

Dynamic Lycra Orthoses as an adjunct to upper limb rehabilitation after stroke: A feasibility study and trial

Researchers

Dr Jacqui Morris, School of Nursing & Midwifery, University of Dundee

Professor Thilo Kroll, Social Dimensions of Health Institute, Universities of Dundee & St Andrews

Professor Peter Donnan, Division of Population Health Sciences, University of Dundee

Gillian Crighton, NHS Tayside

Lucy Wedderburn, NHS Tayside

Rosa Mendes, NHS Tayside

Background

Only 15% of stroke survivors regain full upper limb (UL) function by 6 months. Intensive, supervised UL task training facilitates recovery but intensive rehabilitation is rarely available. This study will evaluate dynamic lycra orthoses (DLO) as an adjunct to UL rehabilitation. These tailor-made lycra garments, which are worn for up to 8 hours per day provide biomechanical correction of stroke related movement and sensory impairments without the need for direct therapist supervision. They may therefore augment effects of usual physiotherapy and occupational therapy and self-directed practice. However evidence of effectiveness is scant and which survivors benefit is unclear. This two-stage study will examine feasibility, acceptability and potential effectiveness for UL recovery outcomes of DLO as an adjunct to usual rehabilitation therapy, and examine feasibility of undertaking a full scale trial. The intervention may provide an effective adjunct to usual therapy and to improve recovery and quality of life for stroke survivors.

Aims of Study

Study Aims Phase 1

1. To examine perceived feasibility, acceptability, and usefulness of the DLO with survivors, caregivers and rehabilitation staff, to facilitate modelling of the DLO intervention for use in a feasibility randomised controlled trial.
2. To evaluate efficiency and cost of DLO provision from the two dominant manufacturers to inform selection of the appropriate manufacturing company for DLO provision for a pilot trial.

Study Aims Phase 2

1. To assess the feasibility of conducting an effectiveness trial of the DLO in

rehabilitation

2. To assess the potential effectiveness of the UL DLO provided as an adjunct to rehabilitation on: UL sensory and motor impairments, UL activity limitation, activities of daily living and quality of life compared to those receiving usual rehabilitation only in order to select a primary outcome measure and establish sample size for a full scale effectiveness trial.
3. To identify appropriate indicators of cost effectiveness of the UL DLO in usual rehabilitation

Funding

This project has been funded by the Chief Scientists Office

Contact

For more information about this project contact Jacqui Morris
j.y.morris@dundee.ac.uk