

University of Wollongong

Research Online

Faculty of Science, Medicine and Health -
Papers: part A

Faculty of Science, Medicine and Health

1-1-2013

Low-intensity exercise improves functional fitness and quality of life in community-dwelling sedentary older adults

Chaiya Noradechanunt
University of Wollongong, cn165@uowmail.edu.au

Herbert Groeller
University of Wollongong, hgroell@uow.edu.au

Anthony Worsley
Deakin University, tworsley@uow.edu.au

Follow this and additional works at: <https://ro.uow.edu.au/smhpapers>



Part of the [Medicine and Health Sciences Commons](#), and the [Social and Behavioral Sciences Commons](#)

Recommended Citation

Noradechanunt, Chaiya; Groeller, Herbert; and Worsley, Anthony, "Low-intensity exercise improves functional fitness and quality of life in community-dwelling sedentary older adults" (2013). *Faculty of Science, Medicine and Health - Papers: part A*. 1551.
<https://ro.uow.edu.au/smhpapers/1551>

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

Low-intensity exercise improves functional fitness and quality of life in community-dwelling sedentary older adults

Abstract

Abstract of paper that was presented at The 12th National Conference of Emerging Researchers in Ageing.

Disciplines

Medicine and Health Sciences | Social and Behavioral Sciences

Publication Details

Noradechanunt, C., Groeller, H. & Worsley, A. (2013). Low-intensity exercise improves functional fitness and quality of life in community-dwelling sedentary older adults. *Enabling Active Ageing Conference Proceedings: The 12th National Conference of Emerging Researchers in Ageing* (pp. 61-61). Australia: Emerging Researchers in Ageing Australia.

LOW-INTENSITY EXERCISE IMPROVES FUNCTIONAL FITNESS AND QUALITY OF LIFE IN COMMUNITY-DWELLING SEDENTARY OLDER ADULTS

NORADECHANUNT Chaiya¹, GROELLER Herbert¹, WORSLEY Anthony²

¹School of Health Sciences, University of Wollongong

²Centre for Physical Activity & Nutrition Research, Deakin University

Evidence suggests that older people can gain significant health benefits not only from moderate- to vigorous-intensity exercise but also from low-intensity physical activity. However, the comparative efficacy of structured low-intensity range of motion and balance exercise regimens to improve functional fitness (FF) and quality of life (QoL) in sedentary elderly has received limited investigation. This study investigated the effects of two 12-week structured low-intensity flexibility and balance exercise regimens, Thai Yoga and Tai Chi, on components of FF and QoL in adults aged over 60. Thirty-nine participants apparently healthy yet sedentary community-dwelling older adults (29 women, mean age 67), were randomly allocated and counter-balanced to either Thai Yoga, Tai Chi, for 12 weeks, twice weekly for 90 minutes each session, or a Control group who received telephone counselling. FF was evaluated using the Senior Fitness Test battery. QoL was assessed using self-report measures that included the 36-item Short-Form Health Survey (SF-36), the Centre for Epidemiological Studies of Depression (CES-D), the Physical Activity Scale for the Elderly (PASE), and the Physical Activity Enjoyment Scale (PACES). Outcome measures were assessed at baseline, six, 12, and 24 weeks. The data were analysed using repeated-measures ANOVA. Despite the low-intensity of the exercise regimen, Thai Yoga participants significantly improved upper-body strength (28.8%), lower-body strength (28.4%), upper-body flexibility (64.1%), lower-body flexibility (103.8%), agility and dynamic balance (14.6%), aerobic endurance (11.3%), SF-36 vitality dimension (17.7%), and PACES (24.0%) with the beneficial effects were maintained 12 weeks after completion of the exercise regimen. These data provide the first objective evidence that low-intensity flexibility-balance exercise, has significant beneficial effects on the physical and psychological functioning in sedentary older adults, and that these benefits are comparable to those of multicomponent traditional exercise programs. The findings suggest that older people can improve their health and well-being through low-intensity exercise regimens.

PROTEIN SUPPLEMENTATION MAY IMPROVE PHYSICAL FUNCTION IN OLDER PEOPLE

KONG Jielan¹, DAWSON Beryl², O'LEARY Fiona¹

¹University of Sydney

²Balmain Hospital, Sydney Local Health District

Sarcopenia is the involuntary loss of muscle mass associated with ageing and is a recognized geriatric syndrome which affects the quality of life and cost of care of the elderly. Protein supplementation improves muscle strength and function in well, older subjects undergoing resistance training. However, many elderly are unwell and unable to participate in exercise and the usefulness of protein supplementation on muscle mass and function in this group is not known. The aim of the study is to assess the evidence for the use of supplemental protein in the treatment and prevention of sarcopenia in older people with chronic disease or in elderly who are unable to perform resistance training exercises. A literature search of eleven databases was performed using keywords related to elderly, protein intake and muscle strength and function. All randomized controlled trials assessing the effect of essential amino acids (EAA) and branched chain amino acids (BCAA) published between 1990 and 2013 were included. The American Dietetic Association quality tool was used to grade study quality and quality assessment, and data abstraction was undertaken by 2 researchers. Fifteen trials were identified with a total of 1148 subjects with mean age over 60 years. Ten trials were of positive quality. Study limitations included inadequate reporting of inter-current treatments, including dietary intake and exercise. Six of the studies assessed frail or sarcopenic elderly with or without chronic disease and three of four studies using EAA showed significant improvement in muscle strength, physical characteristics or physical function in the supplemented participants. In contrast, five trials using BCAA in elderly subjects with or without liver disease found no effect. In conclusion there is some evidence that EAA supplementation improves physical function in the elderly, and this may provide an additional treatment method to reduce the functional decline associated with age.