

Letters to the Editor

Exercise Targets in the 2020 CCS Guidelines for the Management of Patients With Atrial Fibrillation

To the Editor:

The 2020 Canadian Cardiovascular Society (CCS) guidelines for the management of atrial fibrillation (AF) are the first in the world to provide specific exercise targets (aerobic exercise: ≥ 200 minutes per week of moderate intensity; resistance: 2 to 3 days per week; flexibility: ≥ 10 minutes per day at least 2 days per week in those ≥ 65 years of age).¹ Although we commend the authors for their inclusion, there are several key points that merit further discussion.

Recent reviews of exercise-based cardiac rehabilitation (CR) in patients with AF have shown improvements in exercise tolerance and poor quality of life (Fig. 1).^{2,3} This evidence is limited, however, given the few studies and the heterogeneity of their interventions, which is perhaps why the guidelines did not discuss these reviews or include referral to CR as an element of AF management. Greater exercise levels and cardiorespiratory fitness (CRF)—well-established outcomes of CR—are associated with lower long-term risk of cardiovascular disease and all-cause mortality in patients with AF.⁴

We were pleased to see the benefits of multicomponent lifestyle interventions included in the guidelines,¹ but a discussion of the specific “dose-related” effects of exercise were lacking. We presume the ≥ 200 minutes per week of moderate-intensity exercise prescribed in these observational studies led by Pathak and colleagues was used to establish the exercise targets in the guidelines,¹ but this was not mentioned nor was consideration given to exercise volume and intensity ranges of other exercise interventions in patients with AF.^{2,3} The guidelines also include resistance and flexibility targets, yet most of the exercise interventions in patients with AF have either not included resistance training or tested different paradigms (ie, inspiratory muscle training, yoga).² The effectiveness of these targets specific to AF outcomes remains to be investigated and is currently unknown; this should be acknowledged.

The guidelines described notable clinical sex differences yet not those identified in the exercise and AF literature. Nearly 20 years elapsed between the first and second exercise-based intervention in patients with AF reporting sex-specific outcomes (Fig. 1).³ The lack of sex-based analyses and female under-representation in exercise research (eg, exercise-based studies in patients with AF include $\sim 25\%$ female participants)^{2,3} results in women often being recommended treatment options without empirical support; this merits

Exercise and AF Literature: Current Evidence and Future Directions

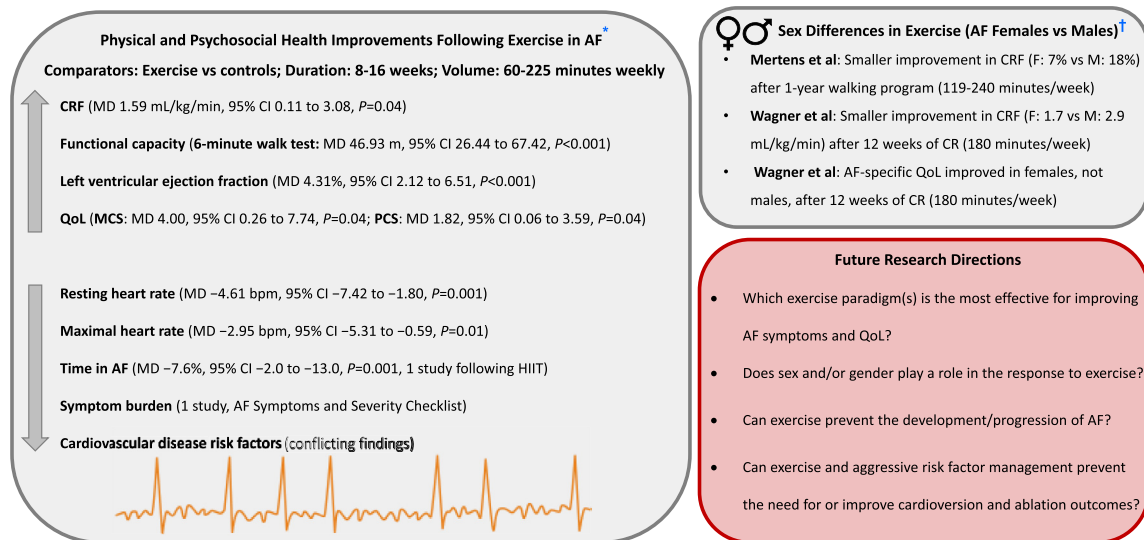


Figure 1. Exercise and atrial fibrillation (AF) literature: current evidence and future directions. *Data from Smart et al.² †Data from Reed et al.³ CI, confidence interval; CR, cardiac rehabilitation; CRF, cardiorespiratory fitness; MCS, mental component summary of the Short-Form 36; MD, mean difference; HIIT, high-intensity interval training; PCS, physical component summary of the Short-Form 36; QoL, quality of life.

acknowledgement.

In summary, the guidelines fall short in their justification of the aerobic exercise volume and intensity, resistance training and flexibility targets, and reflection of the growing literature regarding the role of exercise-based CR in addressing the needs of patients with AF. Patients with AF have highlighted the need for clear advice and support from health care professionals following diagnosis and treatment of AF, particularly as it relates to exercise. Our suggestions for future research are provided herein (Fig. 1).

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Disclosures

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