Research letters


8. Ettinger B, Black DE, Thompson SIR—Frequent or recurrent fallers are more likely to have chronic medical conditions and physiological impairments, exhibit functional decline and have poor outcomes, than single fallers [1]. Fractures are also more common in recurrent fallers than single fallers [2]. Modern surgery for hip fracture can no longer improve on its outcomes [3] and therefore, effective prevention of falls [4, 5] is the key to preventing disability and death. There is still no published evidence that a single intervention (tailored group exercise) can prevent falls or injuries in a high risk group of frequent fallers.

This randomised controlled trial (RCT) aimed to investigate the impact of a 36 week individualised and tailored group and home exercise intervention, compared with a control intervention, in reducing falls and injuries in community-dwelling, independent-living, frequent falling women aged 65 years and over. Preliminary results have been published in abstract form [6]. The primary outcome was falls and fall-related injuries. The secondary outcome was the number of frequent fallers who had died, had moved into residential care or were in hospital compared with the group they were in.

Methods

Women aged 65 years or over, living in their own home without help, and with a history of three or more falls in the...
Subjects with known medical reasons for their falls were not excluded. All subjects’ GPs gave consent for their patients to take part in the exercise programme. Approximately 30% of those eligible and invited to take part enrolled in the trial. The main analysis of falls data was performed on an intention to treat basis, on all who completed the intervention or control group. The numbers of falls in the two groups were compared using negative binomial regression models, adjusting for baseline falls [10]. Time at risk was included in person-weeks, the intervention and follow-up periods for this analysis being combined. The number needed to treat was calculated from the proportion of controls and exercisers who did not fall during follow-up.

**Results**

The mean (SD) age of the subjects was 72.8 (5.9) years. The average number of non-returns on the falls diaries was eight (four ‘fortnightly’ diaries), which corresponded with either holidays or injurious falls. There were no significant differences in the baseline assessments or fall rates between groups (Table 1).

Of those randomised to the exercise group of the trial, only 17% refused with another 10% dropping out of the exercise sessions after initial entry. There were no adverse events during the course of the exercise sessions.

There was a total of 743 falls in both groups over the falls data collection period, with 293 (39.5%) occurring at home, and 20 (2.7%) leading to a fracture (including two hip fractures, one in each group). 37% cited a loss of balance or a change in level to be the cause of the fall, 49% cited a slip or trip, 7% of falls outside the person’s home occurred on public transport and 10% on stairs.

For further details on the coding please see Appendix 1 in the supplementary data on the journal website (http://www.ageing.oxfordjournals.org/). The information from the diaries was recorded by an observer blinded to the subject’s group who also contacted subjects if diaries had not been returned for two weeks or more.

The controls were given a set of home exercises (consisting of seated warm-up, mobility, flexibility and cool-down exercises) to do twice-weekly for their intervention. This programme was considered unlikely to improve the components of fitness necessary to maintain postural stability.

The exercisers had pre-exercise assessments to assess individually asymmetry and specific problems with balance, strength and flexibility. They attended 36 weeks of Falls Management Exercise (FaME) [7] classes once a week for an hour, taken by qualified exercise-for-the-older-person instructors, with additional FaME programme training (and regular quality assurance). The OTAGO exercises [8] were core to both the home (twice a week for 30 minutes) and group programme but were progressed to more challenging balance exercises during the group sessions. The exercise classes were balance specific, individually-tailored and targeted training for dynamic balance, strength, bone, endurance, flexibility, gait and functional skills, training to improve ‘righting’ or ‘correcting’ skills to avoid a fall, backward-chaining and functional floor exercises. A full description of the exercise programming and progression has been published [7]. Hip protectors (SafeHip, Robinson’s Healthcare, UK) were supplied for wear during the exercise sessions. Subjects also had a set of home exercises (20–40 minutes duration), aimed at reducing asymmetry [9] in strength of the lower limbs, to perform twice a week. A copy of these exercises is available from the author.

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Table 1. Baseline characteristics of subjects

<table>
<thead>
<tr>
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<th>Exercisers</th>
<th>Controls</th>
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</thead>
<tbody>
<tr>
<td>Number of women</td>
<td>50</td>
<td>31</td>
</tr>
<tr>
<td>Age (years)a</td>
<td>72.7 (5.8)</td>
<td>73.2 (5.4)</td>
</tr>
<tr>
<td>Weight (kg)a</td>
<td>65.6 (9.9)</td>
<td>67.5 (10.7)</td>
</tr>
<tr>
<td>Height (m)a</td>
<td>1.57 (0.05)</td>
<td>1.57 (0.05)</td>
</tr>
<tr>
<td>Number of medications</td>
<td>4 (0–9)</td>
<td>4 (0–8)</td>
</tr>
<tr>
<td>Number using walking aids (canes) (%)</td>
<td>9 (18.0%)</td>
<td>7 (19.4%)</td>
</tr>
<tr>
<td>Number able to rise from the floor unaided (%)</td>
<td>18 (36.0%)</td>
<td>13 (41.9%)</td>
</tr>
<tr>
<td>Mean fall rate (falls/week)a</td>
<td>0.09 (0.06)</td>
<td>0.09 (0.06)</td>
</tr>
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</table>

All data as mean (SD) except bmedian (range) and % where indicated. There were no significant differences between the groups.
Exercise can also help reduce fear, depression and associated avoidance of activities [12].

This trial provides generalisable evidence that individually, progressive, balance and power necessary to remain independent [7].

This RCT shows that tailored, balance specific group and home exercise can prevent falls in people at high risk. The evidence base is changing faster than guideline developers can assess it, with the risk that any clinical guidelines, such as the NICE guidelines on falls prevention [15] may rapidly become out of date as soon as they are published.

Key points
• Community-dwelling women aged 65 years or over with a history of frequent falls, undertaking a 36 week individualised balance and strength retraining group and home exercise programme (FaME) were significantly less likely to fall than the women who did not take part in FaME. This was particularly evident in the follow-up period.
• Women with a history of frequent falls generally have poor outcomes. Taking part in the FaME exercise programme lessened the chances of hospitalisation, nursing home admission or death.
• Long-term, regular, tailored, strength and balance exercise should be a referral option for any evidence-based interdisciplin ary falls prevention programme and should be led by trained, specialist instructors with regular quality assurance.

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Conflicts of interest

None.

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Research letters

Age-related differences in smoking cessation advice and support given to patients hospitalised with smoking-related illness

SIR—Cigarette smoking is a major public health concern accounting for 17% of all deaths and over 80% of deaths from chronic obstructive pulmonary disease (COPD). Much of the morbidity and mortality from smoking is preventable through effective smoking cessation. The British Thoracic Society Guidelines on smoking cessation highlight the effectiveness of smoking cessation strategies in terms of life-years gained[1, 2], and recommend that opportunistic advice should be given in community and hospital settings, with specialist service support if required. They also highlight the need to document provision of advice in the patients’ medical records.

One cessation strategy of recent interest is the ‘teachable moment’, a short-term opportunity, as brief as 10 minutes, enabling health professional/patient interaction whereby smoking behaviour can be influenced[3]. However, in the acute medical setting, clinical pressures may result in inadequate time for such support to be provided.

Benefits from smoking cessation can be obtained regardless of age (certainly up to 80–85 years, particularly in women) or presence of disease, and mainly comprise morbidity compression including reduction in progression of COPD, reduced cough/sputum, and reduced risk of ischaemic stroke and myocardial infarction within 2–3 years of cessation[4–7].

There is no consistent association between age and stage of readiness to quit smoking although, of those who plan to quit, the elder age group are most likely to succeed over the subsequent three months [8, 9]. Patient insight into association between their illness and smoking behaviour is also an important factor in successful cessation. Although the elderly are more likely to underestimate smoking risks, those older patients who see the connection