High Intensity Interval Training Exercises; Novel Treatment in Increasing Maximum Walking Distance for patient with Intermittent Claudication.

Angela Njeri Kihara MSc Cardiovascular Rehabilitation.
(B.PT, Hons.)

Abstract

Statement of the Problem: High Intensity Interval Training exercises are more likely to increase Maximum Walking Distance compared to usual supervised exercise program

Peripheral artery disease (PAD) is a chronic obstructive vascular disease of the arteries supplying the lower limb caused by atherosclerosis (Aboyans et al. 2018). The most common symptom of PAD is intermittent claudication (IC), characterized by ischemic muscle pain in the leg, worsened by exertion and relieved by rest (Pymer et al. 2020). 1 in about 5 adults over 60 years have some sort of PAD (BHF, 2013).

Previous studies show that supervised exercise programs (SEP) have shown to improve maximum walking distance (MWD) by 452% by week 12 for patients with IC (Harwood et al. 2019).

There has been limited literature and clinical trials on comparison between Moderate Intensity Steady State Cardio (MISS) and High Intensity Interval Training (HIIT) on improving symptoms and MWD for IC (Pymer et al. 2020).

MISS exercise is the first line treatment for IC (Harwood et al. 2019). HIIT is a novel treatment that is yet to be adopted by Vascular exercise classes. Results and analysis will be from cohort studies done at a single vascular center that used the two exercise interventions for IC.



Figure1; site of pain or leg cramp.

References

1.Aboyans, V. et al. (2018) 'Editor's Choice – 2017 ESC Guidelines on the Diagnosis and Treatment of Peripheral Arterial Diseases, in collaboration with the European Society for Vascular Surgery (ESVS)', European Journal of Vascular and Endovascular Surgery, 55(3), pp. 305–368. doi: 10.1016/j.ejvs.2017.07.018.
2.Harwood, A.E. et al. (2019) 'Cardiovascular and musculoskeletal response to supervised exercise in patients with intermittent claudication', Journal of Vascular Surgery, 69(6), pp. 1899-1908.e1. doi: 10.1016/j.jvs.2018.10.065.
3.Harwood, A.E. et al. (2020) 'Exercise training for intermittent claudication: a narrative review and summary of guidelines for practitioners', BMJ Open Sport & Exercise Medicine, 6(1), p. e000897. doi:10.1136/bmjsem-2020-000897.
4.Lane, R. et al. (2017) 'Exercise for intermittent claudication', Cochrane Database of Systematic Reviews. Edited by Cochrane Vascular Group, 2017(12). doi: 10.1002/14651858.CD000990.pub4.
5.Pymer, S. et al. (2020) 'High Intensity Interval Training In patients with intermittent claudication (INITIATE): protocol for a multicenter, proof-of-concept, prospective interventional study', BMJ Open, 10(7), p. e038825. doi:10.1136/bmjopen-2020-038825.



Biography.

Dr Angela Kihara is a Kenyan Cardiovascular Rehabilitation Physiotherapist based in the United Kingdom. Her focus is on improving the scope of physiotherapy practice and research In Africa with a keen interest in cardiovascular health and rehabilitation. She has vast experience in hospital institutions, teaching, research, and sports related physiotherapy. She aims to introduce comprehensive cardiac rehabilitation programs in Kenya with the current burden and prevalence of the risk of cardiovascular diseases. These programmes will help standardize practice and to promote health and well-being in line with United Nations Sustainable Development Goal 3 (SDG 3).