Iodine

This sheet is about exposure to iodine in pregnancy and while breastfeeding. This information should not take the place of medical care and advice from your healthcare providers.

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. People who are pregnant or nursing need more iodine. The Recommended Dietary Allowance (RDA) for iodine is between 220 micrograms (mcg) and 290 mcg for pregnancy, and 290 mcg when breastfeeding.

How can I get the right amount of iodine in my diet or in my 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 reduce your level of iodine, such as cassava or cabbage. 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. You can also take a daily prenatal vitamin that contains at least 150 mcg of iodine if you are 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, check with your healthcare provider before taking any iodine supplements.

Should my iodine levels be checked?

It is difficult to accurately test for the amount of iodine in the body. Your healthcare provider may test your thyroid hormone levels through blood tests during pregnancy. People with normal thyroid hormone levels who are taking prenatal vitamins containing 150 mcg of iodine daily would be expected to have good 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. People with low levels of thyroid hormone (called hypothyroidism) can have a harder time getting pregnant. For that reason, 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?

Miscarriage can occur in any pregnancy. If you do not have enough iodine in your body, your levels of thyroid hormone could be low. People with low thyroid hormone levels (hypothyroidism) 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?

Every pregnancy starts out with a 3-5% chance of having a birth defect. This is called the background risk. Low iodine levels in the body could cause low thyroid hormone levels (hypothyroidism). Low thyroid hormone levels during pregnancy may lead to poor growth of the baby. It may also increase the chance for preterm delivery (babies who are born before 37 weeks of pregnancy).

People with very low iodine levels are said to have “severe iodine deficiency.” Severe iodine deficiency during pregnancy can lead to babies being born with learning or hearing problems. However, it is very rare for people 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). Topical antiseptics (applied to the skin or the vagina) that contain iodine can also result in too much iodine.
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. A well-balanced diet is recommended, especially during pregnancy and while breastfeeding.

**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) which can interfere with breathing.

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

A baby receives all of their iodine (for making their own thyroid hormone) from their diet. When breastfeeding, the baby gets all of their dietary iodine from the breast milk. That means it is important to get enough iodine while breastfeeding a child.

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 an iodine-containing prenatal vitamin. The American Thyroid Association recommends that anyone who is breastfeeding a child should supplement their diet with a daily supplement that contains 150 mcg of iodine.

It is not recommended to take more than 500 mcg to 1100 mcg for long periods. If a baby gets too much iodine in breastmilk, their thyroid might not work well. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

**If a male has high iodine levels, could it affect his fertility (ability to get partner pregnant) or increase the chance of birth defects?**

This is not known. There is one small study that found high iodine levels in males who were attending an infertility clinic. This study noted that they also had some changes in their sperm. It is not clear if the changes were due to higher iodine levels or other factors. There are no studies looking at birth defects, but it is unlikely that a male’s iodine levels would affect the baby’s development. In general, exposures that fathers or sperm donors have are unlikely to increase the 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 to view references.