.

How do beta-blockers work?

Beta-blockers work by blocking the effects of the hormones norepinephrine and epinephrine (adrenaline). Norepinephrine and epinephrine are responsible for increasing your blood pressure and making your heart beat faster. By blocking the actions of these hormones, beta-blockers expand your blood vessels, reduce the rate at which your heart beats, decrease your blood pressure, and lower the

force with which the heart pumps. These actions improve blood flow throughout your body and decrease strain on your heart.

Beta-blockers can cause many side effects, including: slow heart rate, low blood sugar, shortness of breath, difficulty breathing, dizziness, tiredness, and problems with sexual function.

If I am taking a beta-blocker, can it harm my baby?

Beta-blockers should be avoided during pregnancy unless they are medical necessary. These medications cross the placenta and expose your baby to their effects. They have been associated with babies being born small for their age and with other health problems. Some studies have also shown that beta-blockers may increase the risk that your baby will be born with specific birth defects, especially a defect in his or her heart. Each beta-blocker has different actions in the body and may pose a different risk to your baby depending on the medication.

Evidence:

Evidence is conflicting as to whether beta-blockers increase the risk of birth defects, particularly defects of the heart. One review found an increased risk for specific defects, including defects of the heart, face or mouth (cleft lip or palate), and the brain, spinal cord, or spine, when beta-blockers were taken during the first trimester of pregnancy. Two other reviews also found that beta-blockers were associated with an increased risk of heart defects. However, another review found that after taking age, weight, and other diseases of the expecting moms into consideration, beta-blockers did not increase the risk of heart defects.

In addition to the risk of birth defects, several reviews have found that beta-blockers increase the risk that your baby will be born small for gestational age. This means that your baby's weight is lower than it should be for his or her age. These reviews included studies of: 51 expecting moms with heart disease who took a beta-blocker, 45 expecting moms with heart disease who took a beta-blocker, and 416 expecting moms who took a beta-blocker for high blood pressure. This last study also found that beta-blockers increased the risk that babies would be hospitalized for seizures, sepsis (blood infection), or respiratory distress syndrome (a condition where the baby has difficulty breathing). If a beta-blocker is used during pregnancy, your doctor will monitor your developing baby to ensure that he or she is growing properly before birth.

Beta-blockers have also been shown to increase the chances that your baby will be born with other health problems. A review looked at 10,585 expecting moms who took a beta-blocker at the time of

delivery and found that there was an increased risk for babies to be born with low blood sugar and low heart rate. If a beta-blocker is used at or near delivery, the baby's heart rate and blood sugar must be monitored at birth.

Bottom line: **Beta-blockers should be avoided during pregnancy unless medically necessary.** They have been shown to increase the chances that your baby will have health problems at birth and may also increase the risk of specific birth defects.

If I am taking a beta-blocker and become pregnant, what should I do?

If you become pregnant while taking a beta-blocker, you should contact your doctor immediately. Your doctor will decide whether your beta-blocker is medically necessary or if it should be temporarily discontinued until after the birth of your baby. If your doctor decides that you should continue treatment with a beta-blocker during pregnancy, your baby will need to be monitored for proper growth inside the uterus.

If I am taking a beta-blocker, can I safely breastfeed my baby?

Each beta-blocker affects the body in different ways and will have a different likelihood of producing side effects in the breastfed baby. Beta-blockers pass into breast milk in varying amounts depending on the specific medication taken. Atenolol and nadolol are able to pass into milk in larger amounts, potentially increasing the risk of side effects in the breastfed baby. Due to the lack of safety studies and the potential risks to your baby, it is recommended to avoid beta-blockers while breastfeeding unless they are medically necessary.

There have been reports of side effects in breastfed babies with the use of beta-blockers, although the amount of safety information is limited. The only safety data available comes from reports by individuals or very small studies. There were no reports of side effects in 6 breastfed babies who were exposed to metoprolol. One mom taking propranolol noticed sleepiness in her breastfed baby, but it is unclear if this was from the propranolol or from other medications she was taking. Additionally, labetalol was associated with a low heart rate in one breastfed baby.

Acebutolol and atenolol have been associated with more serious side effects and are not recommended. Although some reports have not found side effects in breastfed babies exposed to atenolol, there was a report of a baby who developed a low heart rate, low body temperature, and a condition where parts of the body had trouble getting oxygen. Similarly, a breastfed baby who was exposed to acebutolol developed a low heart rate, low blood pressure, and rapid breathing.

Some beta-blockers are considered to be safer than others. The American Academy of Pediatrics has labeled metoprolol, labetalol, nadolol, timolol, and propranolol as “usually compatible with breastfeeding.” They have also warned that acebutolol and atenolol have been associated with side effects in the breastfed baby. If a beta-blocker is used while breastfeeding, metoprolol, propranolol, or labetalol are preferred. It is important to contact your doctor if you notice any side effects in your baby, including tiredness or difficult breathing.

Bottom line: **Beta-blockers should be avoided while breastfeeding unless they are medically necessary. They pass into breast milk and can cause health problems in your baby.**

If I am taking a beta-blocker, will it be more difficult to get pregnant?

No studies have been conducted on the effects of beta-blockers on fertility in women, but they may cause fertility problems in men. One study looked at 73 men who were taking a beta-blocker and found that these men had reduced semen volume and lower sperm motility. These effects may cause problems with fertility, but more evidence is necessary before any conclusions can be made.

Common side effects of beta-blockers include reduced sex drive and ability. If you are trying to become pregnant, you may want to contact your doctor if you are experiencing low sex drive. Additionally, if your male partner is taking a beta-blocker, he may choose to contact his doctor if he is experiencing erectile dysfunction or reduced sex drive.

If I am taking a beta-blocker, what should I know?

It is recommended to avoid beta-blockers during pregnancy unless they are medically necessary. They increase the risk that your baby will be born small for his or her age. Beta-blockers that are used at or near your delivery date can also cause your baby to be born with low blood sugar or a low heart rate. Additionally, there is evidence that beta-blockers may increase the risk of specific birth defects in your baby. If you are taking a beta-blocker and are planning to become pregnant, you should contact your doctor. Your doctor will determine if your medication is necessary or if it should be discontinued until after the birth of your baby.

Beta-blockers should be avoided while breastfeeding unless medically necessary. These medications pass into breast milk and can cause side effects in the breastfed baby, including low heart rate, difficulty breathing, low blood pressure, or sleepiness. If you take a beta-blocker while breastfeeding, you should contact your doctor if you notice any of these side effects in your baby.

If I am taking any medication, what should I know?

This report provides a summary of available information about the use of beta-blockers during pregnancy and breastfeeding. Content is from the product label unless otherwise indicated.

You may find Pregistry's expert reports about heart and blood conditions [here](#) or hypertension [here](#). Additional information can also be found in the resources below.

Resources for beta-blockers during pregnancy and breastfeeding:

For more information about **beta-blockers** during and after pregnancy, contact <http://www.womenshealth.gov/> (800-994-9662 [TDD: 888-220-5446]) or check the following links:

- American Heart Association: [How do beta blocker drugs affect exercise?](#)
- Mayo Clinic: [High blood pressure \(hypertension\): Uses for beta blockers](#)

Last Updated: 07-09-2018

General information

It is very common for women to worry about having a miscarriage or giving birth to a child with a birth defect while they are pregnant. Many decisions that women make about their health during pregnancy are made with these concerns in mind.

For many women these concerns are very real. As many as 1 in 5 pregnancies end in a miscarriage, and 1 in 33 babies are born with a birth defect. These rates are considered the background population risk, which means they do not take into consideration anything about the health of the mom, the medications she is taking, or the family history of the mom or the baby's dad. A number of different things can increase these risks, including taking certain medications during pregnancy.

It is known that most medications, including over-the-counter medications, taken during pregnancy do get passed on to the baby. Fortunately, most medicines are not harmful to the baby and can be safely taken during pregnancy. But there are some that are known to be harmful to a baby's normal development and growth, especially when they are taken during certain times of the pregnancy.

Because of this, it is important to talk with your doctor or midwife about any medications you are taking, ideally before you even try to get pregnant.

If a doctor other than the one caring for your pregnancy recommends that you start a new medicine while you are pregnant, it is important that you let them know you are pregnant.

If you do need to take a new medication while pregnant, it is important to discuss the possible risks the medicine may pose on your pregnancy with your doctor or midwife. They can help you understand the benefits and the risks of taking the medicine.

Ultimately, the decision to start, stop, or change medications during pregnancy is up to you to make, along with input from your doctor or midwife. If you do take medications during pregnancy, be sure to keep track of all the medications you are taking.