

Abstract Title: Does improved physical function following a NuStep® seated all extremity exercise intervention reduce the fear of falling and improve quality of life in older adults with fear of falling living in community care homes?

Background:

Decreased physical activity associated with fear of falling invokes a dangerous cycle of more fear, reduced activity and falls. NuStep is a seated all-extremity recumbent cross trainer which provides safe and efficient exercise training.

Hypotheses/Objectives:

The objectives of this study are to:

- i. improve physical function and mobility of older adults living with a fear of falling with a NuStep;
- ii. assess change in self-reported fear of falling and quality of life before and after the exercise intervention; and
- iii. determine whether there is a relationship between exercise-related improved physical function/mobility with change in fear of falling and/or quality of life of older adults living with a fear of falling.

Proposed Methods:

A longitudinal cohort intervention study design. Subjects (n=15) will be older adults living in community care homes. Baseline and post-intervention measures will include physical function, mobility, fear of falling and quality of life. NuStep will be used to provide an exercise training intervention to induce a clinically meaningful change in performance on measures of function and mobility. Functional data will be analyzed using repeated measures ANOVA and appropriate statistics to determine any relationship between improved function/mobility and fear/quality of life.

Discussion/Future Applications

Physical activity that improves function and/or mobility may be an important influence on managing the adverse effects of fear of falling. The NuStep offers a safe, effective method of exercise training which may provide additional benefits than just improved physical function including reduced isolation, improved self-confidence and enjoyment.