



Tetrachloroethylene (PERC)

Exposure to Tetrachloroethylene (PERC) has the potential to harm your health. The health effects of contact with any hazardous substance depend on how much, for how long and the way in which you are exposed. The effects also depend on personal factors such as family history, overall health, and lifestyle.

What is PERC?

Tetrachloroethylene (PERC) is a nonflammable liquid at room temperature. It evaporates easily and has a sharp, sweet odor. Other names include perchloroethylene, PCE and tetrachloroethene.

Where is PERC found?

It is used for dry cleaning of fabrics and for metal-degreasing. It is used to make other chemicals and can be found in some consumer products such as adhesives, carpet cleaners, auto lubricants, and fabric spot removers.

How could I be exposed to PERC?

- Breathing it from working at a dry cleaner or from dry cleaned clothes.
- Drinking from a contaminated well or water source.
- Through skin contact by showering with contaminated water or touching contaminated soil or water.
- If your water source is contaminated with PERC, activities such as showering, doing dishes or running a dish washer or a washing machine can cause PERC in the water to evaporate and contaminate your indoor air.
- It can get into indoor air through the use of products that contain PERC in the home or by vapor intrusion. Vapor intrusion occurs when PERC in the groundwater or soil gets into a building where you can breathe it.

What guidelines have been set to protect human health?

The Environmental Protection Agency has established the maximum contaminant level for PERC in public drinking water systems at 0.005 milligrams per liter (0.005 mg/L) or 5 parts of PERC per billion parts water (5 ppb). Federal agencies have established standards and recommendations for the work place also.

How can PERC affect my health?

Breathing high concentrations of PERC, especially in closed poorly ventilated areas, can cause eye and upper respiratory tract irritation, dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, possibly unconsciousness and death. High concentrations for a long time can affect the kidneys and cause mood and behavior changes.

Drinking water with PERC can damage the liver, kidney, and nervous system. Some studies have shown effects to the reproductive system. Repeated or extended skin contact may cause skin irritation. The U.S. Environmental Protection Agency has determined that PERC is likely to cause cancer in humans.

How can I limit my exposure to PERC?

- Remove household products with PERC.
- If your private well water is contaminated use an alternative source of water or a whole-house carbon filter and keep up with the filter maintenance.
- If you are concerned about PERC vapor intrusion, contact an environmental professional to evaluate the problem and provide recommendations.

When should I see a doctor?

See a physician if you or your children have symptoms that you think are caused by contact with PERC. You should tell the physician about the symptoms and about when, how and for how long you think you and/or your children were in contact with PERC. Bring your water test results with you.

Well testing

Contact your local health department to have your well water tested.

Additional information

N.C. Department of Health and Human Services, Division of Public Health, Health Assessment, Consultation and Education program at (919) 707-5900 for additional information.

References

U.S. Environmental Protection Agency. Tetrachloroethylene. Technology Transfer Network, Air Toxics Web Site. Revised December, 2012 , Available at www.epa.gov/ttnatw01/hlthef/tet-ethy.html

Agency for Toxic Substances and Disease Registry (ATSDR). ToxFAQs for Tetrachloroethylene (PERC). Accessed on March 4, 2013 from www.atsdr.cdc.gov/toxfaqs/tf.asp?id=264&tid=48



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