

# Higher fitness levels linked to lower AFib risk in male, African American veterans

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Higher fitness levels reduced the risk of developing an irregular heart rhythm, known as atrial fibrillation, by 30% to 50% in a study of male, African American veterans, according to preliminary research to be presented at the American Heart Association's Scientific Sessions 2020.

Atrial [fibrillation](#) (also called AFib or AF) is an irregular heartbeat (arrhythmia) that can lead to blood clots, stroke, [heart](#) failure and other heart-related complications. According to the American Heart Association, at least 2.7 million Americans are living with AFib.

"Engaging in physical activity to increase fitness is an inexpensive and practical intervention that [health care professionals](#) can prescribe to patients to prevent and manage [cardiovascular disease](#)," said lead researcher Apostolos Tsimploulis, M.D., a cardiology fellow at the State University of New York at Stony Brook. "All of our evidence suggests the health benefits associated with increased cardiorespiratory fitness and reduced risk of [atrial fibrillation](#) are the same for all adults regardless of race."

To study the effects of exercise on the development of atrial fibrillation, researchers examined the medical records of more than 11,000 middle-aged, male African American veterans (average age 58) from 1985 to 2013. None exhibited evidence of heart disease during or prior to completing a symptom-limited treadmill stress test at two VA Medical Centers—in Washington, D.C., and Palo Alto, California.

Participants were categorized into four fitness groups based on their age-specific cardiorespiratory fitness (CRF). CRF was measured in metabolic equivalents, or METs, resting metabolic rate (1 MET=3.5 ml of O<sub>2</sub>/kg of body weight per minute). The groups were categorized as: least fit, moderately fit, fit and highly fit.

A search of [medical records](#) was conducted by two independent investigators to directly assess the association between CRF and atrial fibrillation. Models were adjusted for risk factors, including heart or blood pressure medications, age and body mass index.

During an average follow-up of 10.7 years, 1,423 veterans developed

atrial fibrillation:

- 421 (16.6%) in the least fit group;
- 366(10.9%) in the moderately fit group;
- 323 (11.9%) in the fit group; and
- 313 (12%) in the high-fit group.

When compared to the least-fit group, the atrial fibrillation risk was:

- 29% lower in the moderately fit group;
- 37% lower in the fit group; and
- 51% lower in the high fit group.

Researchers noted the study results are strong based on the number of participants, and atrial fibrillation incidence was established during a follow-up period spanning roughly 17 years (median 10.7 years). Access to adjusted, longitudinal data, including medications and heart [risk factors](#), along with equal access to care (care from the VA regardless of a patient's ability to pay) are significant factors. This permitted continuous follow-up and minimized the potential for disparities in medical care.

Tsimploulis noted the precise cause of atrial fibrillation was not determined. In addition, CRF was measured only once; the level or frequency of physical activity was not assessed; and follow-up data on changes in cardiorespiratory fitness or physical activity of the participants over time were not available.

"We cannot make associations between atrial fibrillation and frequency, intensity, duration or volume of [physical activity](#). Future studies are needed to document the effects of cardiorespiratory [fitness](#) on the incidence of atrial fibrillation, and the studies must include women," Tsimploulis said.

The American Heart Association recommends adults participate in at least 150 minutes per week of moderate-intensity aerobic activity or 75 minutes per week of vigorous aerobic activity or a combination of both.

**More information:** Session: Non-Traditional Predictors of Arrhythmia: [www.abstractsonline.com/pp8/? ... 4/presentation/36389](http://www.abstractsonline.com/pp8/?...4/presentation/36389)

Provided by American Heart Association

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