

Short episodes of abnormal heart rhythm may not increase risk of stroke

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Micrograph showing cortical pseudolaminar necrosis, a finding seen in strokes on medical imaging and at autopsy. H&E-LFB stain. Credit: Nephron/Wikipedia

People with pacemakers or defibrillators who experience only short episodes of an abnormal heart rhythm known as atrial fibrillation have a very low risk of stroke, suggesting that anticoagulants in this group of patients were not likely to reduce the risk for stroke, according to new research in the American Heart Association's journal *Circulation*.

Atrial fibrillation is the most common abnormal heart rhythm, affecting approximately 2.7 million Americans. Previous research demonstrates that people with prolonged episodes of atrial fibrillation are at an increased risk for [cardiovascular complications](#), including stroke. As a result, guidelines recommend that [patients](#) with atrial fibrillation take anticoagulants, blood thinners that decrease the ability of the blood to clot, to reduce their stroke risk. However, it has been unclear whether "short" episodes (estimated as less than 20 seconds) also increase medical risks and warrant anticoagulants.

Researchers analyzed 37,000 individual ECGs from 5,379 patients over 2 years enrolled in the RATE Registry, an ongoing study following patients with pacemakers or defibrillators that constantly monitor their heart rhythm. The study confirmed that long episodes of atrial fibrillation are associated with increased risk of stroke, heart failure, ER visit or hospitalization for an [abnormal heart rhythm](#), or death.

In contrast, during the course of two years, patients experiencing only "short" episodes of atrial fibrillation were at no more risk of stroke or other cardiovascular complications than people without documented atrial fibrillation. Over the two years of the study, researchers found:

- more than 15,000 episodes of atrial fibrillation;
- 94 patients were hospitalized for atrial fibrillation;
- 265 patients were hospitalized for heart failure;
- 47 patients were hospitalized for stroke; and
- 359 patients died.

The results suggest that, in patients who only experience short episodes of atrial fibrillation, the risks of bleeding associated with taking anticoagulants outweighs the risk of stroke.

"We knew that people with atrial fibrillation are at higher risk of [stroke](#),

but the next question was, how much atrial fibrillation?" said Steven Swiryn, M.D., lead author and clinical professor of cardiology at the Feinberg School of Medicine at Northwestern University in Chicago, Illinois. "Other studies have shown that prolonged episodes of atrial fibrillation pose a risk, but what about short ones? The answer until this study was 'no one knows.' Now we have good solid data that if all you have is short episodes of atrial fibrillation, the risk is so low that it doesn't warrant [anticoagulants](#)."

However, physicians should continue to monitor patients for progression to prolonged episodes of [atrial fibrillation](#) that may develop, Swiryn said.

More information: *Circulation*, [DOI: 10.1161/CIRCULATIONAHA.115.020252](#)

Provided by American Heart Association

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