Department of Health & Social Care

Llywodraeth Cymru
Welsh Government

Department of Health
An Roinn Sláinte
Männystrie O Poustie
www.health-ni.gov.uk

Scottish Government
Riaghaltas na h-Alba
gov.scot

Extract from:

UK Chief Medical Officers' Physical Activity Guidelines

Published 7 September 2019

Physical activity guidelines for Older Adults (65 years and over)

- Older adults should participate in daily physical activity to gain health benefits, including maintenance of good physical and mental health, wellbeing, and social functioning. Some physical activity is better than none: even light activity brings some health benefits compared to being sedentary, while more daily physical activity provides greater health and social benefits.

- Older adults should maintain or improve their physical function by undertaking activities aimed at improving or maintaining muscle strength, balance and flexibility on at least two days a week. These could be combined with sessions involving moderate aerobic activity or could be additional sessions aimed specifically at these components of fitness.

- Each week older adults should aim to accumulate at least 150 minutes of moderate intensity aerobic activity, building up gradually from current levels. Those who are already regularly active can achieve these benefits through 75 minutes of vigorous intensity activity, or a combination of moderate and vigorous activity, to achieve greater benefits. Weight-bearing activities which create an impact through the body help to maintain bone health.

- Older adults should break up prolonged periods of being sedentary with light activity when physically possible, or at least with standing, as this has distinct health benefits for older people.

Summary of scientific support for the new guidelines

To develop these guidelines, the expert panel reviewed scientific evidence published from 2010 to 2018. The purpose of this review was to identify any new evidence justifying a change to the previous guidelines from 2011. Where insufficient additional evidence was available, the 2011 guideline was retained. Full details of methods are available in Annex B.

Physical activity plays a changing role in the lives of older adults, as for some it becomes more about the maintenance of independence and the management of symptoms of disease, rather than primary disease prevention. There is enough knowledge of the benefits associated with physical activity in older adults to categorically state that they outweigh the risks. In older adults with frailty, moderate-to-severe dementia, or a history of vertebral fractures or regular falls, it might be more appropriate for any new exercises to be initially supervised by a trained professional, to ensure efficacy and safe techniques to avoid injury.

Older adults should participate in daily physical activity to gain health benefits. Some physical activity is better than none: even light activity brings some health benefits compared to being sedentary.

The use of wearable devices to objectively measure the physical activity of older individuals during the activities of daily life, in addition to structured activity programmes, has provided a growing evidence base that supports the health benefits of light-intensity physical activity, independently of those provided by MVPA (57-60). Light activity is associated with a range of health benefits, including lower risk of obesity, CVD, cancer, and all-cause mortality (61); improved markers of lipid and glucose metabolism (56); and reductions in unplanned hospital admissions and future prescriptions for health conditions (62). Although still extremely limited in number, studies show a link between inactivity and loneliness and social isolation, and that increasing physical activity can reduce loneliness and social isolation, as well as improving social functioning (63, 64).

Older adults should break up prolonged periods of being sedentary with light activity when physically possible, or at least with standing, as this has distinct health benefits for older people.

Prolonged sedentary behaviour is associated with many poor health and functional outcomes in older adults (65). There is emerging evidence that for inactive older adults, replacing sedentary behaviour with light-intensity activity is likely to produce some health benefits. Specifically, for individuals who perform no or little MVPA, replacing sedentary or inactive behaviours with light-intensity activity (such as walking at 2 miles per hour, dusting or polishing furniture, or easy gardening) reduces the risk of all-cause mortality, cardiovascular disease incidence and mortality, and type 2 diabetes (57). In those transitioning to frailty and who find light activity difficult, there is emerging evidence that short periods of standing repeated hourly provides some benefits to physical function (66).

These revised guidelines therefore highlight the potential of light-intensity activity to benefit the health of older adults, and that increasing the volume of light-intensity movement in daily routines can bring important health benefits at a population level. This is particularly valuable for those older adults unable to perform moderate-intensity activity. Other evidence supports the benefits of being active throughout the day, such as better maintenance of bone health with higher volumes of light intensity activity spread throughout the day (67).

Older adults should maintain or improve their physical function by undertaking activities aimed at improving or maintaining muscle strength, balance and flexibility on at least two days a week.

A loss of muscle strength in advancing age is the primary limiting factor for functional independence (68). Physical function has a linear relationship with mortality, and those with poor physical function have a higher risk of all-cause mortality, even from mid-life (69). Multi-component strength and balance activities, including flexibility, are key to improving physical function (70). Poor balance also predicts a higher rate of cognitive decline, as well as higher all-cause mortality (71). Good balance and mobility are essential to the successful performance of most activities of daily living, as well as the ability or confidence to take part in recreational activity.

Evidence-based strength and balance exercise programmes reduce falls rate and risk (72), are cost-effective (73), increase confidence, and can increase habitual moderate physical activity towards meeting the guidelines (74). They can be group or home-based, and strength and balance activities can be embedded within everyday activities.

Each week older adults should aim to accumulate at least 150 minutes (2½ hours) of moderate intensity aerobic activity, building up gradually from current levels.

The evidence that at least 150 minutes of moderate intensity activity per week contributes significantly to the prevention of chronic disease has strengthened (1). In addition, the risk of progression of disabilities affecting the basic activities of daily living is almost halved in those who undertake regular moderate intensity physical activity, compared to those who do not (75). Bone mineral density is greater in those who meet the MVPA guidelines (67). There is strong support for the role of physical activity in reducing the risk of cognitive impairment and dementia (76), and bouts of 30 minutes of moderate activity per day almost halve the odds of experiencing depression (77).

Alternative ways of recording exercise, such as using pedometers or step counters, may be helpful to some older adults in tracking progress towards the MVPA guidelines. Evidence suggests that 30 minutes of daily MVPA accumulated in addition to habitual daily activities in healthy older adults is equivalent to taking approximately 7,000 to 10,000 steps per day (78-80). This evidence suggests 4500 to 5500 steps a day for improved health related quality of life, above 7000 steps a day for better immune function, and 8000 to 10000 steps a day for an effect on metabolic syndrome and maintenance of weight (81).

For those who are already regularly active, a combination of moderate and vigorous aerobic activity brings greater benefit (1). 75 minutes of vigorous aerobic activity spread across the week can produce comparable benefits to 150 minutes of moderate intensity activity (1). High intensity interval training is one approach to accumulating vigorous

intensity physical activity, but there is currently very limited evidence on its benefits and harms among older populations.

Emerging evidence from cross-sectional and prospective studies indicates that bouts of any length of MVPA contribute to the health benefits associated with accumulated volume of physical activity (1, 55, 59). The previous recommendation of a minimum bout length of 10 minutes is therefore no longer necessary for the optimal health message. This seems particularly relevant to older adults, given the sporadic nature of accumulated activity in this population.

Types of physical activities for this group

Older adults are more likely to have already been diagnosed with disease, and also experience different life events to middle-age adults, such as retirement, helping with grandchildren, and the increased likelihood of becoming a carer. These circumstances bring a new set of challenges in terms of physical activity participation and may temporarily halt people's ability to be active. Nevertheless, a few strategies can help to re-engage in physical activity and build activity levels up gradually. For those who are limited by disease or impairment, there is value in even small increases in activity, which can also help to slow or prevent further decline. This section provides examples of how a combination of different activities addressing the different components of the guidelines can be tailored to the range of circumstances encountered in older age, from those who are already active, to those who are losing function but otherwise healthy, to those who are frail (78-80).

Active Older Adults

Active older adults are those who are already active through daily walking, an active job, and/or who engage in regular recreational or sporting activity. For many, this may just involve aerobic activity such as brisk walking, whereas significant additional benefits can be achieved from incorporating activities to improve strength, balance and flexibility. Undertaking a programme of activity at least twice per week that includes resistance activities (lifting weights, using resistance bands or other equipment to provide resistance, etc.), some impact activities (running, jumping, skipping etc.), and balance activities (standing on one leg, backwards walking, activities that involve 3-dimensional movement etc.) would provide these benefits (8). A mix of sporting activities, Tai Chi, dance and aqua-aerobics, for example, would contribute to both the aerobic and the strength and balance guidelines.

In transition

Older people in transition describes people whose function is declining due to low levels of activity and too much sedentary time, who may have lost muscle strength and/or be overweight but otherwise remain reasonably healthy. 'Walk and rest for a minute' may be a useful strategy for adults in this age group to manage fatigue, particularly while building up

gradually towards the guideline level for moderate-intensity activity. The inclusion of strength and balance activities may be particularly useful to increase confidence and stability. Sit-to-stands, stair climbing, and home-based strength and balance exercises can all contribute to stability. They can also build the confidence to move safely on to activities that improve aerobic activity, such as brisk walking and exercise classes to improve strength and balance.

Frailer older adults

Frailer older adults are those who are identified as being frail or have very low physical or cognitive function, perhaps because of chronic disease such as arthritis, dementia or advanced old age itself. Any increase in the volume and frequency of light activities, and any reduction in sedentary behaviour, is a place to start and contributes towards health. For this group, more strenuous activities are less likely to be feasible. A programme of activities could focus instead on reducing sedentary behaviour and engaging in regular sit-to-stand exercise and short walks, stair climbing (82), embedding strength and balance activities into everyday life tasks (72), and increasing the duration of walking, rather than concentrating on intensity.