

# DMO dorsiflex sock

This study on the sock was completed as part of an MSc by Seline Bridges MSc MCSP.

**Background and Purpose:** This study aimed to evaluate the effects of dynamic Lycra socks on function, gait performance and energy expenditure in children with cerebral palsy.

**Method:** Six participants, aged 6 years to 14 years (male = 3, females = 3) and with a diagnosis of cerebral palsy, were recruited. A repeated measures design was used, with participants being tested with the Gross Motor Function Measure (GMFM), the Edinburgh Visual Gait Score (EVGS), the Physiological Cost Index (PCI) and the 10-metre walking test before and after intervention. Each participant received a baseline test, was then provided with lycra socks and was re-tested 6 weeks later. During this period participants used their socks for 6-8 hours a day.

**Results:** Improvements in function were seen on one or both dimensions of the GMFM in five out of six children and the five children showed improvement in their EVGS. However these results were not significant. PCI and 10-metre walking tests results suggested that children had significant changes ( $p > 0.05$ ) with immediate use of the socks but no real change in barefoot at the end of 6 weeks.

**Conclusion:** In this population, participants showed improvements in function and gait performance when wearing the lycra socks but this was not the case when the socks were not in use.

NB. the style of sock has been slightly modified since this research to include 20° dorsiflexion into the base pattern. This further enhances the effect.

Ref: The effects of dynamic socks in ambulant children with cerebral palsy: a pilot study.

Bridges S, Mayston M, Peirson J (2004)

MSc in Neurophysiotherapy 2003/4 University College London

clinical information and case studies