DMO leggings and shorts

Ref: Effects of dynamic Lycra® orthoses on children with diplegic cerebral palsy: a series of replicated single case experiments.

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Background & Purpose: This Level 1 exploratory study aimed to establish proof of concept of the effects of dynamic Lycra Orthoses (DLOs) on the gait of children with spastic diplegic cerebral palsy.

Method: Replicated single case experiments employing an ABA methodology were carried out on 8 subjects (median age 5.5 years, range 3-13 years; 4 girls/boys) utilising quantitative / qualitative data collection. Outcome measures were: ten metre walking test (10MWT); physiological cost index (PCI); visual analogue scale (VAS) scoring of perceived gait changes; functional mobility changes using Patient Specific Functional Scale (PSFS); subject/carer perceptions recorded in daily diaries.

Results: Results identified following analysis of quantitative data indicated a treatment effect derived from the orthoses. Findings could be collaborated by participant subjective impressions and comments. Statistically significant ($p<0.05$) intervention-related improvements in gait velocity and gait consistency were identified respectively in 5/8 and 4/8 subjects. Power calculations supported the feasibility of a larger study to further investigate this orthotic intervention.

Conclusion: This study indicates that DLO leggings can confer beneficial effects on the gait of some children with spastic diplegia resulting from CP. These findings have implications for orthotic intervention with this subject group.