



Otago Exercise Program

Campbell AJ and Robertson MC. Otago Exercise Programme to prevent falls in older adults - A home-based, individually tailored strength and balance retraining programme. Wellington: ACC Thinksafe. Mar 2003.

Welcome to the **Otago Exercise Program!**

History

Otago is a muscle strengthening and balance retraining program developed and tested by the New Zealand Falls Prevention Research Group. The idea behind Otago is that muscle strength, flexibility, balance, and reaction time can all be improved to reduce your risk of falling.

Benefits of Exercise

The benefits of exercise are plentiful. By participating in this program, you can improve:

- Balance
- Muscle strength
- General fitness
- General well-being.

You need to do the prescribed exercises three times each week. You can divide the exercises up. They do not all have to be done at the same time.

Between each set of exercises take three deep breaths or more.

You may feel a bit stiff after you first start to exercise. This is quite normal. It is because you are using muscles which may not be used to the exercise. It is important that you keep on exercising. The stiffness will leave as your body becomes more familiar with the exercise.

Safety

Never exercise holding on to an object which may move, for example a chair. Always use the side of something stable like a counter top or solid table unless otherwise instructed.

Exercises should not be painful. If you are experiencing pain, talk with your therapist to have the exercises adjusted.

Contact your doctor if while exercising you experience...

- Dizziness
- Chest pain
- Shortness of breath (you are unable to speak because you are short of breath).

If you have any questions about the exercise program please contact your therapist.

Day to Day

Did you know that you can improve your general fitness simply by being more active in your day-to-day life?

Here are some examples of activities to build into your day:

- Walk instead of driving to the store
- Walk to talk to a friend instead of using the telephone
- Take the stairs rather than the elevator or escalator
- Get off the bus a block early and walk home
- When visitors and family arrive, go for a walk with them before having a cup of tea
- Garden when the weather permits

Walking

Walking is an excellent way to improve your general fitness.

Try going for a walk on most days of the week. Start with 10 minutes and *gradually* try to increase the distance you walk and the time you spend walking.

Tips for walking

- Wear comfortable shoes and clothing.
- Start with a warm-up – marching on the spot for two minutes.

When you walk:

- Your shoulders are relaxed and your arms gently swing.
- Look ahead, not down.
- With each step, land with your heel first, then push off on your toes.
- Choose a comfortable pace.
- Finish with a warm-down – marching on the spot for two minutes.
- Enjoy yourself!

Be safe outdoors:

- Walk with a friend
- Walk in a well maintained, well lit, and well-populated area.
- Tell others when and where you are going for a walk
- Avoid walking outdoors if it is too hot or cold

Alternatives to walking outdoors:

- Malls or other large indoor retail locations, including grocery stores
- Local community centres or senior centres

Warm Up

Head Movements

- Stand up tall and look ahead.
- Slowly turn your head as far as you can to the right.
- Slowly turn your head as far as you can to the left.
- Repeat five times to each side.



Neck Movements

- Stand up tall and look ahead.
- Place one hand on your chin.
- Guide your head straight back (tuck your chin in).
- Repeat five times.



Back Extension

- Stand up tall with feet shoulder-width apart.
- Place your hands on the small of your back.
- Gently arch your back.
- Repeat five times.



Trunk Movements

- Stand up tall and place your hands on your hips.
- Do not move your hips.
- Turn as far as you can to the right, comfortably.
- Turn as far as you can to the left, comfortably.
- Repeat five times to each side.



Ankle Movements

- Either stand or sit.
- Pull the foot towards you, then point the foot down.
- Repeat 10 times for each foot.



Strength Exercises

Strengthening your muscles is important for maintaining healthy bones and muscles necessary for walking and being independent in your daily activities.

You should aim to do the strengthening exercises 3 times per week with a rest day in between.

Lift the weight slowly through the entire range of movement.

Never hold your breath while lifting. Inhale before lifting, exhale while lifting and inhale again while lowering the weight.

You may feel a bit stiff after you first start to exercise. This is normal and the stiffness will go away as your body gets used to this new activity.

For best results, you should use **adjustable ankle weights** to provide resistance for the strengthening exercises. Choose a weight that allows you to perform eight to ten repetitions before your muscles fatigue. This may be different for each exercise on each leg.

Adjustable Ankle Weights

Importance of Adjustable Ankle Weights

Adjustable ankle weights are weighted bands that fasten around the ankles (most often with Velcro). They add weight to your legs during a workout, which is an important component of the Otago Exercise Program (Otago). Adjustable weights allow you to gradually increase the weight (one pound to 20 pounds) and to progressively increase resistance while strengthening your hip and knee muscles.

Cost of Adjustable Ankle Weights

You are encouraged to purchase a weight set with each weight band holding 5-10 pounds. The cost for such a set ranges from \$30 to \$50. Adjustable weights can be purchased at large retailers and sporting goods stores or at online retail outlets. Please talk to your therapist if you have questions about which weights are right for you.

Note: If you don't have access to adjustable ankle weights, these exercises can be done using Theraband or without any resistance at all.

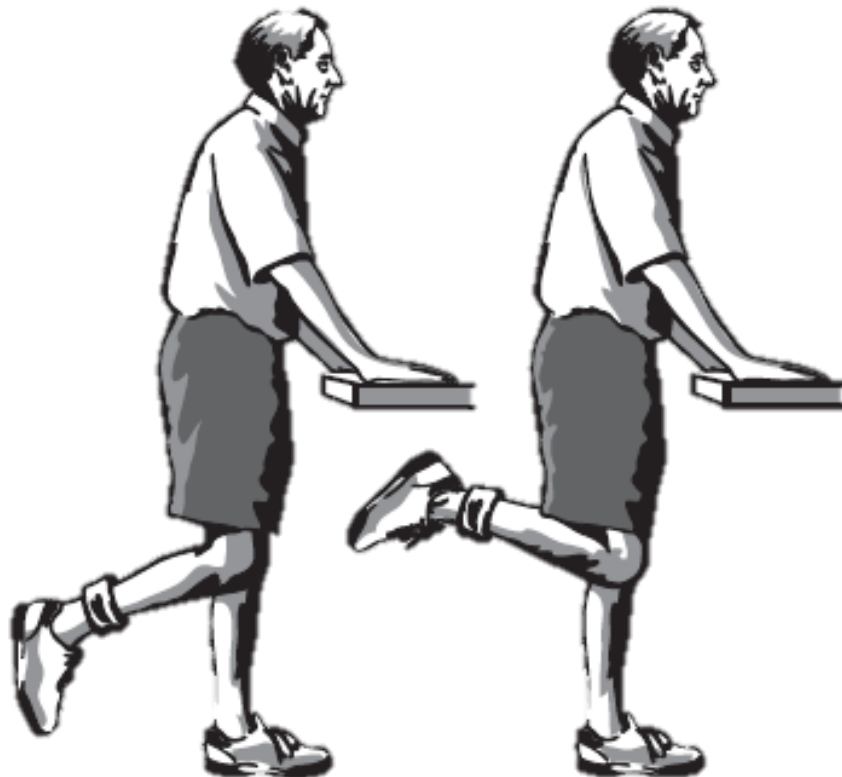
Front Knee Strengthening Exercise

- Strap the weight onto your ankle.
- Sit in a chair with your back well supported.
- Straighten the leg out.
- Lower the leg.
- Repeat 10 times.
- Strap the weight onto your other ankle.
- Repeat this exercise 10 times.
- Progress to 2 sets of 10 repetitions.



Back Knee Strengthening Exercise

- Strap the weight onto your ankle.
- Stand up tall facing a table with both hands on the table.
- Bend the knee, bringing the foot toward your bottom.
- Return to the starting position.
- Repeat 10 times.
- Strap the weight onto your other ankle.
- Repeat this exercise 10 times.
- Progress to 2 sets of 10 repetitions.



Side Hip Strengthening Exercise

- Strap the weight onto your ankle.
- Stand up tall beside a table and hold onto it.
- Keep the exercising leg straight and the foot facing straight ahead.
- Lift the leg out to the side and return.
- Repeat 10 times.
- Strap the weight onto your other ankle.
- Turn around.
- Repeat this exercise 10 times.
- Progress to 2 sets of 10 repetitions.



Calf Raises – Hold Support

- Stand up tall facing a table.
- Hold onto the table and look ahead.
- Your feet should be shoulder-width apart.
- Come up onto your toes.
- Lower your heels to the ground.
- Repeat this exercise 10 times.
- Progress to 2 sets of 10 repetitions.



Toe Raises – Hold Support

- Stand up tall beside a table.
- Hold on and look ahead.
- Your feet should be shoulder-width apart.
- Come back onto your heels, raising your front foot off the floor.
- Lower your feet onto the ground.
- Repeat this exercise 10 times.
- Progress to 2 sets of 10 repetitions.



Balance Exercises

Balance is important for everyday activities. The following quick balance exercises should be done three times a week, but you are encouraged to do them as often as you can! They can be done every day.

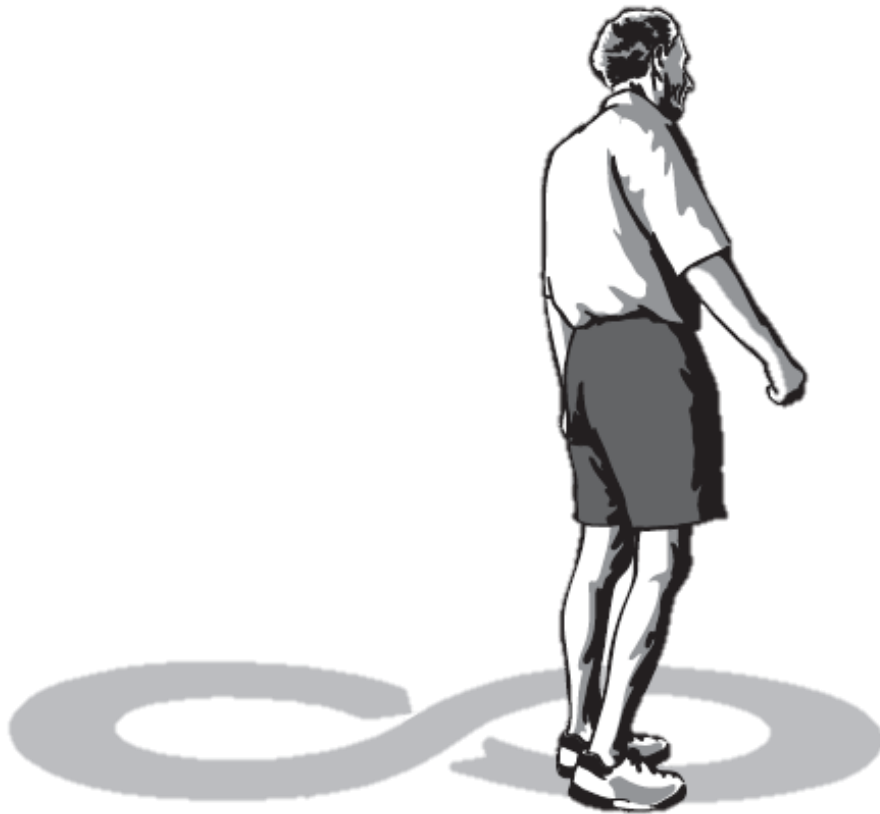
Knee Bends – No Support

- Stand up tall near a table and look ahead.
- Place your feet shoulder-width apart.
- Squat down half way, bending your knees.
- The knees go over the toes.
- When you feel your heels start to lift, straighten up.
- Repeat 10 times.
- Progress to 2 sets of 10 repetitions.



Walking and Turning Around

- Stand near a table.
- Walk at your regular pace.
- Turn in a clockwise direction.
- Walk back to your starting position.
- Turn in a counter-clockwise direction.
- The exercise is a figure-eight movement.
- Repeat this movement 2 times.



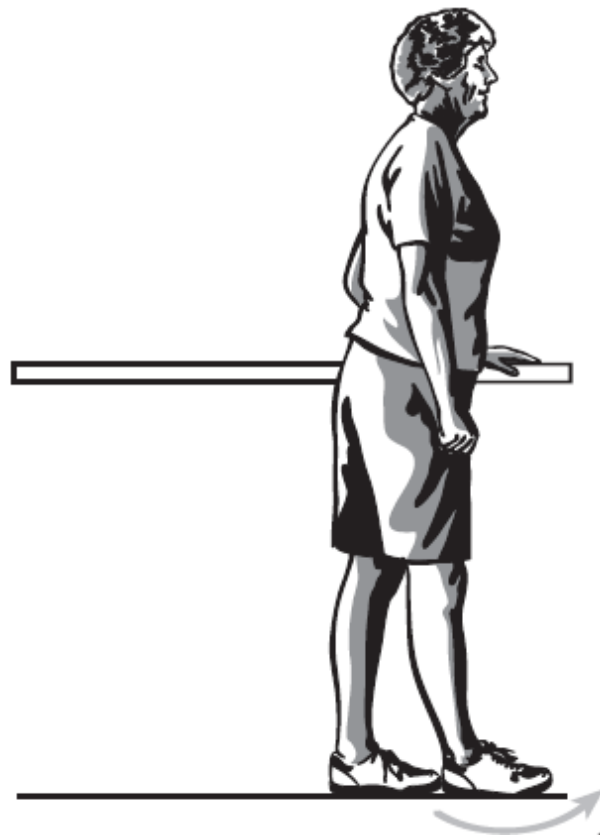
Sideways Walking

- Stand up tall near a table and place your hands on your hips.
- Take 10 steps to the right.
- Take 10 steps to the left.
- Repeat 4 times.



Heel Toe Walking – Hold Support

- Stand up tall beside a table.
- Hold on and look ahead.
- Place one foot directly in front of the other so your feet form a straight line.
- Place the foot behind directly in front of the other.
- Repeat for 10 more steps.
- Turn around.
- Repeat 4 times.



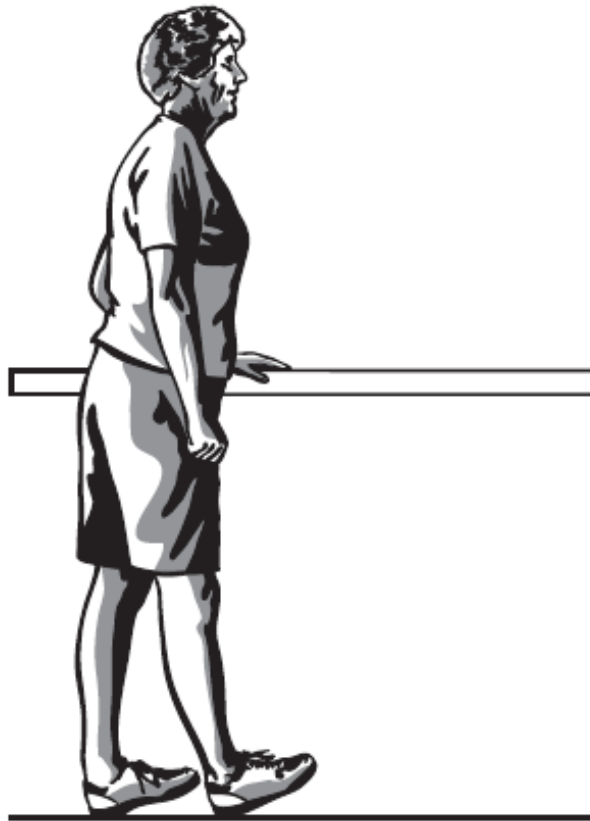
One Leg Stand – No Support

- Position yourself near a table.
- Stand on one leg.
- Try to hold this position for 10 seconds.
- Stand on the other leg.
- Try to hold this position for 10 seconds.



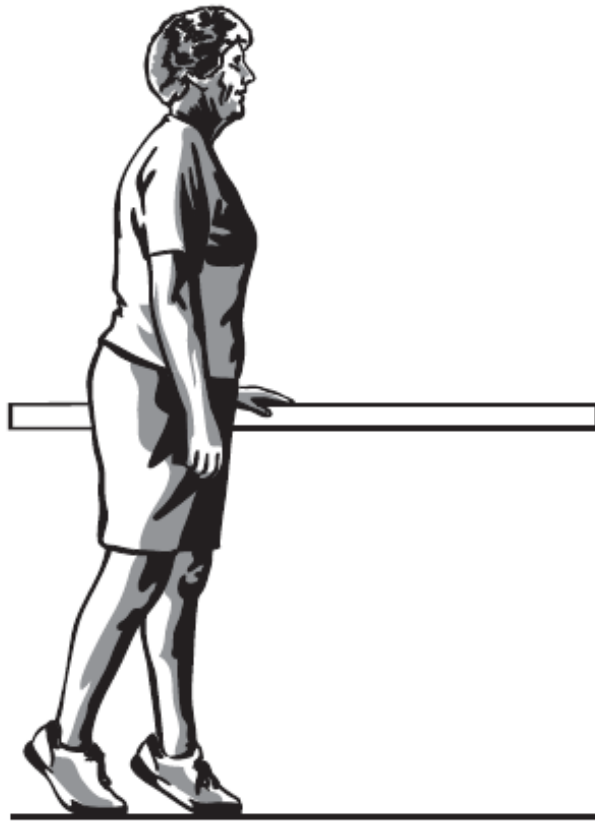
Heel Walking – Hold Support

- Stand up tall beside a table.
- Hold on and look ahead.
- Come back onto your heels, raising the front of your foot off the floor.
- Walk 10 steps on your heels.
- Lower your feet to the ground and turn around.
- Walk 10 steps on your heels.
- Repeat 4 times.



Toe Walking – Hold Support

- Stand up tall beside a table.
- Hold on and look ahead.
- Come up onto your toes.
- Walk 10 steps on your toes.
- Lower your heels to the ground and turn around.
- Walk 10 steps on your toes.
- Repeat 4 times.



Stand To Sit – One Hand

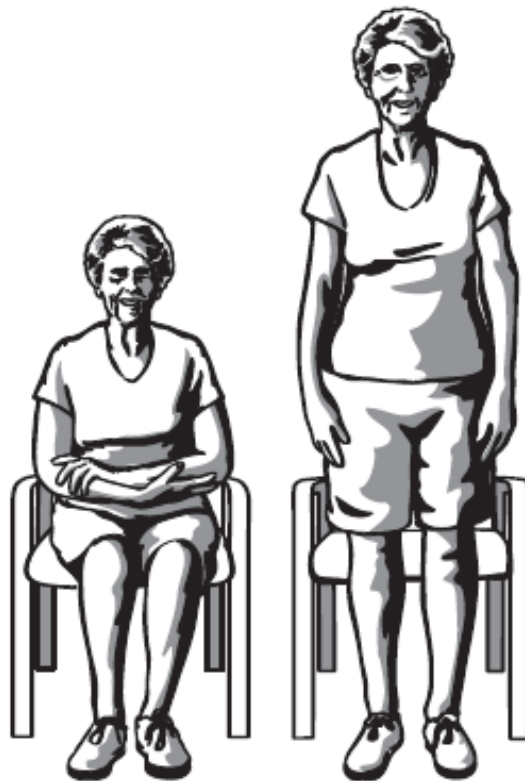
- Sit on a chair that is not too low.
- Place your feet behind your knees.
- Lean forward over your knees.
- Use one hand to help you stand up.
- Repeat 10 times.
- Progress to 2 sets of 10 repetitions.



Progress to **Stand to Sit – No Hands** (next page) when you are able.

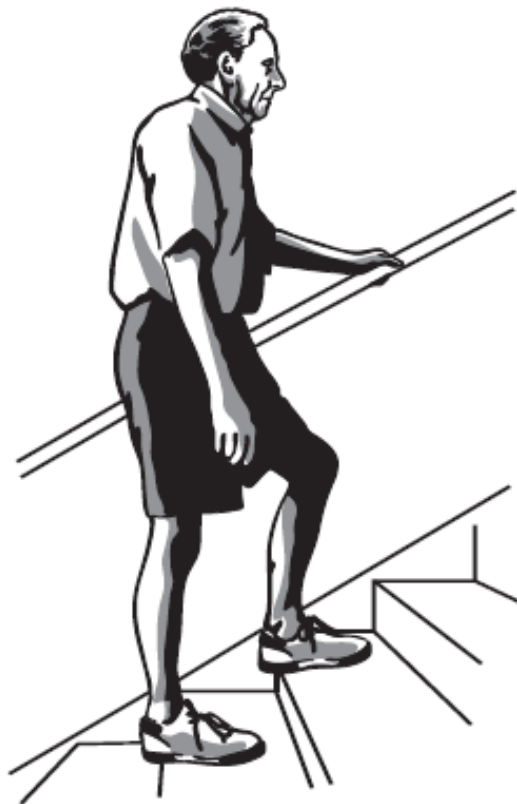
Stand To Sit – No Hands

- Sit on a chair that is not too low.
- Place your feet behind your knees.
- Lean forward over your knees.
- Stand up without using your hands.
- Repeat 10 times.
- Progress to 2 sets of 10 repetitions.



Stair Walking

- Hold onto the handrail for this exercise as required for safety.
- Go up and down the stairs for 10 steps.
- Progress to 2 sets of 10 repetitions.



Exercise Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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Exercise Recommendation:

- Complete the Otago exercises **3 times per week**
- Walk or take part in another moderate intensity physical activity for **150 minutes per week**.