

Compression hosiery in the elderly reduces falls and is easily donned thanks to simple donning devices



BACKGROUND

Compression therapy in the elderly is an effective treatment for chronic venous insufficiency (CVI). However, it is met with skepticism due to the practicalities of applying & removing medical compression stockings (MCS).

This one-pager presents the promising findings of two studies that will motivate elderly people and their caregivers to use compression therapy.



STUDY 1: MCS & POSTURAL STABILITY¹

AIM

Elderly people are at greater risk of falls than younger people. This study investigated whether leg stimulation with MCS aids postural regulation in the elderly.

EXPERIMENTAL PROCEDURE

The effects of MCS on postural stability were evaluated on stable and unstable surfaces during a balancing task.

PARTICIPANTS: 46 participants; healthy; 65-84 years; male, n=23, female, n=23.
TREATMENTS: barefoot; placebo; 8-15mmHg MCS; 20-30mmHg MCS.
PRIMARY ENDPOINTS: Stabilometric parameters measuring somatosensory function. Their decrease is associated with a reduced risk of falling.

STUDY 2: MCS & DONNING DEVICES²

AIM

Donning & doffing medical compression hosiery is extremely difficult for elderly patients. This study examined whether donning devices facilitate donning in the elderly.

EXPERIMENTAL PROCEDURE

Successful donning of MCS was analyzed either with or without donning devices.

PARTICIPANTS: 40 patients; >65 years; severe CVI (C4-C6); male, n=17; female, n=23.
MCS: one 40mmHg; two superimposed 20+20mmHg.
DONNING DEVICES: various, including EasySlide, EasySlide Caran (SIGVARIS), or none.
PRIMARY ENDPOINTS: Complete donning and correct positioning of MCS; subjective patient evaluation.



STUDY 1: RESULTS

MCS reduced the levels of stabilometric parameters (especially on an unstable surface). **MCS had an immediate positive effect on somatosensory function and postural regulation.**

WITHOUT MCS



Barefoot

WITH MCS



8-15mmHg & 20-30mmHg

MCS significantly improved postural stability & reduced falls

STUDY 2: RESULTS

Donning devices significantly improved donning success. SIGVARIS devices were among the most successful. Donning with a device was rated significantly better than without.

WITHOUT DONNING DEVICE



29 patients successful donning
11 patients unsuccessful donning

WITH DONNING DEVICE



37 patients successful donning
3 patients unsuccessful donning

Improved donning success +20%



TAKE-HOME MESSAGE

Wearing knee-length **compression socks** could be included as a viable intervention in addition to other forms of balance training to **reduce the risk of falling in elderly people.**

Donning devices should be mentioned by physicians to encourage elderly patients and their caregivers **to wear and comply** with compression therapy.

References: (1) Immediate effects of wearing knee length socks differing in compression level on postural regulation in community-dwelling, healthy, elderly men and women. MT Woo, K Davids, J Liukkonena, JY Chowd, T Jaakkola. 2018. Oct;66:63-69. doi: 10.1016/j.gaitpost.2018.08.011. Epub 2018 Aug 16. (2) Donning devices (foot slips and frames) enable elderly people with severe chronic venous insufficiency to put on compression stockings. K Sippel, B Seifert, J Hafner. 2015. Feb;49(2):221-9. doi: 10.1016/j.jeivs.2014.11.005. Epub 2015 Jan 8.