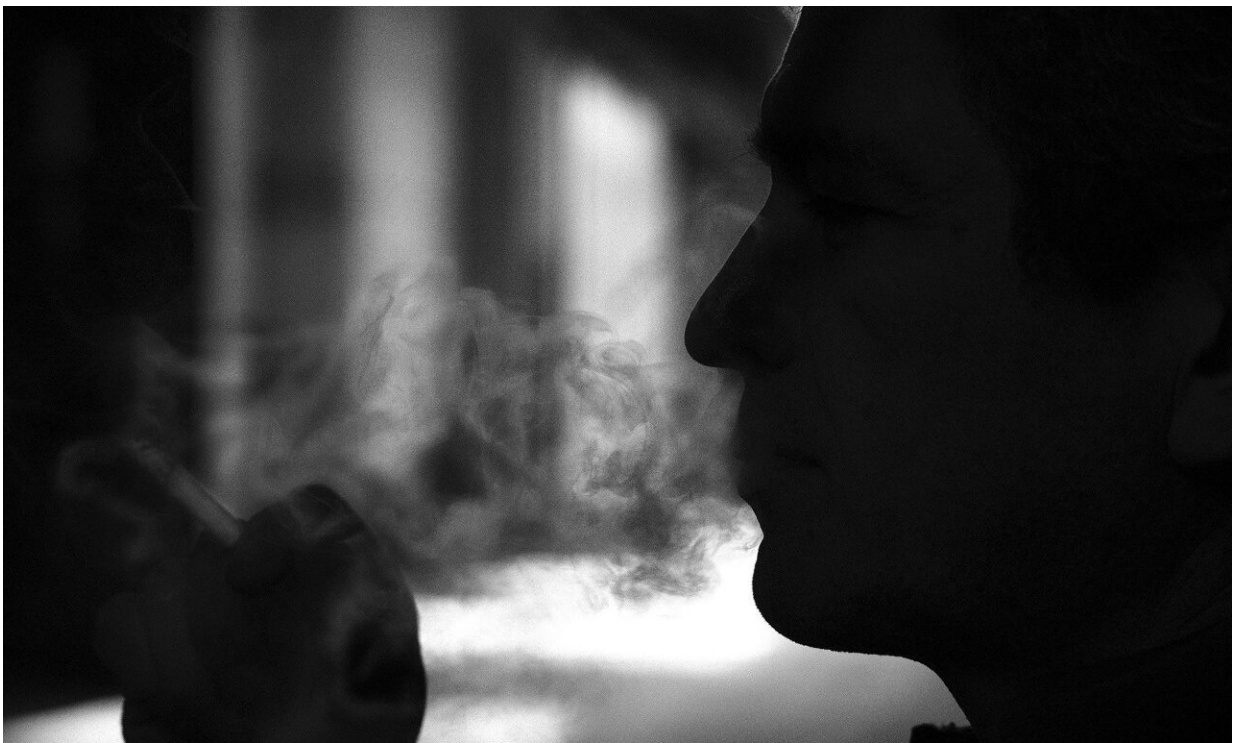


E-cigarette users face 15% higher risk of stroke at a younger age than traditional smokers

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Adults who used electronic cigarettes had a 15% higher risk of having a stroke at a younger age when compared with adults who smoked traditional combustible cigarettes and despite the high risk of stroke with

tobacco smoking, according to preliminary research to be presented at the American Heart Association's Scientific Sessions 2021.

Tobacco smoking is a known major risk factor for [stroke](#) and heart attack and cigarette smoking claims nearly 480,000 lives prematurely every year in the U.S., according to the American Heart Association Presidential Advisory, [New and Emerging Tobacco Products and the Nicotine Endgame: The Role of Robust Regulation and Comprehensive Tobacco Control and Prevention](#). Global use of e-cigarettes, which are battery-powered devices that deliver nicotine along with other chemicals in the form of an aerosol, has substantially increased in recent years. However, there is very limited knowledge about the safety, risks and potential efficacy of e-cigarettes to help people quit smoking.

To learn more about the cerebrovascular impact of [e-cigarette](#) use, researchers examined National Health and Nutrition Examination Survey from 2015 to 2018 to identify 79,825 adults with a history of stroke who used traditional cigarettes or e-cigarettes. Among the participants, 7,756 (9.72%) used e-cigarettes; 48,625 (60.91%) used traditional cigarettes; and 23,444 (39.37%) used both.

Researchers found that although stroke was more prevalent among traditional cigarette smokers, e-cigarette smokers had a 15% higher risk of having a stroke at a younger age.

"The public needs to know that the safety of e-cigarettes have not been proved to be safe and should not be considered as an alternative to traditional smoking especially among people with existing risk factors such as history of heart attack, [high blood pressure](#) and high cholesterol," said the study's co-lead author Urvish K. Patel, M.D., M.P.H., research scholar and chief education officer in the department of public health and neurology at the Icahn School of Medicine at Mount Sinai in New York City.

Among the other findings of this analysis:

- Adults who used e-cigarettes were younger when they had their first stroke—at a median average age of 48 years, compared to 59 years of age for people who smoked traditional cigarettes and 50 years of age for those who used both.
- Stroke was far more common among traditional cigarette smokers than e-cigarette users or people who used both, 6.75% compared to 1.09% and 3.72%, respectively.
- Among the women who had a stroke, 36.36% used e-cigarettes compared with 33.91% who smoked traditional cigarettes.
- Among Mexican American study participants, 21.21% used e-cigarettes and 6.02% smoked traditional cigarettes; 24.24% of non-Mexican American Hispanic participants used e-cigarettes and 7.7% smoked [traditional cigarettes](#).

"Many people are aware that nicotine is a chemical in vaping products as well as in conventional cigarettes, however, there are lots of other chemicals included that can directly affect the lining of the blood vessels. These can cause damage to the blood vessels that results in atherosclerosis, but it can also cause injury that weakens the strength of the blood vessels, predisposes to clot formation and can damage the blood vessels over time, so that individuals are at risk for both the ischemic and hemorrhagic stroke," said Karen L. Furie, M.D., M.P.H., an American Heart Association volunteer expert and chair of the Department of Neurology at Brown University's Warren Alpert Medical School in Providence, Rhode Island. "It's quite possible that exposure at a younger age may cause irreversible damage to blood vessels throughout the body and particularly in the brain. I think it's important that young people understand that e-cigarettes are not a safe alternative, and that the best way to preserve brain health and prevent stroke is to avoid all cigarettes and nicotine products."

"These findings have clear implications for physicians, health care policymakers and tobacco product regulatory authorities who are advocating for new regulations on e-cigarette access, sales and marketing," said co-lead author, Neel Patel, M.D., a research scholar in the department of public health at the Icahn School of Medicine at Mount Sinai in New York City. "People need to be warned that e-cigarettes should not be promoted as an alternative option to smoking traditional, combustible cigarettes."

A limitation to the study is that researchers did not have data on the type or severity of the participants' strokes and there is still much to learn about why e-cigarette use is linked to younger age for first stroke. Researchers said more research is needed to better evaluate the long-term effects of e-cigarettes and their role in heart and stroke health.

The American Heart Association supports ending the use of all combustible tobacco products while assuring other products do not addict the next generation of youth and adolescents. In 2019, the Association announced \$20 million in research funding to drive scientific discovery that will help end teen vaping, nicotine use and addiction in the U.S. Additionally, the Association's Tobacco Center of Regulatory Science is now in its second round of funding from the U.S. Food and Drug Administration (FDA) and the National Institutes of Health (NIH) to study the cardiovascular effects of tobacco and nicotine products, including e-cigarettes and other non-traditional devices. Basic and population research supported by the Center will help develop further understanding relevant to the potential regulation of current, new and emerging tobacco and nicotine products.

More information: [professional.heart.org/en/meet ... /scientific-sessions](https://professional.heart.org/en/meet.../scientific-sessions)

Provided by American Heart Association

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