

OTAGO

STRENGTH & BALANCE

Home Exercise Programme



laterLife
training•

Otago
Exercise
Programme
Leader

<http://www.laterlifetraining.co.uk/>

Do you want to live life to the full? Doing the exercises in this booklet at least twice a week. in addition to taking a daily walk can help keep you strong and walk steadily, reducing the risk of falls.

These exercises have been used in strength and balance programmes across the world and are based on the Otago Exercise Programme (OEP) which has been shown to reduce falls and injuries due to falls

Ideally, set aside a time to do all (or some) of the exercises at once. Alternatively you can do these exercises as part of your everyday routine - for example try a one leg stand while waiting for the kettle to boil, or do the sit to stand exercise during the advertisements on television.

Safety

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

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

If you experience pain in your joints or muscles, stop, **check your position** and try again. If the pain persists, seek advice from your GP or Otago Exercise Programme Leader.

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).

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 try not to hold your breath.

Aim to do these exercises **three times** per week -or twice a week in addition to a strength and balance group or class.

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

Please read disclaimer at the back of this booklet.

Warm Up Exercises

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

There are 4 **warm up** exercises.

Try to complete them all.

TIP:

While waiting for the kettle to boil.

Alongside the exercises are tips or suggestions of when you could do these exercises in your own daily routine, to help make them more of a habit.

Marching

- 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.

TIP:

At the breakfast
table.

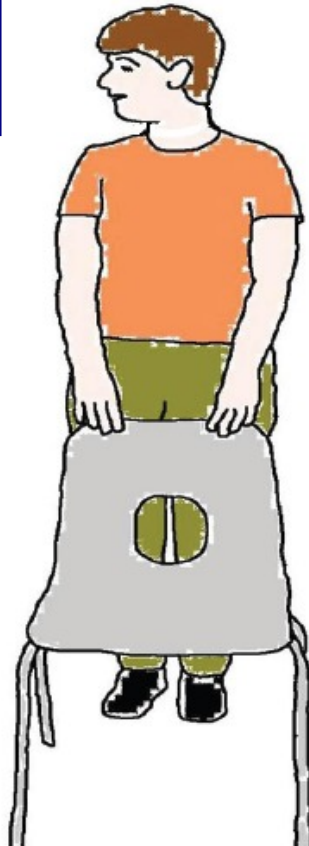


Head movements

- 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 as far as you can.
- Ensure that the shoulders stay still so only the head is moving.

TIP:

At the window
and hold the sill.

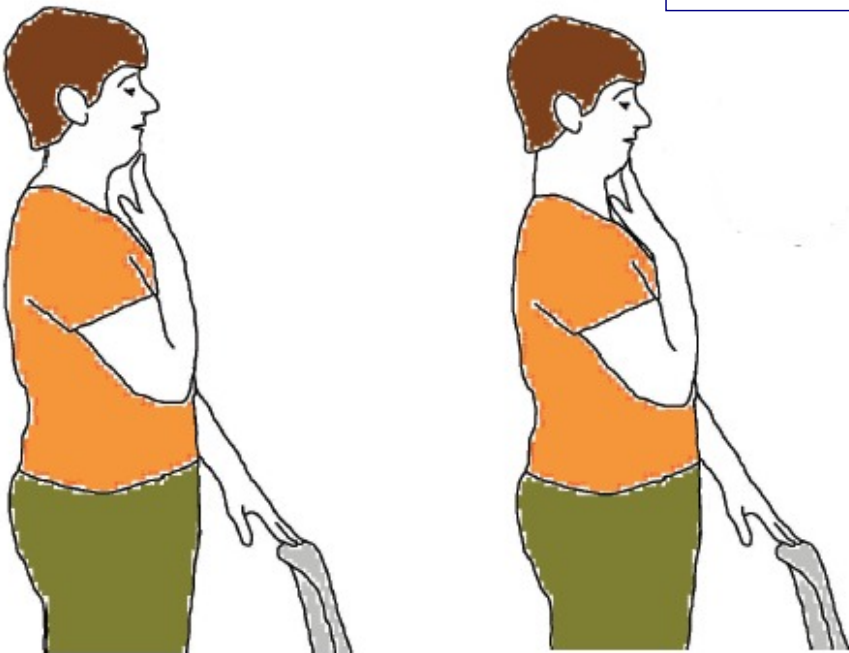


Neck movements

- 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.

TIP:

While you are watching TV.



Back extension

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



TIP:

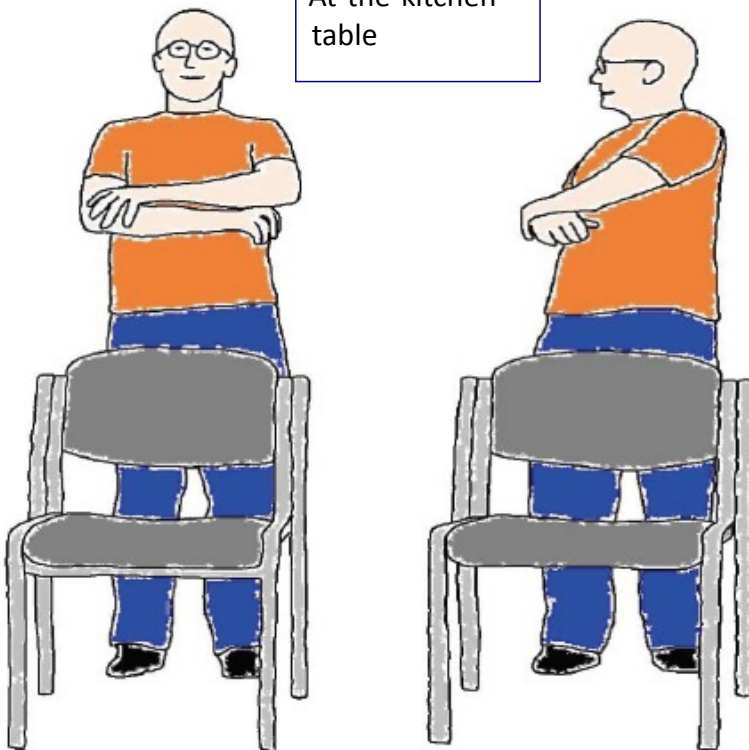
While you are
listening to the radio

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.

TIP:

At the kitchen
table

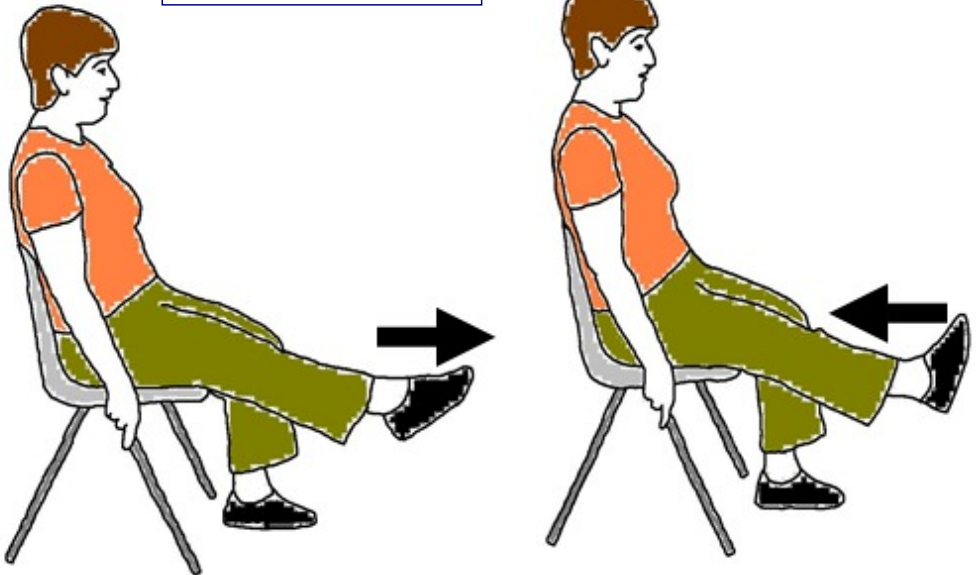


Ankle movements

- 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.

TIP:

After breakfast before
you start the day



Strength exercises

These are 5 exercises to help improve your bone and muscle strength.

Try to complete them **all**, unless instructed otherwise by your Orago Exercise Programme Leader.

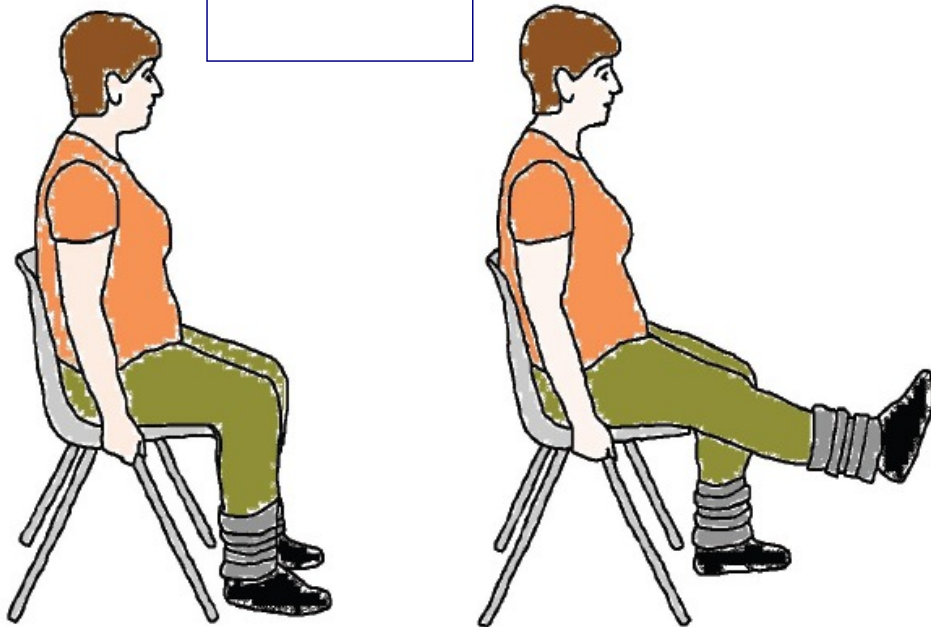
If you have ankle weight put them on now.

Front knee strengthener

- Sit back in the chair with your back supported and your feet under your knees.
- Brush one foot along the floor then lift the ankle slowly and straighten (but do not lock out) your knee.
- Lower the foot with control.
- Aim to lift for a slow count of 3 and lower for a slow count of 5 each time.
- Repeat up to 10 times on one leg then change legs.

TIP:

While watching TV



Back knee strengthener

- 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.
- Aim to lift for a slow count of 3 and lower for a slow count of 5 each time.
- Repeat up to 10 times on one leg then change legs.

TIP:

While you are
listening to the radio

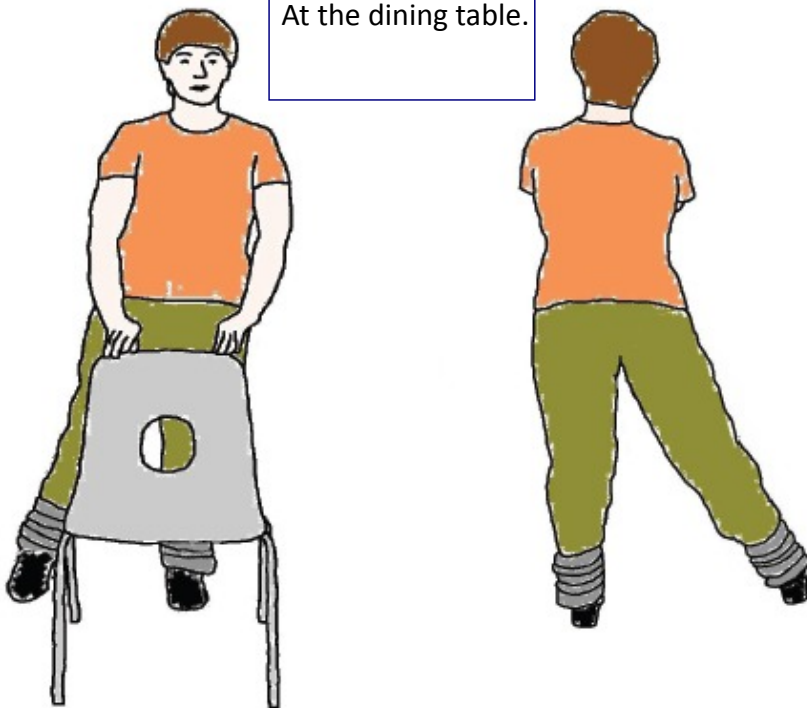


Side hip strengthener

- 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.
- Place the weight back over both feet to rest briefly.
- Repeat up to 10 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.

TIP:

At the dining table.



Important!

If you are wearing ankle weights, take them off now.

Heel 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.
- Aim to lift for a slow count of 3 and lower for a slow count of 5 each time.
- Repeat 10 to 20 times.



TIP:

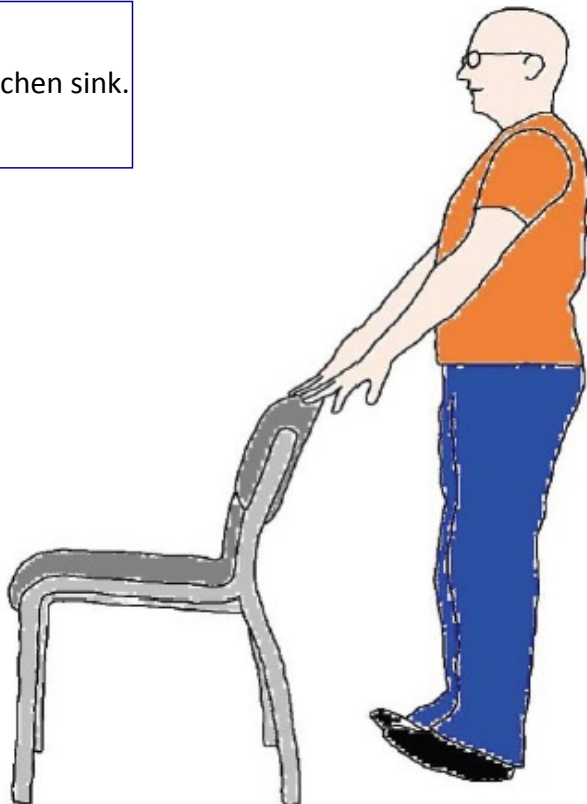
At the bathroom sink.

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.
- Aim to lift for a slow count of 3 and lower for a slow count of 5 each time.
- Repeat 10 to 20 times.

TIP:

At the Kitchen sink.



Balance exercises

There are over 12 exercises to help improve your balance and stability and prevent falls.

Try to complete them **all**, unless instructed otherwise by your Otago Exercise Programme Leader.

You should feel a bit wobbly when doing these exercise, but always hold a stable support or chair if you need it.

Knee bends supported or →

- 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.
- Make sure your knees do not turn in.
- Come back up to the start position.
- Repeat up to 10 times.



TIP:

At the Kitchen
sink.

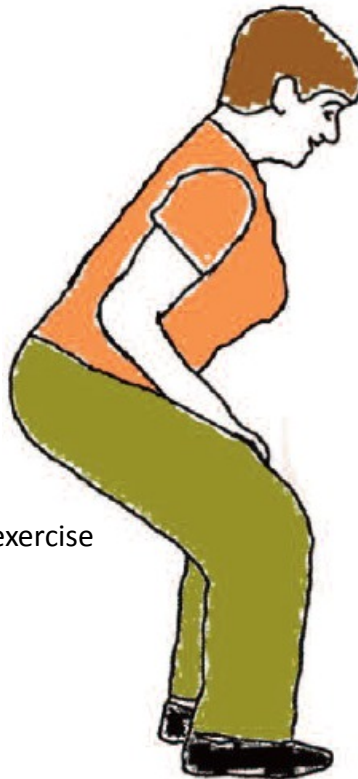
If you feel safe try the exercise without
holding on to support →

Knee bends no support ← or

- 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 up to 10 times

TIP:

At the Kitchen
sink.



If you feel too unsteady try the exercise
holding on to support ←

Toe walking supported or →

- 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.
- Move steadily and with control.
- Bring the feet level before lowering the heels to the floor.
- Turn around slowly towards the support then repeat the toe walking in the other direction.



TIP:

Along your kitchen
worktop.

If you feel to safe try the exercise
without holding on to support →

Toe walking no support ← or

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

TIP:

Along your kitchen worktop.

If you feel unsteady try the exercise holding on to support ←



Heel toe stand Supported

→ or

- 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.



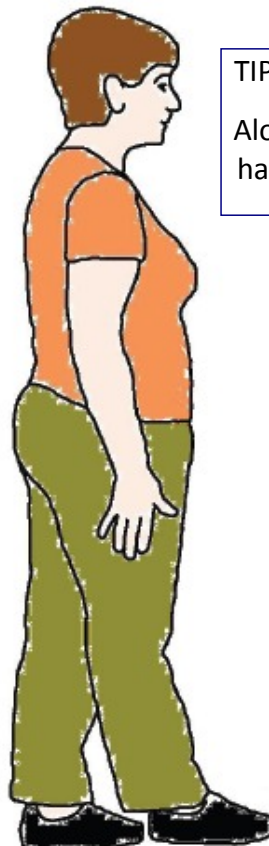
TIP:

Along your
hallway.

If you feel steady try the exercise
without holding on to support →

Heel toe stand no support ← or

- 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.



TIP:

Along your
hallway.

If you feel unsteady try the exercise
holding on to support ←

Heel toe walking supported → or

- 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 slow walking action.
- Take the feet back to hip width apart before turning slowly towards your support then repeat the steps in the other direction.



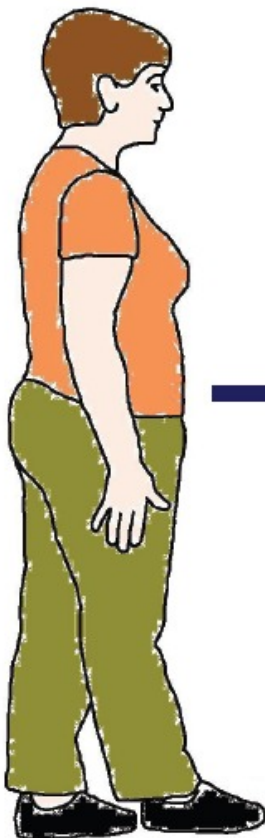
TIP:

Around your
kitchen table.

If you feel steady try the exercise
without holding on to support →

Heel toe walking no support ← or

- 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 slow walking action.
- Take the feet back to hip width apart before turning around slowly then repeat the steps in the other direction.



TIP:

Around your
kitchen table.

If you feel unsteady try the exercise
holding on to support ←

One leg stand supported or →

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



TIP:

In the kitchen
watching your
clock.

If you feel steady try the exercise
without holding on to support →

One leg stand no support ← or

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

If you feel unsteady try the exercise holding on to support ←

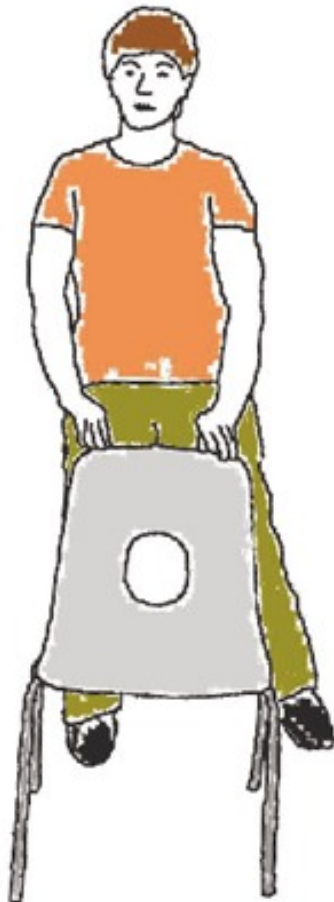


TIP:

In the kitchen watching your clock.

Sideways walking supported or →

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



TIP:

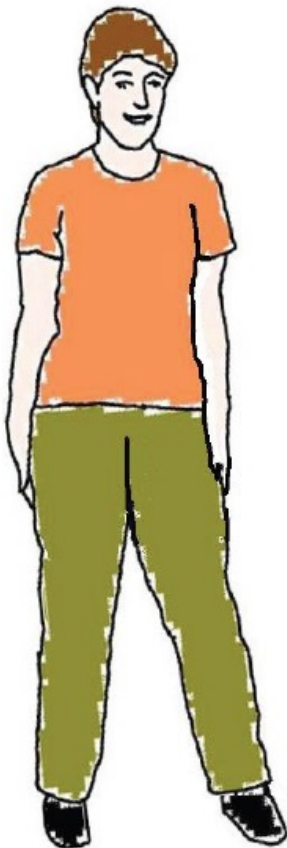
Along your kitchen
worktop.

If you feel steady try the exercise
without holding on to support →

Sideways walking no support

← or

- Stand tall and look ahead.
- Take 10 sideways steps keeping the hips facing forward and the knees soft.
- Repeat the other way - slowly.



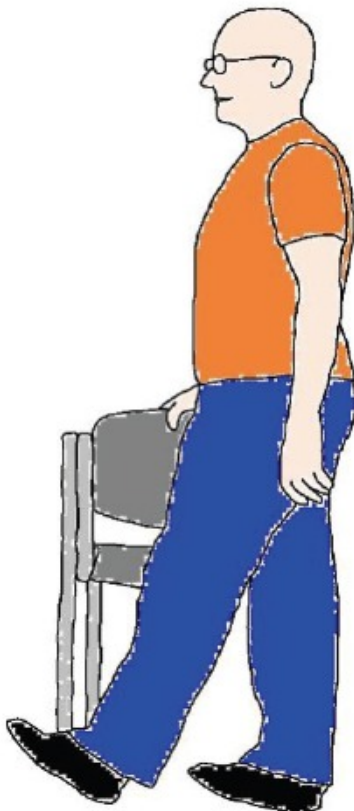
TIP:

Along your kitchen worktop.

If you feel unsteady try the exercise holding on to support ←

Heel walking supported or →

- 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.



TIP:

Around your
kitchen table.

If you feel steady try the exercise
without holding on to support →

Heel walking no support ← or

- 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.



TIP:

Around your
kitchen table.

If you feel steady try the exercise
holding on to support ←

Sit to stand using hands or →

- 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) slowly.
- 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 up to 10 times.

TIP:

At the end of a TV
Programme.

If you are feeling strong and steady
try the exercise without support →



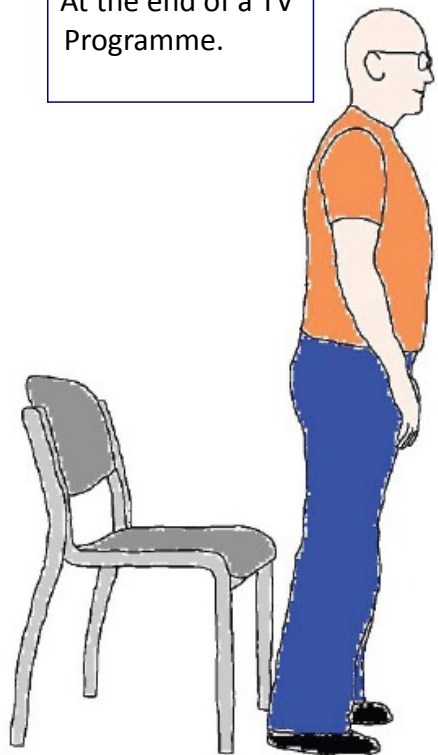
Sit to stand no hands ← or

- 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 slowly.
- Step back until your legs touch the chair then slowly lower your bottom back into the chair.
- Repeat up to 10 times.

If you are feeling strong and steady
try the exercise with support ←

TIP:

At the end of a TV
Programme.



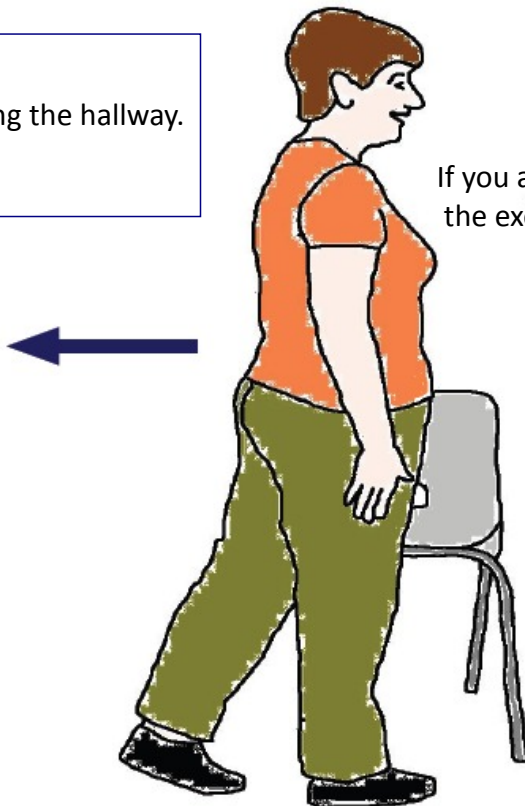
Backwards walking supported or →

- Stand side on to the support.
- Walk backwards 10 steps slowly.
- Keep the back tall and look straight ahead throughout the exercise.
- Use a toe through to heel action.
- Keep the pace steady and controlled.
- Place your feet hip width apart before turning then repeat in the other direction.

TIP:

Along the hallway.

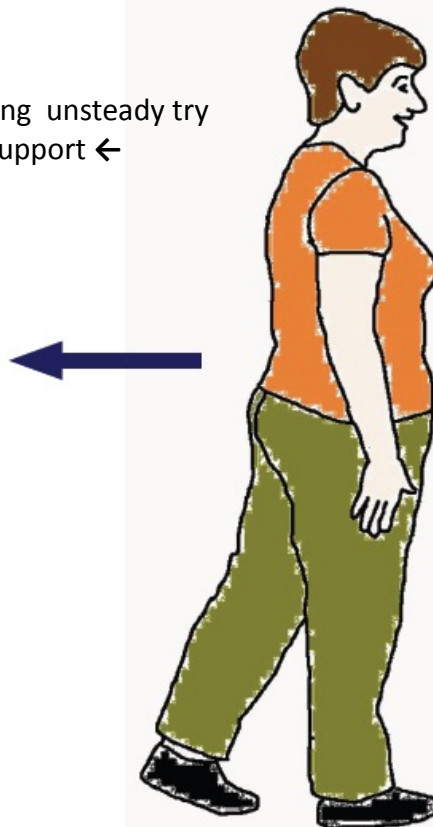
If you are feeling steady try
the exercise without support →



Backwards walking no support ← or

- Stand tall.
- Walk backwards 10 steps slowly.
- Keep the back tall and look straight ahead throughout the exercise.
- Use a toe through to heel action.
- Keep the pace steady and controlled.
- Place your feet hip width apart before turning the repeat in the other direction.

If you are feeling unsteady try
the exercise support ←

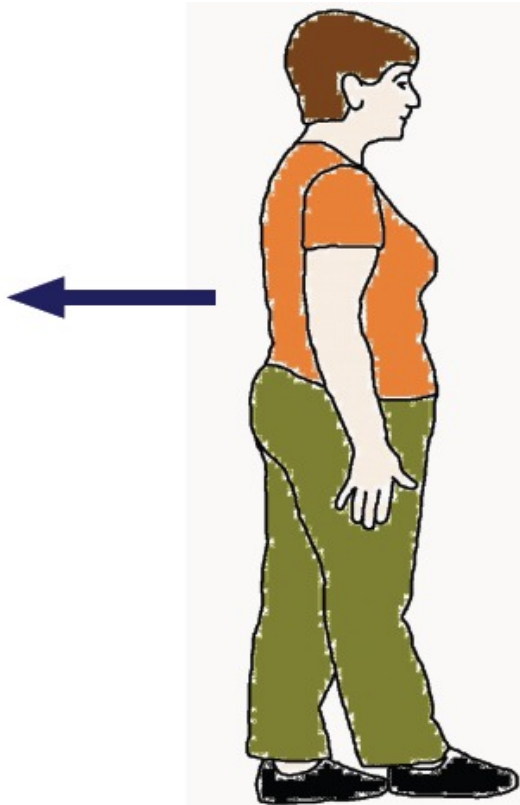


TIP:

Along the hallway.

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 slowly.
- 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



TIP:

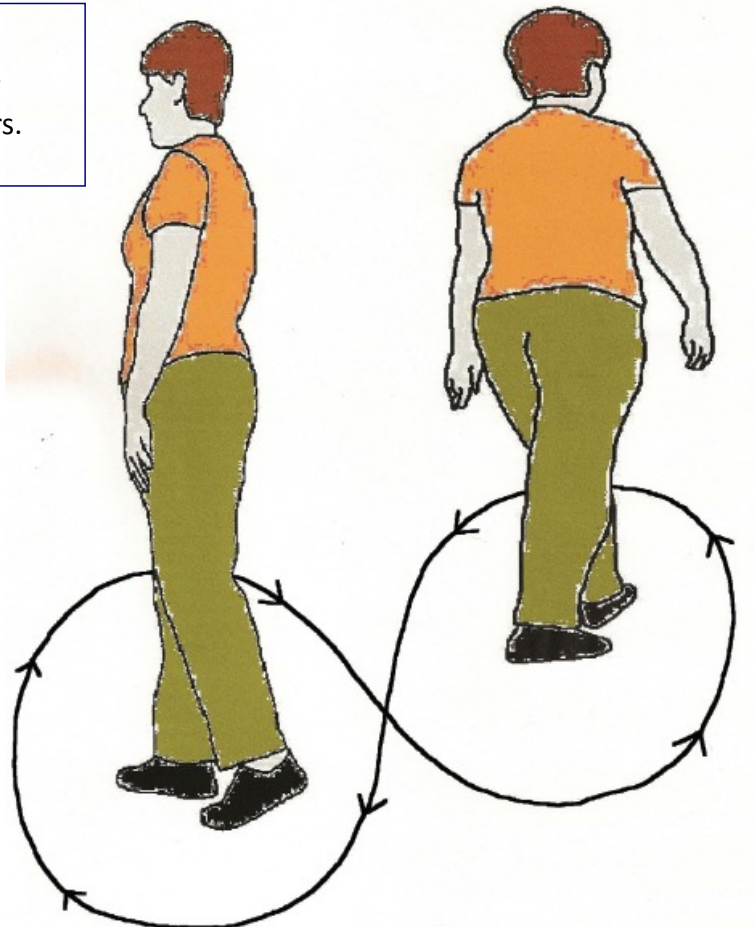
Along the hallway.

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 and slowly.

TIP:

Around your kitchen chairs.



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 up to 5 times times or until your leg muscles get warm.

TIP:

Use the stairs as often as possible to strengthen your legs.

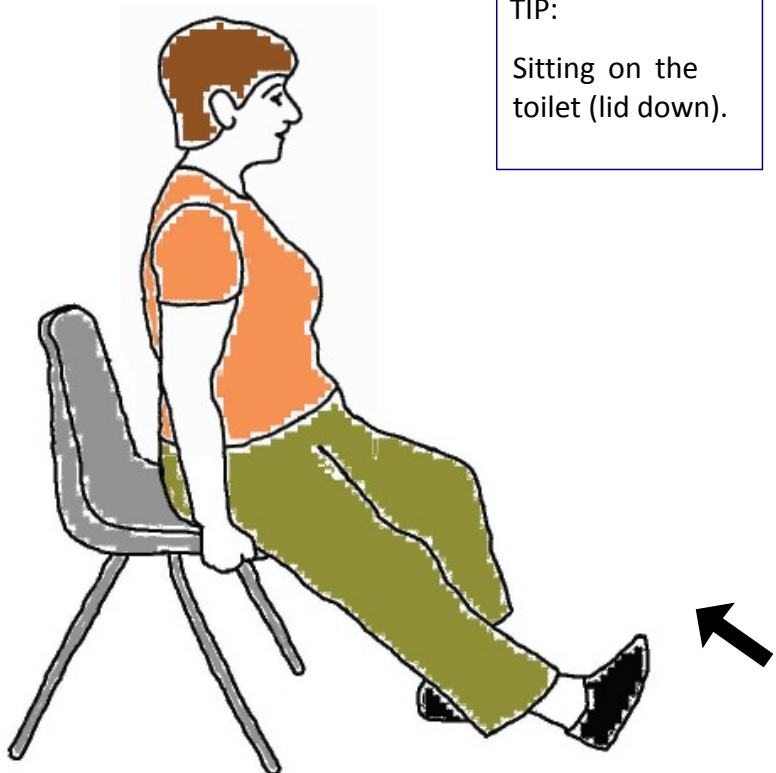


Ending the session

Try to perform the following stretches at the end of your session or daily. They will help with walking and stability.

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.
- Relax and repeat on the other side.



TIP:

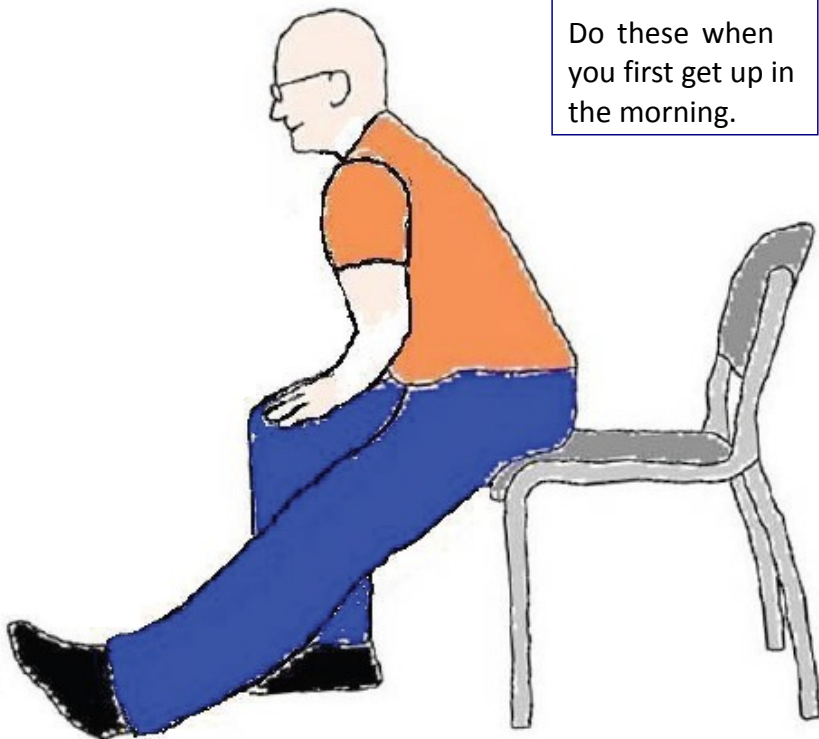
Sitting on the toilet (lid down).

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.
- Relax and repeat on the other leg.

TIP:

Do these when you first get up in the morning.



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 or you will tire and might trip.

Wear loose, comfortable clothing and flat, supportive shoes.

Always use a walking aid if you feel steadier.



Finished!

Well done! You have finished your exercises.

Try to do these exercises **three times** per week. Set a day and a time aside for a second session now, or try to do the exercises as part of your daily routine. Our tips may give you some ideas. It would be best if these exercises become a habit!

Regular performance of these exercises will, over time, make you feel stronger and steadier. They have also been shown to help your brain, reduce injuries and improve quality of life. Why not get exercising with your family or a friend.

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 sometimes 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 remember or if you are part of an exercise group, you may want to share with your Otago Exercise Programme Leader. There is a diary below you can use.

Date (Eg. Monday 2 nd)	Comments (eg. Did not do a specific exercise, feel you have improved doing a particular exercise, did some walking today), did 2 strength and balance exercises today.

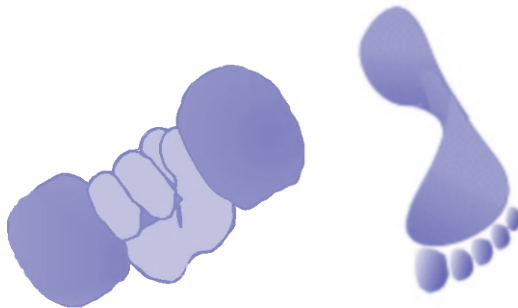
Exercise Diary

Date (Eg. Monday 2 nd)	Comments (eg. Did not do a specific exercise, feel you have improved doing a particular exercise, did some walking today), did 2 strength and balance exercises today.

Why Strength and Balance?

Strong muscles help maintain bone health as well as protecting your joints. Regular strength exercises can reduce pain from arthritic joints as well as boosting your body's natural immunity to infection.

Balance is the ability to stay upright when you are knocked, or to stay steady if you have to walk along a narrow foot path. When we walk, we spend a lot of time with only one foot on the ground, this makes the brain work hard to keep us upright and this requires a lot of practice to get right. Just as a young child has to practice to walk, as we get older we have to practice balance challenging activities to maintain good balance.



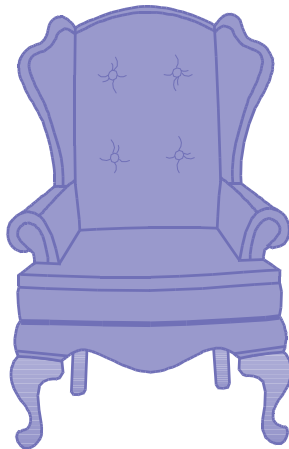
Sit Less

We now know that long periods of sitting, like watching the television all evening, are not good for our health. The more we sit, the more likely we are to get thicker around the waist, develop diabetes, become less mobile and have a low mood.

People who get up more regularly and break up long periods of sitting (every 1 - 2 hours at least) are more mobile and healthy.

Tips to break up long periods of sitting

- Stand up after a few chapters of your book
- Remain standing while the kettle boils
- Do one of the standing exercises in this booklet



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 7th Edition, Later Life Training, 2015.

The “How to Lead the Otago Exercise Programme Handbook” 4th Edition, Later Life Training, 2015.

With additional thanks to:

Professor John Campbell and Dr Clare Robertson for their permission to use the OTAGO Exercise Programme and for their continued collaboration with LLT.

Dr Susie Dinan-Young and Prof Dawn Skelton for their ongoing technical support and research input.

Text by Sheena Gawler, Co-Development Lead & Senior Tutor, Later Life Training .

Illustrations by Simon Hanna, Senior Tutor, Later Life Training.

Steve Richardson, Crashed Inventors, for the “design” of the booklet (V1).

Helen Skelton for the design of Booklet V2.

Disclaimer

You take responsibility for your own exercise programme. The authors and advisers of the exercises in this programme accept no liability. All content is provided for general information only, and should not be treated as a substitute for the medical advice of your own GP or any other health care professional. Health care professionals using these exercises do so at their own risk.

Whilst these exercises have been used in research trials and many thousands of older people do similar exercises from other home exercise booklets, the authors do not know you, your medical conditions or physical fitness and cannot give advice tailored to you, your medical condition or physical function. The authors cannot guarantee the safety or effectiveness of this program of exercises for you. Any noticeable changes in health, pain, mobility or falls should prompt a visit to your GP.

This booklet should not be treated as a substitute for medical advice of your doctor.

Later Life Training © 2015.

This booklet may be printed or photocopied in its entirety without charge.

If distributed as printed material, no charge must be made for this reproduction or provision without the permission of Later Life Training.

Part content (graphics or text) must not be used, or reproduced in any other form without permission, in writing, from Later Life Training.