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Study highlights:

- *The more young women smoke, the more their risk of stroke increases.*
- *Researchers found that any smoking more than doubles the risk of stroke, with the risk further increasing in a dose-dependent fashion based upon the quantity of cigarettes smoked.*

American Heart Association rapid access journal report:

Cigarette usage in young women linked to higher risk of stroke

DALLAS, Aug. 15 — The more young women smoke, the more their risk of stroke rises, according to one of the first studies to examine the relationship between higher rates of smoking and stroke in young women. The study was published in *Stroke: Journal of the American Heart Association*.

“There is a strong dose-response relationship between the daily quantity of cigarettes smoked and ischemic stroke risk in young women, one that reinforces the need for aggressive smoking-cessation efforts in young adults,” said John Cole, M.D., corresponding author of the study and an assistant professor of neurology at the University of Maryland School of Medicine in Baltimore.

As part of the Stroke Prevention in Young Women study, researchers found for:

- 1–10 cigarettes smoked a day, stroke risk increased 2.2 times.
- 11–20 cigarettes smoked a day, stroke risk increased 2.5 times.
- 21–39 cigarettes smoked a day, stroke risk increased 4.3 times.
- 40 or more cigarettes smoked a day, stroke risk increased 9.1 times.

Researchers found that any smoking at all more than doubles the risk of stroke. “The odds ratio comparing current smokers to never smokers was 2.6 times greater,” said Cole, who is also a clinical research scientist at Baltimore Veterans Affairs Medical Center and a neurologist at the University of Maryland Medical Center.

Comparing former smokers and never smokers showed no difference in the odds ratio, Cole said.

The population-based case-control study followed 466 women (15–49 years old) who had suffered their first stroke. The control group consisted of 604 women free of stroke of similar age and race/ethnicity identified by random digit dialing.

A detailed smoking history was obtained during face-to-face interviews. Women were classified according to their smoking status as never smokers, former smokers and current

smokers. The 500 never smokers were defined as those who had not smoked more than 100 cigarettes or five packs of cigarettes in their lifetime. The 386 current smokers were defined as those who had smoked more than 100 cigarettes in their lifetime and also had smoked in the 30 days preceding their stroke (for cases) or their interview (for controls). The 184 former smokers were defined as those who had smoked more than 100 cigarettes in their lifetime but had not smoked in the 30 days prior to their stroke/interview (cases/controls).

Data on measurements of serum nicotine or other markers for objectively validating smoking status were not available.

“Our study adds strong evidence that cutting down helps reduce stroke risk, but quitting is unquestionably the best option,” Cole said.

In 2005, an estimated 20.7 percent of U.S. women ages 18–24 were current cigarette smokers, researchers said.

Cole said a similar study on young men is planned.

According to the American Heart Association:

- Cigarette smoking is the most important preventable cause of premature death in the United States. It accounts for nearly 440,000 of the more than 2.4 million annual deaths.
- Stroke is the third-leading cause of death, behind heart disease and cancer and is the leading cause of serious, long-term disability in the United States. In 1999, about 1.1 million Americans reported difficulties with daily living because of a stroke.
- Each year, about 800,000 people suffer a stroke.

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Editor’s note: The American Heart Association strongly supports the Family Smoking Prevention and Tobacco Control Act, bipartisan federal legislation that would give the Food and Drug Administration (FDA) authority to regulate the manufacture, sale, distribution, labeling and promotion of tobacco products. The association also advocates for smoke-free air policies, cigarette excise tax increases and comprehensive state tobacco control prevention and treatment programs.

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