



Chemical Used in Dry Cleaning Linked to Liver Disease

A chemical commonly used in dry cleaning and consumer products may triple the liver disease risk.

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A chemical commonly used in dry cleaning and consumer products may be harmful to the liver, according to a [new study from Keck Medicine of USC](#) researchers.

Over time, [liver diseases](#), such as hepatitis or metabolic dysfunction-associated steatotic liver disease, can lead to [fibrosis](#)—the excessive buildup of scar tissue in the liver due to repeated damage or inflammation.

A study [published in Liver International](#) reveals that exposure to a [chemical](#) used in dry cleaning and products such as adhesives for arts and crafts, spot cleaners and stainless steel polish known as tetrachloroethylene (PCE) can significantly increase the risk of liver fibrosis.

For the study, researchers tracked PCE exposure through the concentration of the chemical in individuals' blood from 2017 through 2020. About 7% of people had detectable PCE in their blood. Those exposed to PCE regularly were three times more likely to develop significant liver fibrosis.

“This study, the first to examine the association between PCE levels in humans and significant liver fibrosis, underscores the underreported role environmental factors may play in liver health,” said lead author of the study, Brian Lee, MD, MAS, a hepatologist and liver transplant specialist with Keck Medicine, in a release about the study. “The findings suggest that exposure to PCE may be the reason why one person develops liver disease, while someone with the exact same health and demographic profile does not.”

The study noted that those most at risk of PCE exposure were from higher-income households, which are more likely to use dry cleaning services. Researchers also highlighted that people who work in dry cleaning facilities may also face increased risk of liver fibrosis due to long-term PCE

exposure.

PCE is a colorless human-made liquid used in common household goods, dry cleaning and industrial settings to remove grease. The chemical can be slowly released into the air over time from clothes that have been dry cleaned. PCE can also be present in drinking water due to spills and improper disposal of PCE at contaminated sites.

The International Agency for Research on Cancer has linked PCE to [bladder cancer](#), [multiple myeloma](#) and non-Hodgkin lymphoma and classified the chemical as a probable [carcinogen](#). What's more, the Environmental Protection Agency [launched a 10-year phase-out](#) for the use of PCE in dry cleaning and banned or placed workplace controls on other uses of PCE.

"No doubt there are other toxins in our environment besides PCE that are dangerous to the liver," Lee said.

Lee hopes the study can raise awareness among physicians about the connection between PCE exposure and significant liver fibrosis.

"If more people with PCE exposure are screened for liver fibrosis, the disease can be caught earlier and patients may have a better chance of recovering their liver function," Lee said.