Otago Strength & Balance

Home Exercise Programme

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LaterLife training

Safety

Ensure that the chair you use is sturdy and stable. Wear comfortable clothes and supportive footwear.

Prepare a space and have your exercise band and a glass of water (for afterwards) ready before you start.

While exercising, if you experience chest pain, dizziness or severe shortness of breath, **stop immediately** and contact your GP (or call an ambulance if you feel very unwell and your symptoms do not go away when you stop exercising).

If you experience pain in your joints or muscles, stop, **check your position** and try again. If the pain persists, seek advice from your Postural Stability Instructor.

However, feeling your muscles working or slight **muscle soreness** the next day after exercise is **normal** and shows that the exercises are working.

Breathe normally throughout and enjoy yourself.

Aim to do these exercises **three times** per week.

If you are using this booklet without attending a supervised exercise session, consult your GP to check it is suitable for you.

Warm Up Exercises

Always begin with a warm up to prepare your body for the main exercises.

There are **6 warm up** exercises.

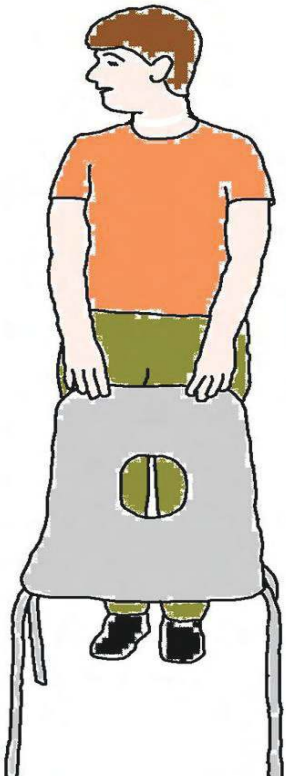
Complete them **all**:

March

- Stand tall (holding your support if needed)
- Begin marching your legs
- If you feel steady, add an arm swing with one or both arms
- Continue marching for 1 to 2 minutes

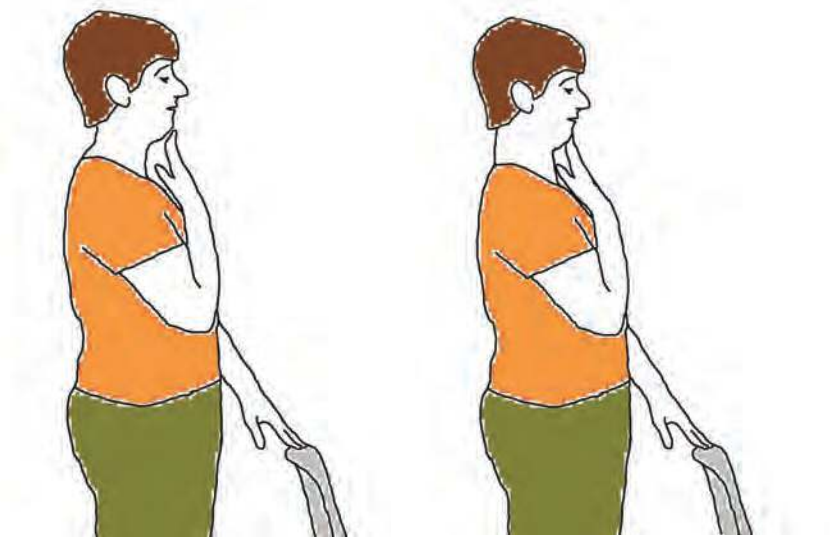
Head movements

- Stand tall with your feet hip width apart and arms resting loosely by your sides or hold the chair
- Turn the head slowly to the left then slowly to the right
- Ensure that the shoulders stay still so only the head is moving
- Repeat 5 times



Neck movements

- Stand tall with your feet hip width apart and arms resting loosely by your sides or hold the chair
- Place 2 fingers onto your chin then gently guide the chin back until you feel a stretch in the back of the neck
- Repeat 5 times

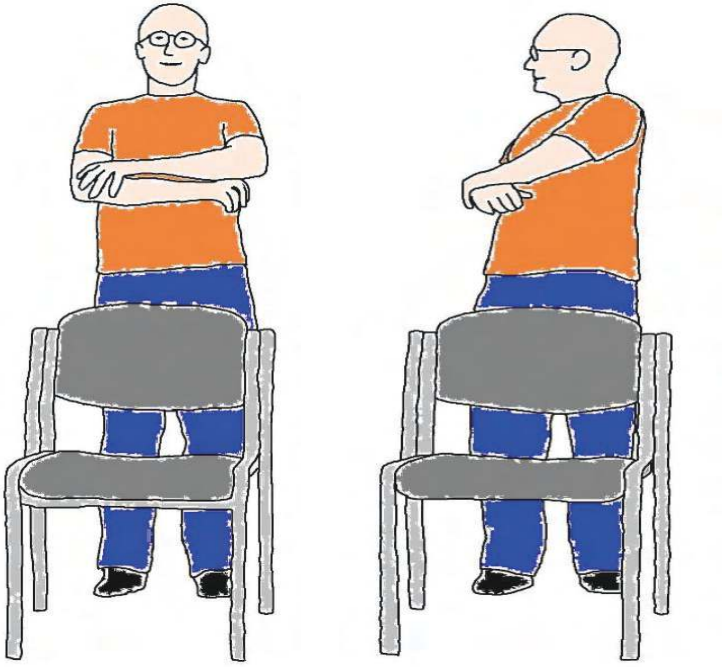


Back extension

- Stand tall with your feet hip width apart
- Place your hands onto your bottom
- Gently arch your back
- Avoid looking at the ceiling or locking out your knees
- Repeat 5 times

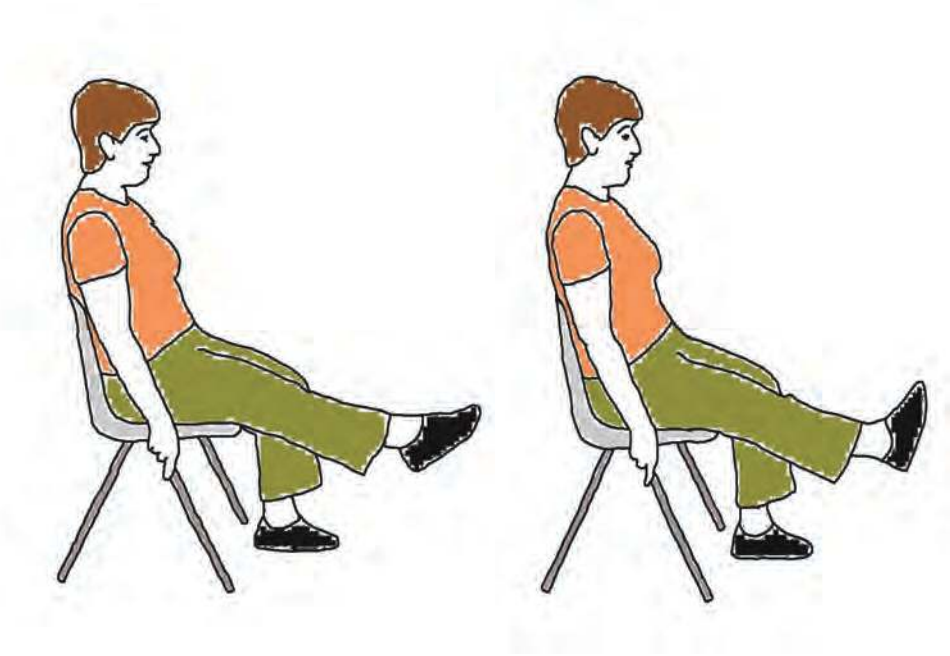
Trunk movements

- Stand tall with your feet hip width apart
- Fold the arms in front of the chest or place one hand on the chair
- Lengthen and lift the trunk upwards then slowly turn the head and shoulders to the right
- Ensure you are only turning the upper body (not the hips)
- Return to the start position and repeat to the other side
- Repeat 5 times



Ankle movements

- Sit with your back supported by the chair back
- Straighten one leg so the foot is held off the floor
- Keep the leg in this position whilst pointing the toes forwards then pulling them back
- Do this 5 times then repeat on the other leg
- If the pull behind the knee is too intense, perform this exercise with the foot closer to the floor



Strength exercises

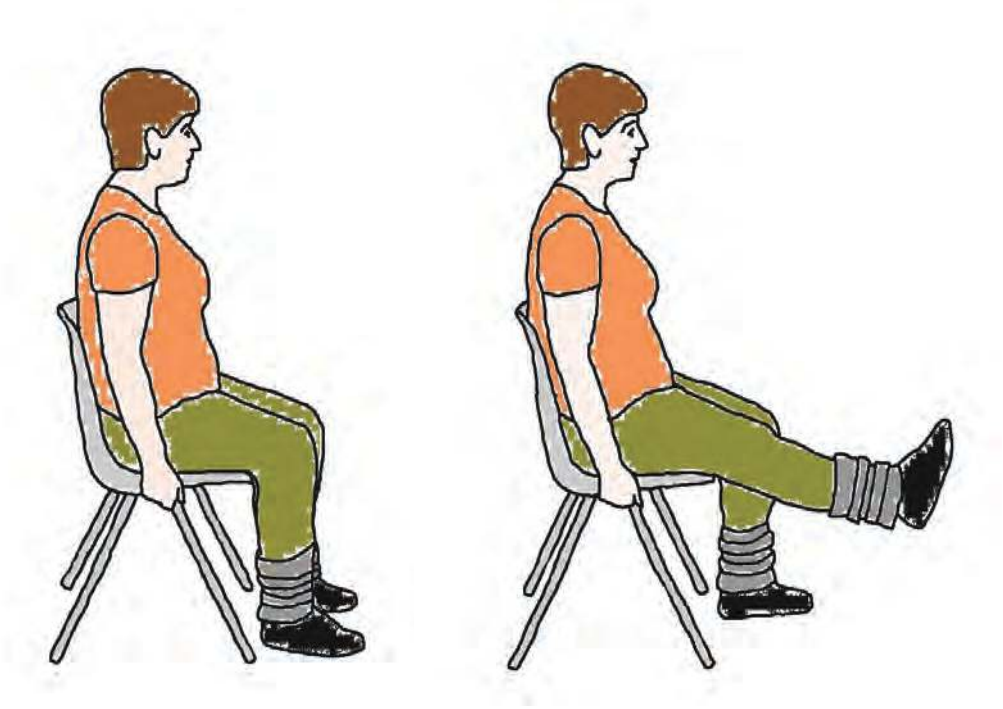
These are to help improve your bone and muscle strength.

Complete them **all.**

Put your ankle cuff weights on now.

Front knee strengthening

- Sit back in the chair with your back supported and your feet under your knees
- Brush one foot along the floor then lift the weight slowly and straighten (but do not lock out) your knee
- Lower the foot with control
- Repeat _____ times on one leg then change legs
- Aim to lift for a slow count of 3 and lower for a slow count of 5 each time

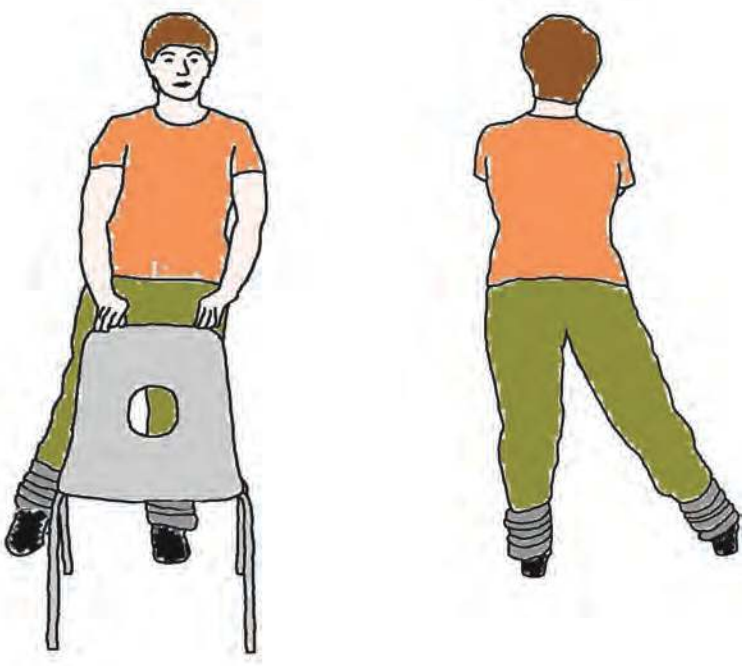


Back knee strengthening

- Stand tall close to and holding your support
- Feet hip width apart and knees soft
- Brush the foot backwards along the floor then lift the heel slowly towards the bottom
- Keep the knees close together
- Lower the foot slowly
- Place the weight back over both feet to rest briefly
- Repeat _____ times on one leg then change legs
- Aim to lift for a slow count of 3 and lower for a slow count of 5 each time

Side hip strengthening

- Stand tall with your feet hip width apart holding your support
- Lift the leg slowly out to the side keeping the toes pointing forwards
- Avoid leaning the body to the side
- Lower the leg slowly
- Place the weight back over both feet to rest briefly
- Repeat _____ times on one leg then change legs
- Aim to lift for a slow count of 3 and lower for a slow count of 5 each time



Important!

Take your ankle cuff weights off now!

Calf raises

- Stand tall with your feet hip width apart holding your support
- Slowly lift the heels keeping the weight over the big toes
- Avoid locking the knees
- Lower the heels slowly
- Repeat 10 to 20 times
- Aim to lift for a slow count of 3 and lower for a slow count of 5 each time

Toe raises

- Stand tall with the feet hip width apart, holding your support
- Slowly lift the toes keeping your knees soft
- Avoid sticking your bottom out
- Lower the toes slowly
- Repeat 10 to 20 times
- Aim to lift for a slow count of 3 and lower for a slow count of 5 each time

Balance exercises

These are to help improve your balance and stability and prevent falls.

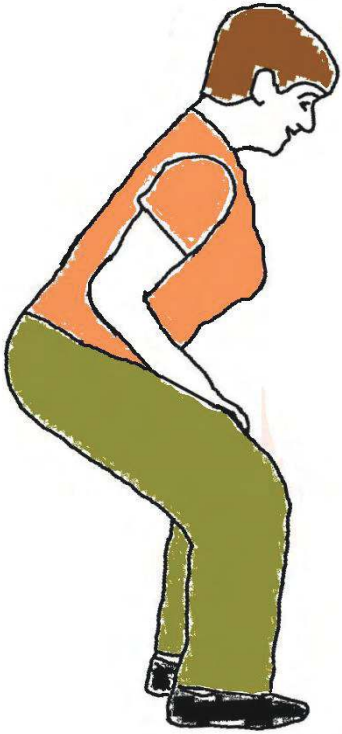
Complete them **all.**

Knee bends supported

- Feet should be hip width apart, toes facing forwards
- Hold your support
- Bend the knees and push your bottom backwards as though you were going to sit down
- Ensure the heels do not lift
- Ensure the knees do not roll inwards
- Come back up to the start position
- Repeat _____ times

Knee bends no support

- Feet should be hip width apart, toes facing forwards
- Bend the knees and push your bottom backwards as though you were going to sit down
- Ensure the heels do not lift
- Ensure the knees do not roll inwards
- Come back up to the start position
- Repeat _____ times



Toe walking supported

- Stand side on to a support with feet hip width apart
- Lift the heels keeping the weight over the big toes
- Walk 10 steps forwards on your toes.
- Bring the feet level before lowering the heels to the floor
- Turn around towards the support then repeat the toe walking in the other direction
- Move steadily and with control

Toe walking no support

- Stand with feet hip width apart
- Lift the heels keeping the weight over the big toes
- Walk 10 steps forwards on your toes
- Bring the feet level before lowering the heels to the floor
- Turn around then repeat the toe walking in the other direction
- Move steadily and with control

Heel toe stand supported

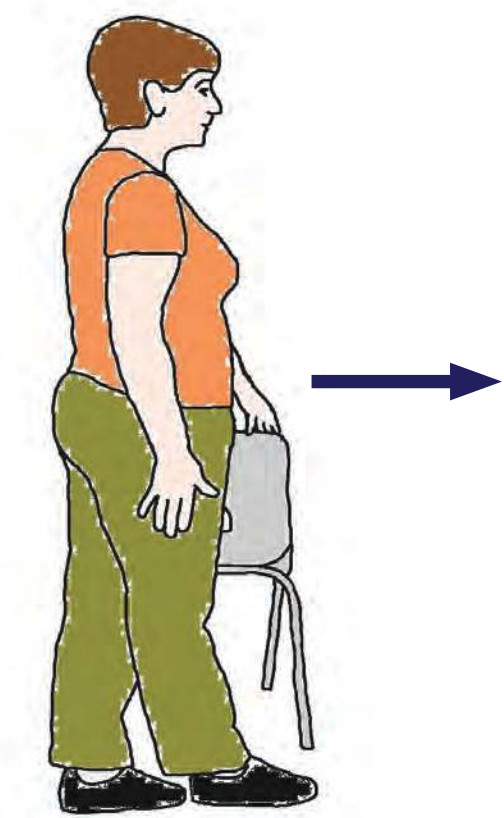
- Stand tall, side on to the support
- Place one foot directly in front of the other so that the feet form a straight line
- Look ahead and balance for 10 seconds
- Take the feet back to hip width apart before placing the other foot in front and balancing for another 10 seconds

Heel toe stand no support

- Stand tall
- Place one foot directly in front of the other so that the feet form a straight line
- Look ahead and balance for 10 seconds
- Take the feet back to hip width apart before placing the other foot in front and balancing for another 10 seconds

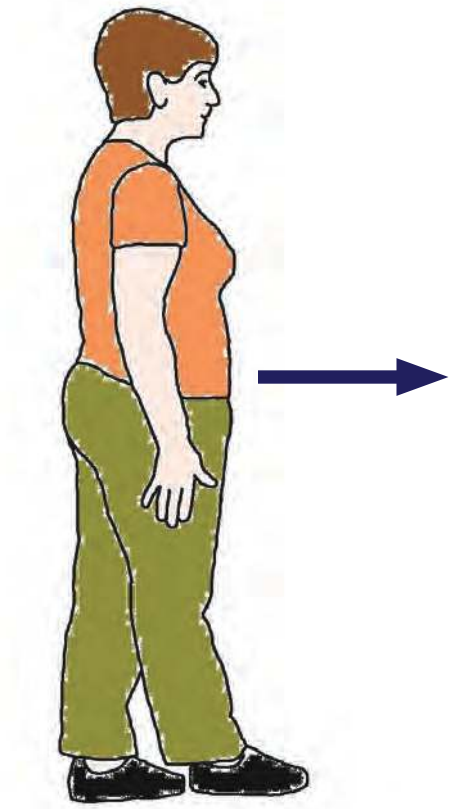
Heel toe walking supported

- Stand tall, side on to the support
- Walk 10 steps forwards placing one foot directly in front of the other so that the feet form a straight line
- Look ahead and aim for a steady walking action
- Take the feet back to hip width apart before turning towards your support then repeat the steps in the other direction



Heel toe walking no support

- Stand tall
- Walk 10 steps forwards placing one foot directly in front of the other so that the feet form a straight line
- Look ahead and aim for a steady walking action
- Take the feet back to hip width apart before turning around then repeat the steps in the other direction



One leg stand supported

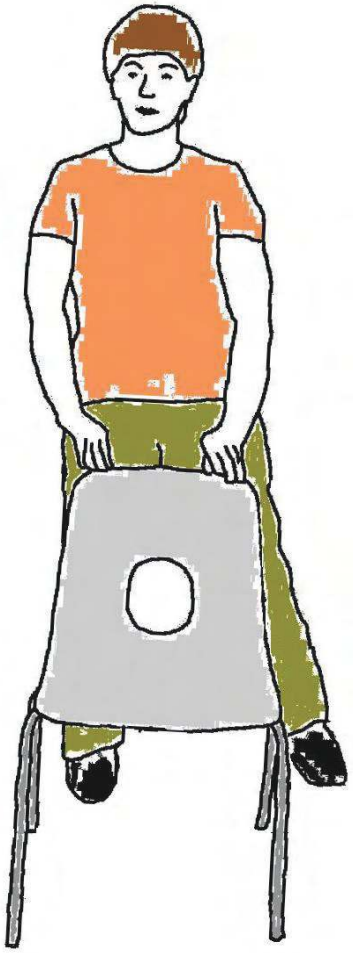
- Stand close to and holding on to your support
- Balance on one leg keeping the support knee soft and upright posture
- Hold the position for 10 seconds
- Repeat on the other leg

One leg stand no support

- Stand tall
- Balance on one leg keeping the support knee soft and upright posture
- Hold the position for 10 seconds
- Repeat on the other leg

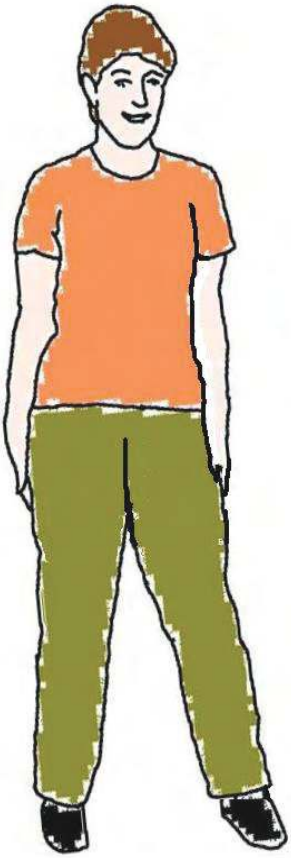
Sideways walking supported

- Stand tall facing a support
- Take 10 sideways steps keeping the hips forward and the knees soft
- Repeat the other way



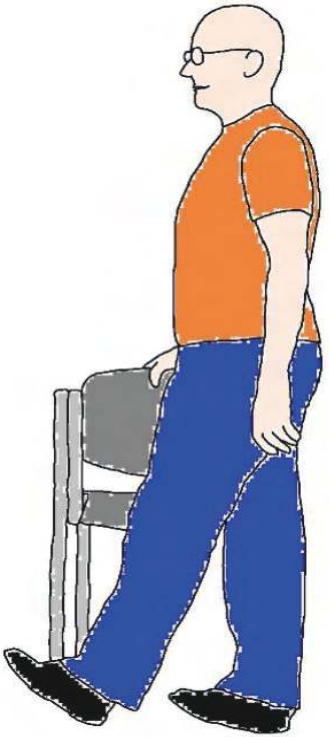
Sideways walking no support

- Stand tall
- Take 10 sideways steps keeping the hips forward and the knees soft
- Repeat the other way



Heel walking supported

- Stand side on to the support
- Lift the toes keeping the knees soft and the bottom tucked in
- Walk 10 steps on your heels
- Move steadily and with control
- Keep looking ahead
- Bring the feet together before lowering the toes to the floor
- Repeat the other way

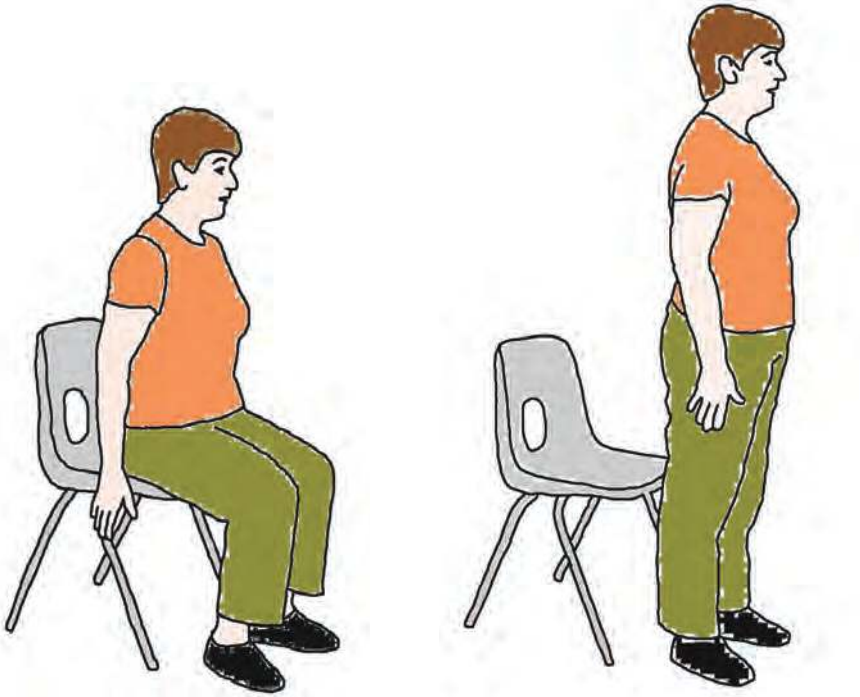


Heel walking no support

- Stand tall
- Lift the toes keeping the knees soft and the bottom tucked in
- Walk 10 steps on your heels
- Move steadily and with control
- Keep looking ahead
- Bring the feet together before lowering the toes to the floor
- Repeat the other way

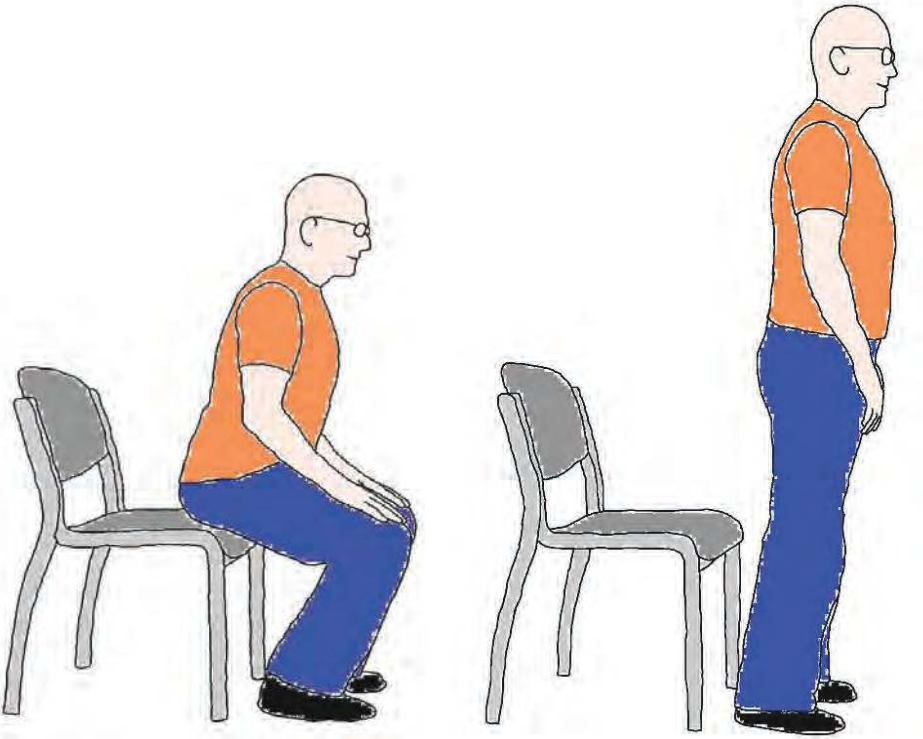
Sit to stand using hands

- Sit tall near the front of the chair
- Place your feet slightly back
- Lean forwards slightly
- Stand up (using your hands on the chair if needed)
- Step back until your legs touch the chair
- Slowly lower your bottom back into the chair, reaching for the chair as you lower if needed
- Repeat ____ times



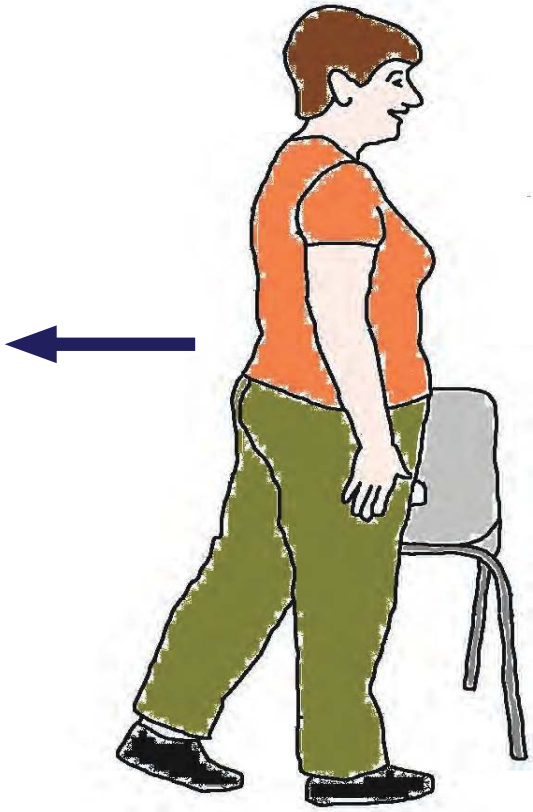
Sit to stand no hands

- Sit tall near the front of the chair with your hands on your thighs or folded across your chest
- Place your feet slightly back
- Lean forwards slightly
- Stand up
- Step back until your legs touch the chair then slowly lower your bottom back into the chair
- Repeat ____ times



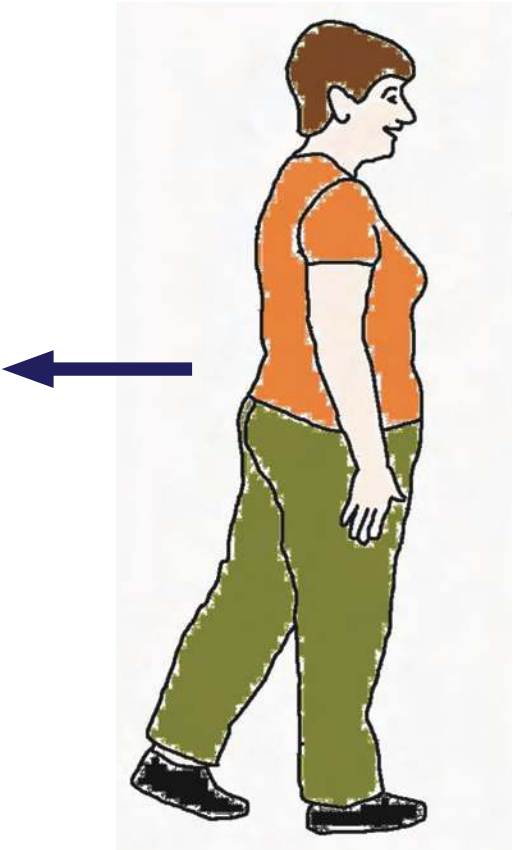
Backwards walking supported

- Stand side on to the support
- Walk backwards 10 steps
- Keep the back tall and look straight ahead throughout the exercise
- Use a toe through to heel action
- Keep the pace steady and controlled
- Repeat the other way



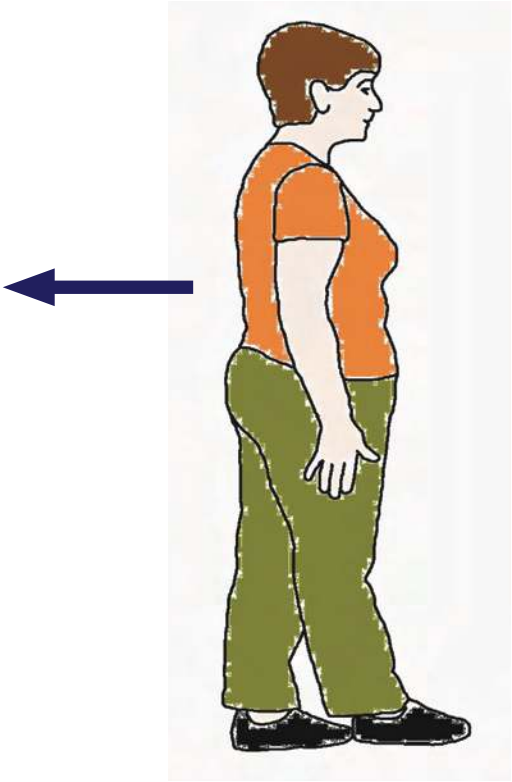
Backwards walking no support

- Stand tall
- Walk backwards 10 steps
- Keep the back tall and look straight ahead throughout the exercise
- Use a toe through to heel action
- Keep the pace steady and controlled
- Repeat the other way



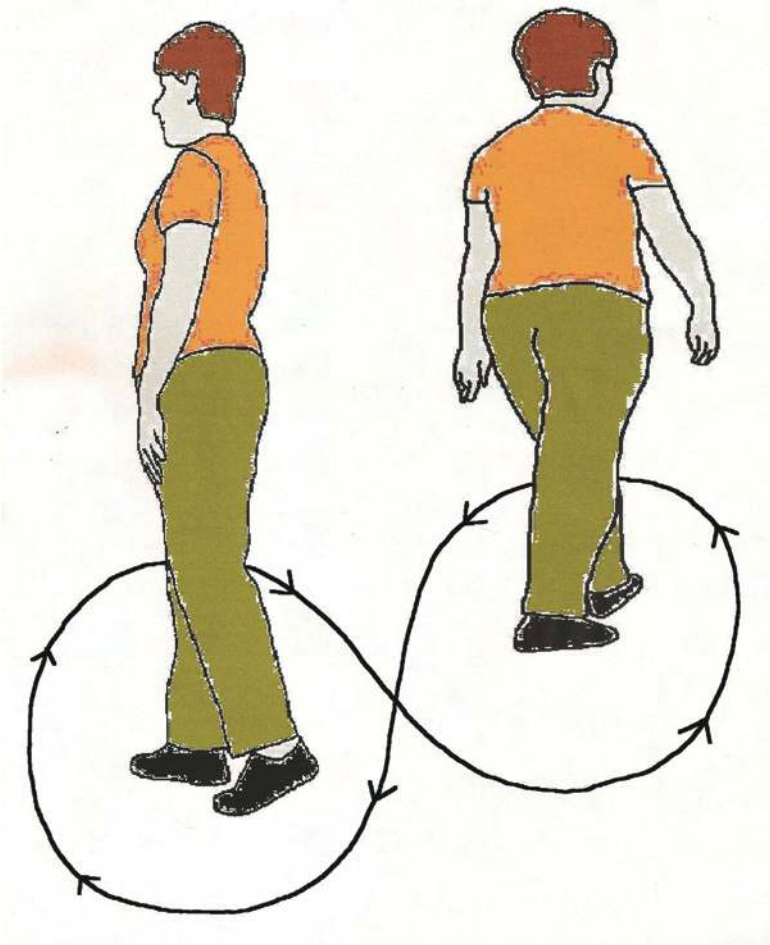
Heel toe walking backwards

- Stand tall
- Look straight ahead
- Place one foot directly behind the other touching the toe against the heel so the feet are in a straight line
- Continue walking backwards in this way for 10 steps
- Aim for a smooth walking action, rolling through the foot from toe to heel
- Place your feet hip width apart before turning then repeat in the other direction



Walk and turn

- Walk at your usual pace in a figure of 8 shape (around 2 chairs if this is easier for you)
- Try to maintain upright posture as you walk
- Repeat this exercise twice only



Stair walking

- Hold the rail if you usually do, but try not to pull too much with your arms
- Use the strongest leg to lead on each step
- Place the foot fully on the stair
- Look down with the eyes (rather than bending forwards from the waist) to check your foot position
- At the top, take a rest then come back down leading with your weaker leg on each step
- Repeat _____ times

Ending the session

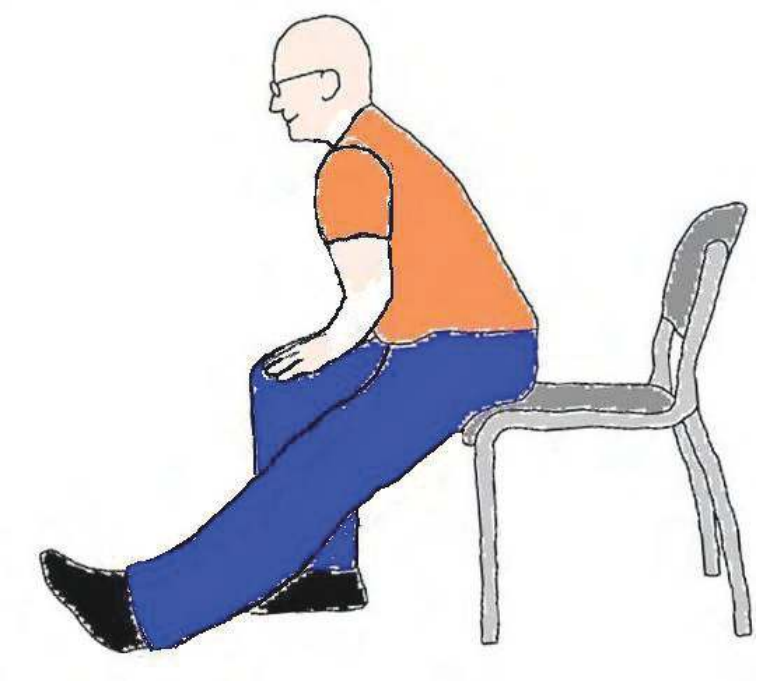
Perform the following stretches:

Calf stretch

- Sit forwards in the chair and hold on
- Keep one knee bent and directly above the ankle
- Straighten the other leg with the heel resting on the floor
- Pull the toes back towards the shin until you feel a stretch in the calf
- Hold for 10 to 15 seconds, making sure the knee is not locked out
- Release and repeat on the other side

Back of thigh stretch

- Make sure you are right at the front of the chair
- Straighten one leg placing the heel on the floor
- Place both hands on the other leg then sit really tall
- Lean forwards with a straight back until you feel the stretch in the back of your thigh
- Hold for 10-15 seconds
- Repeat on the other leg



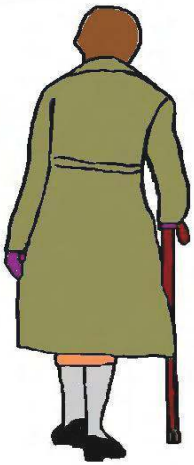
Walking

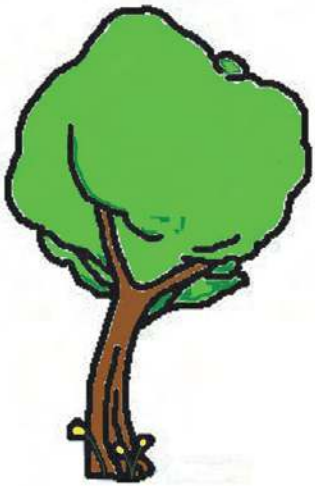
Aim for two 30 minute walks per week.

5 or 10 minute walks are an ideal way to get started. Progress the time until 30 minutes of continuous walking is achieved.

If possible, try to walk at a pace that makes you feel warmer and increases your breathing. You should still be able to talk as you walk. If you feel too puffed to talk, you are going too fast and need to slow down a little.

Wear loose, comfortable clothing and flat, supportive shoes.





Finished!

Well done! You have finished your exercises for today.

Try to do these home exercises **two more times** this week. Set a day and a time aside for a second session now.

Balance Progression

Once you are performing the balance exercises with confidence on a regular basis, you should aim to GRADUALLY reduce the amount of hand support you use. This can be done by releasing your little fingers to see if you can still maintain your balance. The next step is to release your ring fingers and when you have mastered this, your middle fingers so that you are now balancing by supporting only with your index fingers. Make sure you master balancing at each stage before progressing to the next.

Exercise Diary

It helps to keep an **exercise diary**. This will remind you when you last did your exercises and is a place to note anything you want to ask or tell your exercise instructor. There is a diary below you can use.

Date (eg. 2 June 2011)	Comments (eg. Did not do a specific exercise, feel you have improved doing a particular exercise, did some walking today)

Acknowledgements

We would like to acknowledge the following content resources:

The Otago Exercise Programme, Professor John Campbell & Dr Clare Robertson. ACC New Zealand, 1997.

Robertson MC, et al. Effectiveness and economic evaluation of a nurse delivered home exercise program to prevent falls 1: A randomized controlled trial. British Medical Journal 2001, Vol 322, p697-700.

Robertson MC, et al. Effectiveness and economic evaluation of a nurse delivered home exercise program to prevent falls 2: Controlled trial in multiple centers. British Medical Journal, 2001, Vol 322, p701-704.

The Postural Stability Instructor Manual, Later Life Training, 2008.

Acknowledgements

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