



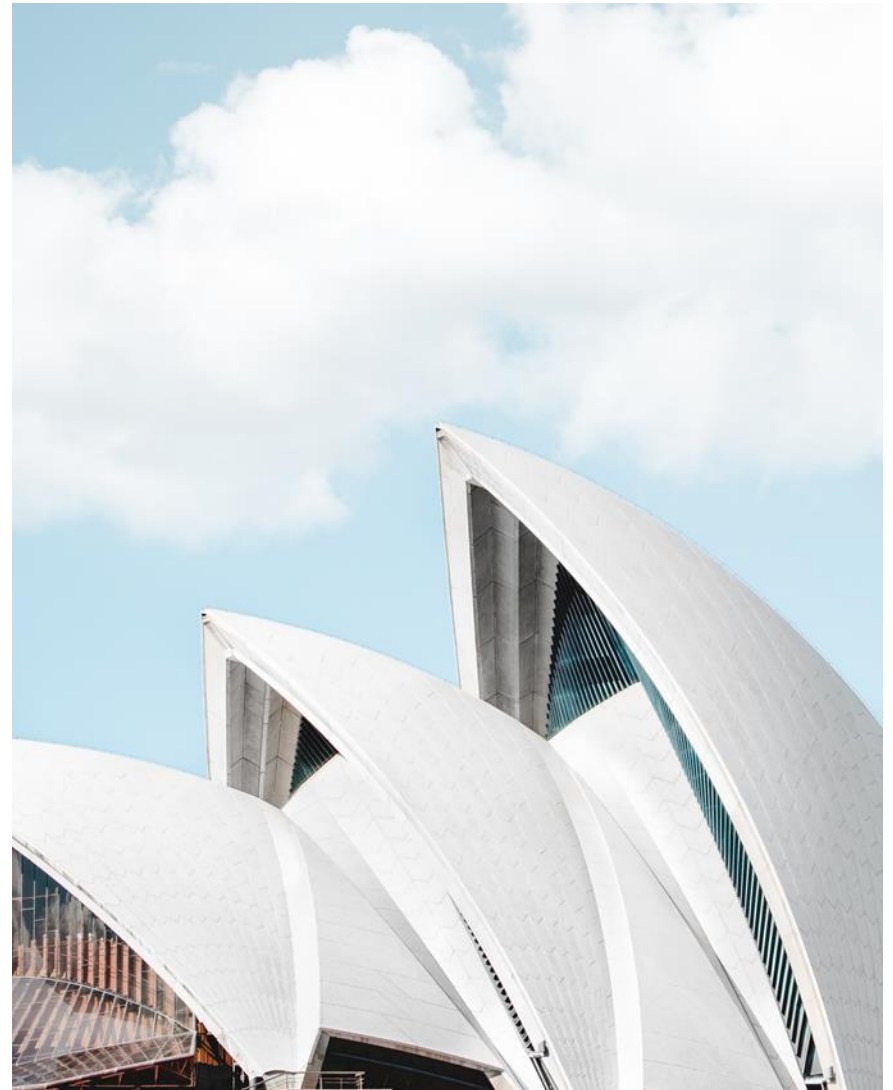
**Institute for
Musculoskeletal
Health**

*A research partnership between Sydney Local Health District and the
University of Sydney in musculoskeletal health and physical activity*

Do physical activity guidelines include fall prevention?

Associate Professor Anne Tiedemann

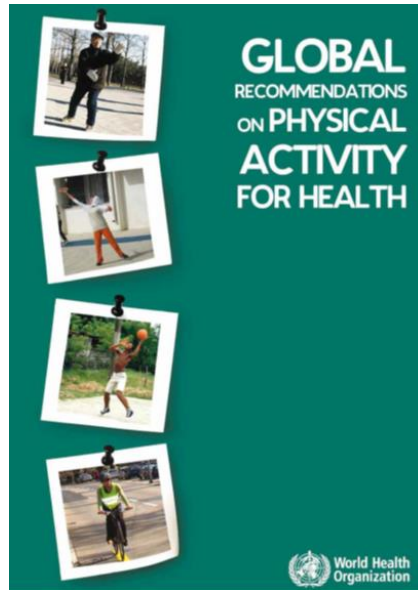
Institute for Musculoskeletal Health
School of Public Health
The University of Sydney



Physical activity guidelines- all contain recommendations for older adults (65+ years)



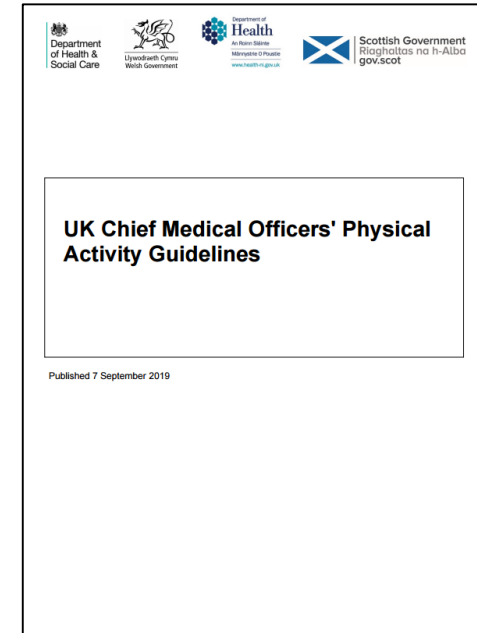
Australian Guidelines
Published 2012



WHO Guidelines
Published 2011



US Guidelines
Published 2018



UK Guidelines
Published 2019

Physical activity for adults and older adults

Benefits health	Reduces your chance of	Type II Diabetes	-40%
Improves sleep		Cardiovascular disease	-35%
Maintains healthy weight		Falls, depression etc.	-30%
Manages stress		Joint and back pain	-25%
Improves quality of life		Cancers (colon and breast)	-20%

Some is good, more is better Make a start today: it's never too late Every minute counts

Be active

at least **150** minutes moderate intensity per week
increased breathing, able to talk

OR

at least **75** minutes vigorous intensity per week
breathing fast, difficulty talking

or a combination of both

Build strength
to keep muscles, bones and joints strong
on at least **2** days a week

Minimise sedentary time
Break up periods of inactivity

Improve balance
For older adults, to reduce the chance of frailty and falls
2 days a week

UK Chief Medical Officers' Physical Activity Guidelines 2019

Talk Test

As a rule of thumb, a person doing moderate-intensity aerobic activity can talk, but not sing, during the activity. A person doing vigorous-intensity activity cannot say more than a few words without pausing for a breath.

Do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity. Adults should also do muscle-strengthening activities of moderate or greater intensity and that involve all major muscle groups on 2 or more days a week.

Australian Guidelines: Older people should minimise the amount of time spent in prolonged sitting. Break up long periods of sitting as often as possible. In most, preferably all, days.

Guidelines regarding fall prevention

WHO Guidelines: Older adults, **with poor mobility**, should perform physical activity to enhance **balance** and prevent falls on **3 or more days per week**.

Australian Guidelines: Older people should be **active every day** in as many ways as possible, doing a **range of physical activities** that incorporate fitness, strength, **balance** and flexibility.

US Guidelines: As part of their weekly physical activity, older adults should do multicomponent physical activity that includes **balance training** as well as aerobic and muscle-strengthening activities.

UK Guidelines: 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.

Detail provided about balance training in guidelines

WHO guidelines: “In older adults with poor mobility, there is consistent evidence that regular physical activity is safe and reduces risk of falls by nearly 30%. For prevention of falls, most evidence supports a physical activity pattern of balance training and moderate-intensity muscle-strengthening activities three times per week. There is no evidence that planned physical activity reduces falls in adults and older adults who are not at risk of falls.”

Australian guidelines: “These activities will improve your balance and help to prevent falls. Make a specific time each day to do these exercises, or fit them in whenever you can – for example – while waiting for the kettle to boil.” Examples given -one leg stand, heel raises.

US guidelines: “These kinds of activities can improve the ability to resist forces within or outside of the body that cause falls while a person is stationary or moving. Walking backward, standing on one leg, or using a wobble board are examples of balance activities. Strengthening muscles of the back, abdomen, and legs also improves balance.

It is important to note that doing only low-intensity walking does not seem to reduce the risk of fall-related injuries and fractures.”

UK guidelines: “Balance training involves a combination of movements that challenge balance and reduce the likelihood of falling.”

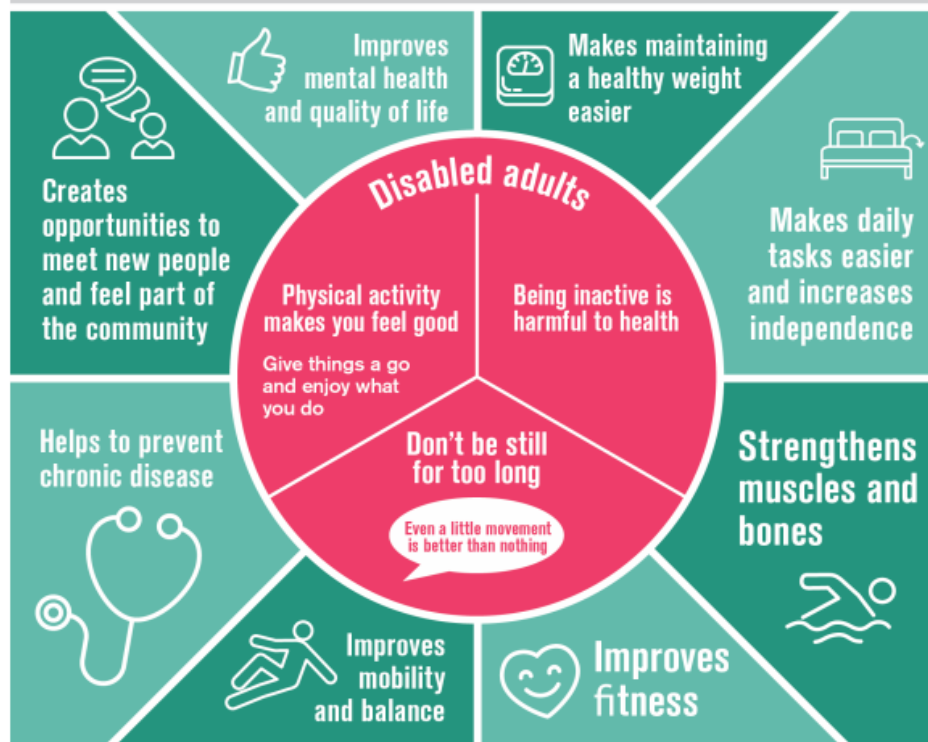
How could PA guidelines be improved with regard to balance training?

Provide clarity regarding:

- What balance training means
- What intensity
- Weekly dose/ dose response
- Who can benefit
- Importance

Physical Activity for Disabled Adults

• Make it a daily habit •



Do strength and balance activities on at least two days per week

For substantial health gains aim for at least 150 minutes each week of moderate intensity activity

Remember the talk test:



Can talk, but not sing = moderate intensity activity

Difficulty talking without pausing = vigorous intensity activity



UK Chief Medical Officers' Physical Activity Guidelines, 2019