



Exercising with Walking Poles

A USER'S GUIDE TO SELF-ASSESS POLE WALKING SUITABILITY



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How do you spend your free time?

We experience changes in the activities we do throughout life. For example, as adults we may no longer participate in our adolescent, time-consuming activities (i.e. playing soccer).

Another example is as older adults retire, there is more free time throughout the day¹.

When we have more free time than we expected, we might be spending more time indoors watching tv or laying down longer.



When we spend more time indoors, we may not be moving our bodies as much as we did before.

We might start to notice that our body feels more tight and stiff in areas like our back, arms, and knees².

What does this mean if you've had a stroke?

Exercising is a good way to promote your recovery, maintain physical and mental well-being, and reduce your chances of having a second stroke³. You can also exercise from home!

For example, going on walks is something you can do to promote your recovery. Over time walking has been shown to improve³⁻⁴:

- ✓ Balance
- ✓ Stamina or how long you can walk for
- ✓ Emotional and mental well-being

If you go on a brisk walk for **30 minutes at least 3 times a week**⁵⁻⁶, you will see improvements in your⁵:

- ✓ Quality of life
- ✓ Physical fitness levels
- ✓ Endurance levels

If you cannot walk at a brisk pace, walk at a speed that works best for you! Remember to start slow and build your walking tolerance.

Walking will give you a good workout to your legs, but what about your arms?

Moving our arms and legs is a good way to use all of our body muscles, work on our coordination, and promote more range of motion in our arms and legs⁷. One way to improve or relearn function is by practicing the movements⁸.

How can we get our arms more active when we are walking?

Consider starting up **Pole Walking!**

What is pole walking?

Pole Walking, also known as Nordic Walking or Urban Poling, started in Finland in the 1930s⁹. In the 1990s, Nordic walking became popular across Europe¹⁰.

Pole Walking is walking with specially designed walking poles and uses both your lower body (the legs) and your upper body (the arms)⁹⁻¹¹.

The effects of a stroke look different for every person¹² and independent pole walking **does require** you to have certain physical abilities such as:

- ✓ Balance and strength (in core and lower legs) to safely walk using the poles
- ✓ Hand grip and strength to safely hold the poles in both hands
- ✓ Coordination while walking

You may decide to use one walking pole rather than two. This will depend on your preference and your ability to grip with your stroke-affected hand.

However, you **may be able** to use the walking poles:

- ✓ To exercise
- ✓ To help practice a normal walking pattern and
- ✓ To provide your body with more support when walking

What is pole walking? (continued)

Keep in mind that independently walking using poles is **not recommended** for the following individuals:

- ✓ If you are unable to grip and hold onto a handle on your stroke-affected side¹³
 - In this case you may choose to use one walking pole rather than two. Be sure to consult your occupational therapist, physiotherapist, or healthcare provider.
- ✓ If you have visual neglect¹³
 - This is when one is having difficulty bringing attention to the side of the body that is affected by the stroke¹⁴.
 - This can impact one's ability to participate in their daily activities safely.
 - Examples of visual neglect may include:
 - Bumping into obstacles in your environment
 - Not eating food on the left side of your plate
 - Not dressing the left side of your body
- ✓ If you have cognitive limitations which lead to safety concerns¹³
 - Examples of this may include¹⁵:
 - Difficulty with attention
 - Difficulty with learning new tasks
 - Challenges with reasoning and judgment

* **Please note:** If any of the above apply to you, you should first consult with an occupational therapist, physiotherapist, or rehabilitation professional.

What is pole walking? (continued)

How can you decide if using walking poles is something you can do based on your current abilities?

Please use the decision-making tree on the next page to help guide your thinking and help you decide if pole walking might be an activity you can participate in independently.

The decision-making tree has been broken down into two main components (balance and functioning of stroke-affected hand) which are needed when independently walking using walking poles.

**** If you are interested in starting a new activity such as pole walking, please be sure to speak to your occupational therapist, physiotherapist, or rehabilitation professional ****



Decision-Tree #1: Walking with Walking Poles

There are two decision trees that you can use to help you decide whether pole walking is a good fit for you and the types of walking pole features you should consider. Please be sure to complete both decision-making trees.

Please note: Decision-Tree #1: Walking with Walking Poles is to help guide your decision on which types of walking poles are a good fit for you based on what you are able to do (in terms of balance). Speak to your occupational therapist, physiotherapist, or rehabilitation professional **before** beginning a new activity such as pole walking.

Continue to the next page to see Decision-Tree #1: Walking with Walking Poles.

If you like, you can use the online version of Decision-Tree #1: Walking with Walking Poles. Click on the link for the online version:

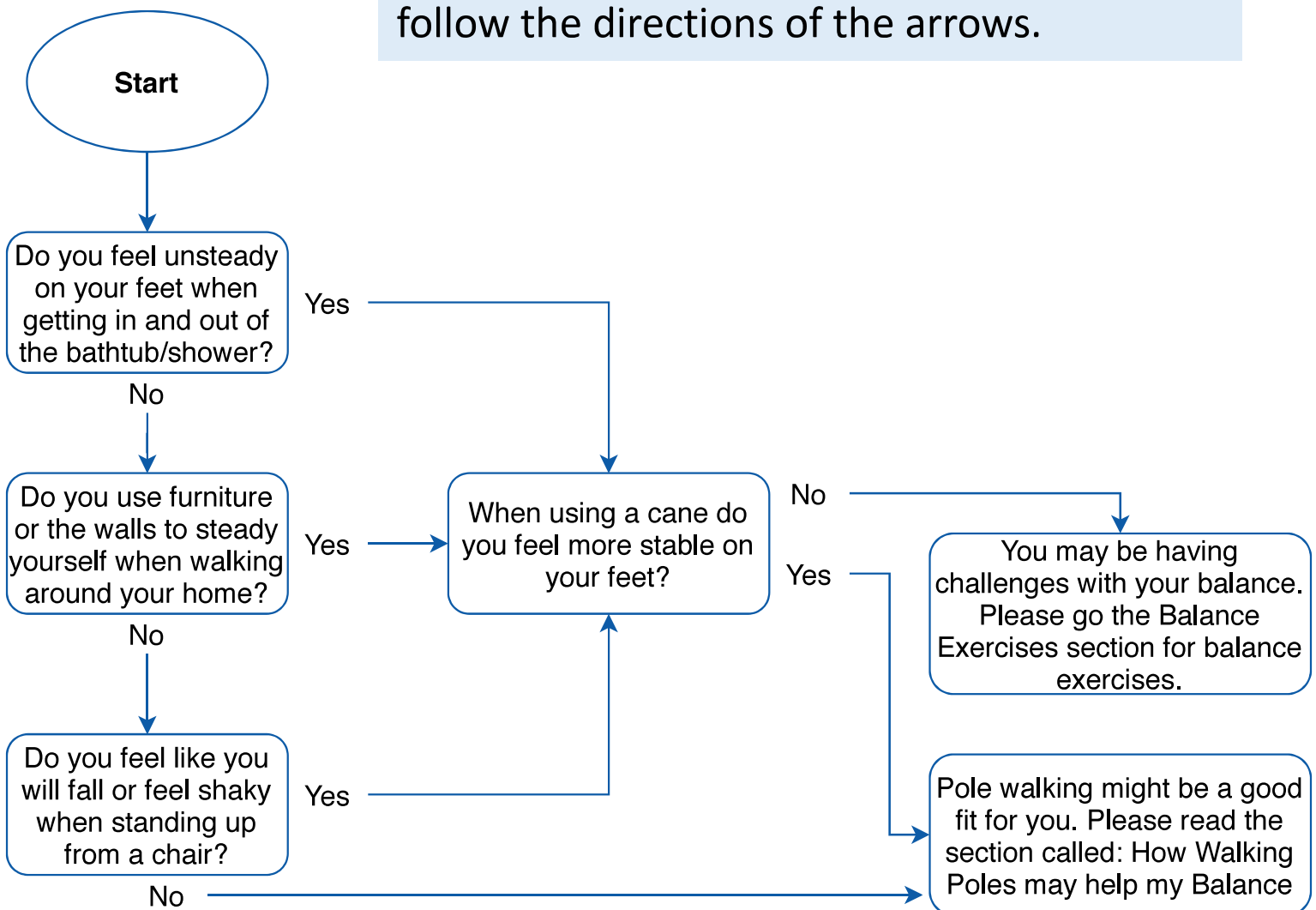
<https://forms.gle/sYduV4wbUpw7uF4GA>



Decision-Tree #1: Walking with Walking Poles

****** Speak to your occupational therapist, physiotherapist, or rehabilitation professional **before** beginning a new activity such as pole walking. ******

You still start at the oval that says “start” and follow the directions of the arrows.



Decision-Tree #2: Holding the Walking Poles

Please note: Decision-Tree #2: Holding the Walking Poles is to help guide your decision on which types of walking poles are a good fit for you based on what you are able to do (in terms of hand function). Speak to your occupational therapist, physiotherapist, or rehabilitation professional **before** beginning a new activity such as pole walking.

Continue to the next page to see Decision-Tree #2: Holding the Walking Poles.

If you like, you can use the online version of Decision-Tree #2: Holding the Walking Poles. Click on the link for the online version:

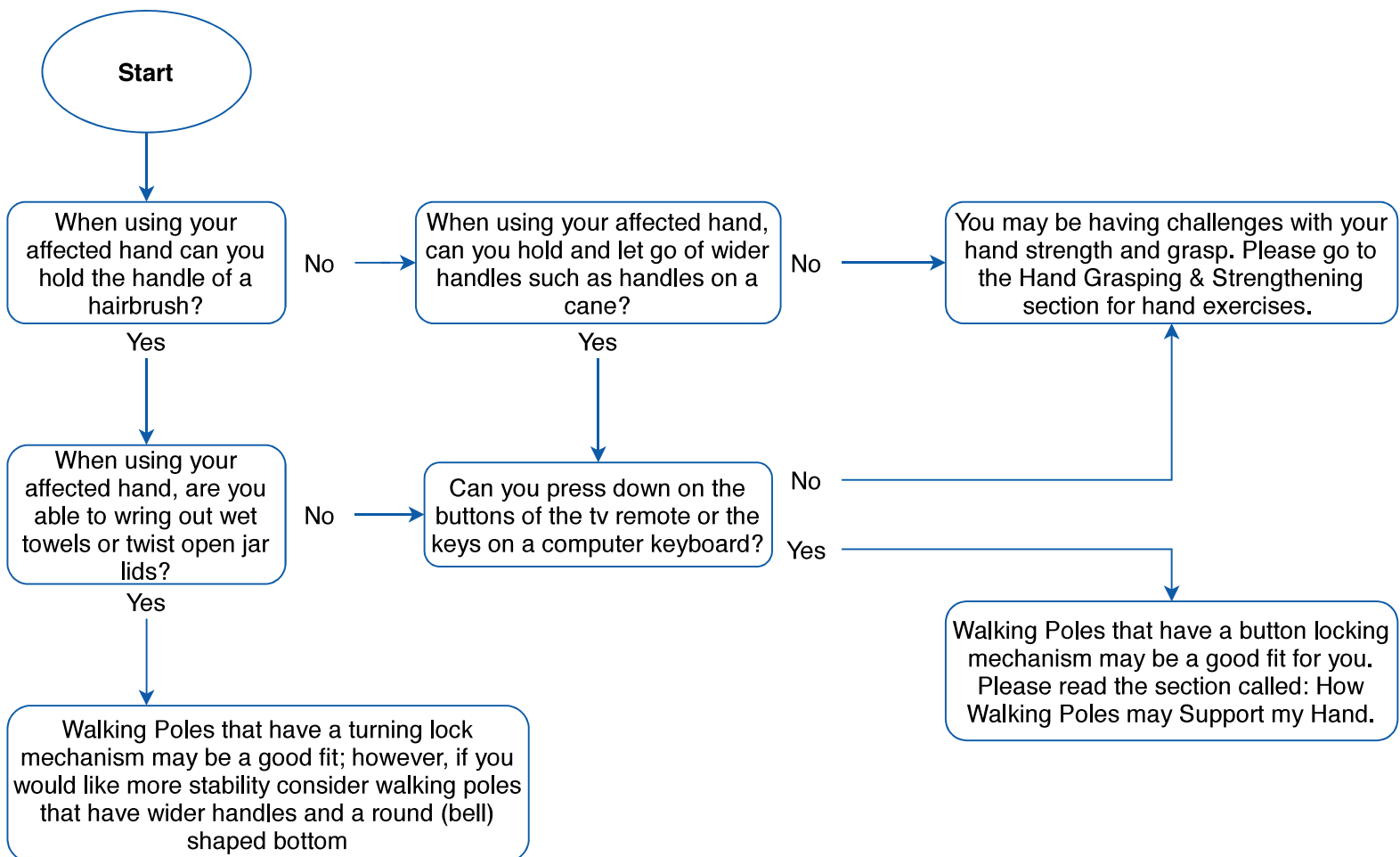
<https://forms.gle/JKApUD4dJCSpccZdA>



Decision-Tree #2: Holding the Walking Poles

****** Speak to your occupational therapist, physiotherapist, or rehabilitation professional **before** beginning a new activity such as pole walking. ******

You still start at the oval that says “start” and follow the directions of the arrows.





How Walking Poles may Help my Balance

A USER'S GUIDE TO POLE WALKING INFORMATION



Created by: Karishma Patel, Student Occupational Therapist

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How walking poles may help my balance:

When you use walking poles, you will be holding a pole in each hand. This provides you with **more support and steadiness when walking**. When you feel more stable while walking and use the walking poles safely, this can reduce your chances of falling.

Walking poles are **adjusted to your height**. When you stand while holding walking poles, you will stand upright with a straighter posture. For example, a cane provides you with unilateral support or support on only one side of your body. Because of this you might find that you are leaning more towards one side when using a cane. With walking poles, you will have **bilateral support or support on both sides of your body**¹³. As a result, you may not lean as much to one side and instead feel more centred.

The feet on the walking poles are also important for stability. You may find walking poles with different types of feet. There are three main types: carbide steel tip, boot-shaped tip, and bell-shaped tip.

Walking poles will have a carbide steel tip hidden underneath the feet.



Carbide Steel Tip



Boot-Shaped Tip



Bell-Shaped Tip

How walking poles may help my balance (continued):



Carbide Steel Tip	
Pros	Cons
<p>Used on:</p> <ul style="list-style-type: none">• Sandy areas, such as beaches• Snowy areas, during the winter• When hiking on trails / on uneven grassy areas (like a sports field)	<ul style="list-style-type: none">• Not recommended for use on hard surface as it causes more vibration and discomfort¹²• If you need more stability and are in the rehabilitation stage of your recovery, this tip may not be appropriate for you

How walking poles may help my balance (continued):



Boot-Shaped Tip	
Pros	Cons
<ul style="list-style-type: none">• Used by avid walkers who feel more stable• Used for fitness walking• Helps to propel (push) you forward when walking¹⁶	<ul style="list-style-type: none">• Have to be replaced as they become more worn down• If you need more stability and are in the rehabilitation stage of your recovery, this tip may not be appropriate for you



Bell-Shaped Tip	
Pros	Cons
<ul style="list-style-type: none">• Provides more stability and balance• Reduces likelihood of falls• Can be used indoors and outdoors	<ul style="list-style-type: none">• Have to be replaced as they become more worn down

If you have **concerns about your balance**, the bell-shaped tip on walking poles is recommended as it provides the user more stability.



Balance Exercises

A USER'S GUIDE TO FUNCTIONAL BALANCE EXERCISES



Created by: Karishma Patel, Student Occupational Therapist

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Jana Ray (CARP)

Balance exercises:

This section will provide you with **some suggestions** for balance exercises. **Please consult** your treating occupational therapist, physiotherapist, or rehabilitation professional for balance exercises which are most suitable for you given your abilities.

Balance Exercises through your Daily Activities:

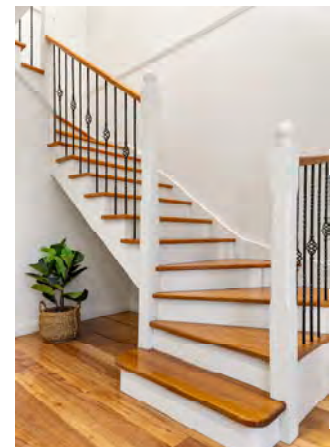


Brush your teeth while standing on one leg:

While standing at the sink and brushing your teeth, raise one leg, bending slightly at the knee, hold it for 10-30 seconds, and lower it. Do the same thing with the second leg. Do this 5 to 10 times.

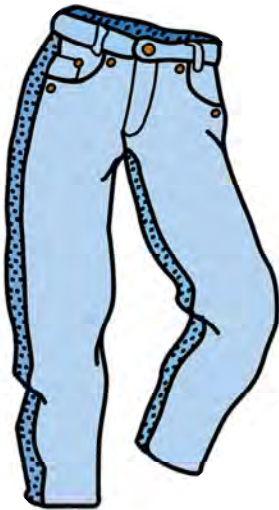
You can do the above activity while washing dishes as well!

Walking up and down stairs (without walking poles) is another balance-related activity where you are engaging your core. If you are unable to climb stairs, there are balance exercises you can complete in the seated position.



Balance exercises (continued):

Balance Exercises through your Daily Activities:



Put on pants while standing:

This makes you balance on one leg. Please remember to follow any safety precautions given to you by your healthcare provider. For example, it may be safer for you to be in a seated position while putting on pants.

Exercises with Walking Poles:

Remember to keep your **posture upright** and tall when doing exercises. In other words, keep your back straight.

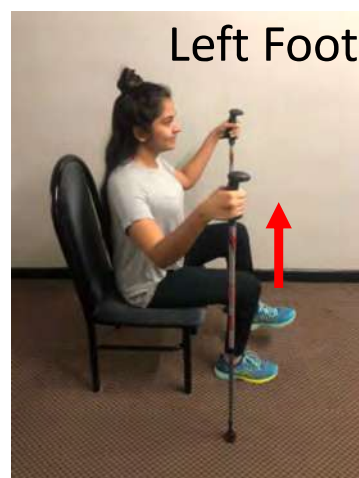
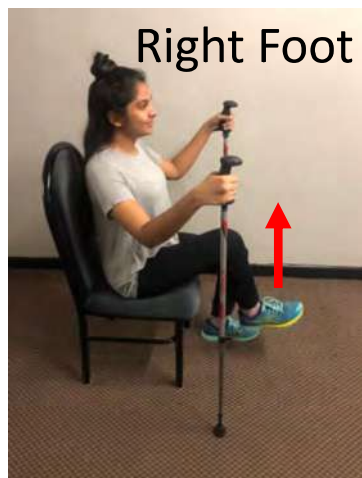
You can do the exercises in front of a mirror to help you watch your form.

Using the walking poles can provide more support and stability while doing balance exercises.

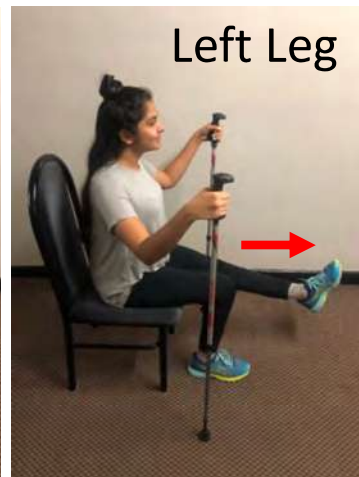
The model is using Activator® Poles which are walking poles designed by Urban Poling Inc. that may be used by people who have had a stroke.

Balance exercises (continued):

Exercises with Walking Poles:



Marching while seated with Activator® Poles



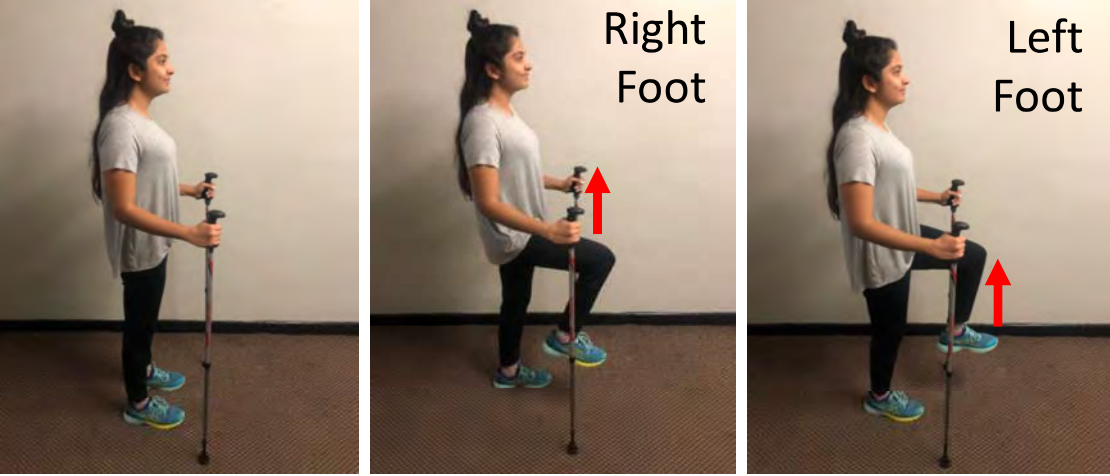
Leg raises while seated with Activator® Poles

Please note: You can modify the exercises based on your ability and range of motion. **Remember** to keep your back straight.

Balance exercises (continued):

Exercises with Walking Poles:

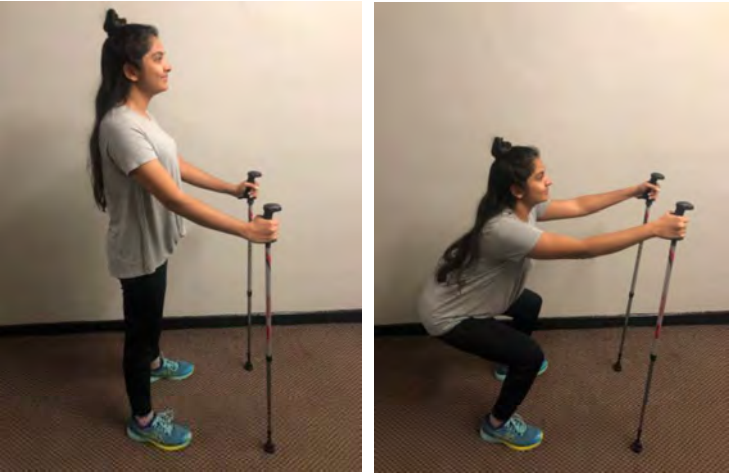
Please note: For standing exercises, it may be safer to do the exercises with a wall or chair behind you.



Right Foot

Left Foot

Marching in place with Activator[®] Poles

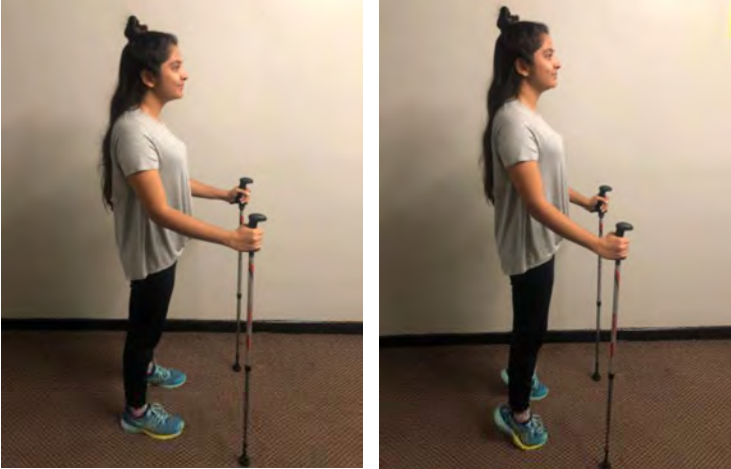


Squats with Activator[®] Poles

Remember to keep your back straight and your feet flat.

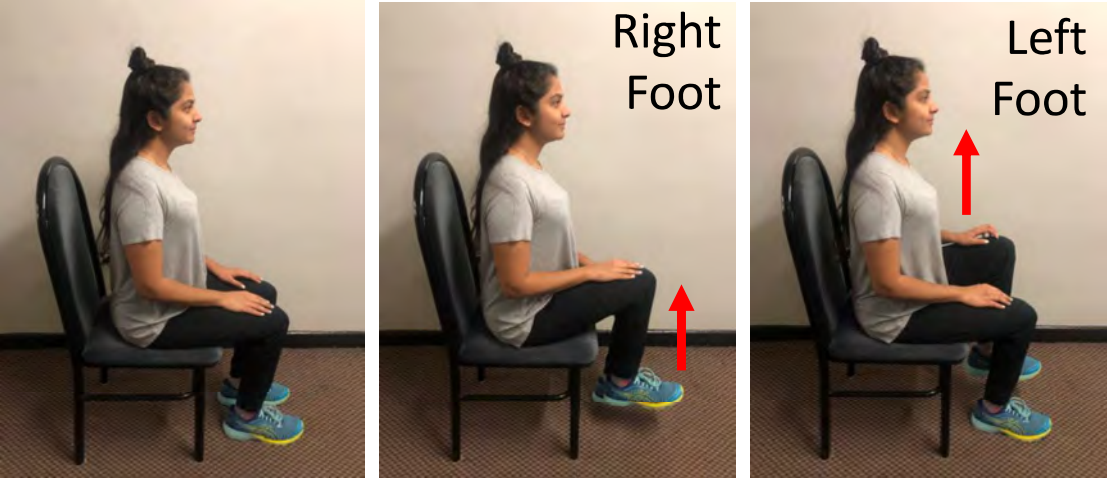
Balance exercises (continued):

Exercises with Walking Poles:



Calf raises with Activator® Poles

Exercises without Walking Poles:



Right Foot

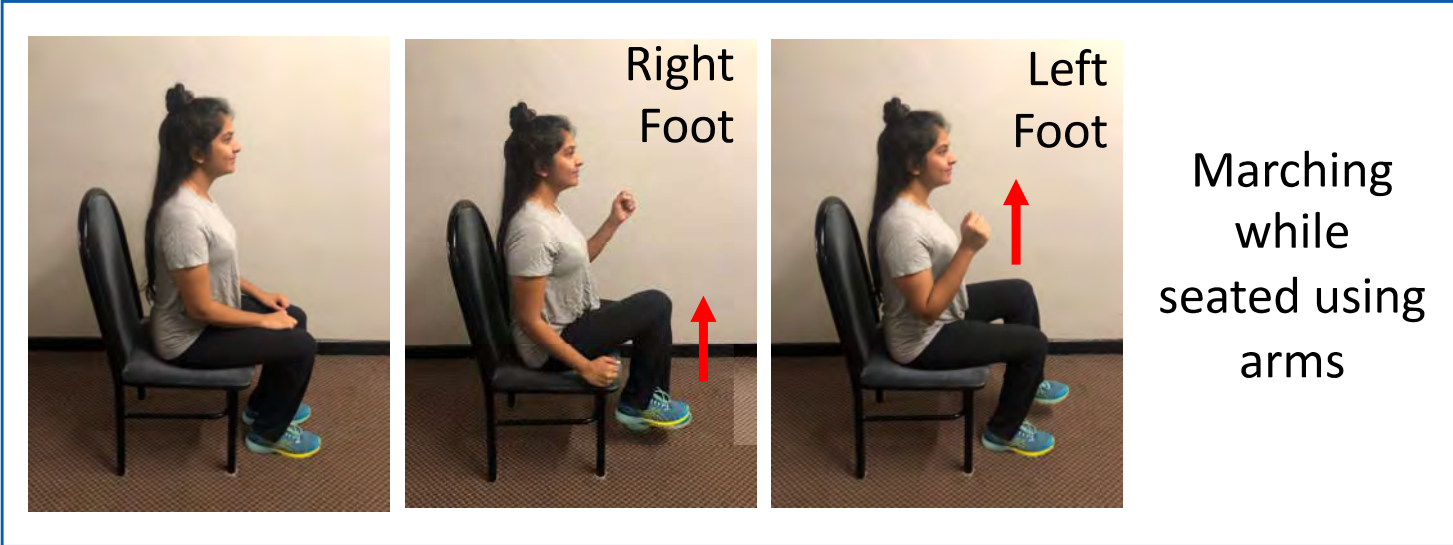
Left Foot

Marching while seated

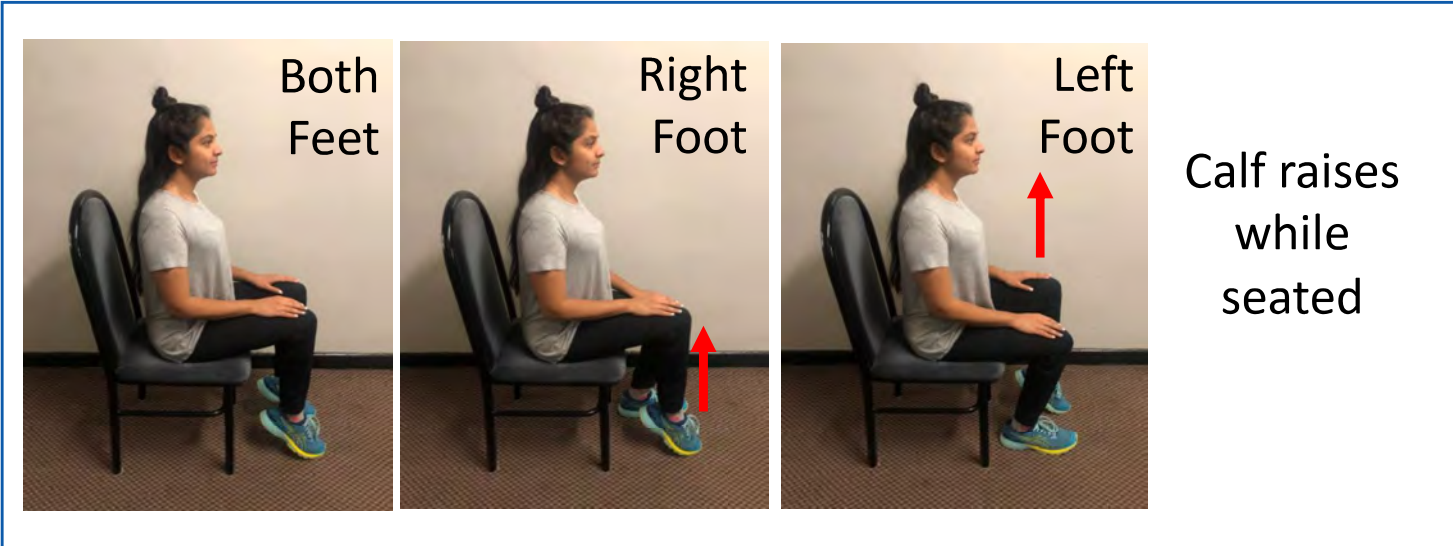
A chair with arms can provide more support when marching in place while seated.

Balance exercises (continued):

Exercises without Walking Poles:

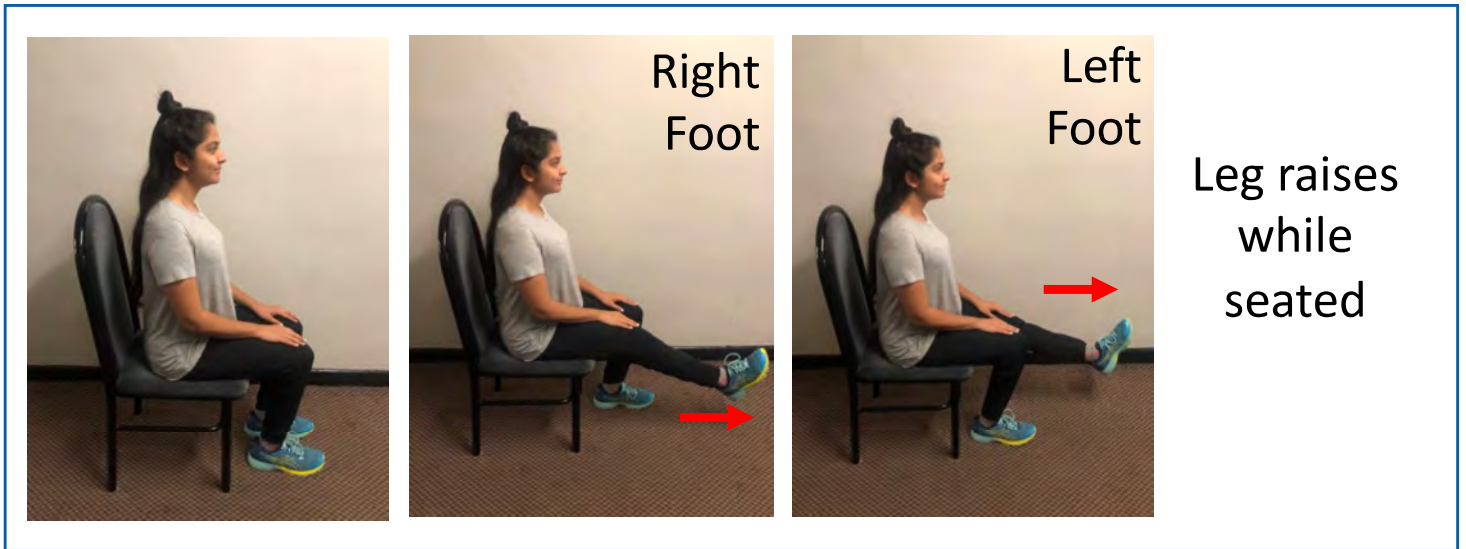


Remember to use opposite leg and arm.

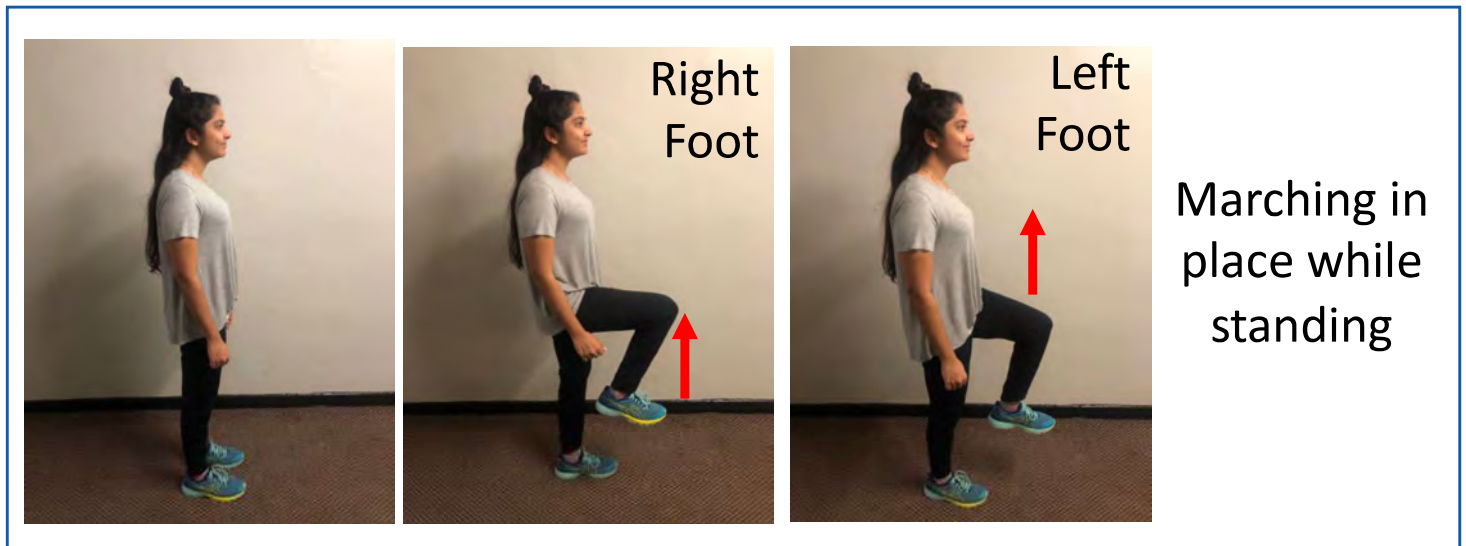


Balance exercises (continued):

Exercises without Walking Poles:



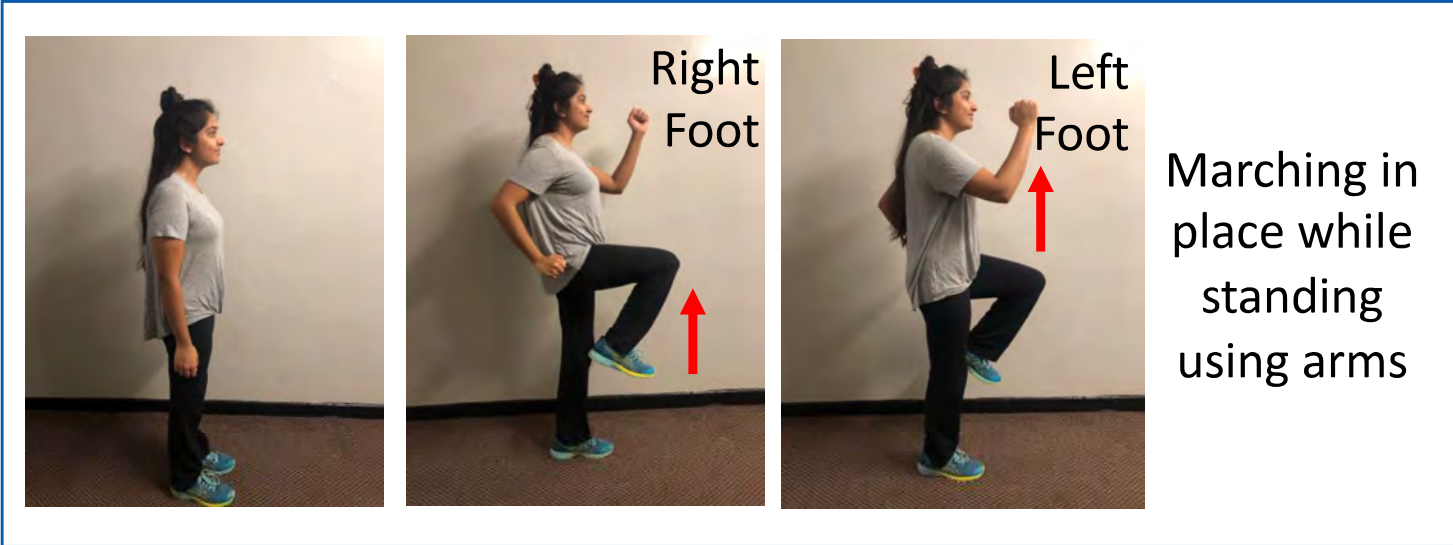
A chair with arms can provide more support when doing leg raises in a seated position.



If you need more support, you can hold onto a counter while marching.

Balance exercises (continued):

Exercises without Walking Poles:



Remember to use opposite leg and arm.





How Walking Poles may Support my Hands

A USER'S GUIDE TO POLE WALKING INFORMATION



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How walking poles may support my hands:

Using walking poles does require you to be **able to hold** the pole in both hands. This might be more difficult for you if your stroke-affected hand has decreased strength, sensitivity, and ability to grasp.

Similar to picking out the right type of feet on the walking poles to support your needs, you will also have to take into consideration the different types of handles and features walking poles are designed with.

Let's talk about handles first!

There are many different types! Here are a **few examples** of the different types of handles:



Strapless
Ergonomic Design



Thumb-Hole
Wrist Strap



Wrist Strap

How walking poles may support my hands (continued):

Which type of handle is best for me to use?

Traditional Nordic Walking Poles have handles with straps. These straps go over the wrist.



Walking Poles with Wrist Straps	
Pros	Cons
<ul style="list-style-type: none">• When using the wrist straps, you can let go of the pole grip without losing the pole¹⁷	<ul style="list-style-type: none">• If you trip while pole walking, having a pole attached may increase your risk of injury

How walking poles may support my hands (continued):

The thumb-hole wrist straps are designed so you can really push a downward type pressure while controlling the swinging motion¹⁷⁻¹⁸.

It allows you to propel yourself forward.



Walking Poles with Thumb-Hole Wrist Straps

Pros

- May be helpful for someone with a slightly weaker grip and/or coordination difficulties
- Provides a bit more support to the wrist than the traditional thin wrist straps
- Can help keep the pole attached to your wrist

Cons

- If you trip while pole walking, having a pole attached may increase your risk of injury

How walking poles may support my hands (continued):

The Activator® Poles by Urban Poling Inc. are strapless for safety and reducing injuries. This handle design may be safer for you if you are still in the rehabilitation phase of your recovery process.

Activator® Poles by Urban Poling Inc.	
Pros	Cons
<ul style="list-style-type: none">• Strapless to promote safety and prevent injury• Wider handles with an ergonomic design• Pressing on the ledge increases core strength and provides off-loading	<ul style="list-style-type: none">• If you have difficulties grasping with your stroke-affected hand you may not be able to keep a grip on the handle



The poles are labelled right and left. Instead of a strap, your hand will rest along a wide ledge. This may be beneficial for you if you have difficulty grasping thinner handles. When the hand rests along the ledge, it is in a neutral position to help relieve any pressure off of the joints and support your wrist. When you press on the ledge it will increase your core strength and provide off-loading (or relieve pressure and provide support)^{13, 19}.

How walking poles may support my hands (continued):

Something else to consider is the type of locking mechanism the walking poles have. There are generally two types.

The Turning Lock Mechanism:

- With the turning lock mechanism, you will have to tighten the walking pole by twisting the pole.
- This type of locking mechanism may be harder for people who have difficulty with lifting and lowering (or flexing and extending) their hand at the wrist.
- For example, if it is difficult for you to open jar lids, turn on facets that twist open, and/or tap your hand up and down, the turning lock mechanism may not be a good fit for you.
- This is very important as you do not want the walking poles to collapse on you when you are walking because this may lead to injury.



How walking poles may support my hands (continued):

If you are worried about the strength needed to lock the turning lock mechanism, the button-lock mechanism will be a better fit for you.

The Button Lock Mechanism:

- The walking poles are secured with a button-lock. This is similar to locking mechanisms used on canes.
- This type of button-lock mechanism may be a better fit for you if you have had a stroke and are having difficulties with hand strength.
- It is best to double check the button lock before putting your weight on the pole to ensure it is secure.



Take into consideration **your height**, as you need to make sure the length of the walking pole will be appropriate for you based on your height. For example, the Activator® poles are adjustable to 6 feet and the Activator 2® poles are adjustable to 6 feet 4 inches. You also want to ensure the walking poles can support **your weight** as well.

How walking poles may support my hands (continued):

Concerns about sensitivity or feeling too much vibration in your hands?

Prolonged periods of experiencing vibration in your hands may also feel like numbness²⁰.

Most walking poles are designed with enhanced anti-vibration features. When you do something over and over, for example hammering a nail, you might feel vibrations in your hand.

Vibration is small movements from forces outside of our body²¹⁻²². Pole walking is an activity that might cause feelings of vibration in your hands.

Some **anti-vibration features** to look out for on poles include:

- ✓ A black ferrule
- ✓ The rubber tip to absorb vibration while walking

To reduce your exposure to vibration, you could:

- ✓ Speak to your occupational therapist or rehabilitation professional to learn more about vibration and how to minimize it
- ✓ Use the walking poles on more even terrains
- ✓ Take breaks as needed

To read more about using walking poles on **different types of terrain**, see the “Where Should I Pole Walk” section.



Hand Grasping & Strengthening Exercises

A USER'S GUIDE TO FUNCTIONAL HAND EXERCISES



Created by: Karishma Patel, Student Occupational Therapist

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Jana Ray (CARP)

Hand grasping and strengthening exercises:

This section will provide you with **some suggestions** for hand grasping and strengthening exercises. **Please consult** your treating occupational therapist, physiotherapist, or rehabilitation professional for hand grasping and strengthening exercises which are most suitable for you given your abilities.

Hand Grasping and Strengthening Exercises through your Daily Activities:

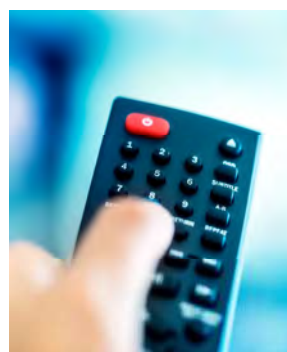
Use your stroke-affected hand when engaging in your daily activities. Some activities include:



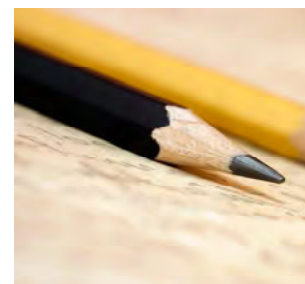
**Brushing
Teeth**



**Drinking Cool
Tea / Coffee**



**Holding the
Remote**



Handwriting

You can also engage in dressing-related exercises such as holding, putting on, and buttoning your shirt.

Hand grasping and strengthening exercises (continued):

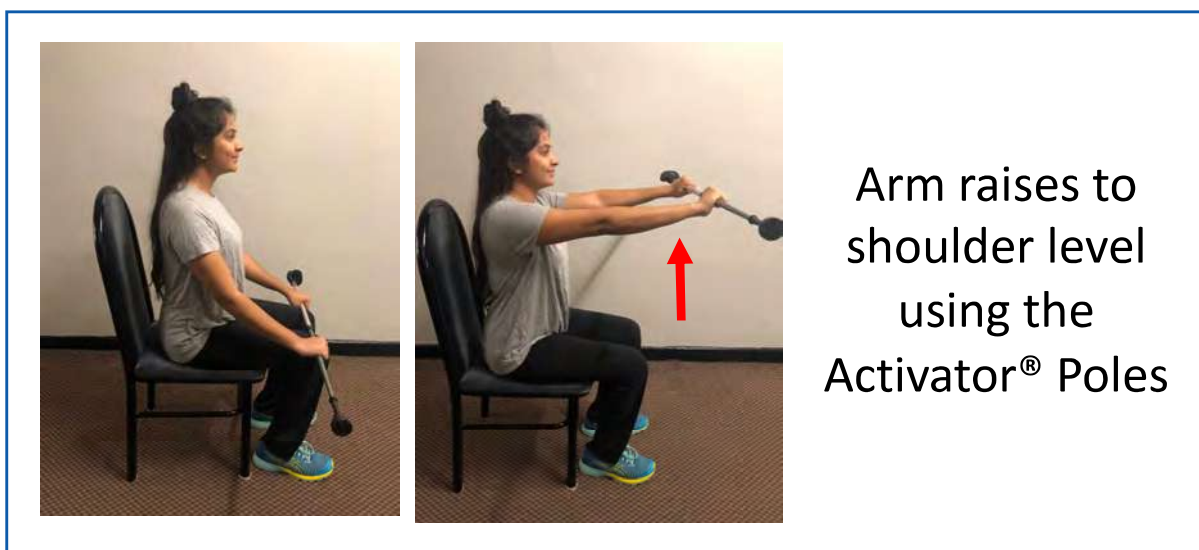
Hand Grasping and Strengthening Exercises with Walking Poles:

Remember to keep your **posture upright** and tall when doing exercises.

Please note: You can modify the exercises based on your ability and range of motion.

If you have difficulty gripping with your stroke-affected hand, speak with your rehabilitation therapist to modify the exercises.

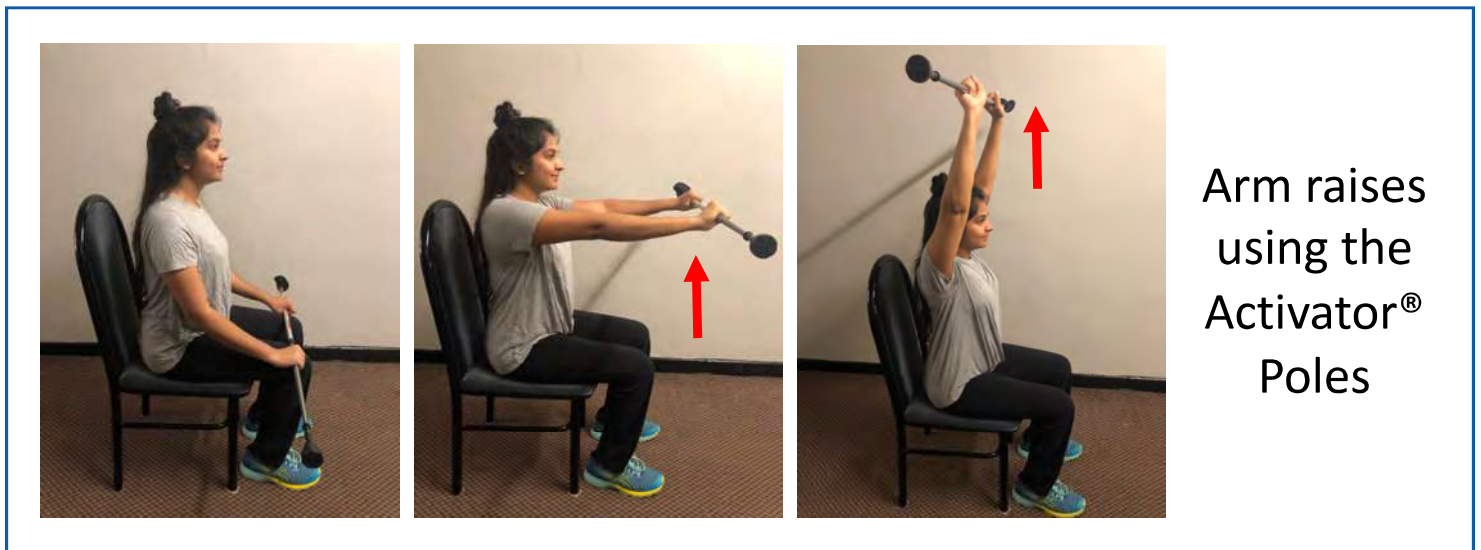
The model is using Activator® Poles which are walking poles designed by Urban Poling Inc. that may be used by people who have had a stroke.



* Walking poles that are collapsible into shorter lengths can be used to do the exercises. This way the walking pole is not too long.

Hand grasping and strengthening exercises (continued):

Hand Grasping and Strengthening Exercises with Walking Poles:



Hand grasping and strengthening exercises (continued):

Hand Grasping and Strengthening Exercises without Walking Poles:



Triceps extension using weights



Arm raises using weights

If you do not have weights, you could use water bottles.

Walking Poles: How do I get Started?

A USER'S GUIDE TO GETTING STARTED WITH WALKING POLES



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Jana Ray (CARP)

I want walking poles! How do I get started?

You can use the checklist down below to see next steps:

- Start by speaking with your current rehabilitation professional (e.g. your occupational therapist or physiotherapist) before beginning a new activity such as pole walking
 - Your rehabilitation professional can assess your ability to use walking poles safely
- Be clear on why you want to use walking poles (i.e. for stability vs fitness walking) as this can help inform your decision for the type of tips you may use
- Determine the type of pole features that you want
 - What type of foot do you want on the walking pole? For example, do you want a bell-tip shaped bottom or a boot-shaped bottom?
 - What type of handle do you want on the walking pole?
 - What type of locking mechanism do you want on the walking pole?
 - Consider your height and weight
- Purchase the walking poles
- Create an exercise plan using your walking poles
 - Your current rehabilitation professional may be helpful to assist you with creating your individualized exercise plan with the walking poles
- Enjoy your walk with the walking poles!

How much are walking poles and where to purchase walking poles?

How much are walking poles?

Walking poles can range anywhere between \$40 to \$200. This does not include shipping and handling. You really want to ensure that the walking poles you buy will fit your needs and wants.

Where to purchase walking poles?

There are many places you can purchase walking poles. A variety of fitness stores sell walking poles and if you are an older adult, some stores that sell walking poles might have discounts. There are companies which specifically design poles for rehabilitation which may be used by individuals who have had a stroke. You can also purchase walking poles online (e.g. amazon).

Here are two online options:

- Urban Poling Inc. sells walking poles that are called Activator® Poles which may be used by individuals who have had a stroke. They have walking poles which have been designed for rehabilitation use. They also have walking poles for more avid, fitness walkers with different locking mechanisms. You can order walking poles from their website: <https://urbanpoling.com>
 - How to set up Urban Poling Inc.'s Activator® poles: <https://urbanpoling.com/getting-started/#instruction>
- Nordic Walking Nova Scotia sells Nordic poles. They have fitness walking poles with different types of locking mechanisms. Their walking poles may be used by more avid, fitness walkers. You can order walking poles from their website: <https://nordicwalkingnovascotia.ca/index.htm>

Okay, I have walking poles. What's next?

Next Steps for Walking Poles:

Exercise using Walking Poles:

- You can exercise with your walking poles indoors or outdoors. If you are walking indoors, the walking poles should have either the bell-shaped tip or the boot-shaped tip.
- Aim to go on walks using your walking poles for **about 20 to 30 minutes at least 3 times a day**²¹.
 - If you are new to exercising and have a lower tolerance, you can build up your time of how long you use your walking poles for.
 - For example, start walking with walking poles at 30% of your walking tolerance. This means if you usually go on walks for 30 minutes, then go on a walk with the walking poles for 10 minutes. This way you can slowly build up your walking tolerance with the poles.
- Make sure to plan your route in advance and choose a route that has rest spots (e.g. a bench) to take breaks.
- YouTube has some videos on different types of exercises you can do with your walking poles. You can modify the exercises to match your needs. Here is a link to Workout Exercises by Urban Poling Inc.:

<https://www.youtube.com/watch?v=6Kfk0thYEgl>

Okay, I have walking poles. What's next?

Next Steps for Walking Poles:

Connecting with Pole Walking Groups:

- There are organized pole walking groups across Canada through a variety of community programs (e.g. YMCA).
- Here are a few options and ways to connect with walking groups in your area.

March of Dimes Canada, as a part of their After Stroke Program, offers a **Next Steps Walking Program**. Next Steps is a program that focuses on having fun, setting goals, and staying motivated while walking. This weekly program meets and operates in a local indoor mall in Ontario and British Columbia with easy access to washrooms and seating. Prior to joining the walking group, fill out the Next Steps Mall Walking Form:

<https://afterstroke.marchofdimes.ca/stroke-recovery/home-to-community/next-steps-walking-program>.

If you are a **Canadian Association of Retired Persons (CARP)** member, you can contact the chapter lead in your area to find out if a walking program exists in your area. On the CARP website you can find a list of all the chapters: <https://www.carp.ca/about#chapters>

Okay, I have walking poles. What's next?

Next Steps for Walking Poles:

Where Should I Pole Walk?

- Where you pole walk will depend on where you live.
- If you would like more stability, then walking on smooth, even surfaces is most ideal. For example, these types of walking surfaces include:



Walking inside of a mall on smooth tiles



Smooth asphalt road



Even-levelled sidewalk pathways

*When walking inside of a mall, a bell-shaped tip is highly recommended. You can use a bell-shaped tip for any of the surfaces listed here.

In the winter, when walking **outside**, the carbide tip is recommended.

Okay, I have walking poles. What's next?

Next Steps for Walking Poles:

Where Should I Pole Walk?

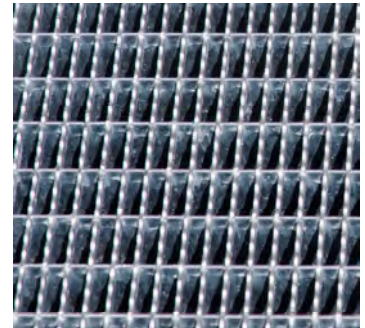
- There are surfaces which may be more challenging if you have balance difficulties. These surfaces include areas such as:



Uneven sidewalks



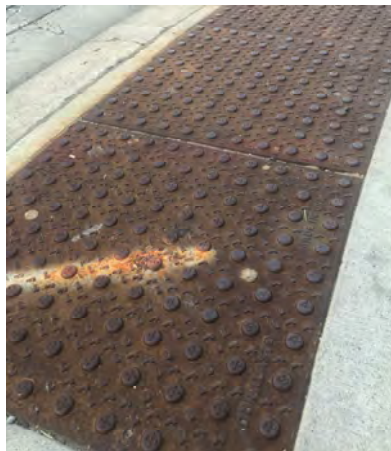
Brick pathways



Metal grates



Dirt roads



Rumble strips



Uneven grassy areas

Okay, I have walking poles. What's next?

Next Steps for Walking Poles:

Where Should I Pole Walk?

- Although walking poles provide additional stability when walking on uneven surface, **take extra caution** when walking along sidewalks and pathways that are uneven. The more uneven a path is the more vibration you may experience in your hands.

Walking Poles and Holding Backpacks/Bags:

- When going on walks, it may be difficult for you to wear a backpack or one-shoulder bag. For example, it may be difficult to hold the walking poles and grocery shop or answer your cellphone if it rings. In this case, it **may be helpful** to wear a cross-body bag and have walking poles that are collapsible into smaller sizes for easy storage.

Concentration and Attention while Pole Walking:

- Depending on where you go on your walks, you may be required to concentrate more and pay more attention to everything going on around you. For example, if you live in an Urban area there may be a lot of moving traffic around you. Rural areas may have less moving traffic around you. If you have difficulty with multi-tasking and paying attention, it may be best to **pole walk in quieter areas** such as parks and neighborhood streets.

What happens if I fall?

- In the case you fall, the Government of Canada website has an information sheet outlining the steps to take after a fall.
- You can read this here:
 - <https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/seniors-aines/alt-formats/pdf/publications/public/injury-blessure/falls-chutes/falls-chutes-e.pdf>
- You can also go on walks with others such as your family members, friends, or members of a walking group.

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