



MotherToBaby

Medications & More During Pregnancy & Breastfeeding
Ask The Experts

Fact Sheet

by the **Organization of Teratology Information Specialists (OTIS)**

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Iodine

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 iodine 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 iodine?

Iodine is a naturally occurring element. Our body needs iodine for our thyroid gland to work properly. Iodine can be found in some foods, nutritional supplements, medications, and topical disinfectants. Women's bodies need more iodine when they are pregnant or nursing. The Recommended Dietary Allowance (RDA) for iodine in women who are pregnant is between 220 micrograms (mcg) and 290 mcg, and 290 mcg for women who are nursing. The American Academy of Pediatrics (AAP) and the American Thyroid Association (ATA) have recommended that pregnant women use supplements containing 150 mcg/day of iodine.

How can I get the right amount of iodine in my diet or in my supplements?

An easy way to make sure that you are getting iodine in your diet is to use iodized salt when cooking and at the dinner table. In addition, you can take a daily prenatal vitamin that contains at least 150 micrograms of iodine. You should take a prenatal vitamin with iodine if you are already pregnant or are planning to become pregnant. Be sure to check the label on your prenatal vitamins since some do not contain iodine. Potassium iodide is the preferred source of iodine for prenatal vitamins, as the iodine levels are the most consistent.

If you have a known thyroid disease, you should check with your health care provider before taking any iodine supplements.

Iodine deficiency can be caused by not getting enough iodine in the diet. It can also be caused by a diet that is high in foods that contain iodine-binding properties, such as cassava or cabbage.

Should my iodine levels be checked?

It is difficult to accurately test for the amount of iodine in your body. Your health care provider may test your thyroid hormone levels through blood tests during pregnancy. If your thyroid hormone levels are normal and you are taking prenatal vitamins containing 150 micrograms of iodine daily, you do not need to worry about your iodine levels.

Can low levels of iodine in my system make it harder for me to become pregnant?

Your body uses iodine to make thyroid hormones. Women who have low levels of thyroid hormone (called hypothyroidism) can have a harder time getting pregnant. Therefore, it is important to take a vitamin containing iodine if you are trying to become pregnant.

Can low levels of iodine in my system increase my chance of miscarriage?

Possibly. If you do not have enough iodine in your body, your levels of thyroid hormone could be low. Women who have low thyroid hormone levels during pregnancy have an increased chance for miscarriage.

Can low levels of iodine in my system cause birth defects or affect my baby's development?

Possibly. Low iodine levels in the body could cause low thyroid hormone levels (hypothyroidism). Low thyroid hormone levels during pregnancy may lead to poor growth and babies who are small. It may also increase the chance for prematurity (babies who are born early).

Women who have *very* low iodine levels are said to have "severe iodine deficiency." Severe iodine deficiency during pregnancy can lead to babies being born with learning problems or hearing defects; however, it is very rare for

women in developed countries (such as the United States) to have severe iodine deficiency. It is possible that mild iodine deficiency during pregnancy could lead to problems with learning and behavior, but this has not been clearly proven in studies.

What can cause high levels of iodine?

If you have a pre-existing thyroid condition, or if you take a medication that has a large amount of iodine, these very high levels in your system could result in high levels of thyroid hormone (called hyperthyroidism).

It is difficult to reach very high levels of iodine from diet alone. Eating foods that contain high amounts of iodine (such as fish, seaweed, and dairy products) should not result in high iodine levels in your body, unless you eat a lot of them very often. Overall, a well-balanced diet should be the goal.

Can high levels of iodine or hyperthyroidism cause pregnancy complications?

Hyperthyroidism can lead to medical problems for both you and the baby. Very high levels of iodine in pregnancy could lead to low levels of thyroid hormone (hypothyroidism) in the baby. The baby could also develop a goiter (large thyroid gland).

Can high or low levels of iodine in my system be harmful while I breastfeed my baby?

Yes. A baby receives all of his iodine (for making his own thyroid hormone) from his diet. If you are breastfeeding, your baby gets all of his dietary iodine from your breast milk. Therefore, it is important that you get enough iodine while breastfeeding. The Recommended Dietary Allowance (RDA) for iodine during breastfeeding is 290 mcg daily. You will get some iodine from the foods you eat. However, you should continue to take your iodine-containing prenatal vitamin. The American Thyroid Association recommends that breastfeeding women should supplement their diet with a daily supplement that contains 150 mcg of iodine. Women should not take more than 500 to 1100 mcg for long periods. If a baby does not get the right amounts of iodine, their thyroid might not work well. Be sure to talk to your health care provider about all of your breastfeeding questions.

My baby's father has low iodine. Can this affect our chances to get pregnant or have a healthy child?

This is not known. There is one small study that found high iodine levels in men who were attending an infertility clinic. This study noted that these men also had some changes in their sperm. It is not clear if it was due to higher iodine levels. There are no studies looking at birth defects, but it is unlikely that a man's iodine levels would affect his chances to affect his baby's development. In general, exposures that fathers have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures and Pregnancy at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

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December, 2017