

Abnormal heart rhythm detected by smartwatch: What does it mean?

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16 March 2019: Should an abnormal heart rhythm detected by a smartwatch in otherwise healthy young adults be treated? Are the benefits of this new technology worth the risks? Where is the technology headed?

Answers to these and other vital questions will be debated during the Meet the Trialist of the Apple Heart Study on Tuesday at EHRA 2019, a scientific congress of the European Society of Cardiology (ESC) that starts tomorrow in Lisbon, Portugal.

The largest study of a smartwatch app for detection of irregular heart rhythms including [atrial fibrillation](#) was presented today.

Atrial [fibrillation](#) is the most common heart rhythm disorder (arrhythmia). It causes 20 to 30% of all strokes and increases the risk of dying prematurely. Symptoms include palpitations, shortness of breath, tiredness, and difficulty exercising. But some people have no symptoms at all.

Strokes can be prevented with oral anticoagulation, but there is no evidence that treatment is beneficial in otherwise [healthy people](#) younger than 65. So, is there any point in monitoring?

Some initial reactions from leaders of the European Heart Rhythm Association (EHRA):

EHRA President Professor Hein Heidbuchel: "We can assume that many people wearing an Apple Watch will be younger. Even if they really have atrial fibrillation, we have to admit that as physicians we don't know exactly what that means for those patients. That is something we will have to solve before we really apply this sort of technology at a wide scale in medicine."

"The study is the beginning of a new era. In medicine we've always been used to ordering tests. Here the patient does a test and presents it to a physician. We have to find a way to positively integrate that into how we deal with patients and their information."

Professor Isabelle Van Gelder, Chairperson of EHRA's National Cardiac Societies Committee: "My main concern about the study [is] that it brings a lot of anxiety among the people wearing such devices."

Professor Haran Burri, Scientific Chairman of EHRA 2019: "This device does not replace standard techniques for diagnosing arrhythmias. It's really a screening device."

"The potential benefits are that if we're able to screen for atrial fibrillation then we may start a therapy, for example anticoagulants, that may prevent stroke. The risks are that if the subject actually has an arrhythmia that's not detected by the device, he may be falsely reassured. Or conversely, if there's a notification and no arrhythmia, then he may be anxious for nothing."

Professor Gerhard Hindricks, Editor-in-Chief of EHRA's scientific journal *EP Europace* and a Past-President of EHRA: "From an innovative technological point of view, this is a fantastic new approach. But are we ready for these technological innovations? Are the citizens ready? Is the healthcare system ready? I have my doubts about whether we are ready to implement this approach now."

"Will the technology have an impact on outcome? Will it support patient values—being well and living longer? That needs to be proven."

"Do we know what we're going to do with all these data? Do we know where these data end up? Will these data potentially bypass the traditional healthcare system? Are there legal issues? Has all that been clarified and really thought through? I've got my doubts."

Dr. Emma Svennberg, EHRA m-health Coordinator: "[The] detection rate of atrial fibrillation in this population [was] about 0.2%. This should be compared to other screening studies in elderly populations of much shorter duration where they found approximately 15 times more atrial fibrillation with numbers approximating 3%."

"[Atrial fibrillation] is not a benign condition in the elderly nor in those with cardiovascular risk factors. But in this trial including more than 400,000 people only 6% were above the age of 65."

More information: Meet the Trialist of the Apple Heart Study on Tuesday 19 March at 09:30 to 10:10 WET (GMT) in the Sokolov lecture room.

Provided by European Society of Cardiology

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