

Eastern Heights Community Grenada, Mississippi

The Agency for Toxic Substances and Disease Registry (ATSDR), is a federal public health agency headquartered in Atlanta, GA. ATSDR has written this flier to answer your health questions about Trichloroethylene (TCE).



If you are exposed to a chemical, will you get sick?

This depends on many factors about the exposure:

- The type of chemical
- How much of a chemical you were exposed to
- How long the exposure was
- How many times you were exposed
- What is your general health
- Are you a sensitive to a chemical

What is Trichloroethylene (TCE)?

Trichloroethylene (TCE) is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet, burning taste. It is used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers. TCE was once used as an anesthetic for surgery.

How can breathing trichloroethylene (TCE) affect my health?

The amount of TCE you breathe, how long you breathe TCE, whether other chemicals are present, and your personal traits and habits will affect whether TCE can be harmful to your health. A person's sensitivity to the chemical may also affect whether their health will be harmed.

Non-cancer health effects caused by TCE are:

- Headaches, dizziness and sleepiness caused by nervous system damage
- Liver, kidney or immune system damage.
- Effects to the fetus associated with heart development

Can breathing trichloroethylene (TCE) cause cancer?

Breathing low levels of TCE over time may pose some additional risk of developing cancer, especially kidney cancer. The increased risk of developing cancer depends on the amount of TCE you breathe, how long you breathe TCE, personal traits and habits, and whether other chemicals are present. A person's sensitivity to the chemical may also affect the risk of developing cancer.

Has the federal government made recommendations to protect human health?

There are several government guidelines concerning exposure to TCE. Those most applicable to residential inhalation exposures include: (continued on back)

- The ATSDR has derived a Minimal Risk Level (MRL) for chronic (greater than 1 year) inhalation exposure to TCE. The MRL value for TCE is 0.004 parts per million (ppm) or 2 micrograms per cubic meter ($\mu\text{g}/\text{M}^3$). This means a person can be exposed to 0.004 ppm TCE for a lifetime without an appreciable risk of adverse non-cancer health effects.
- The EPA has derived a similar value known as an RfC (Reference Concentration). The value of the RfC is the same as ATSDR's MRL or 2 $\mu\text{g}/\text{M}^3$. EPA interprets this as a level one can be exposed to for a lifetime without adverse health effects.
- The EPA has derived a cancer slope factor for TCE and calculated an estimated unit risk of 4×10^{-6} per $\mu\text{g}/\text{m}^3$. This can be used to calculate the number of people estimated to get cancer from a given lifetime exposure. In the case of TCE, if 100,000 people were exposed to 2 $\mu\text{g}/\text{M}^3$ of TCE for their lifetimes (70 years) it would be estimated that 1 additional person would get cancer out of the 100,000 exposed.

What do we tell our doctors about being exposed to TCE if we are sick?



ATSDR and the Mississippi State Department of Health (MSDH) have given TCE exposure training materials and information to doctors in Mississippi. The materials explain how you can be exposed to TCE, and how it may affect your health. Doctors can call Leann Bing, ATSDR Region 4 office, at 404-562-1784 if they would like to talk to her, or an ATSDR doctor, about TCE exposure and possible health effects.

What will ATSDR do in the future?

- We will continue to evaluate data when asked.
- We will answer health related questions for community members and health care providers.
- We will continue to work with EPA and the MSDH to address public health issues.



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