



Johnson & Johnson Announces Research Study with Apple Watch to Help Improve AFib Outcomes Including Stroke Prevention

January 17, 2019

Johnson & Johnson to collaborate with Apple to assess impact of wearable technology on earlier detection of AFib, improved diagnosis and patient outcomes

Up to 30 percent of AFib cases go undiagnosed until life-threatening complications occur, signaling a critical need for more efficient and scalable screening methods

NEW BRUNSWICK, N.J., Jan. 17, 2019 /PRNewswire/ -- Johnson & Johnson (NYSE: JNJ) today announced that Janssen Pharmaceuticals, Inc., member of the Johnson & Johnson Family of Companies, entered into a research study in collaboration with Apple Inc. to investigate whether a new heart health program using an app from Johnson & Johnson in combination with Apple Watch's irregular rhythm notifications and ECG app can accelerate the diagnosis and improve health outcomes of the 33 million people worldwide living with atrial fibrillation (AFib), a condition that can lead to stroke and other potentially devastating complications. In the U.S. alone, AFib is responsible for approximately 130,000 deaths and 750,000 hospitalizations every year.[i]

The study aims to analyze the impact of Apple Watch on the early detection and diagnosis of AFib, and the potential to improve outcomes including the prevention of stroke. A multi-year research program will be launched later in 2019. This large-scale program will occur in the U.S. only, and will be designed as a pragmatic randomized controlled research study for individuals age 65 years or older.

The study's goals include:

- Measuring the outcomes of a heart health engagement program with irregular rhythm notifications on Apple Watch.
- Assessing the impact of a medication adherence program using an app from Johnson & Johnson.

"We're excited about the potential of common, wearable technology to aid in the earlier detection and prevention of a frequent cause of stroke," said Paul Stoffels, M.D., Vice Chair of the Executive Committee and Chief Scientific Officer, Johnson & Johnson. "Too many people living with AFib are unaware of their risk, and earlier detection, diagnosis and treatment of AFib could significantly improve outcomes. Based on the insights generated through this research program, we may be able to develop new ways to detect other health conditions earlier in the future that also exhibit measurable physiological symptoms."

"Through Apple Watch people have been able to learn more about their heart health, including discovering they have AFib. This kind of information empowers customers to follow up with the right treatment or even better, implement healthy habits aimed at prevention," said Jeff Williams, Chief Operating Officer, Apple Inc. "We're excited to work with Johnson & Johnson, a leader in the medical community, as we learn about the impact Apple Watch can have in delivering better health outcomes."

Johnson & Johnson's recent mSTOPs (mHealth Screening to Prevent Strokes) study demonstrated that earlier screening leads to increased AFib detection. "Utilizing wristwatch-based optical heart sensor and ECG monitoring is a logical evolution of this research and may also lead to increased AFib diagnosis and improved clinical outcomes for patients," said Paul Burton, M.D., Ph.D., FACC, Vice President, Medical Affairs, Internal Medicine, Janssen Scientific Affairs, LLC. "This collaboration brings together Johnson & Johnson's depth of expertise and long heritage in treating cardiovascular disease with Apple's experience in utilizing cutting-edge technologies to improve the lives of consumers. Ultimately, we hope to improve the treatment of cardiovascular disease, and identify ways to prevent it."

About AFib

AFib is an irregular heartbeat that can lead to the formation of blood clots resulting in stroke, heart failure and other potentially devastating complications. AFib is the most common sustained arrhythmia, increases stroke risk five-fold, and accounts for almost one-third of all strokes.[ii] Because blood clots formed in the heart can be large, AFib-caused strokes tend to damage large areas of the brain, which typically leads to a higher risk of death, significant damage and increased cost of treatment and care. Around 20% of individuals who experience a stroke were not aware of their underlying AFib condition.[iii]

About Johnson & Johnson

At Johnson & Johnson, we believe good health is the foundation of vibrant lives, thriving communities and forward progress. That's why for more than 130 years, we have aimed to keep people well at every age and every stage of life. Today, as the world's largest and most broadly-based health care company, we are committed to using our reach and size for good. We strive to improve access and affordability, create healthier communities, and put a healthy mind, body and environment within reach of everyone, everywhere. We are blending our heart, science and ingenuity to profoundly change the trajectory of health for humanity.

About the Janssen Pharmaceutical Companies of Johnson & Johnson

At the Janssen Pharmaceutical Companies of Johnson & Johnson, we are working to create a world without disease. Transforming lives by finding new and better ways to prevent, intercept, treat and cure disease inspires us. We bring together the best minds and pursue the most promising science. We are Janssen. We collaborate with the world for the health of everyone in it. Learn more at www.janssen.com. Follow us at [@JanssenGlobal](https://twitter.com/JanssenGlobal). Janssen Pharmaceuticals, Inc. is part of the Janssen Pharmaceutical Companies of Johnson & Johnson.

Cautions Concerning Forward-Looking Statements

This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 regarding the collaboration with Apple Inc. seeing to advance research and the development of healthcare solutions and technologies. The reader is cautioned not to rely on these forward-looking statements. These statements are based on current expectations of future events. If underlying assumptions prove inaccurate

or known or unknown risks or uncertainties materialize, actual results could vary materially from the expectations and projections of Janssen Pharmaceuticals, Inc., any of the other Janssen Pharmaceutical Companies of Johnson & Johnson and/or Johnson & Johnson. Risks and uncertainties include, but are not limited to: the potential that the expected benefits and opportunities related to the collaboration may not be realized or may take longer to realize than expected; challenges inherent in new product development, including the uncertainty of clinical success and obtaining regulatory approvals; competition, including technological advances, new products and patents attained by competitors; uncertainty of commercial success for new products; the ability of the company to successfully execute strategic plans; impact of business combinations and divestitures; challenges to patents; changes in behavior and spending patterns or financial distress of purchasers of health care products and services; and global health care reforms and trends toward health care cost containment. A further list and descriptions of these risks, uncertainties and other factors can be found in Johnson & Johnson's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, including in the sections captioned "Cautionary Note Regarding Forward-Looking Statements" and "Item 1A. Risk Factors," in the company's most recently filed Quarterly Report on Form 10-Q, and the company's subsequent filings with the Securities and Exchange Commission. Copies of these filings are available online at www.sec.gov, www.jnj.com or on request from Johnson & Johnson. Neither the Janssen Pharmaceutical Companies nor Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.

[i] Atrial fibrillation fact sheet. 2011. at https://www.cdc.gov/dhdsp/data_statistics/fact_sheets/fs_atrial_fibrillation.htm.)

[ii] Aguilar MI, Hart R. Oral anticoagulants for preventing stroke in patients with non-valvular atrial fibrillation and no previous history of stroke or transient ischemic attacks. The Cochrane database of systematic reviews 2005:Cd001927.

[iii] Lin HJ, Wolf PA, Benjamin EJ, Belanger AJ, D'Agostino RB. Newly diagnosed atrial fibrillation and acute stroke. The Framingham Study. *Stroke* 1995;26:1527-30.

The logo for Johnson & Johnson, featuring the company name in a red, cursive script font.

 View original content to download multimedia:<http://www.prnewswire.com/news-releases/johnson--johnson-announces-research-study-with-apple-watch-to-help-improve-afib-outcomes-including-stroke-prevention-300780002.html>

SOURCE Johnson & Johnson

Press Contact: Ernie Knewitz, (732) 524-6623, (917) 697-2318 (M); Investor Relations: Lesley Fishman, (732) 524-3922; Margo, T: 732-524-3541, M: 732-266-6495, Email: mdavis21@its.jnj.com