Carbon Monoxide

This sheet is about exposure to carbon monoxide in pregnancy and while breastfeeding. This information is based on published research studies. 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 typically found in our bodies and in the air we breathe. Larger amounts of carbon monoxide can be released from poorly working fuel burning appliances like furnaces, water heaters, and gas stoves. Exhaust from cars and other vehicles release carbon monoxide.

How can carbon monoxide get into my body?

Carbon monoxide can enter the body by breathing it in (inhalation). Breathing in any type of smoke can lead to more carbon monoxide in your body.

What is carbon monoxide poisoning?

Carbon monoxide poisoning happens 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. 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.

How can I lower the chance of carbon monoxide exposure or poisoning?

- Make sure home appliances that burn fuels are properly installed, vented, and maintained
- Have working carbon monoxide and smoke detectors in your home that are battery operated or backed up by batteries in case there is a power outage
- Use generators outside only, away from the home/windows/doors
- Avoid heating your home with an oven
- Avoid leaving a car running in an attached garage
- Avoid cigarette smoke (For more information, please see the MotherToBaby fact sheet on cigarette smoking at https://mothertobaby.org/fact-sheets/cigarette-smoking-pregnancy/.)

What should I do if I am pregnant and think I have 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. In pregnancy, the carbon monoxide might not get into the fetus' blood right away. However, once it does, it takes much longer for the fetus to clear the carbon monoxide than it would an adult. If you do have carbon monoxide poisoning, you might be given treatment to help you and the fetus get rid of the carbon monoxide. The source of carbon monoxide should be found, and the problem should be fixed as soon as possible to stop further exposure.

Can exposure to carbon monoxide make it harder for me to get pregnant?
Studies have not been done to see if carbon monoxide exposure can make it harder to get pregnant.

Does exposure to carbon monoxide increase the chance of miscarriage?
Miscarriage is common and can occur in any pregnancy for many different reasons. Carbon monoxide might be linked to a higher chance of miscarriage. Effects can depend on when (timing) in pregnancy someone is exposed and how much (dose) carbon monoxide they are exposed to.

Does exposure to carbon monoxide 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, like carbon monoxide, might increase the chance of birth defects in a pregnancy.

There are reports of babies being born with birth defects after exposure to carbon monoxide during pregnancy. However, most pregnancies with carbon monoxide exposure do not have birth defects, and no pattern of birth defects has been linked to carbon monoxide poisoning. The main concerns with carbon monoxide poisoning during pregnancy are the chance of pregnancy loss and possible harm to fetal brain development.

Does exposure to carbon monoxide increase the chance of other pregnancy-related problems?
Some studies suggest that exposure to carbon monoxide in pregnancy can increase the chance of other pregnancy-related problems, such as preterm delivery (birth before week 37), low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth), and stillbirth. There are also reports of healthy outcomes after pregnancies with carbon monoxide poisoning.

Does exposure to carbon monoxide affect future learning or behavior of the child?
Carbon monoxide exposure during pregnancy might affect fetal brain development, which could increase the chance of learning or behavior problems later in life. There are 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.

Breastfeeding and exposure to carbon monoxide:
There are no human studies looking at carbon monoxide exposure during breastfeeding. Absorption of carbon monoxide from swallowing breastmilk is thought to be unlikely. If you get carbon monoxide poisoning, talk to your healthcare provider about breastfeeding. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

If a man is exposed to carbon monoxide, could it affect fertility or increase the chance of birth defects?
Studies have not been done in humans to see if carbon monoxide could affect men's fertility (ability to get a partner pregnant) or increase the chance of birth defects. Animal studies show carbon monoxide exposure can reduce how many sperm are formed, which could affect fertility. In general, exposures that men 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 to view references.

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