

# UPDATE ON AGEING

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## Staying active

Helping older people maintain their mobility



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**W**ith an ever-increasing older population and longevity at its peak, we are now commonly dealing

with patients who have poor functional mobility and co-morbidities commonly associated with an inactive lifestyle.

This article will briefly review the role of physical activity in promoting health (physical, mental and social) and maintaining mobility and independence in old age. It will also consider the role of the primary care team in a patient's uptake and adherence of habitual physical activity.

### DISEASE OR DISUSE?

The impact of sedentary behaviour on an ever-broadening variety of health problems is clear.<sup>1,3</sup> The benefits of activity are also indisputable (see box above right).

Even healthy older people lose strength (or force) at some 1-2% every year. The effect of sedentary behaviour exacerbates this loss and the resulting weakness and fatigue has important functional consequences for the performance of everyday life activities.<sup>4</sup>

It has been estimated that up to 37% of coronary heart disease deaths could be attributed to inactivity. Regular, appropriate exercise training has been shown to improve the functional abilities and psychological well-being of both healthy older people and patients with disabling symptoms common in old age.<sup>2,3</sup>

Frail, older patients with multiple disabilities arising from chronic and degenerative disease, and those with dementia, have also been shown to gain important health and functional benefits from exercise.<sup>4</sup>

Unfortunately, in the UK, four out of ten adults over the age of 50 are completely inactive, and two-thirds of these believe they are doing enough activity to keep fit.<sup>5</sup>

### HOW MUCH IS ENOUGH?

Both older people, and professionals working with them, need to know how much activity is enough to maintain health and mobility. Ideally, all adults should aim to take part in physical activity of at least moderate intensity (that makes them slightly warmer and more breathless than usual), on five or more days of the week.<sup>6</sup>

### BENEFITS OF PHYSICAL ACTIVITY

- Regular physical activity decreases the risk of cardiovascular disease mortality in general and of coronary heart disease mortality in particular. Physically inactive people have about double the risk of coronary heart disease
- Regular physical activity prevents or delays the development of high blood pressure, and reduces blood pressure in people with hypertension
- Physical activity is also important in helping people to control their body weight, and in controlling diabetes
- Specific forms of physical activity can help to reduce the risk of falls and accidents, by improving bone health and maintaining strength, co-ordination, cognitive functioning and balance
- Physical activity reduces the risk of colon cancer, and evidence is growing to support links with other forms of cancer. Moderate intensity physical activity enhances the immune system
- Physical activity reduces the risk of depression, and has positive benefits for mental health including reducing anxiety, and enhancing mood and self-esteem
- Physical activity can play a valuable role in the prevention and treatment of non-specific chronic low back pain

This includes activities such as brisk walking, cycling and heavy gardening as well as sports or planned exercise.

For the over 75s, taking part in structured exercise and/or home exercise three times a week helps maintain independence.<sup>1,2</sup> Even those who take up exercise in later years still reap phenomenal benefits. In fact, research shows that in as little as 10-12 weeks (as long as the activities are appropriate) newcomers to exercise can turn back the clock by up to 20 years in terms of their muscular and aerobic fitness.<sup>7</sup>

Significant improvements in depression, mood, urinary urgency, postural hypotension and vestibular function can be seen, at any age, with specific tailored exercise regimes.<sup>3</sup>

The national service framework for older people<sup>8</sup> acknowledges the evidence base relating to the role of physical activity, and exercise is important in four of the eight standards ('The promotion of health and active life in older age', 'Intermediate care', 'Stroke' and 'Falls').

### RECOMMENDATION OR REFERRAL?

Recommending that a particular patient try to be more habitually active, compared with specifically directing a patient through a formal exercise referral process, are two distinct but related approaches within the overall context of improving physical activity.<sup>9</sup> The choice depends on the

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objectives of the practitioner and patient.

Recommendations to be habitually more active are appropriate if the following are both true:

- The patient is receptive to and capable of acting on the recommendation independently.
- The patient's condition (health risk factors) and needs (which may be social and/or emotional and/or medical) do not require tailored programming.

Referrals for exercise are appropriate if:

- The person is likely to need help with motivation, programming, supervision, monitoring, and/or the duration, frequency, intensity and type of physical activity, directed at specific health outcomes.

There are a few major contraindications to exercise and most patients, even with comorbidities, can exercise safely (see the boxes over the page).

## ► 'A great deal of disability associated with old age is a result of disuse, not disease'

Exercise referral schemes, with a close link between the primary care team and the leisure industry (with appropriately trained fitness professionals) fit well in the new agenda for health improvement, and provide an excellent opportunity to address inequalities in health care, disease prevention, and enhancement of quality of life.<sup>9</sup> Two reviews found that exercise referral schemes in primary care can result in sustainable improvements in physical activity.<sup>10,11</sup> The Department of Health has suggested that exercise referral should be given equal priority to offering dietary advice or smoking cessation clinics.<sup>9</sup>

The national quality assurance framework for exercise referral schemes was published in 2001.<sup>9</sup> It involves more than simply offering advice.

Many patients entering a referral scheme will not find leisure facilities such as gyms desirable or convenient for maintaining an increased level of physical activity. It is important, therefore, that exercise referral schemes are tailored to the individual to provide an educational experience that motivates patients for long-term change.

Walking and cycling in the community may well be the most popular options, particularly if they are convenient, safe, affordable and can be sociable. But long-term adherence will remain a challenge, as it is with any behaviour change.

To comply with duty of care, there must be meaningful transfer of relevant information from the referring GP to the exercise professional.

A full discussion with the patient about the health risks of inactivity is just as important as discussing the benefits of activity and identifying potential contraindications to particular types of unaccustomed physical activity.

All of this should be undertaken in the light of the patient's specific health needs and expectations, as well as their state of readiness to change.<sup>12</sup> Not surprisingly, GPs

### ASSESSMENT

Assessment ensures that even patients with the following will benefit from exercise programmes that have been suitably adapted:

- Complex, multiple disabilities
- Controlled, cardiac and circulatory disease
- Respiratory disease
- Joint problems and diseases
- Osteoporosis
- Postural instability
- Impairment in cognition
- Depression, anxiety or social isolation

and practice nurses who are themselves habitually physically active have been shown to be more effective in motivating and sustaining long-term behaviour change in their patients.<sup>13</sup>

### INJURY

Are there risks or adverse effects that might outweigh the benefits of increasing physical activity? Increasing it slowly and 'listening to the body' will mean there is little chance of injury.

Overuse injuries appear to be the most prevalent musculoskeletal injuries caused by exercise in older participants. These might more accurately be called 'too much too soon' injuries and could be avoided with cautious increases in activity over time.<sup>3</sup>

Muscular soreness (as opposed to discomfort) that inhibits the performance of everyday activities may prove such a negative experience that it prohibits participation temporarily or permanently.

Engaging in vigorous activity without being used to it may also lead to adverse events. It is advisable not to recommend outdoor walking to someone who has poor balance and might fall over cracked pavements.<sup>14</sup>

With all these caveats in mind, in order to see physiological change, the patient must do more activity than normal, over a sustained period of time – increasing activity too gently will not bring an effective training effect. Suggestions for the patient might be that they get off the bus one stop earlier, use the stairs rather than the escalators or lifts, or go for a walk each morning, trying to ensure that they do these

activities to a level that makes them slightly breathless or warmer.

### PREVENTING FALLS

Poor muscle strength and balance are also major risk factors for falls and injuries.<sup>8</sup> Indeed, falls and instability make up 40% of nursing home admissions. Decreasing strength, balance and co-ordination appear to be key factors in maintaining upright posture in dynamic situations. This can be illustrated by the change in site of fracture with increasing age.

Wrist fractures become more common in the 40s and are prevalent up to the age of 65. With slowing reaction times, it is often no longer possible to get the hand out fast enough to prevent the body landing heavily on the hip and trunk; hence fractures of the hip become more prevalent after the age of 80. Fear of falling can also cause older people to limit their movement, not just in terms of habitual activity levels but also in the range of their normal body movements.

This unwillingness to move can lead to poor compliance with exercise interventions

### USEFUL RESOURCES

- [www.balancetraining.org.uk](http://www.balancetraining.org.uk)  
Self-help website on activities to improve balance
- [www.bhfactive.org.uk](http://www.bhfactive.org.uk)  
Self-help website on the need for physical activity
- [www.laterlifetraining.co.uk/page23.html](http://www.laterlifetraining.co.uk/page23.html)  
Books and videos for older people

and even avoidance of a particular activity that led to a past fall.<sup>8</sup>

Limiting movement in this way can also lead to a reluctance to participate in normal community activities, often resulting in isolation, depression and further lack of stimulation. With one in three people over the age of 65 falling every year, increasing physical activity before falls start is essential if we are to reduce this huge burden.

To prevent falls in younger older adults, physical activity is beneficial, but t'ai chi stands alone as excellent prevention.<sup>15</sup>

Exercise to prevent another fall or reduce injury in frequent fallers must be individually tailored and concentrate on dynamic balance training, floor coping skills and resistance training.<sup>16</sup>

Accident-prevention education, specific home exercise programmes and participant feedback complete the evidence-based recommendations on exercise to reduce the risk of falls.

## CASE HISTORY

One group of women, aged between 65 and 93, with a history of three or more falls in the previous year, took part in an exercise intervention lasting nine months. They attended a one-hour class, once a week, led by a postural stability instructor, and also did two home exercise sessions a week.

There was a significant reduction in falls and many started using public transport again on their own. The group named themselves the Fallen Angels and, four years after the intervention, still meet regularly.

## LIABILITY

Who is liable if the activity does prove unsuitable? When increased habitual physical activity is simply recommended, responsibility remains with the health professional, though of course the patient also has responsibility for their own actions. When the individual is specifically referred for exercise by the GP, responsibility for safe and effective management, design and delivery of the exercise programme passes to the exercise and leisure professionals.

Ideally, exercise professionals should be members of the Register of Exercise Professionals, or other professional bodies, which require the possession of appropriate professional indemnity insurance.<sup>9</sup>

## CONTRAINDICATIONS

Absolute contraindications to exercise in vulnerable older patients:

- Uncontrolled angina
- Uncontrolled resting systolic blood pressure >180mmHg or resting diastolic blood pressure >100mmHg
- Significant drop in blood pressure during exercise
- Uncontrolled tachycardia >100bpm
- Unstable or acute heart failure
- Uncontrolled acute systemic illness (cancer, pneumonia)
- Uncontrolled visual or vestibular disturbances
- Unable to maintain seated upright posture due to neurological deficits
- Recent injurious fall without a medical examination
- Impaired cognition (unable to follow simple movement instructions)
- People who place themselves and others at risk

## ENCOURAGE AN ACTIVE LIFESTYLE

Many leaflets, videos and resources are available to help support the older adult wanting to increase their physical activity or take part in supervised exercise. There is a need to appreciate the value of enthusiasm, positive images and sound advice rather than the unhelpful comment such as, 'What do you expect at your age?'

A great deal of disability associated with old age is a result of disuse, not disease. Symptoms could be ameliorated, and it is vital that GPs and other health professionals working with older people give positive information about the benefits of regular activity and exercise.

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