

Effect of Dynamic Intermittent Pneumatic Compression (IPC) on Vascular & Functional Health Outcomes in Chronic Stroke.

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A Collaborative Research Project Between Academia, Clinicians and Industry

Introduction:

The evidence states that intensity and meaningful repetition is important for neuroplasticity and recovery. The purpose of this study was to assess the effect of using a home-based IPC device on vascular health and functional outcomes in individuals with chronic stroke.

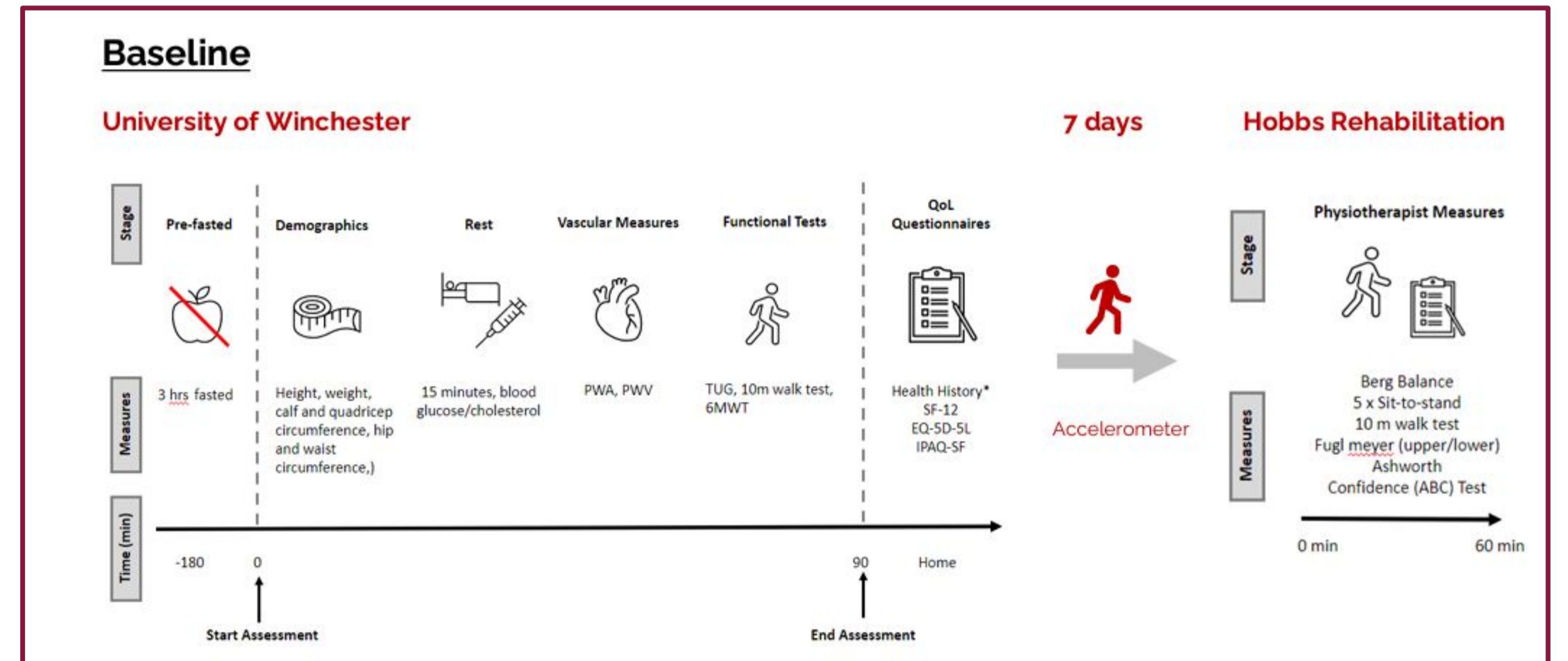


Figure 1: The assessment process

Objectives:

1. Assess feasibility and patient adherence and obtain feedback to using the G-MOVE SUIIT in a home-based environment.
2. Assess the effect of using the G-MOVE SUIIT on clinical, functional and vascular outcomes of stroke patients
3. Assess the effect of using the G-MOVE SUIIT in a home-based on quality of life and psychosocial outcomes of stroke patients

Results:

10m Walk:

- GMove group 21.66s to 18.94s (12.6% change)
- Control group 23.35s to 22.71s (2.7% change)

6 Minute Walk Test (6MWT)

- GMove group increased by 23m (14.8% change)

Activity Balance Confidence Scale:

- GMove group-8% increase
- Control group-4% increase

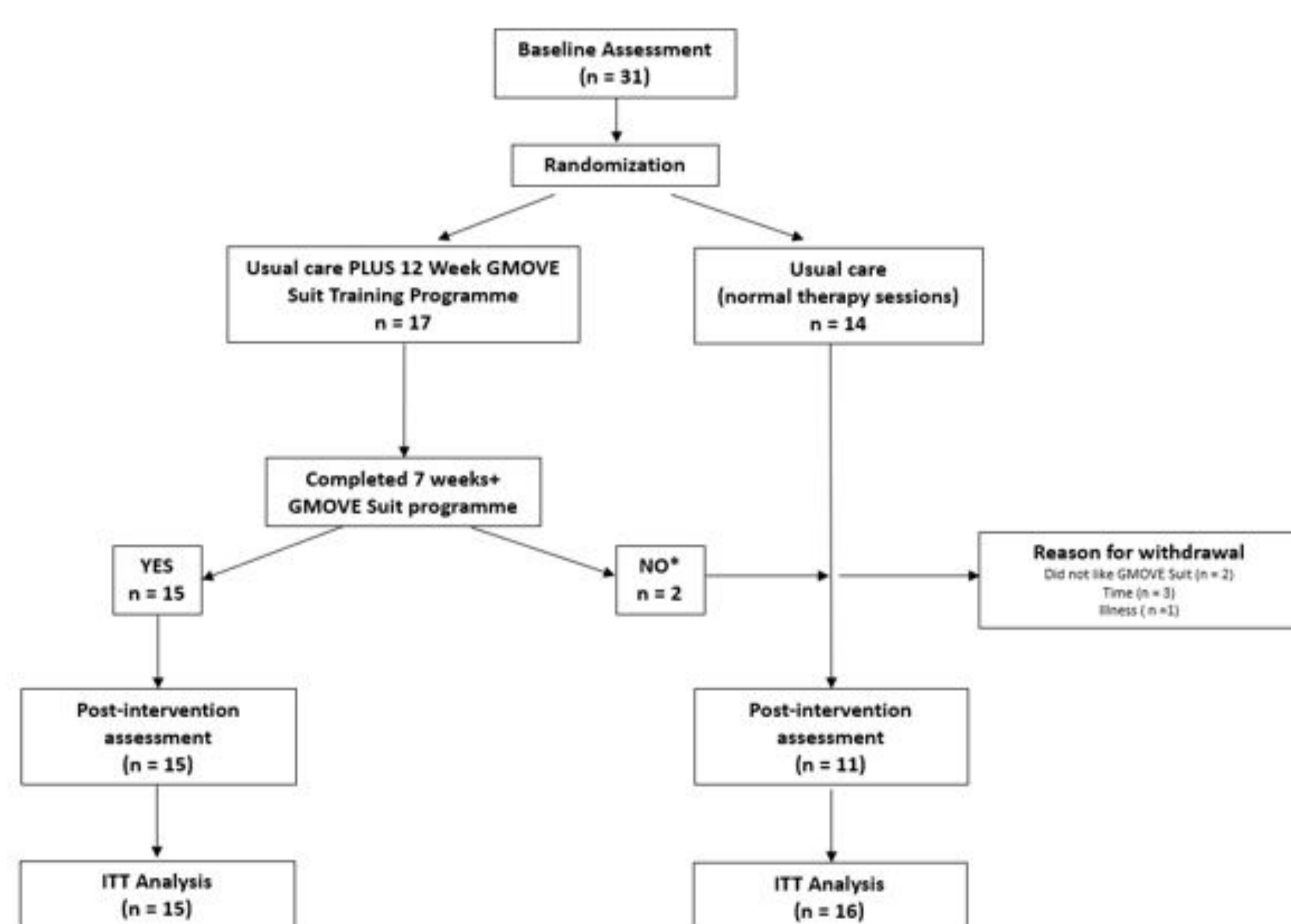
Vascular changes:

- 8mmHg reduction in peripheral systolic blood pressure
- 7 mmHg decrease in central systolic blood pressure
- 3-4mmHg change in diastolic blood pressure -peripheral and central
- 5 mmHg improvement in mean arterial pressure

Outcome	Condition	Pre	Post
SBP (mmHg)	GMOVE	147.4 ± 18.1	139.5 ± 15.6
	Control	139.1 ± 17.5	137.7 ± 16.4

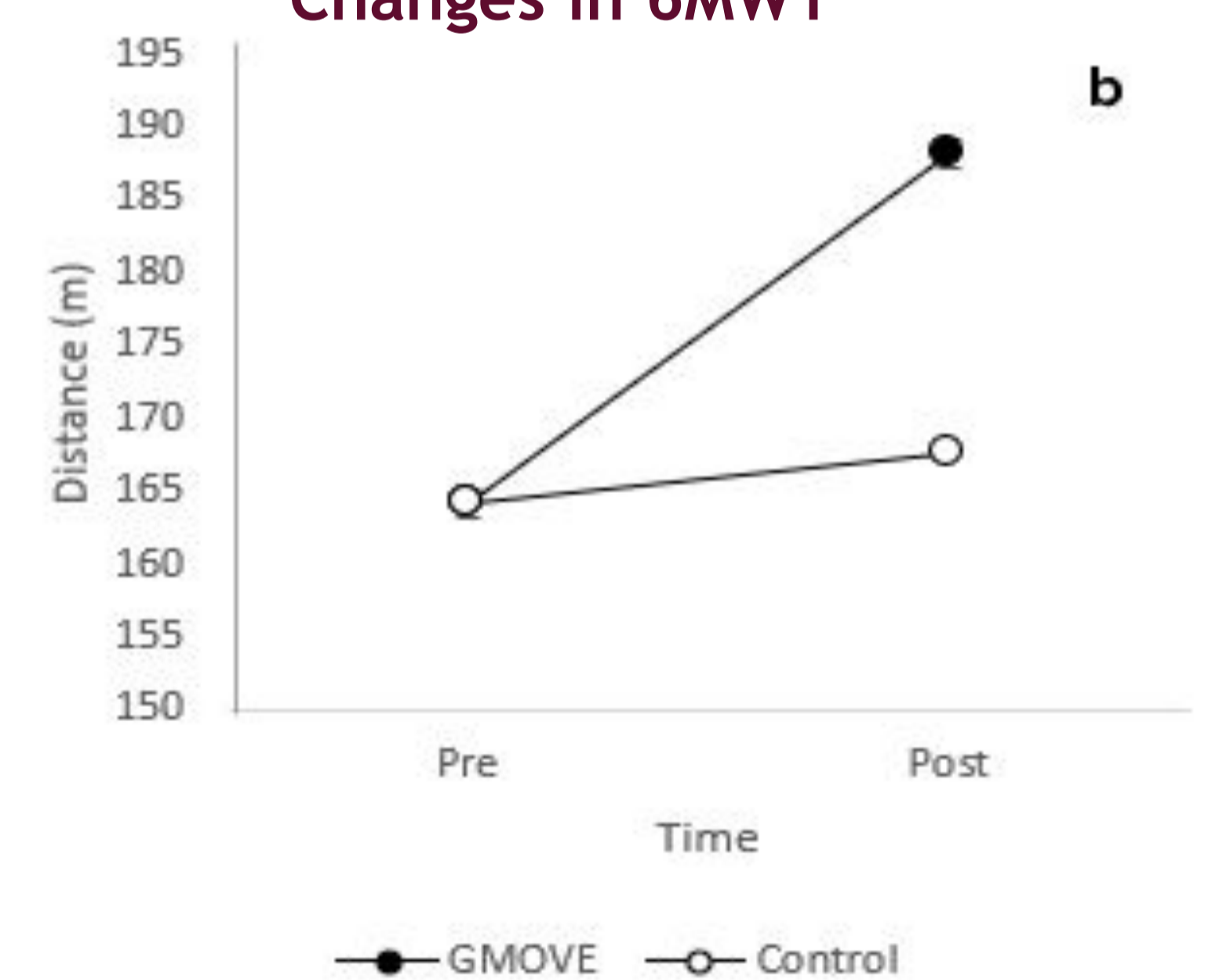
Study Design:

- 12 week trial period
- Control vs G move group
- Pre and post trial outcomes



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Changes in 6MWT



Conclusion:

Improvements seen in blood pressure and six-minute walk test distance, in combination with an increase in physical activity and reduced sedentary behaviours, are important positive findings when considering the use of IPC training for chronic stroke survivors.