



Letters to the Editor

Reply to Reed et al.—Exercise Targets in the 2020 CCS Guidelines for the Management of Patients With Atrial Fibrillation

To the Editor:

We thank Dr Reed and colleagues for their letter. A major focus of the comprehensive 2020 atrial fibrillation (AF) guidelines was to emphasise that AF should not be considered an isolated heart-rhythm disorder. A key pillar of this holistic approach to management of AF is aggressive risk-factor modification. It is well known that higher levels cardiorespiratory fitness are associated with an improved cardiovascular risk-factor profile and a reduction in all-cause mortality and cardiovascular events. In addition, habitual moderate-intensity exercise is inversely associated with incidence of AF.¹ In those with paroxysmal or persistent AF, exercise-training results are associated with a reduction in AF burden and an improvement in health-related quality of life, left-atrial function, and peak oxygen consumption.^{2,3}

Reed and colleagues are correct that the targets cited in the current guidelines are predominantly derived from CARDIO-FIT and ARREST-AF studies. The Impact of **C**ardiorespiratory **F**itness on Arrhythmia Recurrence in Obese Individuals With Atrial Fibrillation (CARDIO-FIT) study demonstrated that a ≥ 2 -metabolic equivalent of task (MET) improvement in cardiorespiratory fitness was associated with a significantly reduced AF burden,³ with a response proportional to the increase in cardiorespiratory fitness. The **A**ggressive **R**isk **F**actor **R**eduction **S**tudy for **A**trial **F**ibrillation and Implications for the Outcome of Ablation (ARREST-AF) study demonstrated that patients who chose to undergo aggressive risk factor modification had better quality of life and symptom control, a significant reduction in AF burden, and greater arrhythmia-free survival after catheter ablation compared with those who did not.⁴

In addition, the CCS AF guidelines committee recognizes that the population of patients with AF are predominantly older (> 65 years). In this population, the Canadian Physical Activity Guidelines recommend adding “muscle and bone-strengthening activities using major muscle groups, at least 2 days per week” and performing “physical activities to enhance balance and prevent falls.” Although we recognize that resistance and balance recommendations are not specifically related to AF outcomes, we believed that a holistic

patient-centric approach that considered all relevant outcomes was warranted.

Finally, we agree that female under-representation is a huge problem, which was the reason we have devoted a section of the guidelines to discuss and highlight to this issue. Although recognition of sex differences offers an opportunity to affect outcomes in female patients with AF, there are many aspects of AF care in which female sex-specific evidence is lacking. We celebrate the authors' efforts to improve representation in exercise and rehabilitation-based trials, identifying sex-specific research gaps.

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