



MotherToBaby

Medications & More During Pregnancy & Breastfeeding
Ask The Experts

Fact Sheet

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

For more information about us or to find a service in your area,
call **(866) 626-6847**. Visit us online at **www.MotherToBaby.org**.

Find us! Facebook.com/MotherToBaby or @MotherToBaby on Twitter

Carbon Monoxide

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 carbon monoxide 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 carbon monoxide?

Carbon monoxide is a gas. It has no color, smell, or taste. Small amounts of carbon monoxide are normally found in our bodies and in the air we breathe. Large amounts of carbon monoxide gas can be released from motor vehicles or poorly working heaters, furnaces, or other fuel burning appliances. You can also be exposed to carbon monoxide by breathing in smoke from cigarettes, a fire, or by coming into contact with methylene chloride found in paint removers or other solvents.

How can carbon monoxide get into my body?

Carbon monoxide can enter the body through the skin or by breathing it in through the lungs.

What is carbon monoxide poisoning?

Carbon monoxide poisoning is when too much carbon monoxide gets into the body. When this happens, the blood carries less oxygen to the organs. This can cause organs to become damaged. Signs and symptoms of carbon monoxide poisoning can be hard to diagnose. Some symptoms can include headache, nausea, vomiting, and dizziness. More severe symptoms are confusion, stumbling or falling, chest pain, sleepiness and loss of consciousness. Severe carbon monoxide poisoning can cause death.

Can carbon monoxide cross the placenta and get to the baby?

Yes. Carbon monoxide can cross the placenta and get into the baby's blood. When a pregnant woman has carbon monoxide poisoning, the carbon monoxide does not get into the baby's blood right away. Once it does get into the baby's blood, it takes much longer for the baby to clear the carbon monoxide than it would in an adult.

Can carbon monoxide poisoning cause birth defects or hurt the baby?

No pattern of birth defects have been linked to carbon monoxide poisoning. There are reports of carbon monoxide poisoning in pregnant women causing fetal death or fetal brain damage. This is thought to be from large amounts of carbon monoxide in the mother's blood. This causes the baby to receive less oxygen. A small study has shown that fetal death and brain damage only happen when carbon monoxide levels in the mother are high enough to make her lose consciousness (to pass out). However, there are also reports of normal outcomes in pregnancies in which the mother had carbon monoxide poisoning. Timing of exposure and amount of exposure can lead to different effects in the pregnancy.

What should I do if I'm pregnant and think I've had carbon monoxide poisoning?

If you have any symptoms that you believe are from carbon monoxide, you should be taken to the emergency room right away. A blood test can be done to measure the amount of carbon monoxide that is in your blood. This test needs to be done very soon after your exposure to be useful. If you do have carbon monoxide poisoning, you may be given treatment to help you and the baby get rid of the carbon monoxide. The source of the carbon monoxide should be found and the problem corrected to prevent further exposure.

My carbon monoxide detector went off. Is my baby at increased risk for problems from carbon monoxide?

If you or other members of your household were not experiencing symptoms of carbon monoxide poisoning when the detector went off and you removed yourself from the source of carbon monoxide until the problem was corrected, it is unlikely that risks to your pregnancy are increased. Emergency services should be contacted when a carbon monoxide detector goes off.

Most cases of carbon monoxide poisoning occur in the home. Installing a carbon monoxide detector is the best way to detect levels of carbon monoxide in your home that could put you at risk for carbon monoxide poisoning. Carbon monoxide detectors can provide an early warning before carbon monoxide builds up to a dangerous level.

I just discovered that my furnace has not been working right and it has been releasing carbon monoxide into my home. Will this increase the risk to my pregnancy?

Some studies have shown that exposure to small amounts of carbon monoxide over a long period of time may cause low birth weight or problems with brain development. However, one study showed that women who were exposed to low or moderate levels of carbon monoxide (enough to experience nausea and dizziness but not enough to cause them to lose consciousness) had babies with normal physical and mental development. If you discover that the heating source in your home is not working properly, you should have it fixed immediately. If you or the members of your household have not experienced any symptoms from the carbon monoxide, it is unlikely that it would increase the risk to your pregnancy. Talk with your healthcare provider to see if they recommend any screening for you or the pregnancy.

I smoke cigarettes. Will the carbon monoxide from smoking cause problems for the baby?

Smoking cigarettes puts a pregnancy at increased risk for many problems. One of the risks is having a baby with low birth weight. A person who smokes has a higher than normal level of carbon monoxide in her blood. This means there is less oxygen in the blood. The baby needs a good oxygen supply to grow. Most growth happens in the 2nd and 3rd trimesters, so the risk of low birth weight is reduced if a woman stops smoking early in pregnancy. Other problems seen in babies of mothers who smoke may be due to carbon monoxide or other substances found in cigarette smoke. It is best that a woman not smoke while she is pregnant. For more information, please see the MotherToBaby fact sheet on Cigarette Smoking and Pregnancy at <https://mothertobaby.org/fact-sheets/cigarette-smoking-pregnancy/pdf/>.

Do I have to stop breastfeeding if I have been exposed to carbon monoxide?

There are no studies looking at carbon monoxide exposure during breastfeeding. If you get carbon monoxide poisoning, you may want to give your body time to recover from any symptoms before breastfeeding. The health care provider treating you will advise you when you are well enough to resume breastfeeding.

Infants are at high risk for developing problems from carbon monoxide exposure. If your baby has also been directly exposed, you should talk to a health care provider immediately. Be sure to talk to your health care provider about all your choices for breastfeeding.

What if the father has been exposed to carbon monoxide?

Animal studies show carbon monoxide exposure can cause reduced sperm formation. There are no studies data in humans. 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/>.

References Available by Request

January, 2018