

More Cancer-Causing Chemicals in U.S. Cigarettes

They contain about 3 times as much of a potent carcinogen as foreign brands, CDC finds.

By Steven Reinberg
HealthDay Reporter



TUESDAY, June 1 (HealthDay News) -- American cigarettes could pack a more toxic punch than foreign brands, say researchers at the U.S. Centers for Disease Control and Prevention.

In one of the first studies of its kind, researchers compared the levels of tobacco-specific nitrosamines -- a main carcinogenic component of tobacco -- in cigarette butts and in smokers from several countries.

The result: "All cigarettes are not the same, and cigarettes across countries do not deliver the same amount of carcinogens to people," said Dr. Jim Pirkle, deputy director for science at the CDC's National Center for Environmental Health's Division of Laboratory Sciences.

In fact, the amount of tobacco-specific nitrosamines (TSNAs) in U.S. brands is about triple that of brands from Australia, Canada or the United Kingdom, he said.

Pirkle was not involved in the study, which was led by researcher David Ashley from the same office at the CDC. The study authors stressed that even though TNSA levels may vary brand to brand, all cigarettes are unsafe.

Still, the new findings should help the FDA as it fulfills its new responsibilities overseeing tobacco products, Pirkle said. "This is a major effort for them and they need to understand the different levels of carcinogens that people are exposed to, as they vary by different cigarette brands," he said.

The report is published in the June issue of *Cancer Epidemiology Biomarkers & Prevention*.

Cigarette tobacco varies both by manufacturer and where the product is made. For example, American brands use the so-called "American blend" tobacco, which contains higher levels of TSNAs than cigarettes from Australia, Canada or the U.K., according to the researchers.

In those other countries, cigarettes are made from "bright" tobacco, which is lighter in color and flue-cured. This process makes cigarettes with lower levels of TSNA, the team explained.

U.S. brands tested in the study included Marlboro, Newport, Newport Light, Camel Light and Marlboro Menthol. The researchers tested TSNA levels in 126 smokers from Australia, Britain, Canada and the United States. These smokers smoked a variety of popular brands, Ashley's team noted.

By measuring chemicals in cigarette butts after a day of smoking, the researchers were able to determine how much TSNA smokers were exposed to. In addition, they also used urine samples to find out how much of the TSNA was broken down in the body.

They found a correlation between the amount of TSNA that entered a smoker's body and how much is broken down in the urine. "We will be able to use this biomarker in the urine to help us understand how much of the carcinogen exposure you are getting in your mouth and lungs," Pirkle said.

Danny McGoldrick, vice president for research at the Campaign for Tobacco-Free Kids said the study "shows why the authority to issue product standards, which the U.S. Food and Drug Administration [FDA] now has, is critically important."

This type of research will help determine changes in the design of tobacco products, he said. These changes could include "reducing TSNA in cigarettes, which will benefit public health," McGoldrick said.

If the FDA determines that reducing the levels of TSNA would be a public health benefit, then it could mandate a change in all tobacco products on the market, McGoldrick added.

"This is a dramatic change from the days when the only people who had anything to say about tobacco product design were the tobacco companies, and they of course had no interest and have no interest in public health," he said.

Another expert said even that is not enough to protect the public's health.

"There are two things in the paper that are disturbing to me," said Dr. Norman Edelman, chief medical officer for the American Lung Association. "First, it seems as if U.S. smokers get more exposure to this deadly carcinogen than smokers in other countries. Second, there is the oblique suggestion that it might be worthwhile to try to reduce the levels of this carcinogen in tobacco smoke. This smacks of suggesting we make cigarettes 'safer.' However, there are dozens of carcinogens in cigarette smoke. There is no reason to believe that reducing one will make smoking safer. The only way to prevent cancer from smoking is to prevent smoking. Even hinting about making cigarettes safer is playing into the hands of the tobacco industry's campaign to promote 'harm reduction,' a thinly veiled attempt to keep up the sales of this deadly and totally unnecessary product."

David Sutton, a spokesman for tobacco giant Philip Morris USA, said the finding was not surprising.

"Previous studies have shown global differences in TSNA levels due to variations in tobacco blending and curing practices around the world," Sutton said in a statement.

"The company is aware of the concerns about TSNA. For a number of years we have worked to reduce TSNA levels," he added. "The FDA now has comprehensive regulatory authority over cigarettes. Under FDA regulation, there is now a regulatory structure to evaluate potential reduced harm products. As of today, however, there is no cigarette on the market that public health organizations endorse as offering 'reduced risk.' If smokers are concerned about the risks of cigarette smoking, the best thing to do is quit."

More information

For more information on smoking and how to quit, visit the [U.S. Centers for Disease Control and Prevention](https://www.cdc.gov/tobacco).

(SOURCES: Jim Pirkle, M.D., Ph.D., deputy director, science, National Center for Environmental Health, Division of Laboratory Sciences, U.S. Centers for Disease Control and Prevention, Atlanta; Danny McGoldrick, vice president, research, Campaign for Tobacco-Free Kids, Washington, D.C; Norman

Edelman, M.D., chief medical officer, American Lung Association, and professor, preventive medicine, internal medicine, physiology & biophysics, Stony Brook University, New York; David Sutton, spokesman, Phillip Morris USA; June 2010 *Cancer Epidemiology Biomarkers and Prevention*)

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