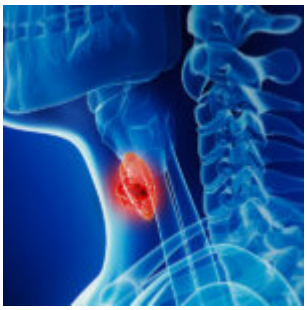
Study Ties Exposure to Certain Solvents to an Increased Risk of Head & Neck Cancer



Various hazardous substances can endanger workers. For example, some substances can burn or irritate the skin on contact, while others can cause respiratory problems when inhaled. The impacts of other chemicals may not be felt immediately'but may be far more serious.

A study from France published in the journal BMJ Open found that occupational exposure to the solvents perchloroethylene (PCE) and trichloroethylene (TCE) may increase the risk of head and neck cancer, particularly laryngeal cancer, in female workers.

A common chlorinated solvent, TCE is often used as a metal degreaser. PCE, once widely used in dry cleaning, metal degreasing and machinery cleaning, has been used on a more limited basis since the 1990s.

In 2014, the US Environmental Protection Agency found that TCE may cause cancer, developmental and neurotoxicological effects, and toxicity to the liver, among other adverse health effects. And the International Agency for Research on Cancer concluded PCE was 'probably carcinogenic to humans.'

Using data from a French population-based study, the

researchers analyzed 1,071 women, including 296 with head and neck cancer. They used three exposure indices for various solvents:

1. Probability of exposure expressed as the percentage of exposed workers
2. Intensity of exposure
3. Frequency of exposure.

In addition to occupational history, the researchers also took factors such as smoking, alcohol consumption and residential history into account.

The researchers found elevated odds ratios among women who were exposed to PCE and TCE at work, which increased the more the women were exposed. For TCE specifically, a clear and significant duration’response relationship was found and there was also some evidence of an increase in cancer risk with intensity and cumulative exposure.

In contrast, the researchers didn’t find a statistically significant cancer risk association for women exposed to other chlorinated, oxygenated or petroleum solvents.

One way to protect workers from exposure to hazardous substances such as PCE and TCE, consider switching to safer chemical alternatives.

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