
Stroke Prevention Using Wearables



The University of Cincinnati is part of a multimillion-dollar grant from the National Heart, Lung, and Blood Institute to study a strategy to prevent stroke in patients with atrial fibrillation. The trial will use an app on Apple Watch to monitor irregular heartbeat to reduce patients' reliance on blood-thinning medication.

"The individualised and precision-based care of patients with conditions affecting the heart has long been a goal for clinicians," says Richard Becker, MD, professor of medicine in the UC College of Medicine and lead investigator of the trial at UC. "Atrial fibrillation is the most common heart rhythm abnormality in adults and causes up to 25% of all strokes," says Costea. "Anticoagulants are considered a standard of care to prevent atrial fibrillation-associated strokes. While effective medications are available, bleeding can occur, and treatment is often recommended for extended periods of time — in some patients indefinitely."

The \$37 million, seven-year trial, called the Rhythm Evaluation for AntiCoagulaTion (REACT) trial, will recruit 5,400 patients at 70 sites nationwide starting in March 2023. Becker says UC has a target goal of enrolling up to 200 patients.

The study will implement the heart health features on Apple Watch, through a contribution from Apple, which will also provide guidance on the development of the study application. Using the app on an Apple Watch and an accompanying iPhone app, trial patients will be able to target blood-thinning medication use for a limited period and only in response to a prolonged episode of atrial fibrillation, also known as AFib, thus creating personalised care unique to each patient.

"The use of anticoagulants to prevent AFib-associated stroke is recommended whether a person has intermittent AFib, also known as paroxysmal AFib, or permanent AFib," says Becker. "What if there was a way to determine when a person was having an episode of AFib and offer an anticoagulant at that time? Might this provide benefit and minimise the risk of taking an anticoagulant every day, including days when AFib was not occurring? Wearable technology may help to answer this question and favourably change the paradigm of management for the approximately 6 million Americans with AFib".

Source: [University of Cincinnati News](#)

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Published on : Wed, 9 Nov 2022