

# An overview of best practice for falls prevention from an occupational therapy perspective

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## Introduction

The purpose of occupational therapy is to provide 'practical support to people ... to do the things they need or want to do. It enables people of all ages to carry out practical and purposeful activities' (or 'occupations').<sup>1</sup> This brief paper provides an overview of the ways in which occupational therapists can help older people at risk of falls, with a focus on those living in the community.

## Background

Around 30% of people aged 65 years and over living in the community fall each year, and this figure rises with age.<sup>2,3</sup> Whilst less than 10% of falls result in fractures, around one in five falls require medical attention.<sup>4,5</sup> In addition, there are a range of other consequences which can significantly impact on the life of an older person, including fear of falling, limitations in the activities of daily living, and admission to supported accommodation.<sup>6</sup> Consequently, the prevention of falls in older people has become a high priority for health services both in the United Kingdom and internationally. Although individual risk factors for falls can vary, particularly with some specific subgroups (see final section), there is a general consensus that a combination of regular strength and balance exercises and environmental modification reduces the rate of falls and the risk of falling.<sup>5</sup>

The 'person-environment-occupation' model provides a useful framework for understanding both the content and process of delivering occupational therapy falls prevention interventions.<sup>7</sup> This model proposes that these three components continually interact and change, and that this impacts on a person's performance or function; the better the congruence or 'fit' between the components, the better their performance or function. When helping to review and reduce someone's falls risk, occupational therapists take a broad holistic view and work together with the individual client to consider factors within each of these domains and how they interact.<sup>8</sup> Subsequent sections provide more detail.

## Occupational therapy interventions addressing personal risk factors

Perhaps the single intervention receiving most

attention within the falls literature over the last 10 years has been physical exercises to promote strength and balance. Occupational therapists have an important role in promoting physical exercise to assist people in carrying out valued activities and occupations, and thus fulfilling meaningful life roles. The two falls prevention exercise programmes for which there is most evidence are the Otago programme and the falls management exercise (FaME) programme. The former is an individually tailored plan designed to be carried out at home,<sup>9</sup> while the latter provides tailored group exercise.<sup>10</sup> The not for profit organisation Later Life Training (<http://www.laterlifetraining.co.uk>) provides evidence based training for instructors to run both of these programmes and more.

One of the potential challenges which can render an exercise programme ineffective is difficulty in adhering to it. In an attempt to improve adherence, occupational therapist Lindy Clemson and colleagues developed the lifestyle integrated functional exercise (LiFE) approach, in which strength and balance training is integrated into everyday routines and activities. This has been proved to be equally as effective in preventing falls as more traditional exercise interventions.<sup>11</sup> Additionally, websites have been developed to provide older people with personalised advice on exercise for falls prevention (available at: <http://www.balancetraining.org.uk/fallsAdvice/findPath.do> and <http://www.freshbalance.org.uk>).

Another area in which occupational therapists provide positive help to older people is in improving falls self efficacy, which is essentially the degree of confidence that a person has in carrying out everyday activities without falling. Typically assessed using the falls efficacy scale international (FES-I),<sup>12</sup> a low falls self efficacy, resulting in a fear of falls, can be a debilitating consequence of a fall. Occupational therapists play a key role in exploring older people's views about falls and their prevention, discussing potential strategies to improve confidence and planning with the person how and when to implement them.

Knowledge of falls prevention strategies remains low among older people.<sup>13</sup> Through their holistic and collaborative work with clients, occupational therapists are in an excellent position to deliver brief educational interventions in order to help prevent falls. Occupational therapy research

is currently exploring the accessibility and readability of falls prevention information (for example, on websites<sup>14</sup>), with a view to improving its user friendliness and availability to a wide range of older people. Health literacy, defined as representing 'the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand, and use information in ways which promote and maintain good health,'<sup>15</sup> may be important when considering falls.

### **Occupational therapy interventions addressing environmental risk factors**

Occupational therapy environmental interventions include home safety, access to aids for communication (for example, pendant alarms), enhancing vision within properties, and footwear modifications.<sup>5</sup> Occupational therapists have a variety of tools with which to explore environmental risk factors for falls. These have primarily focused on the home environment and include the home falls and accidents screening tool (HOME FAST) (available at: <http://www.bhps.org.uk/falls/documents/HomeFast.pdf>) and the Westmead home safety assessment (WeHSA),<sup>16,17</sup> a standardised measure with good inter-rater reliability. Whilst some home hazard checklists do not require the active participation of the person, the WeHSA was designed to be used together with the client to explore how use of the environment contributes to falls risk. This is one of the key differences in the ways in which occupational therapists promote safety; a recent Cochrane review suggested that home safety interventions delivered by an occupational therapist were more successful than those which were not.<sup>5</sup> Several randomised controlled trials have established the efficacy of home safety modifications in reducing falls.<sup>18,19</sup>

Recent research which includes an occupational therapy perspective has explored the relationship between older people, outdoor falls, and the design of public spaces (available at: <http://www.salford.ac.uk/built-environment/research/surface/research/going-outdoors-falls,-ageing-and-resilience-go-far>). Publications are currently in preparation highlighting older people's perspectives about risk factors for outdoor falls and their prevention, as well as identification of outdoor 'hotspots' for falls.

### **Occupational therapy interventions addressing activity ('occupation') related risk factors**

Occupational therapists work with people to review how daily activities can be carried out safely, and also find ways to enhance opportunities for participation. The assessment of motor and process skills (AMPS) is an example of a standardised occupational therapy assessment tool which evaluates the quality of a person's performance in activities of daily living selected by them,<sup>20</sup> such as meal preparation and making a bed. Interventions designed to enhance performance and improve safety might include the provision of adaptive equipment (for example, a bath board, seat, and rail for use when bathing), major housing adaptations, or advice about alternative ways of carrying out activities of daily living to reduce risk (such as use of a night light when accessing one's bathroom at night). The cost of a hip fracture is disproportionately large in comparison to the cost of minor and even major housing adaptations.<sup>21</sup>

Occupational therapy research has highlighted how falls prevention services designed for older people might inadvertently compromise their dignity and valued identities.<sup>22,23</sup> For occupational therapists therefore, the ways in which they work with older people to promote safety and participation are as important as the content of the interventions. Recommendations based on empirical evidence, including the examples cited above, suggest ways in which to promote engagement of older people in falls prevention activities.<sup>24-26</sup>

### **Occupational therapy interventions focusing on multiple risk factors in falls prevention**

In practice, occupational therapists often use multiple interventions when working with older people to prevent falls. Gillespie et al (2012) have highlighted the contribution of these multifactorial interventions in reducing the rate of falls.<sup>5</sup> The 'Stepping On' programme,<sup>27</sup> which is underpinned by Bandura's (1976) social learning theory,<sup>28</sup> was designed by an occupational therapist and combines exercise with a home safety intervention and education, the focus being on falls self efficacy and adult learning principles. In a randomised controlled trial this programme was shown to be effective in reducing falls by 31%.<sup>29</sup>

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## Summary and future areas of work

This resource has summarised the evidence based interventions which occupational therapists use to prevent or reduce falls in older people, and has also provided information about how to access resources. In addition, the holistic approach to falls prevention used by occupational therapists, which acknowledges the client at the centre of the intervention, has been highlighted as a critical element of effective and ethical working.

Evidence based interventions for falls prevention within occupational therapy have developed exponentially in recent years, and research currently in progress highlights additional areas in which occupational therapists can make a contribution. Waterman et al (2010) are currently conducting a pilot study comparing adherence to two interventions delivered by occupational therapists to prevent falls in older people with visual impairment.<sup>30</sup> Occupational therapists are also exploring the potential for the translation of general falls prevention literature specifically for people with learning disabilities.<sup>31</sup> As evidence accrues around the specific challenges experienced by people with different impairments, both in terms of falls risk and access to falls prevention strategies, the potential for effective interventions supported by occupational therapists also grows.

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