



LA TROBE
UNIVERSITY



**PREVENT FALLS
... FROM THE
GROUND UP**

FOOT AND ANKLE

EXERCISE PROGRAM

www.foothold.org.au



INTRODUCTION

Falls in older people are a major public health problem, with one in three older people falling each year. Fortunately, many falls are preventable if appropriate preventative actions are taken.

This DVD and booklet describe a foot and ankle exercise program developed by Australian researchers that has been clinically proven to increase strength, flexibility and balance. When used in combination with appropriate footwear and foot orthoses (insoles), this program has been shown to reduce the rate of falling by 36 per cent.

The DVD is designed to be used in the comfort of your own home. After your health care professional has agreed that this program is right for you, simply follow the instructions and carry out the exercises for 30 minutes three times per week.

If you have any questions about the program, please contact the health professional who provided you with the DVD for further information.

In order to complete the exercises, you will need the following equipment:

- a sturdy table and chair
- resistance exercise bands (provided by your therapist)
- marbles and a cup or mug to put them in
- a large rubber band

In addition, there are two other pieces of equipment that your therapist may provide you with:

- an Archxerciser™ device
- a FootGym™ device

These two pieces of equipment are optional, so you can still complete most of the exercises without them. However, if at all possible we recommend you obtain either of these devices to get the most out of the program.

I. ANKLE CIRCLING

Setup

Sit comfortably in a chair with both feet on the ground.

Clockwise circling exercise

1. Lift one foot off the ground and hold it up in the air
2. Using slow and gentle movements, rotate ankle and circle foot in a clockwise direction, making as large a circle as possible
3. Repeat 10 circles in clockwise direction, then place foot down to rest
4. Lift the other foot off and repeat 10 clockwise circles using this foot.

Anti-clockwise circling exercise

1. Lift the first foot off the ground again and hold it up in the air
2. This time, rotate the ankle and circle the foot in an anti-clockwise direction again making as large a circle as possible
3. Repeat 10 circles in an anti-clockwise direction and then place the foot down to rest
4. Lift the other foot off and repeat 10 anti-clockwise circles using this foot.



Dosage

Do only 1 set of 10 circles in each direction on each foot.

2. ANKLE STRENGTHENING WITH RESISTANCE BANDS

Setup

1. Place chair side-on to the table just behind where the resistance exercise band is attached and sit in it with your feet flat on the ground
2. Loop the free end of the resistance exercise band around your foot that is closest to the table, at the level of the base of the toes
3. Pull your foot away from the table until the resistance exercise band is taut
4. Place your hands on your exercising knee to prevent the knee from turning during the exercise.

Ankle inversion (turn-in) exercise

1. Use your foot to pull on the the resistance exercise band by slowly turning your foot away from the table leg and finishing with the inside sole of your foot off the ground facing away from the table leg
2. Slowly return the foot back to flat on the ground
3. Repeat exercise 10 times.



Ankle eversion (turn-out) exercise

1. When you have finished with the inversion exercise, remove the Thera-Band® from around the inside of your foot and loop it around the outside of your other foot in the same manner, at the level of the base of the toes
2. Pull your foot away from the table until the band is taut
3. Place your hands on your exercising knee to prevent the knee from turning during the exercise
4. Use your foot to pull on the Thera-Band® by slowly turning your foot away from the table leg and finishing with the outside sole of your foot off the ground facing away from the table leg
5. Slowly return the foot back to flat on the ground
6. Repeat exercise 10 times.



Dosage

1. Do 3 sets of 10 repetitions
2. Have a 30 second rest in between each set
3. Start with the coloured resistance exercise band that has been recommended to you
4. Once you can complete all 3 sets of 10 repetitions of the exercises without any difficulty, progress onto next level (colour) of resistance exercise band.

3. ANKLE DORSIFLEXION (TOE-UP) EXERCISE

Setup

Sit in a chair with both feet flat on the ground

Exercise

1. Lift your toes on both feet off the ground as high as you can and hold for 10 seconds
2. Ensure that your heels remain in contact with the ground at all times

Dosage

1. Start with 1 set of 3 repetitions, holding for 10 seconds each time
2. If you can do 3 repetitions without difficulty or muscle soreness the next day, increase by 1 rep to 4 repetitions of 10 seconds
3. Keep increasing the number of repetitions until you reach 10 repetitions. It does not matter if you do not reach 10 repetitions
4. You only need to do 1 set of repetitions for this exercise



4. TOE STRENGTHENING: PICKING UP MARBLES

Set up

1. Sit comfortably in a chair
2. Place 20 marbles on the floor and an empty container by the side of the marbles.

Exercise

1. Use your toes to pick up a marble off the floor
2. Release it into the container
3. Keep picking up the marbles with your toes until all 20 marbles have been picked up and released into the container
4. Tip the marbles out onto the floor again, and repeat the exercise with your other foot.

Dosage

1. Repeat the exercise twice on each foot, each time picking up 20 marbles
2. If you have difficulty with picking up all 20 marbles with your toes, just pick as many as you are able to.



5. TOE STRENGTHENING: THE ARCHXERCISER™

Set up

1. Sit in the chair with your feet on the ground and the ArchExerciser™ placed close to the exercising foot
2. Position the exercising foot on the ArchExerciser™ as shown, with your heel on the grey-pad and your toes over the slider.

Exercise

1. Grip the slider with your toes and pull it back towards the heel by arching the middle of your foot.
2. Do not allow the heel to slide backwards or lift off the grey-pad
3. Pull the slider back as far as possible, then slowly release it by relaxing your foot
4. Repeat 10 times.



Dosage

Do 3 sets of 10 repetitions on each foot.

6. TOE STRENGTHENING: THE FOOTGYM™

Set up

1. Sit in the chair with your feet on the ground and the FootGym™ placed close to the exercising foot
2. Position the exercising foot on the FootGym™, with your heel on the base and your toes curled over the resistance band.

Exercise

1. Grip the band with your toes and pull it back towards the heel by arching the middle of your foot
2. Do not allow the heel to slide backwards or lift off the base
3. Pull the resistance band back as far as possible, then slowly release it by relaxing your foot
4. Repeat 10 times.



Dosage

1. Start with the yellow resistance band, and do 3 sets of 10 repetitions on each foot
2. As you get stronger, move to the green band and then the red band.

7. BIG TOE STRETCH

Set up

1. Sit comfortably in a chair
2. Loop the rubber band provided around both your big toes.

Exercise

1. Slide one foot away from the other until you feel a comfortable stretch in your big toes from the rubber band
2. Keep both feet on the ground and hold the stretch in the big toes for 20 seconds
3. Relax and return the foot back to starting position.

Dosage

Repeat 3 times.



8. RISING UP ON TOES

Set up

Stand in front of a wall with hands on the wall for balance with your feet flat on the ground at a comfortable distance apart.

Exercise

1. Slowly rise up onto your toes on both feet
2. Rise up as high as you can, then slowly lower yourself back down onto the ground
3. Repeat the exercise for 10 times.

Dosage

1. Do 3 sets of 10 repetitions
2. Have a 30 second rest in between each set
3. Once you can complete all 3 sets of 10 repetitions without any difficulty or soreness next day, increase the number of repetitions by 2 to 12, and do 3 sets of 12 repetitions
4. Keep increasing the number of repetitions by 2 up to 50 as you are able to. It does not matter if you cannot go up to 50 repetitions.



9. CALF STRETCHES

Set up

1. Stand in front of a wall with your hands on the wall for balance, feet flat on the ground at a comfortable distance apart
2. Place one foot backwards about a step length
3. Ensure the back heel is flat on the ground at all times
4. Keep your hips, knees and toes pointing forwards and square to the wall at all times.

Exercise

1. Keeping the back leg straight, slowly bend the front knee and bring yourself toward the wall
2. Lean towards the wall until you feel a stretch in the calf muscle at the back of your leg
3. If you have gone as far as you can and cannot feel a stretch, move your foot a little further behind and try again
4. Once you feel a medium-strong stretch in the back leg, stop and hold the stretch for 20 seconds
5. After 20 seconds, relax and have a little rest. Then repeat the stretch again
6. Repeat the stretch 3 times on 1 leg. Then change foot by placing the other leg behind and repeat 3 stretches on times on the other leg.



Dosage

1. Repeat 3 times on each leg or as able
2. Hold the stretch for 20 seconds each time

SUMMARY OF EXERCISES AND DOSAGES

NAME	DOSAGE	INCREMENTS
1. Ankle circling	1 set x 10 circles in each direction on each foot	No increment
2. Ankle strengthening with resistance bands	For both inversion (toe-in) and eversion (toe-out): 3 sets x 10 repetitions on each foot, 30 seconds rest between sets	Increase resistance exercise band
3. Ankle dorsiflexion (toe-up) exercise	1 set of repetitions, holding 10 seconds each time	Start with 3 repetitions, increase repetitions by 1 as able until you reach 10 repetitions
4. Toe strengthening (picking up marbles)	2 sets x 20 marbles on each foot, 30 seconds rest between sets	If you have difficulty with picking up marbles, start with picking as many as you can and increase as able up to 20
5. Toe strengthening (Archxerciser™)	3 sets x 10 repetitions on each foot, 30 seconds rest between sets	Increase amount of slider bar retraction as able
6. Toe strengthening (FootGym™)	3 sets x 10 repetitions on each foot, 30 seconds rest between sets	Increase resistance band
7. Big toe stretch	1 set x 3 repetitions holding 20 seconds each time	Increase distance of toe stretch as able
8. Rising up on toes	3 sets x 10 repetitions, 30 second rest between sets	Increase repetitions in each set by 2, up to 50 repetitions as able
9. Calf stretches	1 set x 3 repetitions on each leg, holding 20 seconds each time	Increase distance of behind foot as able

CREDITS

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Notes

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