



Information Guide

Your Health and Fitness



Balance exercises for older adults

What this guide is about

The American College of Sports Medicine (ACSM) published their new guidelines in 2014 for 'balance exercises for frequent fallers or individuals with mobility problems.'

AllActive has produced this Information Pack to help you put these guidelines into practice simply and effectively. We have included in this pack a sample of balance exercises that are suggested by ACSM or based on the principles they espouse.

Please note: the information presented here does not constitute a falls prevention programme; it contains balance exercises that may be used within one, but a comprehensive falls prevention programme should contain many other facets not covered here. In addition, the information presented here is no substitute for participating in a supervised programme under the guidance of a suitably qualified health or fitness professional.

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How difficult should it be?

ACSM (2014) state the appropriate level of difficulty for any balance exercise is the highest level that can be tolerated without inducing a fall or near-fall (characterised by grabbing the chair for support or stumbling, for example).

They state that progression in the level of difficulty is essential for improvements to take place. However, moving onto the next balance exercise in the sequence should only be done when the previous one has been mastered; for example, holding it for 15 seconds without moving feet, grabbing or stumbling.

How much should I do?

ACSM (2014) state there is no clear evidence to answer this, although they consider 2-3 days every week a reasonable recommendation. They add there is no evidence for any negative effects of high-volume balance training, so balance training 3-7 days a week for those with significant impairments may be more advantageous.

Choose several different types of exercise (such as standing postures, standing exercises and ambulation exercises) and perform each 2 or 3 times at the most difficult level possible (i.e. one that is not quite yet 'mastered').

ACSM (2014) assert that just doing more repetitions of a balance exercise you can easily do will not lead to improvements in balance; you should therefore focus on progressing to higher levels of difficulty rather than just doing more and more of the same.

Standing postures

These standing postures place the feet in a series of positions that gradually decrease your base of support, each one becoming increasingly unstable as you progress through the sequence.

ACSM (2014) suggest starting with the first posture and holding it for 15 seconds. If this can be done successfully (i.e. without moving feet or grabbing for support), the next posture should be attempted.

If any standing posture is not performed successfully, then this becomes the starting point and practised until mastered.

1.1 Feet-apart standing

Instructions:

- Stand upright with feet hip-width apart - hold onto the back of the chair with one or both hands.
- Hold this position for 15 seconds.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold the chair for support.
- Decrease the base of support whilst standing by rising onto the toes of one foot (whilst the other remains flat on the floor).



1.2 Tandem

Instructions:

- Stand upright with feet together - hold onto the back of the chair with one or both hands.
- Hold this position for 15 seconds.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.
- Decrease the base of support whilst standing by rising onto the toes of one foot (whilst the other remains flat on the floor).



1.3 Semi-tandem standing

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Place one foot slightly in front of the other, so the big toe of the back foot touches the instep of the front foot.
- Hold this position for 15 seconds.
- Repeat with the other foot in front.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.
- Decrease the base of support whilst standing by rising onto the toes of one foot (whilst the other remains flat on the floor) – this can be done on either the front or rear foot, each requires a subtle shift of body weight. You could similarly raise the toes off the front foot so it is resting on the heel only.



1.4 Heel-to-toe standing

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Place one foot in front of the other, so the toes of the back foot touch the heel of the front foot.
- Hold this position for 15 seconds.
- Repeat with the other foot in front.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.
- Decrease the base of support whilst standing by rising onto the toes of one foot (whilst the other remains flat on the floor) – this can be done on either the front or rear feet, each requires a subtle shift of body weight. You could similarly raise the toes off the front foot so it is resting on the heel only.



1.5 Single-foot standing

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Raise one foot off the floor so you are now standing on one foot.
- Hold this position for 15 seconds.
- Repeat, standing on the other foot.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.



1.6 Toe standing

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Raise your heels off the floor so you are now standing on tiptoes.
- Hold this position for 15 seconds.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.



1.7 Heel standing

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Raise your toes off the floor so you are now standing with only your heels in contact with the floor.
- Hold this position for 15 seconds.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.



Standing exercises

These exercises add dynamic movements to the standing postures, creating small perturbations to your centre of gravity.

By moving your legs as described in the following exercises you will be displacing your centre of gravity towards the limit of sway, just short of where balance is lost.

With practice, more challenging displacement activities can be mastered to improve balance further.

2.1 Knee bends

Instructions:

- Stand upright with feet shoulder-width apart - hold onto the back of the chair with one or both hands.
- Bend both knees slightly.
- Hold for a few seconds, then stand up straight again.
- Repeat.
- Please note: do not bend the knees too much.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.
- Keep one foot flat on the floor whilst on the toes with the other foot – perform the knee bends.



2.2 Knee raises

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Without leaning forwards, lift your left knee upwards.
- Hold for a few seconds, then lower and repeat.
- After a few repetitions, repeat with the right knee instead.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.



2.3 Side raises

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Without leaning, raise your left leg out to the side.
- Hold for a few seconds, then lower and repeat.
- After a few repetitions, repeat raising the right leg to the side instead.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.



2.4 Rear leg raises

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Without leaning forwards, lift your left leg behind you.
- Hold for a few seconds, then lower and repeat.
- After a few repetitions, repeat raising the right leg backwards instead.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.



2.5 Leg curls

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Without moving your thigh, bend your left knee, bringing the heel of your left foot to your buttocks.
- Hold for a few seconds, then lower and repeat.
- After a few repetitions, repeat bending the right knee instead.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.



2.6 Grapevine

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Cross the left foot in front of the right.
- Hold for a few seconds, then return to a standing position.
- Cross the right foot in front of the left.
- Repeat, alternating sides.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.
- You could make this exercise more complex by adding a side-step to the grapevine – cross the left foot in front of the right, then step the right foot to the right side so you return to a standing position. Reverse this to grapevine to the left.



Ambulation exercises

These exercises involve variations of walking using the chair for support. They get progressively harder as you alter the base of support and shift the centre of gravity whilst moving.

3.1 Sideways walk

Instructions:

- Stand upright and hold onto the back of the chair with one or both hands.
- Side-step to the right, adjusting your grip on the chair as you do so.
- Side-step back to centre and then side-step to the left.
- Repeat, alternating side-steps to the left and right.

Making it harder:

- Steady yourself with the fingertips of one or both hands.
- Do not hold onto the chair for support.
- The pictures below show one side-step to the right, you could add another side-step to the right to make the exercise more complex – you might want to start further to the left than depicted in the first photo, so the chair can still offer support.



Step the right foot to the right



Step the left foot to the right

3.2 Backwards walk

Instructions:

- Stand side-on to the chair with one hand resting on it for support.
- Walk a couple of steps backwards, adjusting your grip on the chair as you do so.
- Then walk forwards back to the starting position.
- Repeat.

Making it harder:

- Steady yourself with the fingertips of the supporting hand.
- Do not hold onto the chair for support.



3.3 Heel-to-toe walk - forwards

Instructions:

- Stand side-on to the chair with your left hand resting on it for support.
- Place your left foot in front of the right, so the toes of the right foot touch the heel of the left foot.
- Repeat this action, this time moving the right foot in front.
- Continue this heel-to-toe walking, adjusting your grip on the chair as you walk forwards.
- Turn gently, and perform the heel-to-toe walk in the other direction (do not forget to hold the chair with your right hand this time).

Making it harder:

- Steady yourself with the fingertips of the supporting hand.
- Do not hold onto the chair for support.
- Place a line on the floor to walk along (e.g. with masking tape).



3.4 Heel-to-toe walk - backwards

Instructions:

- Stand side-on to the chair with your left hand resting on it for support.
- Place your left foot behind the right, so the toes of the left foot touch the heel of the right foot.
- Repeat this action, this time moving the right foot behind.
- Continue this heel-to-toe walking, adjusting your grip on the chair as you walk backwards.
- Turn gently, and perform the heel-to-toe walk in the other direction (do not forget to hold the chair with your right hand this time).

Making it harder:

- Steady yourself with the fingertips of the supporting hand.
- Do not hold onto the chair for support.
- Place a line on the floor to walk along (e.g. with masking tape).



3.5 Heel walking

Instructions:

- Stand side-on to the chair with your left hand resting on it for support.
- Raise your toes off the floor so only your heels are in contact with the floor.
- Walk forwards a few steps landing on your heels, adjusting your grip on the chair as you do so.
- Turn, and perform heel walking in the other direction (do not forget to hold the chair with your right hand this time).

Making it harder:

- Steady yourself with the fingertips of the supporting hand.
- Do not hold onto the chair for support.



References

American College of Sports Medicine, and Pescatello, L. S. (2014). *ACSM's guidelines for exercise testing and prescription*. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins Health.

American College of Sports Medicine, and Swain, D. P. (2014). *ACSM's resource manual for guidelines for exercise testing and prescription*. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

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