

# Tetrachloroethylene (PCE, perc) in Air

PCE is used for dry cleaning, degreasing metal parts, and in the production of other chemicals. It can be found in consumer products, including some adhesives, automotive parts cleaners, and stain removers.

## PCE:

- is a nonflammable, colorless liquid or gas
- evaporates easily into air
- smells sweet at high concentrations; at lower levels, there is no odor

## People may breathe PCE from:

- working in industries that produce or use PCE
- living or working near dry cleaning facilities or from recently dry-cleaned clothes
- using PCE-containing products
- vapors from contaminated soil or groundwater that moves into indoor air

## Health concerns from breathing PCE

**Most exposures to PCE in air are to low amounts and not likely to result in a health effects.** The possibility of health effects depends on the amount of PCE in air and how long people breathe it.

Exposures to high amounts of PCE can cause neurological effects such as vision changes or delayed reaction time. PCE may cause cancer based on studies in the workplace. The studies suggest there may be an increase in bladder cancer, non-Hodgkin’s lymphoma, and multiple myeloma. PCE exposure to rodents also increases liver tumors and leukemias.

It is not known whether children are more susceptible than adults to the effects of PCE. There is not conclusive evidence from human studies that PCE exposure is linked to effects to a developing fetus.

## About PCE Air Values

The Minnesota Pollution Control Agency (MPCA) develops Intrusion Screening Values (ISVs) to understand when actions may be needed to protect health. The Residential ISV is an amount that is safe for people to breathe. This level is protective for sensitive people, including children, pregnant women, and people who already have health issues.

ISVs are much lower than the regulatory limits set for workplaces where the chemical is used. Breathing an amount of PCE that is above the ISVs does not mean health effects will occur; however, the risk for health effects increases as the level of exposure increases. When ISVs are exceeded, MDH recommends steps be taken to reduce exposures.

Value	Description
3.4 µg/m <sup>3</sup>	Residential ISV - a safe level that protects all people from health effects.
33 µg/m <sup>3</sup>	Workplace ISV - a safe level for people who may have exposures in the workplace over many years.
40,000 µg/m <sup>3</sup>	Level at which workers experienced a change in color vision after exposure for many years.
170,000 µg/m <sup>3</sup>	Regulatory occupational exposure limit for dry cleaner workers.

(measured in micrograms per cubic meter, or µg/m<sup>3</sup>)

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