



Welcome to The Otago Exercise Program!

Welcome to the program! This exercise program has been designed specifically for you.

History

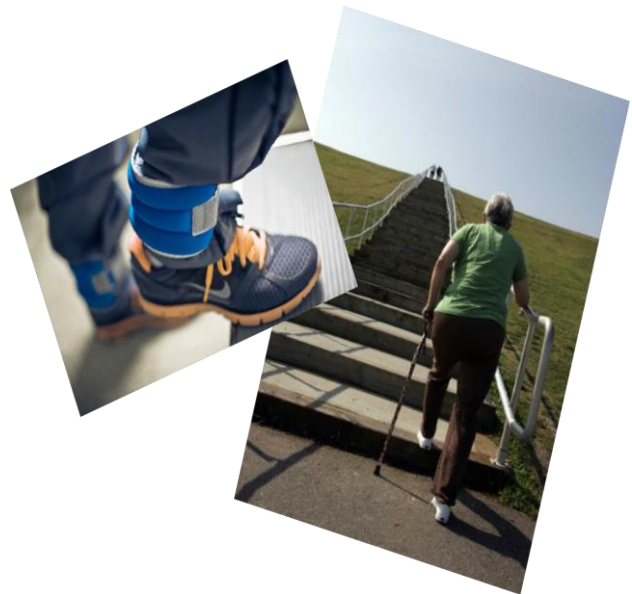
The Otago Exercise Program is a muscle strengthening, balance retraining, and walking program that can reduce falls. It may be performed at home under the supervision of a physical therapist or in group classes with oversight by a physical therapist. The rationale behind this exercise program is that while muscle strength, flexibility, balance, and reaction time are risk factors for falls, they can easily be modified.

Benefits

The benefits of exercise are plentiful—by maintaining your program, you can improve:

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

You should do the prescribed exercises three times each week and walk on the days in between. You can divide the exercises up; they do not have to all be done at the same time. Try to work up to 150 total minutes of activity (exercise + walking).



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

Safety



Always check with your primary care provider and physical therapist prior to beginning any of the Otago strength, balance, and walking exercises. Only add exercises to your routine when you are advised to do so.

We strongly recommend that you do the exercises next to an object that can provide support, for example, a counter, stable piece of furniture, or the wall, unless otherwise instructed. Exercises should not be painful. If you are experiencing pain, talk with your physical therapist to have the exercises adjusted. If illness stops you from maintaining the exercise program, contact your physical therapist before starting again.

Contact your primary care provider if you experience the following while exercising:

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

If you have any questions about the exercise program, do not hesitate to call your physical therapist or primary care provider.

Walking

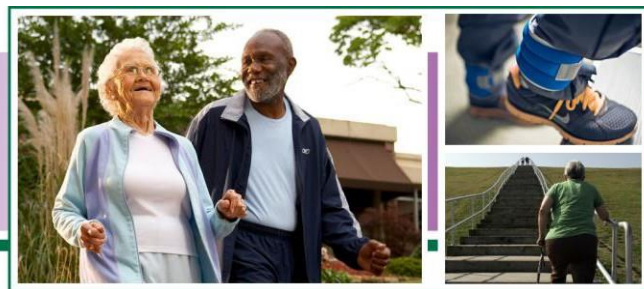
Walking is an excellent way to improve your general fitness. Talk with your physical therapist before starting to walk as they should first assess your ability to walk indoors and outdoors using your usual walking aid(s). Try to go for a walk on the days in between your exercises. Try to increase the distance and the time you spend walking. Take advantage of nice weather to go for a walk. Be safe while walking. See the *Walking Tips* handout for more information about walking, including safety tips.



Day to Day

Did you know that you can improve your general fitness by simply being more active in your day-to-day life? Here are some examples of activities to build into your day:

- Walk instead of drive to stores, as long as it is safe to do so, or park a little farther away from the store so you need to walk further.
- Walk to talk with your neighbor instead of using the telephone,
- Take the stairs rather than the elevator or escalator, and
- Stand to fold clean clothes.



PREPARING FOR EXERCISE

Standing Posture with 3 Deep Breaths

- Stand up tall with feet shoulder-width apart.
- Take a deep breath through your nose. Exhale gently through your mouth.
- Repeat 3 times.
- Remember to breathe while exercising!



FLEXIBILITY EXERCISES

Equipment needed: Standard chair with firm seat and firm back

Head Movements (Neck Rotation)*

- Scoot forward in the chair so your feet are flat on the floor.
- Sit up straight. Place your hands on your knees.
- Slowly turn your head as far as you can to the right.
- Slowly turn your head as far as you can to the left.
- Do not push into pain.
- Repeat five times to each side.



*If you get dizzy during this exercise, speak to your doctor or physical therapist

Neck Movements (Chin Tuck)

- Scoot forward in the chair so your feet are flat on the floor.
- Sit up straight and look straight ahead.
- Gently glide your head straight back to feel a stretch on the neck muscles.
- It is the same motion as making a “double chin.” It is a small motion and a gentle stretch. Be careful not to look up. Just glide your head back and relax.
- Repeat 10 times.



Trunk Movements (Trunk Rotation)

- Stand up tall and place your hands on your hips.
- Your hips over your feet and your shoulders over your hip.
- Turn as far as you can to the right comfortably.
- Turn as far as you can to the left comfortably.
- Repeat ten times to each side.



STRENGTHENING EXERCISES

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

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

Your physical therapist will prescribe certain weights for you during these exercises and may also prescribe additional weights as you become stronger. Using too much weight before your physical therapist tells you it is okay may cause injury.



Lift the weight slowly through the entire range of movement. Never hold your breath while lifting.

- Inhale before lifting,
- Exhale while lifting,
- Inhale again while lowering the weight.

STRENGTHENING EXERCISES

Equipment needed: Standard chair with firm seat and firm back
Ankle weights as prescribed by therapist (5 lb to 20 lb)

1. Front Knee Strengthening Exercise (Quadriceps or Thigh Muscle)

- Strap the weight onto your ankle. If you have 2 weights, put both on.
- Sit in a chair with your feet flat on the floor.
- Straighten the leg out as far as you can.
- Slowly lower the leg. Do not lean back. Do not raise or lower quickly.
- Repeat 10 times on that leg.
- Switch to the other leg.
- Repeat 10 times on the other leg.



2. Side Hip Strengthening Exercise (Hip Abductors)

- Strap the weight onto your ankle. If you have 2 weights, put both on.
- Stand up straight beside the chair and hold onto it. Tighten your stomach.
- Keep the exercising leg straight and the foot facing straight ahead.
- Lift the leg out to the side and slowly return. Keep your trunk straight.
- Repeat 10 times on that leg.
- Turn around and hold onto the chair. Switch to exercise the other leg.
- Repeat 10 times on the other leg.



3. Back Knee Strengthening (Hamstring or Back of Thigh)

- Strap the weight onto your ankle. If you have 2 weights, put both on.
- Stand up tall, facing a chair. You can have one or both hands on the chair.
- Bend the knee, bringing the foot toward your bottom.
- Return to the starting position.
- Repeat 10 times on that leg.
- Switch to exercise the other leg.
- Repeat 10 times on the other leg.



Equipment needed: Standard chair with firm seat and firm back

4. Calf Raises*

- Stand up tall, facing a chair
- Hold onto the chair 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.

**Hold
Support**



* Progress from 2 hands to 1 hand to no hands

**No
Support**



5. Toe Raises*

- Stand up tall, facing a chair
- Hold onto the chair 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 from 2 hands to 1 hand to no hands

**Hold
Support**



**No
Support**



6. Knee Bends*

- Stand up tall facing a chair with both hands on the chair.
- Place your feet shoulder-width apart.
- Squat down halfway, bending your knees.
- The knees go over the toes.
- When you feel your heels start to lift, straighten up.
- Repeat 10 time(s).

*Progress from 2 hands to 1 hand to no hands

**Hold
Support**



**No
Support**



7. Sit to Stand from a Chair*

- Scoot forward in the chair so your feet are flat on the floor.
- Sit up straight and look straight ahead.
- Use your hands if you need to. Or, try with one hand. Or, no hands.
- Stand up straight. Go all the way down. Pause.
- Repeat 10 times.

*Progress from two hands assisting to one hand to no hands.

Two Hand Assist



One Hand Assist



No Hands

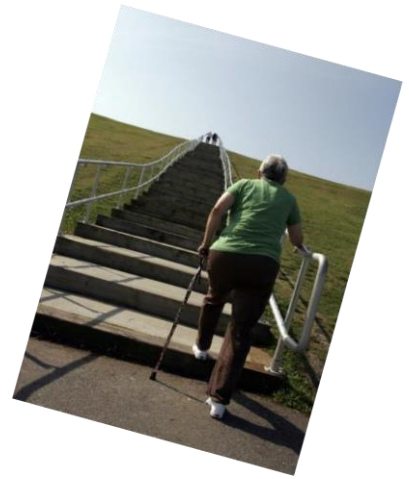


BALANCE EXERCISES

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.



BALANCE EXERCISES

Equipment needed: Standard chair with firm seat and firm back,

8. Heel Toe Stand*

- Stand up tall with your side to a chair or countertop and look ahead.
- Place one foot directly in front of the other so your feet form a straight line. Lightly hold onto the chair or counter with one hand.
- Hold this position for 10 seconds.
- Change position and place the foot behind directly in front of the other.
- Hold this position for 10 seconds.
- Repeat 5 times per leg.

*Progress to holding for balance support to no support.

**Hold
Support**



No Support



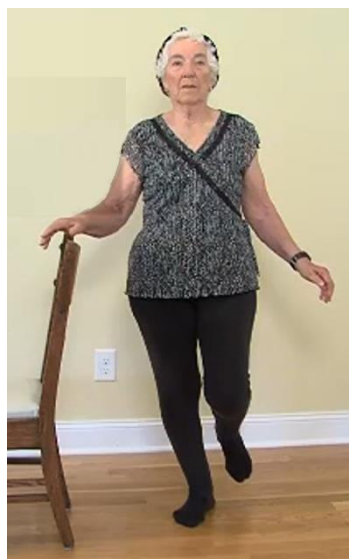
9. One Leg Stand*

- Stand up tall with your side to a chair or countertop 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.
- Repeat 5 times per leg.
- Over time, try to increase to 30 seconds per leg.

**Hold
Support**



No Support



10. Sideways Walking

- Stand up tall near a countertop or table.
- Take 10 steps to the right.
- Take 10 steps to the left.
- Repeat 4 times each direction.



11. Backwards Walk*

- Stand up tall and hold onto wall or countertop
- Walk backwards 10 steps.
- Turn around and hold on with the other hand.
- Walk backwards 10 steps to the beginning.
- Repeat 4 times each direction.

*Progress to holding for balance support to no support.

**Hold
Support**



No Support



12. Heel Toe Walking

- Stand up tall beside a wall or countertop.
- 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 10 more steps to the starting place
- Repeat this exercise 4 times.

*Progress to holding for balance support to no support.

**Hold
Support**

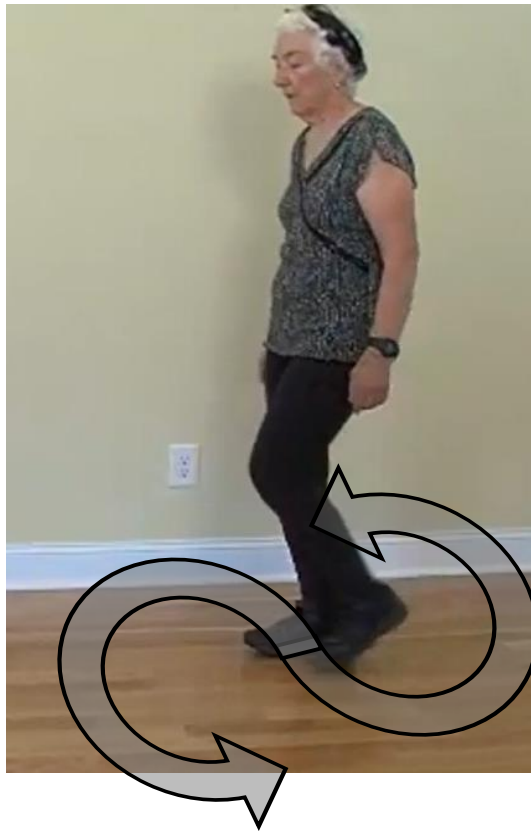


**No
Support**



13. Walking and Turning (Figure 8 Walking)

- Stand up tall near a wall or countertop.
- Walk at your regular pace.
- Walk by turning in a clockwise direction.
- Walk back to your starting position.
- Walk by turning in a counter-clockwise direction.
- You have created a figure of 8 pattern.
- Repeat this exercise 4 times.



14. Heel Toe Walk Backwards

- Stand up tall near a wall or countertop 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 for 10 more steps to return to start.
- Repeat this exercise 4 times.
- Progress to holding for balance support to no support.

**Hold
Support**



15. Heel Walking

- Stand up tall beside a wall or countertop.
- 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.

*Progress to holding for balance support to no support.

**Hold
Support**



**No
Support**



16. Toe Walking

- Stand up tall beside a wall or countertop.
- 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.

*Progress to holding for balance support to no support.

**Hold
Support**



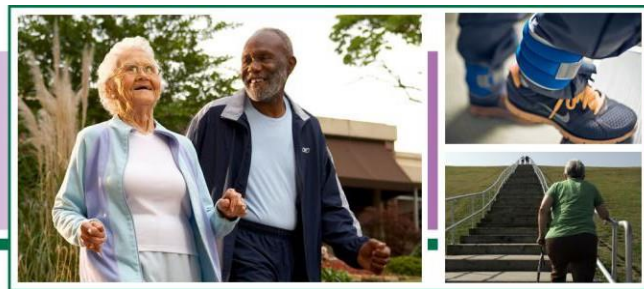
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Support**



17. Stair Climbing – Advanced Exercise!

- Do not start or perform this exercise without close supervision
- Hold onto a hand-rail for this exercise
- Go up and down the stairs for X steps.





Walking Tips

While walking is important, it should not replace the Otago Exercise Program. Add the walking plan to the Otago exercise program when your physical therapist tells that you are ready.

General Walking Tips

- Wear good shoes.
- Wear prescription eyeglasses if advised by your primary care provider.
- Use your walking aid if recommended.
- Do not go outside if it is too cold or too warm
- Carry identification and a cell phone
- Have a set time during the day to walk so it becomes part of your routine and so your family and friends know where you are.

When You Walk

- Start with a warm-up (e.g., marching in place for two minutes).
- Relax your shoulders and gently swing your arms in a way that is comfortable to you.
- Look ahead, not down
- With each step, land with your heel first, then push off on your toes.



- Walk at a normal and not a fast pace.
- Finish with a cool-down (e.g., marching in place for two minutes).
- Avoid multi-tasking (i.e., talking, carrying items).

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 cold or hot
- Avoid roads or sidewalks that have tripping hazards.

How to Be Safe Indoors

- When walking in your house:
 - Remove scatter rugs.
 - Secure loose carpet.
 - Install handrails on staircases.
 - Tape down electrical cords.
 - Mark uneven floors.
 - Watch out for pets.
 - Keep walkways clear of clutter.
- When walking at the mall, choose times when it is less crowded.

Alternatives to Walking Outdoors

- Malls or other large indoor retail locations, including grocery stores,
- Indoor tracks at schools and/or universities, or
- YMCA, or other fitness or senior centers.

Adjustable Ankle Weights

Importance of Adjustable Ankle Weights

Adjustable ankle weights are weighted bands that fasten around the ankles (often with Velcro). They add weight/resistance to your legs during a workout, an important component of the Otago Exercise Program. Adding resistance is critical to your improvement and progression through the program. Adjustable weights allow you to gradually increase the weight (one-half pound to 20 pounds) while strengthening the knee flexors, knee extensors, and hip abductors. Adjustable weights also allow you to increase the intensity but not the impact on joints while strengthening the leg muscles.²⁵

Physical therapists and others who have completed the Otago training program will help determine the appropriate weight to use each time they visit you. They can also advise you on where to obtain your own adjustable ankle weights to complete the exercises at home.

Cost of Adjustable Ankle Weights

You are encouraged to purchase a weight set of 10 to 20 pounds, with each weight band holding 5-20 pounds. The cost for such a set ranges from \$25 to \$75. Adjustable weights can be purchased at large retailers and sporting goods stores or online retail outlets (e.g., Amazon). Please talk to your physical therapist about which weights are right for you and your purchase options.

Otago Exercise Calendar

Use this calendar to keep track of when you do your Otago exercises or when you walk. Just mark the days or time you spent exercising or walking. Please show this to your Otago therapist to keep track of your progress. Ask your physical therapist to provide additional pages of this calendar when you run out. An example of a completed exercise calendar follows the calendar template.

Otago Exercise Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Date:	Date:	Date:	Date:	Date:	Date:	Date:

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SAMPLE – Otago Exercise Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Date:	Date:	Date:	Date:	Date:	Date:	Date:
	<ul style="list-style-type: none"> ▪ Otago exercises – 30 minutes 	Walk – 20 minutes Otago balance exercises – 10 minutes	<ul style="list-style-type: none"> ▪ Otago exercises – 30 minutes 	<ul style="list-style-type: none"> ▪ Walked around park – 20 minutes 	<ul style="list-style-type: none"> ▪ Otago exercises – 30 minutes 	<ul style="list-style-type: none"> ▪ Walk – 20 minutes ▪ Otago balance exercises – 10 minutes

Otago Exercise Diary

Use this diary to record your thoughts and feelings about your Otago exercises and how your body feels before and after you perform them. You can also keep track of how far you walk and where you walk in this diary. Ask your physical therapist to provide you with additional pages of this diary when you run out. An example diary entry is provided below.

Date

Notes (EXAMPLE)

Every day I do the Otago exercises they get a little easier. I still have trouble with the side hip strengthening exercise because of my bad hip, but I've noticed some improvement. I've also noticed I'm not as tired after finishing the exercises as I was when I first started. Today I also walked 10 minutes around my neighborhood.

Date

Notes

Date

Notes