



# MotherToBaby

Medications & More During Pregnancy & Breastfeeding  
Ask The Experts

# Fact Sheet

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

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## Lead

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 lead 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 lead and where is it found?***

Lead is a heavy metal. It can be found in many places, such as: soil, water, cosmetics, children's & costume jewelry, old paint, and gasoline. Lead can leach out of pipes into drinking water. Living near metal smelters or mining wasters can result in exposure to lead. Some traditional or folk medications can contain high amounts of lead. Some types of candy, particularly ones not made in the U.S.A. can also contain lead. Some hobbies and jobs can lead to higher levels of lead exposure. Examples are: ceramics & pottery making, jewelry making, auto repair, printing, construction, stained glass work, art restoration, finishing furniture, indoor target practice, or making bullets or fish lures. In 1978, the United States government banned the use of paint containing lead, as well as the use of lead in gasoline around 1980. Even with attempts to limit sources of lead, lead can still be found in the ground and in water.

### ***How does lead get into my body?***

Lead can be absorbed through the lungs and gut. When lead paint is sanded or disturbed it makes dust that contains lead. If you breathe in that dust, the lead can get into your lungs. It can also get into your body through the gut if you swallow lead paint chips, medications, soil, water, or other items that contains lead. Only small amounts of lead get into the body through the skin. It is important to carefully wash your body, especially hands, if you have been exposed to lead. This is to keep lead from getting into your mouth from your hands.

Because lead is found in many places in our environment, most people have small amounts of lead in their blood. When a person is exposed to lead over a long period of time or at a high level the body will store lead in the bones and teeth. Lead can stay in the bones and teeth for many years. During pregnancy and breastfeeding, lead can leave bone and move back into the bloodstream.

### ***Is there anything I can do to lower my exposure to lead?***

Yes. Avoid exposure to any known sources of lead before and during pregnancy. If you are working with lead in your job or have a hobby such as making jewelry or stained glass, have your health care provider check your blood lead level.

If you are remodeling a home built before 1978, you could disturb paint that contains lead and it is not safe to do this work yourself (as a non-professional). Avoid this activity, and be sure that the people working on your home are following safe procedures to protect you and your family from lead exposure.

Water from public sources is regularly tested for lead. You can get information about your drinking water from your local board of health. Houses that use well water should have the water tested regularly for lead and other possible contaminants.

A diet poor in calcium, iron, zinc, vitamin C, vitamin D and vitamin E can be associated with increased lead absorption. Therefore, it is important to eat a well-balanced diet and to take any recommended vitamin supplements.

### ***Is there a test to tell how much lead is in my blood?***

Yes, a blood lead test can be done to see how much lead is present in your blood. However, this is not a routine blood test for all pregnant women. Although most people will have some lead in their blood, levels greater than 5 micrograms per deciliter (mcg/dL) indicate that there is some exposure at home or in the workplace that needs to be

addressed (such as a search for the source of lead). If you think you have been exposed to lead, talk to your healthcare provider to see if you should be tested.

### ***Can lead in my body reach the baby?***

Yes, lead can cross into the baby. The amount of lead in the blood of the mother and baby are almost the same. It is not known how early lead can reach the developing baby in pregnancy, but reports have documented lead in a developing baby as early as the 13th week of pregnancy.

### ***What effects could lead have on my baby?***

High levels of lead during pregnancy can cause miscarriage and stillbirth. Other pregnancy problems, such as low birth weight/poor growth, premature delivery, and preeclampsia (pregnancy complications, such as high blood pressure, that usually happens after week 20) can also occur.

The most serious effects of high maternal lead levels on babies are learning and behavior problems. Even with small amounts of lead exposure, there may be mild learning disabilities. A higher chance of physical birth defects has not been reported.

### ***Is there concern about lead if I am breastfeeding?***

Lead levels in breast milk are usually lower than levels in mother's blood. A mother should not stop breastfeeding unless her blood lead level is very high (40 mcg/dL or higher).

Lead may also be found in infant formula, mostly because of contaminated water. To prevent or reduce the chance of lead in formula, use bottled/distilled water or, if using tap water, allow it to run for three minutes before using. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

### ***Is it a problem if the father of the baby is exposed to lead?***

Lead in the body can reach the sperm. High levels of lead may cause changes in the shape, size, number and movement of the sperm. This may make it harder for you to get pregnant. Fathers who work with lead can bring lead dust home on their clothes, shoes, or other items. If a pregnant woman handles these items, such as in doing laundry, she could have a direct exposure to lead.

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/pdf/>.

### ***How can I protect myself and my family from lead exposure after a hurricane or flood?***

After a hurricane or flood, lead can be found in the floodwaters. You can prevent a harmful amount of lead from getting to you or your baby by following these safety measures:

- Listen to and follow public announcements that tell you if tap water is safe to drink or to use for cooking or bathing. If the water is not safe to use, follow local instructions to use bottled water. Boiling does not remove lead.
- Flooded, private water wells will need to be tested after floodwaters recede. If you suspect that your well may be contaminated with lead, contact your local or state health department.

Walking in floodwaters is not likely to cause a large exposure to lead because only small amounts get through your skin.

### **References Available By Request**

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