OTAGO
STRENGTH & BALANCE

Home Exercise Programme - Advanced
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. 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.

If you choose to do the exercises throughout the day, do a little march first to warm yourself up and prepare for exercise.
Ensure that the chair you use is sturdy and stable or use a more sturdy support such as the kitchen work top or breakfast table if your instructor/therapist recommends this. Wear comfortable clothes and supportive footwear.

Prepare a space, have your ankle weights ready 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. if you are doing your exercises in one session.

If you decide to spread your exercises over the day, do the March exercise before you move on to do your strength, balance or stretch exercises.

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.

TIP:
While waiting for the kettle to boil.
March

- Stand tall (holding your support if needed)
- March slowly, lifting the knees
- Build to a rhythm that is comfortable for you
- If you feel steady, add an arm swing with one or both arms
- Continue marching for 1 - 2 minutes

TIP:
At the breakfast table.

This exercise helps warm the muscles and prepares the body for movement

SAFETY POINT
Hold a secure support to meet your balance needs
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.

This exercise helps open the chest and improve posture

SAFETY POINT
Hold a secure support to meet your balance needs
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.

This exercise helps strengthen the back of the neck, improving posture.

SAFETY POINT
Hold a secure support to meet your balance needs.
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 slowly
• Do this 2 times and eventually build up to 10
• 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.

This exercise helps loosen ankles and improves the heel/toe walking action
Strength and Balance

These are 7 exercises to help to improve your balance and your muscle strength.

Complete them all, unless instructed by your Otago Exercise Leader.

If you choose to do the exercises throughout the day, do a little march first to warm yourself up and prepare for exercise.

Put your ankle weights on now.
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.

This exercise helps strengthen the side of the leg muscles so it will be easier to get out of a car or the bath or step sideways

SAFETY POINT
Hold a secure support to meet your balance needs
Front Knee Strengtheners

• 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.

This exercise will strengthen your leg muscles making getting out of a low chair and using stairs easier

Now take off your weights if you are wearing them.
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 2 times, eventually build up to 10 times

**TIP:**
At the Kitchen sink.

This exercise will help ensure you lift your toes more easily when stepping over things and reduce your chance of falling backwards.

**SAFETY POINT**
Hold a secure support to meet your balance needs.
Toe Walking

• Stand with feet hip width apart
• Lift the heels keeping the weight over the big toes
• Walk 2 steps forwards on your toes, eventually build up to 10 steps
• 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.

This exercise will help your balance if you have to step over objects and improve your steadiness when walking

SAFETY POINT
Hold a secure support to meet your balance needs.
Heel Walking

• Stand tall
• Lift the toes keeping the knees soft and the bottom tucked in
• Walk 2 steps on your heels, eventually build up to 10 steps
• 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.

This exercise will help your balance and ankle strength when in a crowd or stepping over things

SAFETY POINT
Hold a secure support to meet your balance needs
Sideways walking

• Stand tall facing a support (chair, table or wall) and look ahead
• Take 2 sideways steps, keeping the hips forward and the knees soft
• Build up to 10 steps
• Repeat the other way - slowly

TIP:
Along your kitchen worktop.

This exercise will help you step sideways safely to avoid things and improve your balance

SAFETY POINT
Hold a secure support to meet your balance needs
Sit to Stand

• Sit tall near the front of the chair
• Place your feet slightly back
• Lean forwards slightly
• Stand up slowly (using your hands on the chair if needed but try without)
• 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 2 times, eventually build up to 10 times

TIP:
At the end of a TV Programme.

This exercise will help improve the ease you can get out of a chair or squat to do things.
Ending the Session

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

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.

This stretch will help you put your shoes and socks on more easily and lengthen your stride when walking
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 - 15 seconds, making sure the knee is not locked out
• Relax and repeat on the other side

TIP:
Sitting on the toilet (lid down).

This stretch will help you put your shoes and socks on more easily and lengthen your stride when walking.
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.

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(eg. 2\textsuperscript{nd} January)</td>
<td>(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).</td>
</tr>
</tbody>
</table>

---
# Exercise Diary

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(eg. Monday 2\textsuperscript{nd} January)</td>
<td>(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)</td>
</tr>
</tbody>
</table>

Later Life Training Ltd © Copyright V4a 2018 - http://www.laterlifetraining.co.uk/
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.
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.


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 Dr Sheena Gawler
Illustrations by Helen Skelton
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.

While 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 GP.

Copyright:

If distributed as printed material, no charge must be made for this reproduction or provision without 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.

Later Life Training © 2018

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