Iodine

This sheet is about exposure to iodine in pregnancy and while breastfeeding. This information is based on research studies. It should not take the place of medical care and advice from your healthcare provider.

What is iodine?

Iodine is a naturally occurring element. It can be found in some foods, supplements, medications, and topical disinfectants. The body uses iodine to make thyroid hormones. The thyroid gland cannot work properly without the right amounts of iodine. People who are pregnant or nursing need more iodine than most other people do. The Recommended Dietary Allowance (RDA) for iodine is between 220 micrograms (mcg) and 290 mcg in pregnancy, and is 290 mcg when breastfeeding.

How do I know if I am getting enough iodine?

An easy way to get iodine in your diet is to use iodized salt when cooking or seasoning foods. You can also take a daily prenatal vitamin that contains at least 150 mcg of iodine if you are pregnant or planning to get 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.

If you have a known thyroid disease or concerns about your thyroid, talk with your healthcare provider before taking iodine supplements.

Your healthcare provider might test your thyroid hormone levels during pregnancy. People with normal thyroid hormone levels who are taking supplements containing 150 mcg of iodine daily are expected to have good iodine levels.

What can cause low levels of iodine in the body?

Low levels of iodine in the body (iodine deficiency) can be caused by not getting enough iodine through foods or supplements. For people who already have low iodine, eating a diet high in foods that reduce iodine levels, such as cassava or cabbage, can lower their iodine even more.

Does having low iodine levels make it harder for me to get pregnant?

Not having enough iodine in the body can cause low levels of thyroid hormone (hypothyroidism). People with low levels of thyroid hormone can have a harder time getting pregnant.

Does having low iodine levels increase the chance of miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. Low levels of iodine in the body can cause low levels of thyroid hormone (hypothyroidism). People with low levels of thyroid hormone during pregnancy have an increased chance of miscarriage.

Does having low iodine levels increase the chance of birth defects?

Birth defects can happen in any pregnancy for different reasons. Out of all babies born each year, about 3 out of 100 (3%) will have a birth defect. We look at research studies to try to understand if an exposure or condition, like low iodine levels (iodine deficiency) might increase the chance of birth defects in a pregnancy.

Having low levels of iodine during pregnancy is not expected to increase the chance of birth defects above the background risk.

Would having low iodine levels increase the chance of other pregnancy related problems?

Low levels of iodine in the body can cause low levels of thyroid hormone (hypothyroidism). Low levels of thyroid hormone during pregnancy might lead to poor growth of the baby and increase the chance of preterm delivery (birth before week 37). Some studies suggest that severe iodine deficiency (very low levels of iodine) could increase the chance of stillbirth or of infant death around the time of delivery. Severe iodine deficiency during pregnancy can increase the chance of hearing problems in the child. However, it is very rare for people in developed countries (such

as the United States) to have severe iodine deficiency.

Does having low iodine levels affect future behavior or learning for the child?

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. Severe iodine deficiency during pregnancy can increase the chance of serious learning problems in the child.

What can cause high levels of iodine in the body?

High levels of iodine in the body can be caused by having a thyroid condition, taking a medication that has a high amount of iodine in it, or applying topical antiseptics that contain iodine to the skin or vagina. It is hard to reach very high levels of iodine from diet alone unless a person very often eats foods that contain a lot of iodine (such as fish, seaweed, and dairy products).

Does having high levels of iodine cause pregnancy-related problems?

Very high levels of iodine in the body can cause high levels of thyroid hormone (called hyperthyroidism). Hyperthyroidism can lead to medical problems for both the person who is pregnant and the fetus. The fetus could develop low levels of thyroid hormone (hypothyroidism), or their thyroid gland could grow too large (called a goiter). Some goiters can cause breathing or swallowing problems in newborns.

Breastfeeding and iodine:

Babies receive all their iodine (for making their own thyroid hormone) from their diet, including breast milk. The amount of iodine in breast milk depends on the amount of iodine taken in by the person who is breastfeeding. 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. Some of this amount will come from foods. People who follow vegan or vegetarian diets might get less iodine from foods they eat. The American Thyroid Association recommends that anyone who is breastfeeding a child should continue to take a daily supplement that contains 150 mcg of iodine to help them reach the recommended intake. Talk with your healthcare provider and your baby's pediatrician about how much iodine is right for you and your baby.

It is not recommended to get more than 500 mcg to 1100 mcg of iodine per day for long periods of time while breastfeeding. If a baby gets too much iodine in the breast milk, it can cause problems with their thyroid gland. Be sure to talk to your healthcare provider about all your breastfeeding questions.

If a man has high or low iodine levels, can it affect his fertility or increase the chance of birth defects?

One small study in men reported that those who had high iodine levels also had some changes in their sperm. It is not clear if the changes were due to the iodine levels or other factors. It is also not clear if the changes had long-term effects on their fertility (ability to get a woman pregnant). Studies have not been done to see if high or low iodine levels in men could 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.

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