

Exercise maintains normal heart rhythm in patients with atrial fibrillation

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A six-month exercise program helps maintain normal heart rhythm and reduces the severity of symptoms in patients with atrial fibrillation, according to late breaking research presented at ESC Congress 2021.

"The ACTIVE-AF trial demonstrates that some patients can control their arrhythmia through physical activity, without the need for complex interventions such as ablation or medications to keep their heart in normal rhythm," said study author Dr. Adrian Elliott of the University of Adelaide, Australia.

Atrial fibrillation (AF) is a heart rhythm disorder that makes the heart beat fast and irregularly. The most [common symptoms](#) are palpitations, shortness of breath, light headedness, and fatigue, which can dramatically impact quality of life. Patients have significant risks of stroke and heart failure. The global prevalence of AF is increasing rapidly and is estimated to be over 30 million people, while the lifetime risk of the disorder for individuals over the age of 55 may be as high as one in three.

Exercise-based rehabilitation is recommended for patients with coronary heart disease and heart failure, but few studies have examined the benefits in AF. An observational study found that patients who gained cardiorespiratory fitness over a five-year follow-up were significantly less likely to have recurrences of AF. A [randomized controlled trial](#) showed that 12 weeks of aerobic interval training reduced the time spent in AF compared to usual care but the study enrolled just 51 patients and follow-up was only four weeks.

The ACTIVE-AF trial assessed the impact of a six-month exercise program combining supervised and home-based aerobic exercise on AF recurrence and symptom severity—during the [intervention](#) and after a further six months of follow-up. The study included patients with short AF episodes (paroxysmal AF) or longer episodes requiring intervention to restore normal rhythm (persistent AF). Patients whose normal heart rhythm cannot be restored (permanent AF) were excluded.

The trial randomly allocated 120 patients with symptomatic AF to an

exercise intervention or usual care for six months. The intervention included supervised exercise (weekly for three months then fortnightly for three months) and an individualized weekly plan to follow at home. Over the six months the target was to increase aerobic exercise up to 3.5 hours per week. Supervised sessions were typically higher intensity to raise cardiorespiratory fitness, while home-based exercise was typically a moderate intensity aerobic activity of the patient's choice (e.g. walking, indoor cycling, swimming). The usual care group received exercise advice but no active intervention. All patients received usual medical care from their cardiologist who was blinded to study group allocation.

The co-primary outcomes were AF symptom severity score and the proportion of patients with recurrent AF at 12 months. Recurrent AF was defined as episodes lasting longer than 30 seconds, undergoing an ablation intervention, or requiring ongoing anti-arrhythmic drug therapy.

The average age of patients in the study was 65 years and 43% were women. At 12 months, the AF recurrence rate was significantly lower in the exercise group (60%) compared to the control group (80%), with a hazard ratio of 0.50 (95% confidence interval 0.33–0.78; $p=0.002$). Dr. Elliott said: "Put simply, this means a larger number of patients in the exercise group could maintain a normal [heart](#) rhythm without needing invasive interventions or continued use of drugs."

Patients in the exercise group also had a significant reduction in the severity of their symptoms at 12 months compared to the control group. "This means that patients reported less severe palpitations, shortness of breath and fatigue," said Dr. Elliott.

He concluded: "Our study provides evidence that aerobic [exercise](#) should be incorporated into the treatment of patients with symptomatic AF. This should sit alongside the use of medications, as guided by a cardiologist, and management of obesity, hypertension and sleep apnoea.

As a general guide, [patients](#) should strive to build up to 3.5 hours per week of [aerobic exercise](#) and incorporate some higher intensity activities to improve cardiorespiratory fitness."

More information: Abstract title: An exercise and physical activity program in patients with atrial fibrillation: the ACTIVE-AF randomised controlled trial.

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