

# Trichloroethylene (TCE) in the Workplace Indoor Air

*It is important that you know about the potential risk of TCE if you are a woman between the ages of 15 and 50 years who could be pregnant, or plans to get pregnant soon.*

*This factsheet is only about TCE vapor coming into the building from pollution underground. The Occupational Health and Safety Administration (OSHA) covers the use of TCE at work and may have different standards.*

## Why am I receiving this notice?

Trichloroethylene (also known as trichloroethene or TCE) has been found in the air in your workplace above 8.8 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) of air. This level is of concern for pregnant women in their first trimester because TCE above this level has the potential to damage the heart of the baby during the time the heart is forming.

## What is TCE? How might I be exposed?

TCE is a manmade, colorless liquid used mainly as a solvent to remove grease from metal parts. It is also used in glues and paint removers. When TCE gets in the soil or groundwater because of spills or leaks, it can evaporate and get into a building through seams and cracks in the building's foundation. This process is called "vapor intrusion."

## What is the recommended level of TCE in the workplace?

The United States Environmental Protection Agency recommends 8.8  $\mu\text{g}/\text{m}^3$  of air or less in the workplace.

## What are the possible health effects from breathing indoor air with TCE?

The possible health effects from breathing TCE depend on its level in the air, how long you breathe in the air with TCE, and if you are in contact with TCE during the first trimester of pregnancy. Contact with TCE during the first trimester may increase the risk of heart damage to the baby during the time the heart is forming. Contact with TCE that ends three to four weeks or more before getting pregnant is not expected to increase the risk since most TCE leaves the body quickly. Contact with TCE above 8.8  $\mu\text{g}/\text{m}^3$  of air does not mean it will cause heart damage to the baby, only that there may be a higher risk.

Breathing TCE over a long period of time also may affect your immune system, which fights off infections, and therefore may increase your chances of getting infections. Contact with TCE for a long time may increase the risk of kidney cancer, liver cancer and non-Hodgkin's lymphoma.

## What should I do if I think I might be pregnant?

If you may have been exposed to TCE levels above the **action level of 8.8  $\mu\text{g}/\text{m}^3$  of air in the workplace** and might be in your first trimester of pregnancy, the N.C. Department of Environmental Quality (DEQ) recommends the following:

- avoid areas of the workplace with TCE levels above the action level,

- consider working from an alternative location,
- talk to your doctor or a doctor familiar with chemical exposures if you are pregnant, and
- wait three to four weeks after contact with TCE above the action level before getting pregnant to allow TCE to leave your body.

### **What measures might be taken to reduce TCE levels in my workplace?**

- The DEQ requires telling workers immediately of levels at the action level.
- The DEQ requires immediate actions to lower TCE levels below 8.8 µg/m<sup>3</sup> of air to lower the risk of heart damage to the baby during the first trimester.
- Parties responsible for the pollution are required to lower TCE indoor air levels below action levels.
- Pregnant women in their first trimester or women trying to get pregnant might need to find another place to work until TCE levels are lowered below action levels.
- Quick steps to lower TCE levels include sealing foundation cracks and increasing air flow.
- Portable carbon filtration systems and changes to the heating and air system are quick, temporary ways to lower TCE levels while permanent solutions are designed and put in place.
- Installing a sub-slab depressurization (SSD) system can lower TCE levels. An SSD system is a series of pipes under the foundation or basement with a fan that pushes vapors to the outdoors.

### **What should I do if I think my health has been affected?**

You should talk to your doctor or a doctor that knows about chemical exposures. Give your doctor a copy of your TCE results and the N.C. Division of Public Health's factsheet, Trichloroethylene (TCE) Information for Health Professionals, available at: <http://epi.publichealth.nc.gov/oe/az.html#tce>. Your doctor may also contact the N.C. Division of Public Health's Occupational and Environmental Epidemiology Branch to speak with doctors familiar with chemical exposures (919-707-5900).

You and your doctor can find additional health information at the Agency for Toxic Substances and Disease Registry's website at: <https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=30>.

### **Where can I get more information about TCE contamination and cleanup?**

More information on the DEQ's guidance for sites with TCE contamination can be found at <https://deq.nc.gov/VaporIntrusionGuidance>. For more information about the contamination site that prompted this notice, please contact: \_\_\_\_\_.

Adapted from Massachusetts Department of Environmental Protection's 'Important Information on Trichloroethylene (TCE) in Workplace Indoor Air.'

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