

# Propylthiouracil (PTU)

---

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

## *What is propylthiouracil?*

Propylthiouracil (PTU) is a medication that has been used to treat hyperthyroidism (when the thyroid gland makes too much thyroid hormone) and Graves' disease (a common cause of hyperthyroidism). It lowers the amount of thyroid hormone that the thyroid gland makes. One brand name for PTU is Propycil®.

Sometimes when people find out they are pregnant, they think about changing how they take their medication, or stopping their medication altogether. However, it is important to talk with your healthcare providers before making any changes to how you take this medication. Untreated hyperthyroidism can increase the chance of poor outcomes for a pregnancy, including thyroid storm (life-threatening overactive thyroid), maternal congestive heart failure, and other complications. Your healthcare providers can talk with you about the benefits of treating your condition and the risks of untreated illness during pregnancy.

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

It is not known if PTU can make it harder to get pregnant. Untreated thyroid disorders may make it harder to get pregnant.

## *Does taking PTU increase the chance for miscarriage?*

Miscarriage is common and can occur in any pregnancy for many different reasons. Two studies did not find a higher chance of miscarriage when using PTU during pregnancy. Hyperthyroidism has been associated with an increase in the chance for miscarriage.

## *Does taking PTU 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. Some studies suggest there could be a small increased chance of birth defects when taking PTU. There has not been a confirmed pattern of birth defects linked to PTU exposure alone. Other studies show no increased chance for birth defects when taking PTU. The US Food and Drug Administration (FDA) and The American College of Obstetricians and Gynecologists (ACOG) have noted that PTU may be the preferred treatment for hyperthyroidism during the first trimester of pregnancy.

In summary, although studies do not agree, there is not strong evidence to suggest that taking PTU clearly increases the chance of birth defects above the background chance.

## *Does taking PTU in pregnancy increase the chance of other pregnancy-related problems?*

One study did not find a higher chance of preterm delivery (birth before week 37) when PTU was used during pregnancy. It is not clear if PTU is associated with low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth). Hyperthyroidism has been found to increase the chance for pregnancy complications like preterm delivery and low birth weight.

Antithyroid medications, like PTU, or having Graves' disease, can lead to too low or too high thyroid levels in a baby. If you take PTU, or if you have Graves' disease, your baby's thyroid level should be checked after delivery.

The FDA has reported that PTU can cause serious liver damage in people who take this medication, including people who are pregnant. There is limited data on whether PTU use during pregnancy can cause liver damage in the baby. Talk to your healthcare team to decide what treatment is best for your situation.

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

Two studies looking at 44 children (from preschool to adult ages) exposed to PTU during pregnancy found no difference in intelligence scores compared to their unexposed brothers or sisters. Untreated hyperthyroidism in

pregnancy can increase the chance of learning problems in children.

*Breastfeeding while taking PTU:*

PTU gets into breastmilk in small amounts, and the amounts ingested by the infant are small. The American Thyroid Association has suggested that doses of PTU should be limited to 450 mg per day while breastfeeding due to the lack of research on the chance of liver damage in the breastfed infant. No side effects have been reported in babies who were exposed to PTU through breastmilk. Studies show that PTU does not significantly affect the breastfed infants' thyroid function. If you suspect the baby has any symptoms, contact the child's healthcare provider. Be sure to talk to your healthcare provider about all your breastfeeding questions.

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

Studies have not been done to see if PTU could affect male fertility or increase the chance of birth defects above the background risk. 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**

**Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://mothertobaby.org).**

---

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). *OTIS/MotherToBaby encourages inclusive and person-centered language. While our name still contains a reference to mothers, we are updating our resources with more inclusive terms. Use of the term mother or maternal refers to a person who is pregnant. Use of the term father or paternal refers to a person who contributes sperm.* Copyright by OTIS, November 1, 2022.