



A QUESTION OF BALANCE

BY SHEENA GAWLER AND DAWN SKELTON

THE ORIGINS

Prof. John Campbell and Dr. Clare Robertson, based in New Zealand at the University of Otago, are the authors of the OEP. They devised a programme of strength and balance exercises to help prevent falls among older people. The efficacy of the programme was tested in a series of four randomised controlled trials from 1997 to 2005 (1,2,3,4) and a recent trial involved a group exercise programme by the University of Sydney (5).

STRONG EVIDENCE BASE

These trials involved over 1,000 older participants who performed the strength and balance exercises three times a week for a year in their own homes (or 6 months in a group) with guidance on exercise technique from a trained professional (physiotherapist; nurse trained by a physiotherapist; exercise instructor). The studies showed an overall decrease in falls by about 35%. Although a limited number of other research studies have shown a higher percentage decrease in falls following strength and balance exercise, these have not involved such high numbers of participants nor have the exercises been "put to the test" in such a high number of trials, therefore the OEP is considered to be the jewel in the crown of falls exercise research.

It was this that led to Later Life Training to contact the authors and

collaborate with them to provide training courses for health and exercise professionals resulting in The Otago Exercise Programme Leader's Course.

FALLS AND FRAILITY

Falls and consequent injuries are a huge problem in the older UK population (6). There are currently over 11 million people aged 65 and over and nearly 30,000 aged over 90 years. Over a third of over 65 year olds fall every year and a staggering half of all over 85 year olds (7). Three quarters of people living in residential care fall repeatedly every year (8). There are huge associated costs to both the individual and the health service. For example, 10% of all ambulance service call outs are for people aged 65 and over who have fallen but nearly half of these are not taken to hospital. These older people are not injured but simply lack the ability to get themselves up from the floor (7). Commonly this is due to poor strength and flexibility, particularly in their legs. These components of fitness, along with balance, are targeted in the OEP. The OEP can potentially reduce

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The Otago Exercise programme (OEP) is a supported home exercise programme designed to help increase the strength and balance of older people in order to prevent falls. This article describes a highly successful collaborative project between the authors of the New Zealand based OEP and Later Life training to implement the programme in areas of the UK

the number of ambulance call outs and the associated financial cost but also improve the quality of the older person's life via reducing fear of falling and improving their confidence and ability to perform daily tasks. This may, in turn, broaden their social activities and reduce isolation and loneliness. Recent work suggests group OEP exercise also improved cognitive function and quality of life among older participants (5).

STANDARDISED DELIVERY

Although the OEP is available to download from the internet, LLT wanted to achieve higher standards of delivery of these exercises in terms of exercise technique, and therefore safety and effectiveness of the programme across national falls and exercise services via effective training of health and exercise professionals. The partnership between LLT and the OEP authors was therefore developed, with LLT designing

the training package and writing and producing the training course materials. Much expertise was gleaned from the OEP authors not only with regard to the implementation of the intervention itself but more pertinently in terms of training OEP leaders, as they had originally trained nurses for the 2001 studies.

WHO IS THE COURSE FOR?

The first Otago Exercise Programme Leader's Course pilot was taught in Dudley in 2006 and the second in Cambridge in early 2007. Since then, and following some tweaks to the course and course literature after feedback from both pilots, we have successfully delivered 17 courses with a total of 238 students and a 95% pass rate at assessment in 2007/8. Professionals accessing the training include physiotherapist and rehabilitation assistants, occupational therapy assistants and technical instructors, specialist nurses, exercise instructors, sports coaches, social care workers, and sheltered housing wardens. However this list is not exhaustive and we welcome applications from others. Carers and peer mentors who are keen to help maintain independence and social inclusion would be ideal OEP leaders. Ideally all OEP trained leaders would have access to advice /supervision by a physiotherapist but some models in the UK have linked into occupational therapists and postural stability instructors (NVQ Level 4 specialist exercise instructors) for advice on progression, tailoring exercises or other issues that the OEP leaders may have with their clients.

COURSE CREDENTIALS

The course was included in the qualifications framework this year and is recognised by the Register of Exercise Professionals at Level 2 allowing exercise professionals to gain their Continuing Professional Development (CPD) points via completion of the OEP Course. In addition, the OEP course is currently undergoing the process of endorsement for the Support Workers Foundation Courses and CPD with the Chartered Society of Physiotherapy.

Timetable and exam

The course is delivered over four days. The first two are generally consecutive with the third normally held two weeks

later to allow for some consolidation of learning via homework (mainly practising the exercises). Each course day involves a mixture of theory and practical but the emphasis is on the practical so students have ample time to become familiar with and practise leading the exercises. Assessment of candidates occurs on a separate day and involves the completion of some worksheets and teaching five of the OEP exercises to peers.

WHO CAN BENEFIT?

The OEP provides a natural intermediary exercise opportunity for older people who are functionally more able than those who attend chair-based exercise sessions but who are probably too frail and/or unsteady to participate in a general older person's exercise session (Fit 50s and 50 Plus type sessions usually provided by leisure services and independent exercises instructors). Most importantly, the OEP includes balance exercises in combination with strength exercises that target the leg muscles. This combination is known to have the best effect on an older person's balance, and therefore falls risk, so this programme is highly suitable for older people who are already falling or are fearful of falling. Fear is present in more than 50% of fallers and, interestingly, up to 40% non-fallers (7). It is a risk factor for falls in its own right. The OEP is also very flexible in where the older person can perform their exercises. The original OEP was performed in the person's home on days and at a time that was convenient for the individual but the OEP is now also offered as group exercise sessions for those who prefer the social and motivational aspects of exercising with others.

EQUIPMENT

The only equipment required is a set of ankle cuff weights for each participant. It is usually recommended that they start with 1kg weights and build up over time. Some ankle weights can be adjusted in weight (from 1-3 kg) by the addition or removal of tiny sandbags.

CONSISTENCY OF PROVISION

Falls and exercise were put firmly at the top of the public health agenda in 2001 with the advent of the National Service Framework for Older People

RECENT WORK SUGGEST GROUP OEP ALSO IMPROVED COGNITIVE FUNCTION QUALITY OF AND LIFE AMONG OLDER PARTICIPANTS

- (9). This has resulted in a growth in falls services similar to the earlier growth in cardiac rehabilitation services. The UK leads the rest of Europe in terms of falls prevention services (10). However, in the British Geriatric Society Survey of Falls Services 2004 (11),
 - 51% of exercise programmes had a strength and balance component,
 - 8% had strength OR balance alone
 - and shockingly, 41% had neither.

Where is the evidence base behind these services? With such a strong evidence base, the OEP is undoubtedly a gold standard intervention that, along with the OEP training course, will ensure consistency and excellence in





provision across the UK. The successful components of the OEP that have been identified and underpin the evidence base are:

- The provision of a sheet of exercises
- The continuous progression of challenge of the exercises

- The regular home visits and telephone support.

A MODEL SERVICE

Cambridgeshire Falls Prevention Services

Cambridgeshire Falls Prevention Services has, to date, held five OEP courses training approximately 75 OEP leaders. These include 50% health care professionals (mainly therapists and therapy assistants) and the other 50% are exercise professionals who have previously attended the Chair Based Exercise Leader's Course. Following the OEP training each exercise professional is currently running weekly, community-based OEP group sessions that cost each participant £2 per class. The sessions are subsidised by the City Council's "Forever Active" programme. The participants can keep coming to class for as long as they wish to (ie. no discharge). In addition, there are future plans to set up more challenging sessions for participants to graduate to providing a seamless provision of exercise opportunity that all services strive to achieve.

The majority of health care professionals use the OEP as a home exercise programme delivered in the older person's home, however, some physiotherapists also provide once-weekly, hospital-based group sessions. The participants are from the wards and are additionally encouraged to perform the OEP balance exercises on a daily basis. This is the brainchild of Simon Hanna, clinical exercise specialist for Cambridgeshire Falls Prevention Services, who advised that one exercise card was attached to the end of each bed on the ward so that the patients, when encouraged to do so by nurses, simultaneously get up and perform the exercises in a circuit-style session by moving from one card at the end of a bed to the next. Their exercise technique is monitored by the physiotherapist in the group session. On discharge from hospital each patient is referred into one of the community sessions.

A FINAL WORD

We cannot prevent all falls, but we can prevent the loss of quality of life

by following the evidence base.

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LaterLife Training

For professionals planning to progress their career in exercise and health

Later Life Training specialises in training exercise and health professionals to safely and effectively prescribe and instruct (or lead) exercise to frailer older people with a history or high risk of falls.

The Department of Health funded the development of these programmes.



- Exercise for the Prevention of Falls and Injuries - Specialist Postural Stability Instructor (Level 4)- with CPD days available
- The Otago Home (Strength and Balance) Exercise Leader - Falls Prevention
- The Chair-based Exercise Leader - with CPD days available
- The Senior Peer Activity Motivator
- "Motivate Me"

Each training course combines a taught component, with home study and practical experience.

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