

Carbon Monoxide

This sheet is about exposure to carbon monoxide in pregnancy and while breastfeeding. This information is based on available published literature. It should not take the place of medical care and advice from your healthcare 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 can be released from poorly working heaters, furnaces, grills, kerosene stoves, or other fuel burning appliances and automobile exhaust. You can also be exposed to carbon monoxide by breathing in smoke from cigarettes, marijuana, 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 by breathing it in.

What is carbon monoxide poisoning?

Carbon monoxide poisoning occurs when too much carbon monoxide gets into the body. When there is too much carbon monoxide in the body, the blood carries less oxygen to the organs. This can cause damage to the organs. Symptoms of carbon monoxide poisoning can include headache, nausea, vomiting, muscle weakness, upset stomach, and dizziness. More severe symptoms are confusion, stumbling or falling, chest pain, sleepiness, and passing out (loss of consciousness). Severe carbon monoxide poisoning can cause death.

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

Carbon monoxide can cross the placenta and get into the baby's blood. When a person who is pregnant has carbon monoxide poisoning, the carbon monoxide may not get into the baby's blood right away. However, once carbon monoxide does get into the baby's blood, it takes much longer for the fetus to clear the carbon monoxide than it would in an adult.

Does exposure to carbon monoxide increase the chance of miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. There are cases of death of the baby following carbon monoxide poisoning in pregnancy. Some studies on cigarette smoking (which increases carbon monoxide levels) have also found an increased chance for pregnancy loss.

Does carbon monoxide increase the chance of birth defects?

Every pregnancy starts out with a 3-5% chance of having a birth defect. This is called the background risk. It is not known if carbon monoxide increases the chance for birth defects above the background risk. There are case reports of birth defects when a pregnant person is chronically exposed to carbon monoxide. However, most exposed babies do not have birth defects and no pattern of birth defects has been linked to carbon monoxide poisoning.

Does carbon monoxide increase the chance of other pregnancy-related problems?

There are reports of pregnancy-related problems after carbon monoxide poisoning in people who were pregnant. These have included preterm delivery (birth before week 37), problems with the fetal brain, or fetal death. This is thought to be from large amounts of carbon monoxide in the developing baby's blood that causes the fetus to receive less oxygen. A small study suggests that fetal death and brain damage only happen when carbon monoxide levels are high enough to make the person who is pregnant pass out. There are also reports of healthy outcomes in pregnancies after carbon monoxide poisoning. Effects can depend on when (timing) in pregnancy someone is exposed and how much (dose) carbon monoxide they are exposed to.

What should I do if I am pregnant and think I have had carbon monoxide poisoning?

Carbon monoxide poisoning is a medical emergency. If you have any symptoms that you think are from carbon monoxide, you should be taken to the emergency room right away. 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 should be fixed as soon as possible to stop further exposure.

My furnace has not been working right and has been releasing carbon monoxide into my home. Will this increase risks to my pregnancy?

Most cases of carbon monoxide poisoning happen in the home. Installing a carbon monoxide detector is the best way to detect levels of carbon monoxide in your home. Carbon monoxide detectors can give an early warning before carbon monoxide builds up to dangerous levels.

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. These studies also included the quality of the air. However, one study showed that people who were exposed to low or moderate levels of carbon monoxide (enough to experience nausea and dizziness but not enough to cause them to pass out) during pregnancy had babies with typical physical and mental development. If the heating source in your home is not working properly, have it fixed right away. If you or the members of your household have not had symptoms from the carbon monoxide, it is unlikely that it would greatly increase risks 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. When you smoke or are around others that smoke, you can have higher levels of carbon monoxide and less oxygen in your blood. The baby needs a good oxygen supply to grow. You should not smoke or be around others that smoke during pregnancy. For more information, please see the MotherToBaby fact sheet on Cigarette Smoking at <https://mothertobaby.org/fact-sheets/cigarette-smoking-pregnancy/>.

Breastfeeding and exposure 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 healthcare provider treating you will talk with you about when you are well enough to start breastfeeding again. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

If a male is exposed to carbon monoxide, could it affect fertility (ability to get partner pregnant) or increase the chance of birth defects?

Studies have not been done in humans to see if carbon monoxide could affect fertility or increase the chance of birth defects above the background risk. Animal studies show carbon monoxide exposure can reduce how many sperm are formed. 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.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://mothertobaby.org).

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). *OTIS/MotherToBaby encourages inclusive and person-centered language. While our name still contains a reference to mothers, we are updating our resources with more inclusive terms. Use of the term mother or maternal refers to a person who is pregnant. Use of the term father or paternal refers to a person who contributes sperm.* Copyright by OTIS, May 1, 2023.