Lifestyle

Optimisation of Exercise and Diet in People over 60 years old: Muscle and Quality of Life Responses

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The Investigation

Background & Objectives
- Physical activity in old age may delay muscle wasting.
- Physical activity is of paramount importance for maintaining the functional abilities needed to carry out daily tasks.
- Poor diet influences both metabolic and protein synthetic pathways culminating in lethargy and muscle wasting.

Our objectives are therefore:
1. To study the influences of lifestyle factors (exercise and nutrition) on functional ability
2. To obtain a better understanding of the key physiological and hormonal responses to either or the two combined.

Plan
Participants: A group of volunteers aged 60-90 years (n=48), will be randomly assigned to one of four groups: a) nutritional advice, b) nutritional advice + supplements, c) nutritional advice + exercise, or d) nutritional advice + exercise + supplements.

Testing: At the pre- and post-intervention phases of the study we will incorporate measures of a) blood and urine hormones, b) functional and structural assessments of muscle and c) assessments of quality of life.

Resources
The project received funds of £28,245 from SPARC. Lucozade was kindly donated by GlaxoSmithKline.

Potential Benefits

For older people
- Nutritional advice should improve the hormonal profiles of the participants (e.g. more energy and better mood as a consequence of improved diet) and may hence improve their quality of life.
- These responses should be enhanced with exercise.

For society
- Our study has the potential of clarifying how to co-ordinate physical daily activities and nutrition.
- Interventions may maximise the beneficial effects on the muscular and hormonal systems.
- Findings have major implications and will be widely disseminated.

Mentors, Collaborators and Partners:
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- GlaxoSmithKline

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