

2017-2018 Lorne Phenix Graduate Award Recipient



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Peripheral arterial disease (PAD) is a progressive condition characterized by occlusion in the vessels of the leg. Intermittent claudication (IC) is the most common symptom of the disease and involves extreme pain when walking. Naturally, patients with IC have low functional capacities and poor quality of life.

Women with PAD have a higher prevalence of leg pain and greater walking impairment than men and thus, may benefit the most from exercise training. In fact, there is increased evidence indicating greater pain sensitivity and clinical pain observed in women compared to men. However, women are less likely to be referred to cardiac rehabilitation programs by physicians and less likely to participate even when referred. Further, women are more likely to withdraw from cardiac rehabilitation programs due to certain barriers to exercise. Clearly, consideration of sex affects the benefits from, and participation in, rehabilitative exercise.

My study will recruit a sample of 15 males and 15 females with IC in PAD. By matching the number of male and female participants, I will be able to evaluate the response to high intensity interval training (HIIT) in both sexes. I will compare the differences in subjective pain, enjoyment and training stimulus between sexes. Validation of the benefits of HIIT for women will provide physicians with even more reason to increase referrals to cardiac rehabilitation programs. In addition, a protocol that delivers less pain and greater enjoyment can increase participation and adherence rates in female patients.