E-Cigarettes Expose Users to Toxic Metals

Lead, chromium and nickel are among some of the poisonous metals leaked by e-cigs.

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Thus far, research about whether e-cigarettes are a safer alternative to traditional smokes, has been inconclusive. But now, findings published in the journal Environmental Health Perspectives indicate that e-cigs leak harmful and highly toxic metals, such as lead and nickel, reports Medical News Today.

For the study, scientists from the Johns Hopkins Bloomberg School of Public Health in Baltimore tested the e-cigarettes of 56 daily users. Scientists verified the presence of 15 metals in the refilling dispensers, in the vaping liquids loaded into the e-cigs and in the vapors produced when the liquids were heated.

Researchers found small concentrations of lead, chromium, nickel and manganese as well as the toxin arsenic in the e-liquids from refilling dispensers. However, higher concentrations of the toxic metals were discovered in liquids that were already heated by the inbuilt coils, from which researchers believe the substances originated.

In addition, the vapors released from the e-cigarettes also contained the same poisons, which are linked to major health problems, such as cancer and brain damage.

Results from a separate study that used data from the same group of participants showed noted increased levels of nickel and chromium in the urine and saliva of e-cigarette users. What's more, the vapors produced by e-cigs whose heating coils were frequently changed contained higher concentrations of toxic metals, suggesting that the coils were the source of the toxic leak.

"It's important for the FDA [Food and Drug Administration], the e-cigarette companies, and vapers themselves to know that these heating coils, as currently made, seem to be leaking toxic metals—which then get into the aerosols that vapers inhale," said Ana María Rule, PhD, an assistant scientist at Johns Hopkins Bloomberg School of Public Health and a senior study author.

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