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Simple method devised for determining atrial fibrillation risk in women

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Atrial fibrillation is the most common type of abnormal heart rhythm, affecting 2.5 million Americans. If left undetected or untreated, atrial fibrillation can lead to stroke. Determining who is at increased risk for atrial fibrillation has been difficult, especially among individuals without established heart disease. But now, researchers from Brigham and Women's Hospital have devised and tested a simple atrial fibrillation risk prediction model, based on six easily obtained factors: a woman's age, height, weight, blood pressure, alcohol consumption and smoking history. The model is published in the online edition of the *European Heart Journal* on February 26, 2013.

"The real strength of this model is its simplicity," said Brendan Everett, MD, the lead author of the study and a cardiologist at BWH. "Using this tool, we can estimate an otherwise healthy woman's risk of developing atrial fibrillation over the next 10 years. The tool only requires that a patient's health care provider know some basic information about the patient. There is no need for any advanced testing or additional cost in order to use the risk tool."

The risk prediction model was derived and tested in more than 20,000 middle aged women of European ancestry. Researchers found that the new model was significantly better at identifying women at increased risk for atrial fibrillation over the next 10 years than estimating a woman's risk of atrial fibrillation using her age alone.

"Nearly one in four women were reassigned to a more accurate atrial

fibrillation risk category by using the new model," said Everett. "While specific interventions to lower a woman's risk of a first atrial fibrillation episode are still in development, this personalized information can help [health care providers](link) stress the importance of heart healthy behaviors, including weight loss and moderation of [alcohol consumption](link)."

The study also examined whether recently discovered genetic markers for atrial fibrillation risk improved researchers' ability to accurately predict a woman's risk for [atrial fibrillation](link) and indeed, the researchers found that a genetic risk score has potential to improve the ability to predict atrial fribrillation. However, Everett notes that while this information is scientifically interesting, more research on genetic testing is needed before this combination model can be recommended for use in the general public. Further research is also needed to determine if the study results would apply to men or a broader population of women.

Provided by Brigham and Women's Hospital