FLOWpresso™ device improves subjective sleep and fatigue measures

A 6 week pilot study

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Introduction

Deep pressure stimulation therapy has previously been used to increase parasympathetic activity to elicit a relaxed and calming effect. The FLOWpressoTM is a novel device that delivers deep pressure stimulation combined with far infrared heat, with individually controlled chambers that inflate in a sequential cycle starting from the feet and moving up the legs to the torso, upper back, and arms.

Methods

A pilot study investigated the effects of weekly 40 min treatments of FLOWpressoTM on sleep and fatigue in stressed individuals free from contraindications (n=11) over a six week intervention period.

Sleep (PROMIS Sleep Disturbance – Short Form) and fatigue (Modified Fatigue Impact Scale) were assessed via questionnaire with components of physical, cognitive, and psychosocial fatigue.

All items are scaled so that higher scores indicated a greater degree of sleep disturbance or fatigue.

Results

Average sleep scores improved from 26.1 to 18.9 over the six week intervention period.

Specifically, T-score analyses showed that the percentage of individuals identified as having mild to moderate sleep disturbance decreased from 73% (8/11) to 9% (1/11).

Overall fatigue was decreased by 62%, with improvements observed across all three fatigue components.

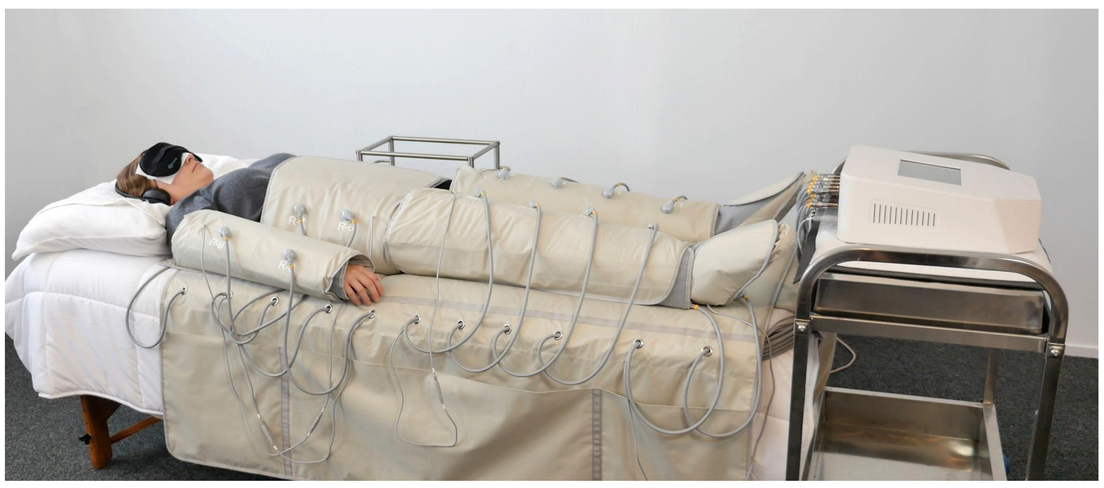

Figure 1: Flowpresso device

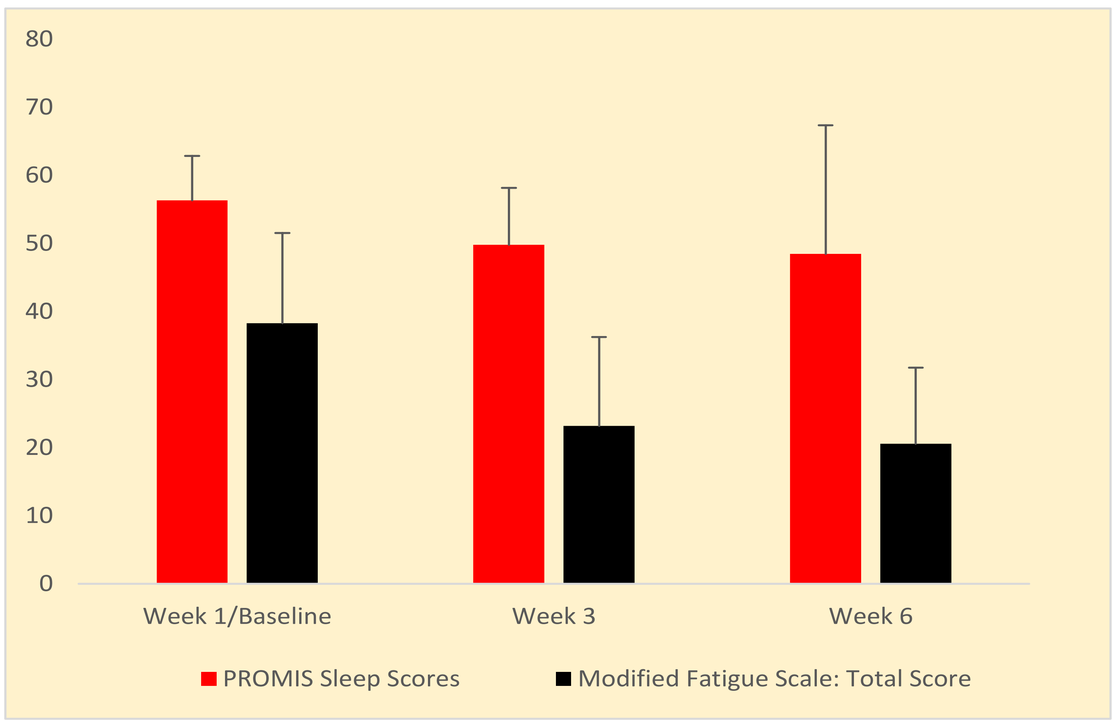

Figure 2: Subjective sleep and fatigue measures over the 6-week intervention period

Discussion

Given the known links between sleep and negative psychological well-being, as well as the widespread impact of psychological stress on the quality of life, and the onset of chronic physical disease, interventions that target sleep quality and psychological stress should be an integral part of public health strategies.

Sleep has been also identified as an important component of recovery in sports and exercise science, thus the FLOWpressoTM may have benefits in this context.

Conclusion

A combination of mechanical deep pressure stimulation and far infra-red heating was effective at alleviating fatigue and improving subjective sleep quality.