

# Quit smoking to reduce stroke risk if you have irregular heartbeat

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Scientists today urged people with atrial fibrillation—the most common heart rhythm disorder—to kick the habit and cut their stroke risk. The research is presented today at ESC Congress 2020.

One in four middle-aged adults in Europe and the US will develop atrial fibrillation, a condition set to affect up to 17 million people in the EU by 2030. People with atrial fibrillation are five times more likely to have a [stroke](#) than those without the arrhythmia. The risk of death is also elevated with atrial fibrillation, by two-fold in women and 1.5-fold in men. Stroke is the most common cause of death in patients with atrial fibrillation.

Previous studies have shown that [smokers](#) are more likely to develop atrial fibrillation and subsequent stroke. While many strokes are prevented with oral anticoagulant drugs, there are limited data on the impact of smoking cessation after atrial fibrillation [diagnosis](#).

This study examined the association between smoking cessation after newly diagnosed atrial fibrillation and the risks of stroke and all-cause death. The researchers used the Korean National Health Insurance Service database and the National Health Screening database. Koreans aged 40 and older are advised to have a national health check-up every two years. Take-up rates are high: for example, 75% were screened in 2014.

The researchers identified 523,174 patients with newly diagnosed atrial fibrillation in 2010 to 2016. Patients with prior strokes were excluded. The study included the 97,637 patients who had a national health check-up less than two years before being diagnosed with atrial fibrillation, and a second check-up within two years afterwards. Patients were followed-up after the second check-up until the end of 2017 for the occurrence of stroke or death.

The average age was 61 years and 62% were men. Participants were classified according to smoking status before and after atrial [fibrillation](#) diagnosis: never-smoker, ex-smoker (stopped smoking before diagnosis), quitter (stopped smoking after diagnosis), current smoker (includes those

who persistently smoked before and after diagnosis; and new smokers who started after the diagnosis). The proportions of never smokers, ex-smokers, quitters, and current smokers were 51.2%, 27.3%, 6.9%, and 14.6%, respectively.

During a median three-year follow-up, there were 3,109 strokes and 4,882 all-cause deaths (10.0 per 1,000 person-years and 15.4 per 1,000 person-years, respectively).

Compared to current smokers, quitters had a 30% lower probability of stroke and 16% reduced likelihood of all-cause death, after accounting for other factors that could influence the relationships such as age, sex, [high blood pressure](#), body mass index, and [physical activity](#).

Quitters remained at higher risk compared with never-smokers. The risks of stroke and all-cause [death](#) were raised by 19% and 46%, respectively, but these associations were consistently observed only in men. New and persistent smokers had even greater risks of stroke compared to those who had never smoked. For new smokers, the probability was raised by 84% and for persistent smokers it was elevated by 66%.

Study author Dr. So-Ryoung Lee of Seoul National University Hospital, Korea, said: "Smoking precipitates blood clots that could lead to a stroke, which may be why giving up lowers risk. The remaining [stroke risk](#) after quitting might be through the damage already caused to the arteries—called atherosclerosis."

She noted that the benefits of quitting were less pronounced in those who had been heavy smokers before their [atrial fibrillation](#) diagnosis. Heavy smokers were defined as those who had smoked 20 cigarettes every day for at least 30 years. "This may be related to longer-term damage to the blood vessels which increases susceptibility to having a

stroke," said Dr. Lee.

Dr. Lee said: "If you don't smoke, don't start. If you do, it's never too late to quit. Regardless of how much you smoke, kicking the habit is good for health."

**More information:** Abstract title: Impact of smoking cessation after the new diagnosis of atrial fibrillation on the risk of stroke: a nationwide cohort study.

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