



Otago strength and balance training exercise programme

An information guide for patients

Building healthier lives

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Why should you undertake this exercise programme?

Welcome to the programme. The exercise programme that you will undertake has been designed specifically for you. The benefits of exercise are plentiful. By maintaining your programme, you can improve:

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

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

If you have any questions about the exercises, please contact your physiotherapist:

Name

Telephone number

Walking

- Walking is an excellent way to enhance your general fitness
- Try going for a walk on the days between your exercises
- Try to increase the distance you walk and the time you spend walking
- Take advantage of fine weather to go walking

Tips for walking

- Wear comfortable shoes and clothing for walking
- Start with a warm-up marching on the spot for 2 minutes

When you walk

You should make sure:

- Your shoulders are relaxed and the arms gently swing
- You look ahead not down
- With each step the heel lands first, then you push off on the toes
- Finish with a warm-down i.e. marching on the spot for 2 minutes
- Enjoy yourself!

Safety

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

If illness stops you from maintaining the exercise programme contact your instructor before starting again.

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)

These exercises are designed to grade the ease with which you can carry them out. They need to be a bit of a challenge without risk of further falls. There is an option to do most of these exercises with varying levels of support depending on your balance and confidence.

Level 1 Holding on with 2 hands

Level 2 Holding on with 1 hand

Level 3 No hands/no support

Start by holding on with 2 hands and as you progress, reduce the support to holding on with 1 hand, finger tips or no hands. Your physiotherapist will be able to advise you about the level of support you should try and achieve during the programme.

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 5 times to each side



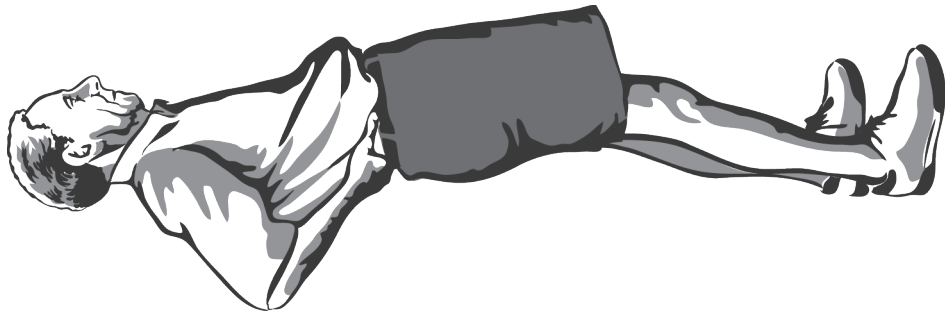
Neck movements

- Stand up tall and look ahead
- Place one hand on your chin
- Guide your head straight back
- Repeat 5 times



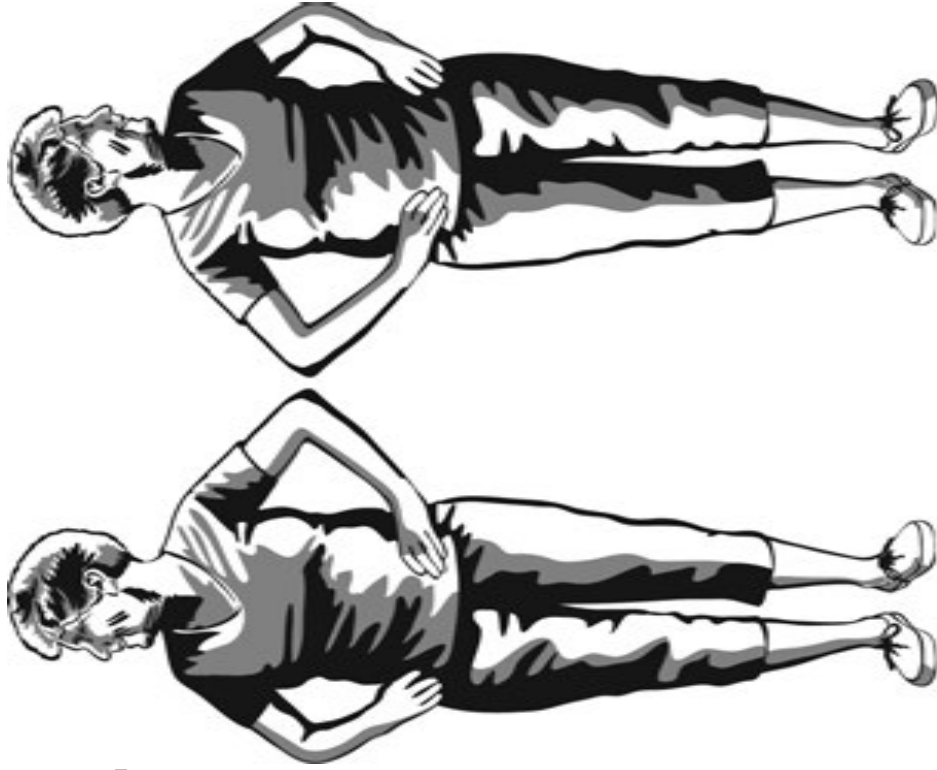
Back extension

- Stand up tall with your feet shoulder-width apart
- Place your hands on the small of your back
- Gently arch your back
- Repeat 5 times



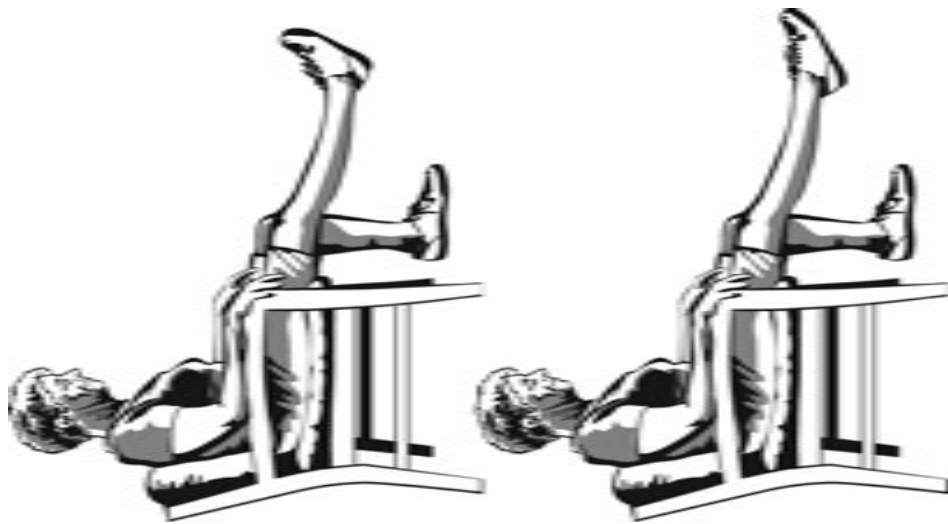
Trunk movements

- 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 5 times to each side



Ankle movements

- Either sit or stand
- Point the foot down then pull the foot back towards you
- Repeat 10 times for each foot



Getting stronger by using weights

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

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

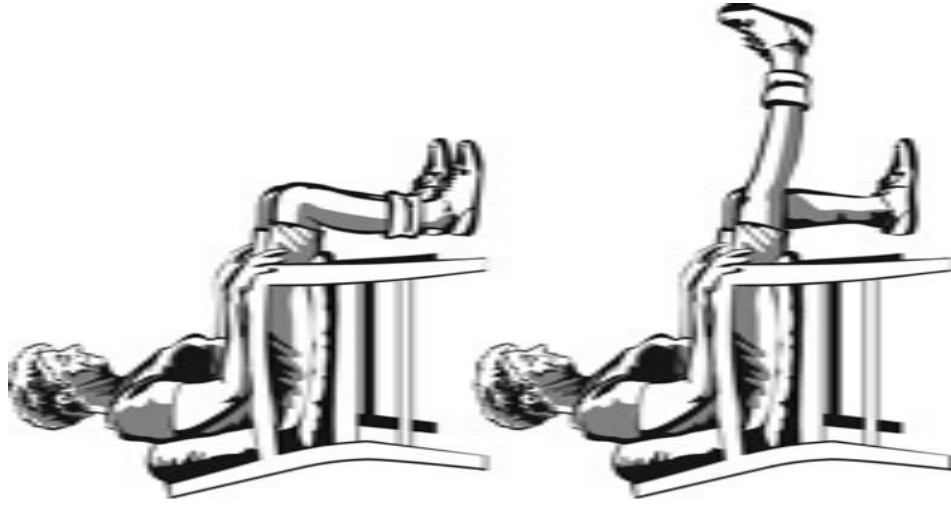
Lift the weight slowly through the entire range of movement.

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 quite normal. It is because you are using muscles which may not be accustomed to the exercise. It is important that you keep exercising. The stiffness will leave as your body becomes more familiar with the exercise.

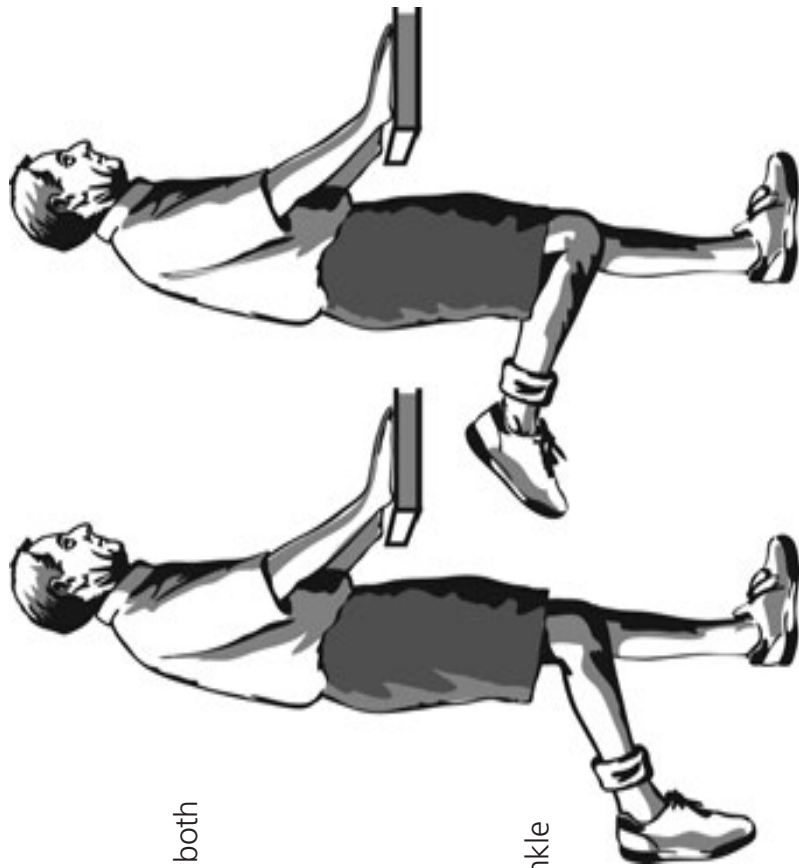
Front knee strengthening exercise

- You could do this while you watch TV
- Strap the weight onto your ankle
- Sit on a chair with your back well supported
- Straighten your leg out
- Lower your leg
- Repeat times
- Strap the weight onto your other ankle
- Repeat this exercise times



Back knee strengthening exercise

- Strap the weight onto your ankle
- Stand up tall facing the bench with both hands on the bench
- Bend your knee, bringing your foot towards your bottom
- Return to the starting position
- Repeat times
- Strap the weight onto your other ankle
- Repeat this exercise times



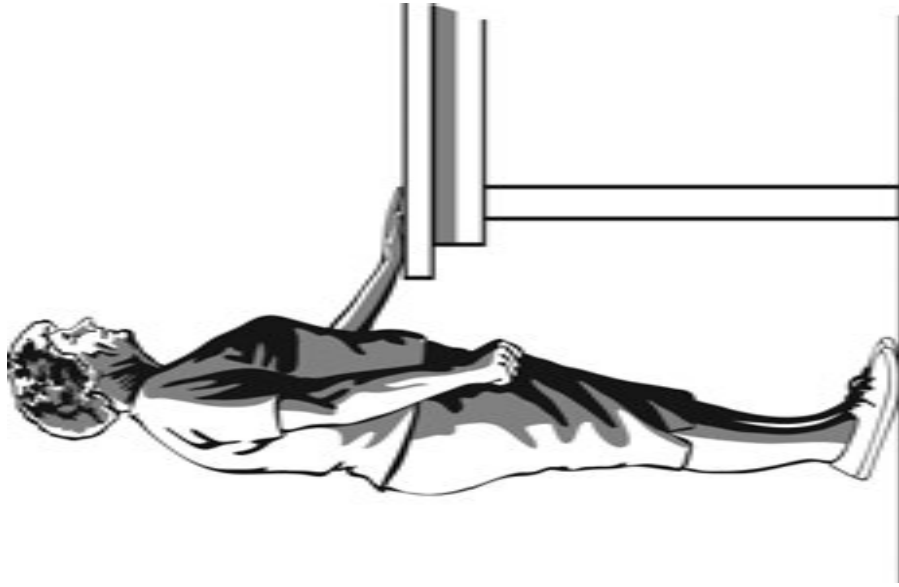
Side hip strengthening exercise

- Strap the weight onto your ankle
- Stand up tall beside the bench
- Hold onto the bench
- Keep the exercising leg straight and the foot straight forward
- Lift the leg out to the side and return
- Repeat times
- Strap the weight onto your other ankle
- Turn around
- Repeat this exercise times



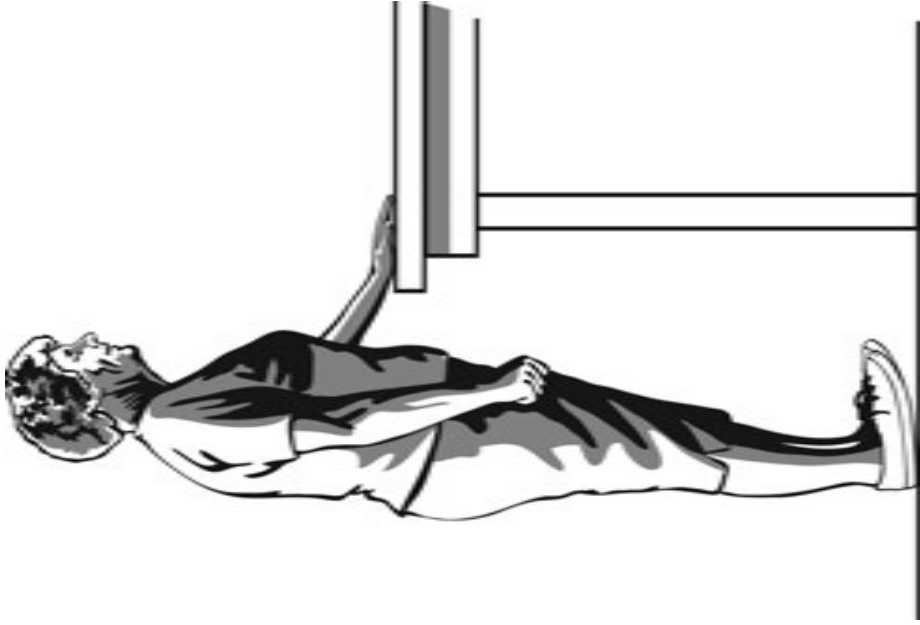
Calf raises – hold support

- Stand up tall facing the bench
- Hold on and look ahead
- Your feet should be shoulder-width apart
- Come up onto your toes
- Lower your heels to the ground
- Repeat this exercise 20 times



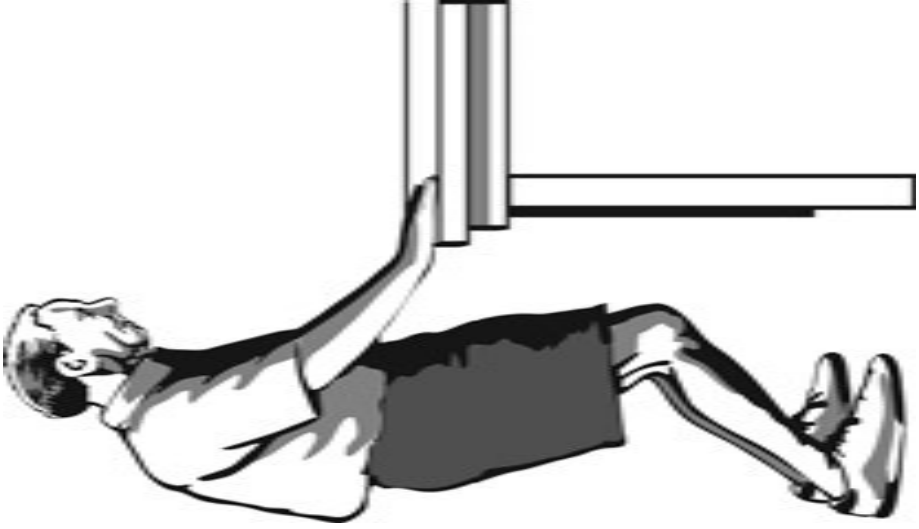
Toe raises – hold support

- Stand up tall beside the bench
- Hold on and look ahead
- Your feet should be shoulder-width apart
- Come back onto your heels, raising the front foot off the floor
- Lower your feet to the ground
- Repeat this exercise 20 times



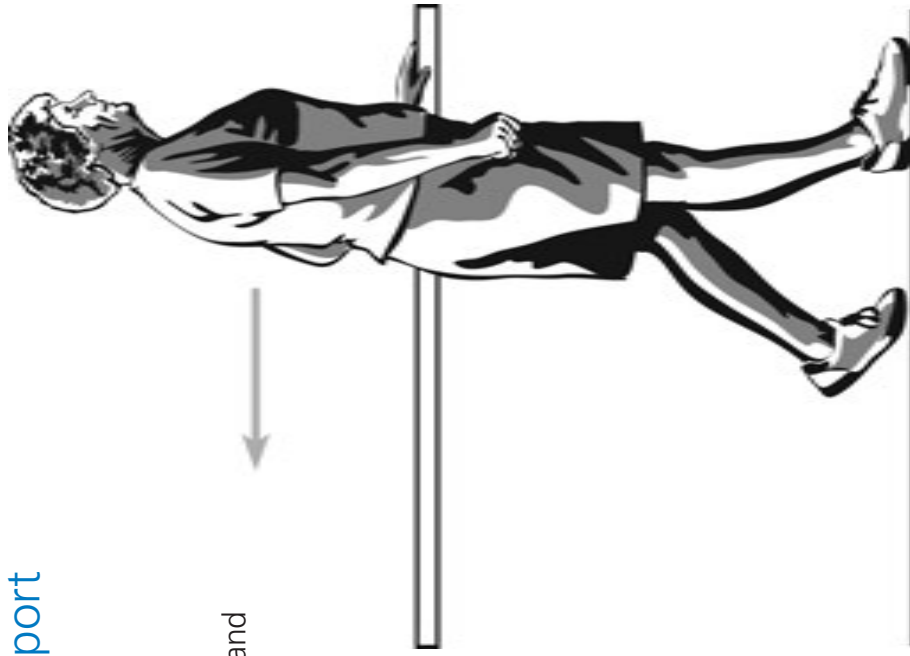
Knee bends – hold support

- Stand up tall facing the bench with both of your hands on the bench
- Place your feet shoulder-width apart
- Squat down half way, bending your knees
- Your knees go over your toes
- When you feel your heels start to lift, straighten up
- Repeat times



Backwards walking – hold support

- Stand up tall and hold onto the bench
- Walk backwards 10 steps
- Turn around and hold on with the other hand
- Walk backwards 10 steps to the beginning
- Repeat this exercise



Walking and turning round

- Walk at your regular pace
- Turn in a clockwise position
- Turn in an anti-clockwise position
- The exercise is a figure of eight movement
- Repeat this movement



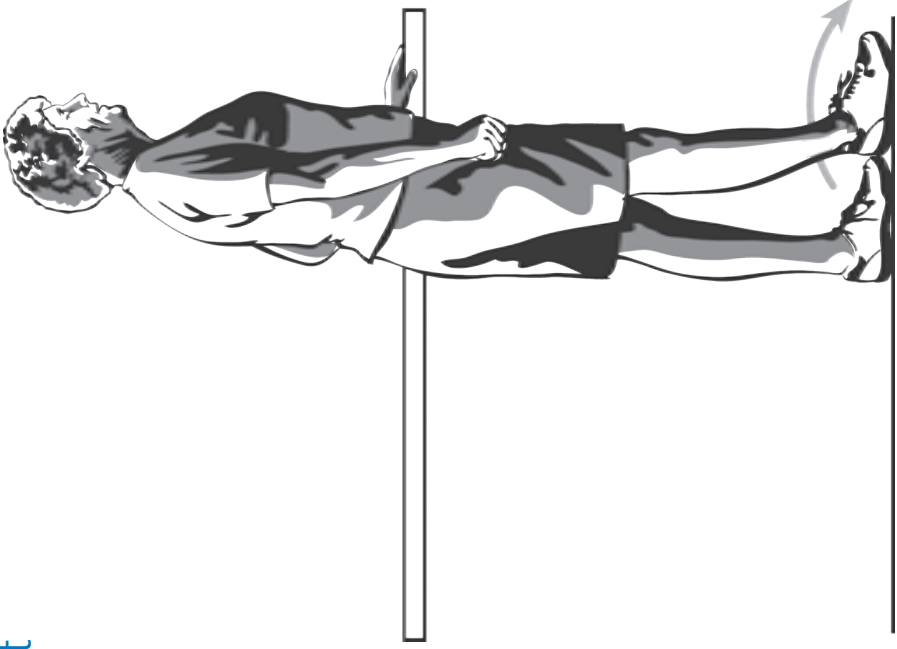
Sideways walking

- Stand up tall and place your hands on your hips
- Take 10 side steps to the right
- Take 10 steps to the left
- Repeat



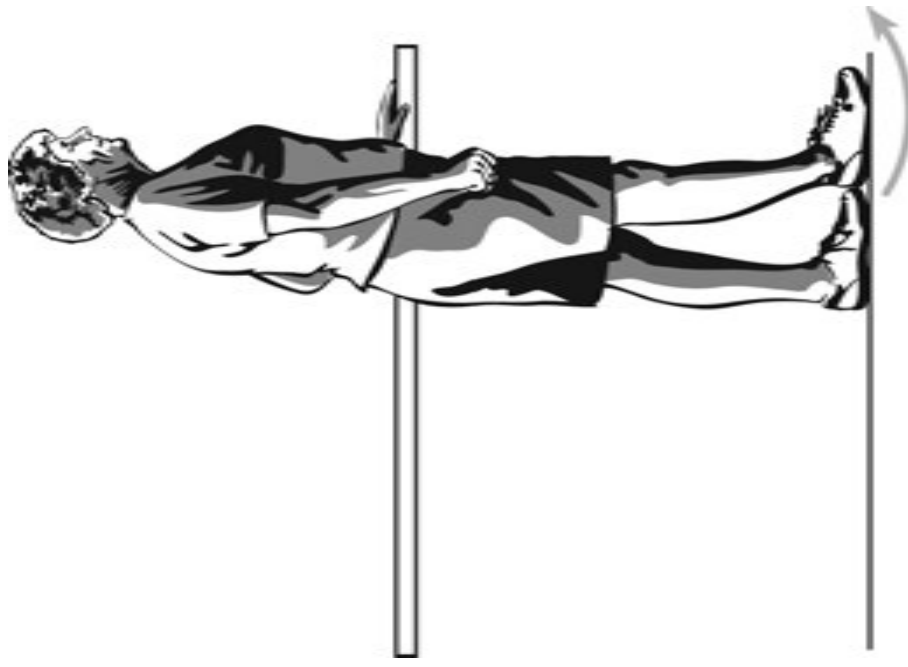
Heel toe standing – hold support

- Stand up tall beside the bench
- Hold onto the bench and look ahead
- Place one foot directly in front of the other so your feet form a straight line
- Hold this position for 10 seconds
- Change position and place the foot behind, directly in front
- Hold this position for 10 seconds



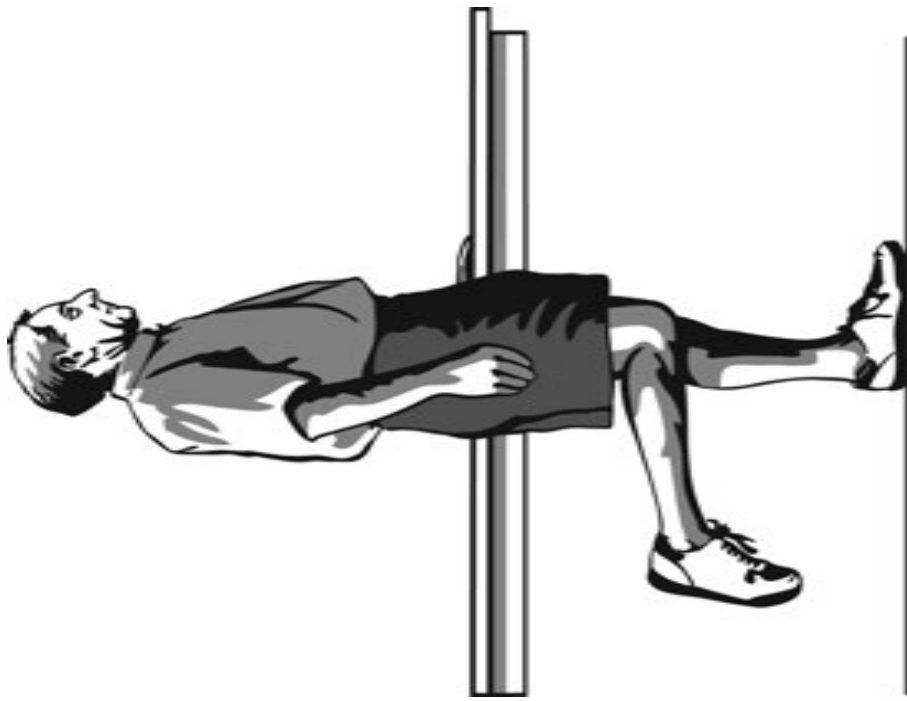
Heel toe walking – hold support

- Stand up tall beside the bench
- Hold onto the bench 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
- Repeat for 10 more steps
- Turn around
- Repeat the exercise



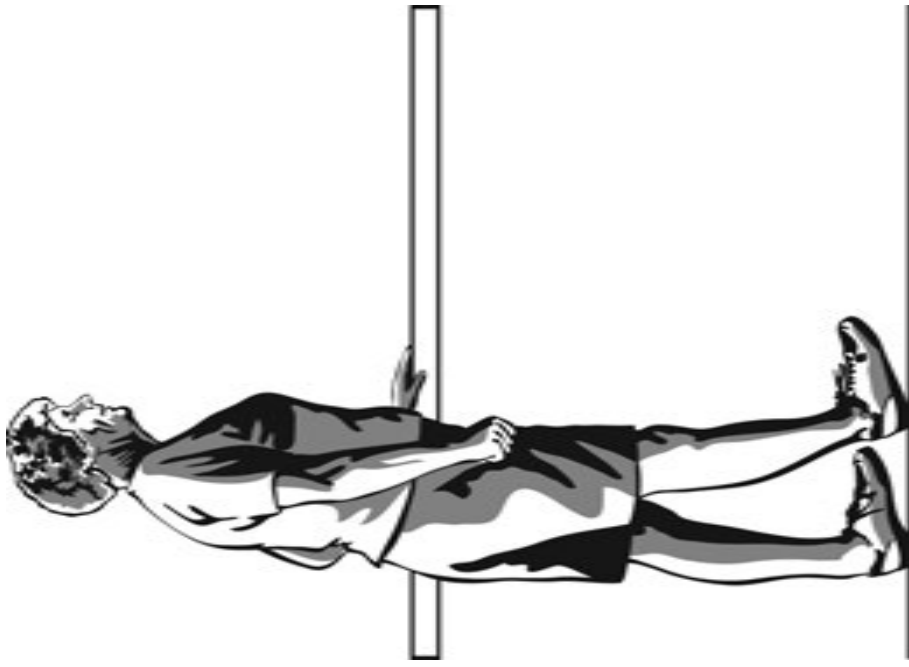
One leg stand – hold support

- Stand up tall beside the bench
- Hold onto the bench and look ahead
- 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



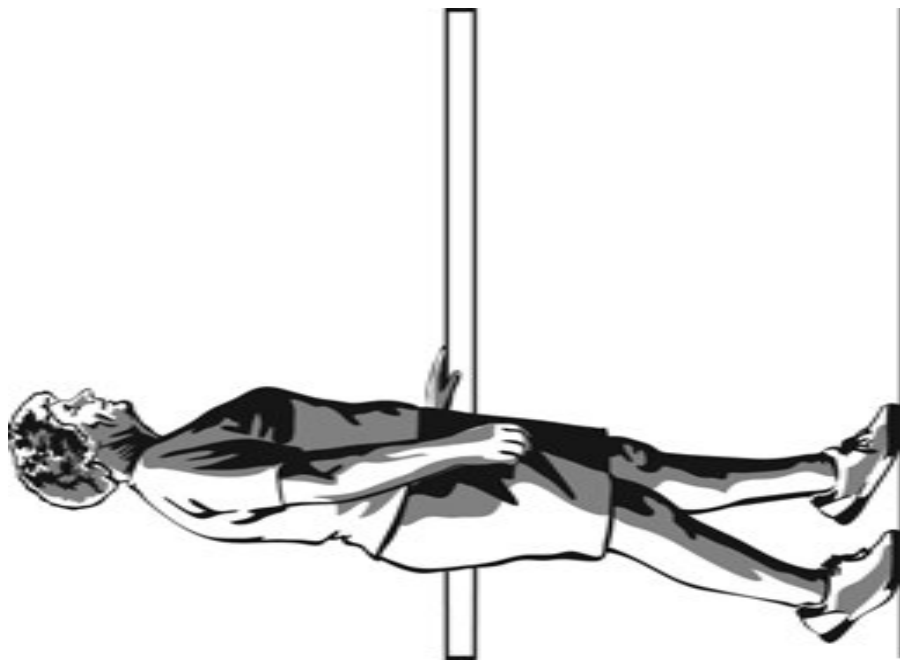
Heel walking – hold support

- Stand up tall beside the bench
- Hold onto the bench and look ahead
- Come back onto the heels, raising the front 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



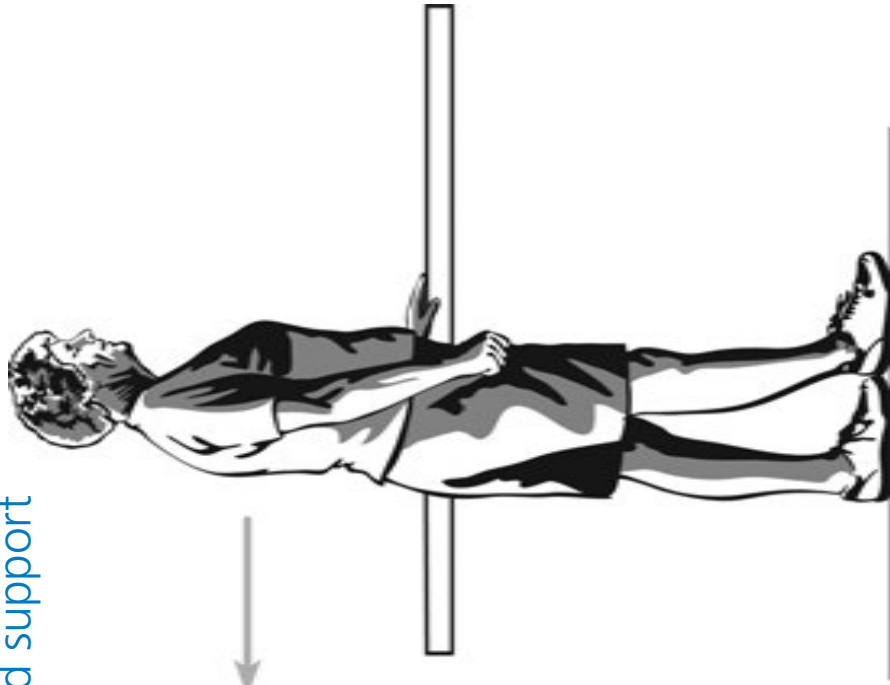
Toe walking – hold support

- Stand up tall beside the bench
- Hold onto the bench 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



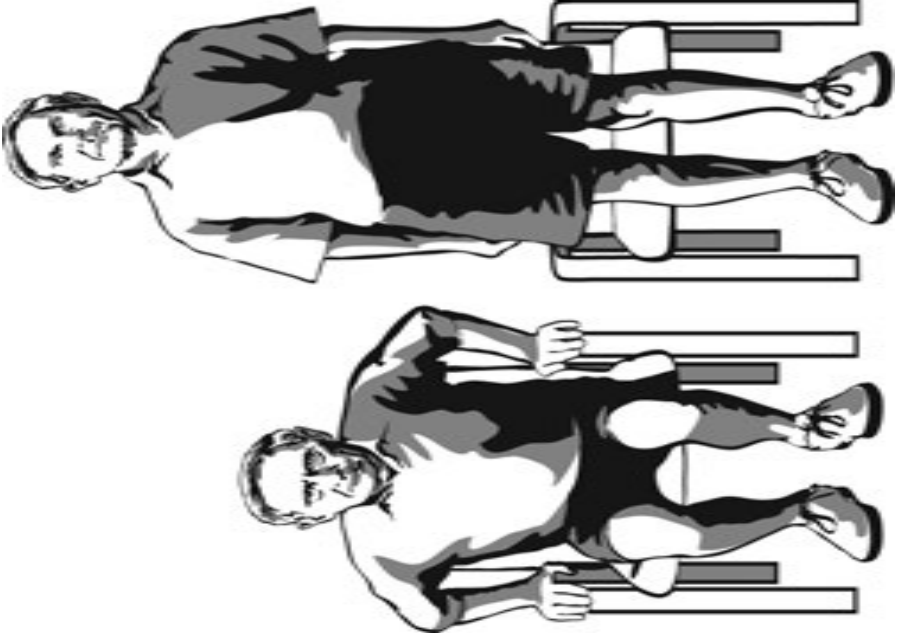
Heel toe walking backwards – hold support

- Stand up tall beside the bench
- Hold onto the bench and look ahead
- Place one foot directly behind the other foot
- Place the foot in front directly behind
- Repeat for 10 more steps
- Turn around
- Repeat the exercise



Sit to stand – two hands

- You could do this exercise while you watch TV
- Sit on a chair which is not too low
- Place the feet behind the knees
- Lean forwards over your knees
- Push off with both hands to stand up
- Repeat times



Stair walking

- Hold onto the hand-rail for this exercise
- Go up and down the stairs for steps



These exercises were designed by the New Zealand Falls Prevention Group 2001. University of Otago Medical School Dunedin, New Zealand.

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References

Robertson MC, et al. Effectiveness and economic evaluation of a nurse delivered home exercise program to prevent falls 1: A randomised controlled trial. British medical Journal 2001, Vol 322. P697-700.

Campbell J, Robertson MC. Otago exercise programme to prevent falls in older adults. A home based individually tailored strength and balance retraining programme. March 2003.



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