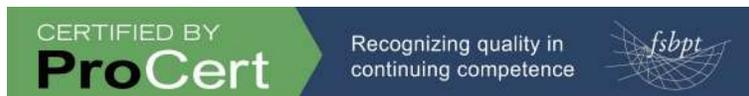


ACTIVATOR® Program Course



Canada: Approved for CECs: CCAA, BCRPA
(CSEP, YMCA & YWCA upon request) 2019



Ethical & Safe Professional Guidelines – Read and Agreed to Before Starting this Course:

It is imperative that you work within your own professional scope as set by the guidelines determined by your college or association. If you are uncertain about your ability to work with a client given his or her physical, cognitive or psychological limitations, contact your association or college to discuss how you should proceed or refer this client to a physical therapist or physician to assess. As well, make sure you are aware of the contraindications for participation in group programs and for independent use of the poles. Abiding by these guidelines will ensure each person receives safe and ethical services.

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This course can be licenced to provide training in-house to your centre, inquire at mandy@urbanpoling.com

Disclosure Statement: Conflict of Interest Statement:

Mandy Shintani is the author of the ACTIVATOR Course and is the developer of the ACTIVATOR Poles as well as co-owner of Urban Poling Inc.

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ACTIVATOR Course Training and ACTIVATOR & Urban Poling Poles available in the UK, Ireland and Australia and USA. Email info@urbanpoling.com or go to urbanpoling.com under Contact Us to find a local distributor.

Urbanpoling.com and urbanpoling.us website

For updated information on;

- research under "Research"
- specific conditions under "Research and Health"
- recorded webinars under "Education"
- new courses under "Education"

To post a comment or ask a question during the ACTIVATOR online course, click on Ask a Question at the bottom of each chapter.

Monthly e-newsletter includes: articles, research, webinars, upcoming courses and specials

What People are Saying

For the past 5 years I have consistently recommended the Activator poles for patients in my surgical practice. They have been especially helpful for spinal stenosis patients who have undergone surgical decompression and extension osteotomy patients who have had surgery for positive sagittal balance. They have been instrumental in promoting an upright posture and a functional walking pattern compared to canes and walkers. In my opinion they facilitate rehabilitation and return patients to optimal function faster.

Charles G. Fisher MD MHSc FRCSC

I immediately understood the benefits of the Activator poles as an alternative to canes, crutches and even walkers. The poles encourage an upright and symmetrical posture, rather than the forward lean of a walker or an asymmetrical lean from one cane. There is also an immediate reduction in lower extremity pain when weight bearing as well as improved balance and walking confidence.

Dolores Langford, physiotherapist, BC PT Association Newsletter

Game changer.

Harry McMurtry who has Parkinson's Disease and walked 500 Miles for Parkinson's. He used the ACTIVATOR® Poles during this journey.

Within minutes and with guidance, Harry integrated the use of the Activator poles into his gait. His cadence was steady and coordinated. He was mobile, aligned and stable. His risk of falls is diminished as his base of support has increased. His postural asymmetry is decreased allowing him an increased visual field. I could go on. Harry was able to adapt readily and the positive outcomes were immediate.

Jasmin Joan Cameron, MSc(RHBS), BSc(OT). OT for the Support Team for 500 Miles for Parkinson's

The most important device developed in the 21st century. Walkers and canes are passé.

Lisa Dennis, OT

ACTIVATOR walking poles are phenomenal in older adult fitness classes. The four points of contact help improve posture, balance and security. But most important of all is the way that participants' self-esteem goes off the chart!

Don Ferguson, older adult fitness instructor
Ottawa, Ont.

Urban poles represent "ability" to me, while a cane suggests "disability."

Letty Kurucz, Urban pole user
Knee replacement

The poles allowed me to get up and moving, but also allowed me to feel secure. The dual pole system was essential in creating less compensation in the most critical time of recovery. I believe using the poles instead of a cane or walker allowed me to continue to recover and have the mindset of focusing on progress while staying mobile. In short, they make full recovery and mobility possible!

Rob McDonald, T10—T12 Dislocation. Completed Scotia ½ Marathon & featured in the Toronto Star.

Foreword

This course is designed for physiotherapists, occupational therapists and other health and fitness professionals.

Objectives of the course:

- Learn & Practice the ACTIVATOR® Poles and technique as well as the Urban Poles and the basic Urban Poling (aka Nordic walking) technique
- Learn & Practice sitting and standing exercises performed with poles for balance, strength, ROM and gait retraining.
- Understand the guidelines on using the poles with specific conditions.
- Learn how to design group exercise classes for those with chronic conditions, retirement to LTC homes.

About Urban Poling Inc.

Vancouver-based Urban Poling Inc. is owned by Mandy Shintani and Diana Oliver.

Mandy, an occupational therapist, focuses on course development and innovation for equipment design. Diana, a marketing specialist, manages marketing and strategic planning.

ACTIVATOR® & Urban Poles are being utilized in hospitals, rehabilitation centres, physiotherapy clinics, primary care centres, private wellness centres, senior's community centres and seniors' residences. While Urban Poles were developed for fitness clubs, diabetic wellness centres, cardiac rehabilitation, sport injuries, employee wellness programs, weight management programs, schools, First Nation programs, yoga and Pilates studios. Both types of poles are available at retail stores across the country.

To date over 3,500 fitness professionals and therapists have completed the ACTIVATOR Course and Urban Poling Instructor Certification Course.

Mandy Shintani developed the ACTIVATOR® Poles (patent) & technique, designed specifically for those with chronic conditions, post-surgery, injuries & older adults for rehabilitation. The Urban Poling ACTIVATOR Course for Rehabilitation & Wellness Professionals® was launched in May 2009. She was the first to introduce the concept of Nordic walking for the purposes of rehabilitation.

Urban Poling has emerged as the leader in the promotion of poling and in the education of health and fitness professionals internationally.



Mandy Shintani, co-owner of Urban Poling Inc., is one of world's leading experts on the health benefits of Nordic walking. She has a Bachelor of Science degree in occupational therapy and a Master's degree in gerontology. Mandy has 30 years' experience as an occupational therapist/rehabilitation consultant in hospitals and community health and was a co-owner of six private rehab clinics. She is a frequent conference presenter and was a finalist for the YWCA 2010 Women of Distinction Award for Entrepreneurship and Innovation. In her spare time, Mandy loves to do Urban poling, hiking, snowshoeing, travelling, skiing and backcountry camping with her Adventure Urban Poles! She has two children in University and lives in North Vancouver.



Diana Oliver is co-owner of Urban Poling Inc. Prior to joining Urban Poling, Diana owned a fitness and wellness business teaching Pilates and Urban Poling. She also has extensive experience in the consumer-packaged goods industry for Unilever and AC Nielsen. Diana brings expertise in marketing and sales.

We are proud of our partnerships with these organizations.



Forward: Starting the Company

After discovering the extensive research on walking with poles combined with my background as an occupational therapist, I felt like I was born to launch this as a fitness activity in Canada and to design ACTIVATOR® Poles for use with rehabilitation professionals. Prior to starting the company in 2006, I spent about a year testing various brands and styles of poles with people of different ages and fitness levels.

Creating the ACTIVATOR®

I have had a lifelong interest in improving the wellbeing of older adults. When I became an occupational therapist, I decided to focus on conditions related to aging. While researching equipment for older adults and healthy aging trends for my Masters thesis, I realized that a modified Nordic walking pole could have great benefits for rehabilitation and general activation.

Based on my research and observations, I believed (and still believe!) that walking poles could revolutionize how therapists provide gait retraining. The poles provide stability and balance and improve posture. What they don't promote is a rounding of the back and a static arm position that can occur with the use of walkers and canes.

Because poling is a bilateral activity that encourages a functional walking pattern, I observed that many older adults who shuffled and had kyphosis without poles suddenly stood upright and lifted their feet using a heel toe gait pattern when they walked with poles. They felt more secure and confident. I also saw the poles as a fall prevention tool. (Many older adults trip and fall due to shuffling over uneven surfaces and obstacles.)

Today, ACTIVATOR® Poles are used by physiotherapists, occupational therapists, kinesiologists, rehabilitation assistants, older adult fitness specialists and chiropractors in group exercise programs and for one-on-one rehabilitation.

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Research

250+ studies listed on PubMed

Research Summary

Health Benefits of Nordic Walking: A Systematic Review

Includes 41 studies. [Tschentscher, Niederseer & Niebauer, 2013](#)

Parkinson's Disease

Effects of a Flexibility and Relaxation Programme, Walking, and Nordic Walking on Parkinson's Disease

Assessment after completion of the training showed that pain was reduced in all groups, and balance and health-related quality of life were improved. Nordic walking was superior to the flexibility and relaxation programme and walking in improving postural stability, stride length, gait pattern and gait variability. [Reuter et al., 2011](#)

Nordic Walking Improves Mobility in Parkinson's Disease

These preliminary findings suggest that Nordic walking could provide a safe, effective, and enjoyable way to reduce physical inactivity in PD and to improve the quality of life. A large randomized clinical trial now appears justified. [van Eijkeren et al., 2008](#)

Older Adults

Short-Term and Long-Term Effects of Nordic Walking Training on Balance, Functional Mobility, Muscle Strength and Aerobic Endurance among Hungarian Community-Living Older People: A Feasibility Study

Balance, functional mobility and aerobic endurance significantly improved in the Nordic walking group. This study showed that Nordic Walking is a simple, well-tolerated and effective physical activity for older people in Hungary. [Virag et al., 2014](#)

Effect of Walking Poles on Dynamic Gait Stability on the Elderly

Texas Women's University study, which concluded that walking poles provided increased gait stability at both preferred and fast speed. [Kwon, Silver, Ryu, Yoon, Newton & Shim, 2006 \(unpublished\)](#)

Effects of Nordic Walking Compared to Conventional Walking and Band-Based Resistance Exercise on Fitness in Older Adults

While all modes of exercise improved various components of fitness, Nordic walking provided the best well-rounded benefits by improving upper-body strength, cardiovascular endurance, and flexibility. Therefore, Nordic walking is recommended as an effective and efficient mode of concurrent exercise to improve overall functional fitness in older adults. [Takeshima et al., 2013](#)

Knee Joints

Effects of Walking Poles on Lower Extremity Gait Mechanics

There were differences in kinetic variables between walking with and without poles. The use of walking poles enabled subjects to walk at a faster speed with reduced vertical ground reaction forces, vertical knee joint reaction forces, and reduction in the knee extensor angular impulse and support moment, depending on the poling condition used. [Willson et al., 2001](#)

Changes in in Vivo Knee Contact Forces through Gait Modification

The results of this study suggest that an optimal configuration of bilateral hiking poles may significantly reduce both medial and lateral compartment knee forces in individuals with medial knee osteoarthritis. [Kinney et al., 2013](#)

Effects of Nordic Walking and Walking on Spatiotemporal Gait Parameters and Ground Reaction Force

Compared with the walking group, the Nordic walking group showed an increase in cadence, stride length, and step length, and a decrease in stride time, step time, and vertical ground reaction force.

[Park et al. 2015](#)

Neck Pain

Health Benefits of Nordic Walking: A Systematic Review

A study by Henkel et al. (2008) found effect of selected prevention concepts on functional health of persons with nonspecific chronic recurrent neck pain. Observed a reduced in unspecific, chronic neck pain and increased quality of life [Tschentscher, Niederseer & Niebauer, 2013](#)

Back Pain

Supervised and Non-Supervised Nordic Walking in the Treatment of Chronic Low Back Pain a Single Blind Randomized Clinical Trial

For pain, disability, and patient specific function the supervised Nordic walking group generally faired best however no statistically significant differences were found. [Hartvigisen et al., 2010](#)

Peripheral Arterial Disease

Nordic Poles Immediately Improve Walking Distance in Patients with Intermittent Claudication

These results show that Nordic Pole Walking (NPW) immediately enables patients with intermittent claudication to walk further with less pain, despite a higher workload. NPW might also be a useful exercise strategy for improving the cardiovascular fitness of patients with intermittent claudication. [Oakley et al., 2008](#)

Fibromyalgia

Does Moderate-To-High Intensity Nordic Walking Improve Functional Capacity and Pain in Fibromyalgia? A Prospective Randomized Controlled Trial

Moderate-to-high intensity aerobic exercise by means of Nordic walking twice a week for 15 weeks was found to be a feasible mode of exercise, resulting in improved functional capacity and a decreased level of activity limitations. Pain severity did not change over time during the exercise period. [Mannerkorpi et al., 2010](#)

Mental Health

Physical Activity of Depressed Patients and Their Motivation to Exercise: Nordic Walking in Family Practice

Nordic walking increased the patients' physical activity and improved their mood. [Suija et al., 2009](#)

Acute effects of a single bout of moderate exercise on psychological well-being in patients with affective disorder during hospital treatment

Nordic walking improved acute psychological well-being in patients with affective disorder. [Stark et al., 2012](#)

Obesity

Health Benefits of Nordic Walking: A Systematic Review

The current analysis revealed that with regard to short- and long-term effects on heart rate, oxygen consumption, quality of life, and other measures, Nordic walking is superior to brisk walking without poles and in some endpoints to jogging. Nordic walking exerts beneficial effects on resting heart rate, blood pressure, exercise capacity, maximal oxygen consumption, and quality of life in patients with various diseases and can thus be recommended to a wide range of people as primary and secondary prevention. Tschentscher, Niederseer & Niebauer, 2013

Caloric Expenditure

Nordic walking increases both energy expenditure and oxygen consumption (on average 20%, with some subjects as high as 46%). Morss et al., 2001, Church et al., 2002

Cancer

Stick Together: A Nordic Walking Group Intervention for Breast Cancer Survivors

Patients' vitality had improved, whereas perceived shoulder symptom severity and limitations in daily activities had decreased. Goniometric data indicated that range of motion (forward flexion, abduction and external rotation) of the affected shoulder improved significantly within ten weeks of training. Results from this explorative study suggest that Nordic Walking is a feasible and potentially valuable tool in the rehabilitation of patients with breast cancer. Fischer et al., 2015

The Effects of Pole Walking on Arm Lymphedema and Cardiovascular Fitness in Women Treated for Breast Cancer: A Pilot and Feasibility Study

The results indicated a significant reduction in total arm volume of the lymphedema arm, in lymphedema absolute volume and lymphedema relative volume. Significant decreases of heart rate and rating of tightness in the arm were found. Jönsson & Johansson, 2014

Cardiac

Randomized Trial of Nordic Walking in Patients with Moderate to Severe Heart Failure

A study published by the University of Ottawa Heart Institute, concluded that walking with poles is superior to standard cardiac rehab, even for those following mild to moderate heart failure. Keast et al., 2013

Effects of Nordic Walking Training on Exercise Capacity and Fitness in Men Participating in Early, Short-Term Inpatient Cardiac Rehabilitation after an Acute Coronary Syndrome—a Controlled Trial

Nordic Walking may improve exercise capacity, lower body endurance and coordination of movements in patients with good exercise tolerance participating in early, short-term rehabilitation after an acute coronary syndrome. Kocur et al., 2009

Go to www.urbanpoling.com under Health & Research for a more extensive review of research studies.

Activator & Urban Poling Studies in Canada & UK

Effects of Walking Technique on Knee Joint Loading

Dynamic knee joint loading is affected by the walking pole technique adopted. Decrease in dynamic knee joint loading was observed when poles are held away from the body and downward force was applied similar to the Activator technique. Bechard et al., (2015) University of Western Ontario. Unpublished

Is there a place for Activator poles in rehabilitation following Spinal Surgery? UK Pilot Study

This pilot study evaluated healthy adults' posture when walking with Activator poles (Aps) in comparison to elbow crutches and walking sticks with the aim to achieve the most upright posture. Difference between APs vs walking sticks / elbow crutches was statistically significant. Questionnaire feedback showed 100% of participants would prefer to use APs if available. 75% of participants would be willing to pay for the poles and 25% would not. Rickenbach et al. (current) Royal National Orthopedic Hospital, UK.

Exploring the Effects of a Health Care Provider Led Physical Activity and Education Program on the Physical and Psychological Indicators of Fall Prevention and Subsequent Independent Living

The study was conducted with the Nova Scotia Health Authority over a 9-week time span. The exercise sessions were based on the "Otago Falls Prevention Program" but modified with using the Activator poles. There was a significant change in the following tests: Timed Up and Go, Stride Length, and Single Leg Stork Stand, which are all indicators for falls risk. Gwynn-Brett & Hudec (2018) Cape Breton University. Unpublished.

Nordic Walking Using Activator® poles Increases Exercise Tolerance in Individuals with COPD Compared to Healthy Controls

VO₂, energy expenditure, heart rate, and minute ventilation were all significantly higher for participants using Activator poles. However, the distance walked during a 6MWT was shorter when patients with COPD walked with ACTIVATOR® poles. Dyspnea and leg fatigue ratings were similar walking with or without poles. Antoniadis, Lim, Gandhi, Montambault, Ricci & Spahija (current study) McGill University

Analysis of balance and gait pattern with Stepscan Pedway© technology, in individuals 80 years and older before and after a 12-week Nordic walking program with Activator poles®

Participants in the Activator pole® Nordic walking program improved their balance as measured by the BERG balance test and there were no falls while the program was active. This improvement in the Berg and falls were not maintained after the program was over. Although the sample is very small, this project suggests that Nordic walking could be an appropriate intervention to maintain functional independence and prevent falls for the elderly. Ferland & Robbins (current) Ste-Anne's Hospital, Montreal.

Clinical Feasibility Project: Outdoor Walking Program with Activator® Poles and Their Impact on Balance, Muscle Strength, the Risk of Falls and Bone Health of Veteran Inhabitants in a Long-Term Care Centre

Outdoor walkers with dementia used Activator poles in an innovative geriatric rehabilitation approach. These data suggest that the use of Activator walking poles contribute to the strengthening of the upper limbs while improving balance and could reduce the risk of falls from users. Bone density, walking speed and strength in the IChassé, Germain, Ferland & Gareau (2017) Ste-Anne's Hospital, Montreal.

Walk Away Stress: Urban Poling on Campus Research Study – Study using Urban Poles

New ongoing study to determine if Urban Poling (also known as Nordic walking) is a suitable workplace fitness program to address overall wellbeing of employees at the University of Guelph-Humber and Humber College. Coutinho (current) HUMBER COMMUNIQUE

Effectiveness of Urban Poling with ACTIVATOR® Poles for Residents of Long-Term Care Facilities

Although the sample size was too small to find significant results, there were improvements in participant's leg and core strength, flexibility, balancing abilities, and perceived physical functioning in an eight-week urban poling program with Activator® poles. MacPhee & Unwin, 2009 thesis Wilfrid Laurier University. Unpublished.

Case Review with a Gait Assessment Lab using the Zeno Walkway.

Subject was an 88-year-old woman with medical history including: bilateral hips, knees and shoulders replacements. Compared walking independently vs walking with Activator Poles using Zeno Walkway at gait assessment lab at Jewish General Hospital. Results found; increased gait speed, gait stride, less gait variability, reduce gait width and a more normalized arm swing when subject walked with Activator Poles. Roscher (2018) Protokinetic. Unpublished raw data.

ACTIVATOR® Poles

ACTIVATOR® Poles were designed with consultation from occupational therapists and physiotherapists who work with individuals with chronic conditions affecting balance, post-surgery, injuries and less active older adults. Built with 8 unique features for safety and effectiveness.



1. CoreGrip (patented)



Palm – Provides an effective alternative hand position to reduce grip fatigue, for off-loading weight when descending, and for propelling during long distance trekking. Large R and L identify the right and left handles.

Column – **Column** – The ergonomic design allows for a loose grip, and the texture helps sweaty hands to grip.

Flare – Absorbs vibrations.

Ledge – Allows more-even distribution of weight across the outside edge of the hand. Allows for comfortable and effective application of force for core strengthening and off-loading of weight. Supports the wrist in a neutral position.

Ergonomic Evaluation

“The forces on the hand are more-evenly distributed across the heel of the hand in the CoreGrip handle design with higher forces at the wrist crease area improving the biomechanical advantage when walking. An even force distribution reduces uncomfortable contact stresses.”

Anna -Kristina Arnold, MSc, CPE (2016)

2. Bell Tips & Carbide Tips



ACTIVATOR® bell tips are made of high grade rubber with aggressive treads for shock absorption and durability. The wider base provides greater stability and weight bearing compared with traditional Nordic walking tips. The bell tips should be replaced as they show signs of wear.



The carbide tips provide traction in snow, sand and other soft surfaces. Use on ice is not recommended.

3. **The button locking system** provides an easy method for locking the poles (vs. the twisting locking system used on Urban Poling Fitness and Hiking walking poles) and ensures that the poles are locked securely. It also has a higher weight capacity of 200 lbs per pole compared to the Urban poles which is 90 lbs per pole.

4. **The ferrule** at the base of the top section reduces vibration and noise. It works most effectively when the poles are used in an upright position.

5. **Snow baskets** are available for walking in snow; use with carbide tips.

Nordic Pole Walking Injuries – Nordic Walking Thumb as Novel Injury Entity

Nordic walking is safe. The most frequent injury in Nordic walking is a distortion of the ulnar collateral ligament of the thumb after a fall which the poles acts as hypomochlium. Modifying the construction of the Nordic Walking pole handle, avoiding holding onto the pole in the event of a fall, as well as education could be preventive measures. Knobloch et al., 2006 Translated

*Comments on the Urban Poles from Dr. Knobloch, 2014. "The Urban poles appear light with a **good grip**. The hand design of the grip offer even **more support** and thus, provide **safety**. The hand piece and length adjustments are **convenient**. Overall, the chance to suffer a Nordic walking thumb is probably reduced with your urban poles, especially among patients with Diabetes; with a potential impairment of balance and proprioception". Prof. Dr. med. Karsten Knobloch*

Ergonomic Strapless CoreGrip

Designed to reduce vibration and increase safety

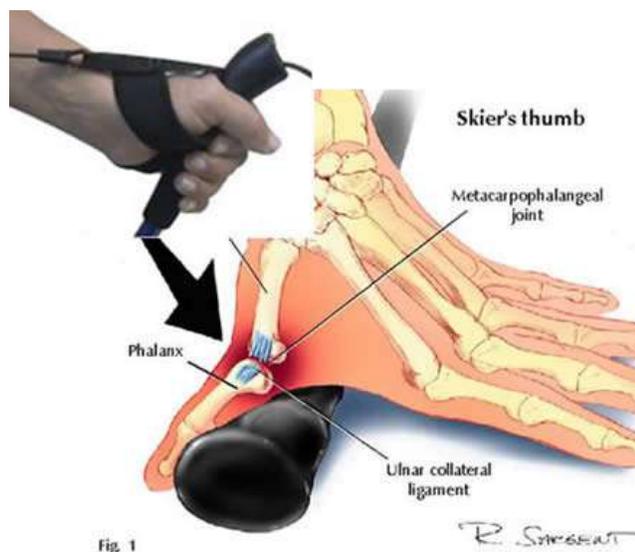


Fig. 1

ACTIVATOR® Poles vs Other Poles

Other walking poles on the market have a different design and technique that were developed for outdoor fitness.

Compare the Differences:

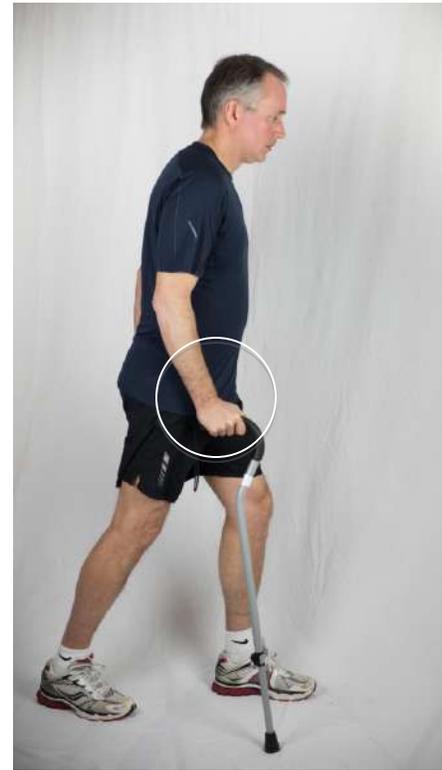
ACTIVATOR® Poles	Nordic Walking/Hiking or Ski Poles
<ul style="list-style-type: none"> • Strapless CoreGrip system. A study by Knobloch (2006), found that using walking poles is safe but the highest rate of injury is related to the strap 	<ul style="list-style-type: none"> • Walking/hiking and ski poles generally have a strap attached
<ul style="list-style-type: none"> • Ergonomic CoreGrip weight bearing occurs though the Ledge of the CoreGrip with the wrist supported in a neutral position 	<ul style="list-style-type: none"> • Most walking poles have a thin grip and force is placed on the strap with the wrist in extension
<ul style="list-style-type: none"> • Button-lock system • Higher weight capacity (200 lbs per pole/91 kg) 	<ul style="list-style-type: none"> • Turning-lock system which can be difficult to secure for those with arthritis in their hands • Lower weight bearing capacity - Urban Poles (90 lbs per pole/41 kg) Low Quality NW poles can be as low as 20-40 lbs per pole/9-18 kg
<ul style="list-style-type: none"> • Bell-shaped tip for maintain the poles in an upright position for more stability and balance 	<ul style="list-style-type: none"> • Boot-shaped tip that propels user forward to increase walking speed
<ul style="list-style-type: none"> • 3 features to reduce vibration 	<ul style="list-style-type: none"> • Some poles have vibration-reducing features.
<ul style="list-style-type: none"> • Technique designed to increase stability and balance. Less exertion is required compared to Nordic walking technique or fitness walking 	<ul style="list-style-type: none"> • To be used in conjunction with the Nordic walking/fitness techniques
<ul style="list-style-type: none"> • Adjustable up to 6 ft – ACTIVATOR Poles and collapse for travel • New ACTIVATOR2 Poles – for clients up to 6 ft 4 inches & collapse shorter 	<ul style="list-style-type: none"> • May or may not be adjustable

Benefits and limitations of the ACTIVATOR® Poles compared to 4-wheeled walkers



ACTIVATOR® Walking Poles	4 Wheeled Walkers
Provides bilateral support	Provides bilateral support
Improves posture (research)	Promotes a kyphotic posture for some clients (see figure A)
Arms swing in a similar pattern to functional walking	Arms are static
Can improve core strengthening to improve performance for walking, transfers and function in activities of daily living (ADL)	Core strengthening may decrease if client is weight bearing excessively onto the walker
Improves balance (research)	
Increases stability	Provides greater stability than the ACTIVATOR®
	Provides a seat for the client to rest when walking in the community
	Carrying basket included
More economical	
Close to 200 studies listed on PubMed on the use of walking poles.	
Positive self-image with walking poles compared to the use of other walking devices-walkers, forearm crutches or canes	
Wrist supported in a neutral position	Stress is place on the wrist in an extended position (see figure B)

Benefits and limitations of the ACTIVATOR® Poles compared to canes



ACTIVATOR® Walking Poles	Cane
Bilateral support	Unilateral support
Improves posture (research)	Can promote leaning to the one side (see Figure A)
Additional weight bearing and stability capability	
Weight bearing occurs through the wrist in a functional position	Weight bearing occurs through the wrist in an extended position (see figure B)
Improves core strengthening and facilitates the rate at which you burn calories(research)	

Remember: Do not convert a walker, forearm crutch or two-cane user to the ACTIVATOR® Poles without extensive one-to-one assessment and training by a physiotherapist or trained rehabilitation professional.

ACTIVATOR® Walking Technique

Step 1 - Place the Right and Left poles in your right and left hands. Wrap your fingers all the way around the CoreGrip, but don't grip the CoreGrip tightly. Instead, hold loosely with the fingers.



Your hands must rest on the Ledge of the CoreGrip.

Step 2 - Stand tall, placing your elbows at your sides at a 90-degree angle. Ensure the poles are upright the entire time you are walking.

Step 3 - Step forward with the poles and walk in the same manner as regular walking. Swing your right arm forward (with your elbow bent at 90 degrees) as your left foot steps forward. Repeat with the left arm and right foot. The tip of the right pole should land at the same time as your left foot.

Don't let your arms swing behind your body. Do not keep arms at the side of your body; there is a lot of upper body movement in your shoulders. Lift and swing your arm forward to the same distance to the opposite leg. This will also help keep your poles upright.

Step 4 - To intensify the core and upper body workout, to increase your stability and balance and to ensure off loading, you must press down on the Ledge of the CoreGrip. Study at UWO found

Video Instructions available on www.urbanpoling.com.

ACTIVATOR® Double Poling

To increase off-loading swing both arms forward at the same time you are stepping forward with the injured limb

Alternate Grip

The Top of the CoreGrip can be held horizontally or facing forward in the palm of your hand. Consider changing grips when the hand gets fatigued using the central column, when gripping the central column is challenging due to flexion contractures or limited grip strength, for descending steep declines or for long distance walking/trekking.



Top of CoreGrip facing horizontally



Top of CoreGrip facing forward

Tips for Using the ACTIVATOR® Poles

- Walk slowly when learning the technique.
- Always use both poles.
- Start by using your poles for only 1/3 of your maximum walking time. Gradually increase the distance/time you are using the poles.
- Use the rubber bell-shaped tips indoors, on **dry** sidewalks and asphalt.
- When using the poles on uneven terrain (such as on dirt trails, grass, sand or gravel) or in the rain or snow, remove the bell-shaped tip to expose the carbide steel tip. The carbide steel tip provides increased traction and stability under such conditions. **Note:** The carbide steel tips are very sharp. Use extreme caution to avoid injuring yourself or others. Never use the carbide steel tips indoors.
- Use ACTIVATOR® Poles on stairs **only with instructions** from a healthcare professional.

Precautions

- Consult your physician or therapist before using the poles if you currently use a cane or walker, have any medical condition which affects your balance, stability, grip strength, vision, depth judgment or coordination, or if you are currently recovering from injury or surgery.
- ACTIVATOR® Poles can be used on stairs with instructions from a healthcare professional.
- ACTIVATOR® Poles should not be used in icy or slippery conditions.
- ACTIVATOR® Poles may help break a fall, but falling on them may affect pole integrity. **Do not** use poles that have been fallen on or that have been damaged in any other way.
- ACTIVATOR® Poles are guaranteed for two years against manufacturing defects.
- Check your poles regularly for any signs of stress, replace your poles every 2 to 3 years for heavy user.
- Replace your Bell Shape Tips each year with regular use. When your tips are worn down unevenly it affects posture and reduces traction.

Teaching Tips

- One of the most challenging aspects of using poles is coordinating the opposite arm and leg (the same pattern as regular walking). Try to not focus too much attention when your participants swing their right legs and right arms together or vice versa. With practice and more confidence participants will naturally begin to coordinate the appropriate arms and legs.
- When the coordination or rhythm is not correct, ask participants to stop and start again.
- Playing or singing marching music of an appropriate tempo can sometimes make poling easier.

Common Errors

- Not walking opposite arm and leg
- Gripping the CoreGrip too tightly instead of a putting downward pressure on the Ledge of the CoreGrip.
- Placing their thumbs on top of the CoreGrip
- Not using the correct pole for their right and left hand
- Keeping arm position static instead of swinging it forward with the opposite leg.
- Walking with the poles on a diagonal.

Who is Appropriate for ACTIVATOR® Poles?

Exercise with ACTIVATOR® Poles **may be beneficial** for people with the following conditions:

1. Hip and knee replacements (once fully weight bearing)
2. Diabetes (claudication pain associated with peripheral arterial disease)
3. Cerebrovascular accident (stroke)
4. Osteoarthritis
5. Osteoporosis
6. Soft tissue injuries (post acute phase)
7. Require general activation and/or gait retraining
8. Multiple sclerosis
9. Parkinson's disease
10. Breast cancer (rehabilitation)
11. Psychological issues (e.g., mood, confidence and fatigue issues)
12. Cardiovascular disease (rehabilitation, if approved by physician)

Contraindications to Group Participation

Exercise with ACTIVATOR® Poles **may not be beneficial** for people with the following conditions (or should only be done with one-to-one supervision of a therapist and the consent of a physician):

1. Has fallen within the previous three months
2. Acute stages of frozen shoulder and tennis elbow (limited by ROM and inflammation)
3. Early stages of hip and knee replacements (walker or crutches may be more appropriate; ACTIVATOR® Poles are not designed for moderate to maximum weight-bearing)
4. Chronic conditions in middle to late onset stages resulting in moderate to severe balance and coordination limitations (e.g. MS, Parkinson's, etc.)
5. Severe rheumatoid arthritis or osteoarthritis in the fingers affecting ability to grip CoreGrips
6. Visual limitations affecting their ability to see obstacles in their walking path
7. Severe acute cardiopulmonary conditions
8. If under medical care for chronic condition (discuss with their healthcare professional)
9. Walkers and cane users (should be trained under the direction of a physiotherapist, occupational therapist or qualified rehabilitation personnel)
10. Moderate to severe dementia (including Alzheimer's disease) – those displaying poor judgment of their walking tolerance and balance.

Goals for ACTIVATOR® Exercise Sessions

1. Improve posture
2. Reduce impact on lower extremity joints while mobilizing
3. Improve balance and stability
4. Increase confidence while walking (and in winter conditions and on different terrain)
5. Improve bilateral and rhythmical movement
6. Equalize weight bearing on both sides of the body
7. Create a functional gait pattern (opposing arm and leg movement, heel-to-toe walking and knee lifting)
8. Improve coordination
9. Increase core strength
10. Increase caloric expenditure
11. Help reduce falls based on increased balance, core strength & confidence
12. Increase speed
13. Ease hill climbing and increase stability for descending hills

Additional Considerations for Participation

ACTIVATOR® Poles are appropriate for many older adults and rehab clients, but not for everyone. Before introducing the ACTIVATOR® in a one-on-one or group situation determine each person's suitability.

An assessment forms (see Appendix B) and standardized tests (on the following pages) for therapists will assess the following functional abilities.

Fitness professionals and Recreation Therapists: Before formally assessing a potential ACTIVATOR® participant, consider the following general information. If after reading this information the person still seems to be suitable, proceed to the formal assessments for Fitness Professionals.

1. **Gait pattern and use of walking aids** (participants requiring a cane or a walker will need one-to-one or a two-person assist during initial training)
2. **Core strength-trunk control:** Participants may require additional core strengthening before using the ACTIVATOR®, particularly if they always use a walker for mobilizing.
3. **Range of motion at shoulders, elbows, hands, knees, hips and ankles:** Determine if your participant has suitable range of motion; if not, you will need to modify the technique.
4. **Grip strength:** Participants must be able to keep the poles upright and grip the CoreGrips.
5. **Ability to shift from sit to stand:** May require one-to-one assistance from sitting to standing or may require exercises to improve their ability to sit to stand.
6. **Balance/history of falls:** Be aware of those who are at a high risk for falls; they may benefit from balance exercises prior to poling.
7. **Vision and hearing:** Participants need adequate vision to see the placement of the poles on the ground and to hear instructions.

8. **Judgment and ability to follow directions:** Determine if participants are aware of their walking tolerance and limitations.

9. **Co-ordination:** Participants may have difficulty with coordinating opposite arm and leg and with manipulating the poles.

10. **Maximum walking tolerance:** Start participants at 30% of their maximum walking tolerance (prior to using poles) to ensure they don't overexert themselves.

ACTIVATOR® Walking Poles and Specific Health Conditions

If you are working with a specific population or a participant with a specific condition, follow these suggestions and recommendations.

1. Arthritis

Poling improves core strength, posture and endurance, and reduces stress on lower extremity joints when mobilizing. Participants must have a functional grip to be able to hold onto the ergonomic CoreGrip. Reinforce the loose grip technique and landing the pole gently. Pain lasting more than 24 hours may indicate the length of poling time was too long, that a longer break between poling sessions is required or that the technique was incorrect. If pain persists after adapting the poling sessions, this activity may not be appropriate. Poling is not appropriate during the acute stages of arthritis (when joints are inflamed).

2. Osteoporosis

Poling provides upper body resistance training and improves posture. Do not force client to stand completely upright if they have a kyphotic posture. Gradually encourage clients to walk more upright as tolerated.

3. Pre/Post Hip and Knee Surgery

Participants must be authorized by their medical professionals for full weight bearing. Not recommended for post surgery for clients who are long time walker users. Post surgery hip clients will start off using crutches and walkers (frames) but may graduate to the ACTIVATOR® Poles & technique at Week 2 to 8 depending on their therapist's assessment and the physical status of the client. Post surgery knee clients may graduate to using the ACTIVATOR® Poles & technique at Week 4 to 8 depending on their therapist's assessment.

4. Multiple Sclerosis

The ACTIVATOR® is appropriate for those at the mild to moderate stages (when only one cane is required for stability). Poling may increase stability and balance, improve posture (helps to maintain the head in an upright position instead of looking to the ground), increase confidence while walking, improve general strength and increase walking speed and tolerance. Participants should be assessed initially by a physiotherapist. When relapses occur (participant experiences double vision, extreme fatigue, cognitive limitations effecting judgement and insight or limited co-ordination) or requires two canes or a walker for mobilizing, walking with the ACTIVATOR® Poles should only be done under one-to-one supervision of a therapist.

5. Cerebrovascular Accident (stroke)

Walking with poles may be useful as a bilateral activity to increase awareness or co-ordination of the affected side. It may be helpful to use a loose strap fastened with Velcro to help support the affected hand to the CoreGrip during therapy sessions to promote bilateral arm swing during walking or exercises. Poling is not recommended for individuals for independent use who don't have a functional grip on their affected side, who have visual neglect (which hinders their ability to see where the poles are being placed) or have cognitive limitations that effect insight and judgement

6. Parkinson's Disease

Poling helps promote posture and balance, allows for more fluid movement during walking, encourages arm swinging during walking and promotes a more functional gait pattern. Participants with moderate to severe Parkinson's (e.g., have impaired balance, cognitive limitations or use canes and walkers) may not be appropriate for the ACTIVATOR® or may require one-on-one supervision or a two-person assist with therapists. Some clients with Parkinson's have reported they walk with a faster speed but then feel quite unsteady when they stop for a

rest and are standing with only using the poles. Ensure these clients have places to sit and rest during walking breaks.

7. Respiratory Conditions

Those with respiratory conditions may be the most limited in terms of their walking tolerance and should only use the ACTIVATOR® technique. Practice using poles inside before heading outside. Use level walking areas and avoid hills or any routes with an incline, if possible. Ensure there are areas for resting.

8. Wheelchairs

Poles may be used for wheelchair users as a new exercise tool, using different arm motion for propelling the wheelchair forward, including wheelchair users in group walking programs and for core strengthening. Removing arm rests may help people find it easier to sit more forward in their chair (if they have adequate balance). Make the poles as short as possible. You can also remove foot rests, if people have the ability to use their legs for propelling forward. However, recognize that wheelchairs will propel much faster forward when using poles, so people will have to keep up by using their legs. It may be easier to use the boot shaped tips on the poles. Be aware of any inclines which will also increase the speed of the wheelchair. Users should always be assessed to determine their abilities before using the poles (outside or indoors) with changes in the grad.

9. Brain Injuries

People with brain injuries may benefit from using the poles for cognitive retraining for: new learning; increasing concentration; improving co-ordination, walking tolerance and core strengthening; and facilitating a functional gait pattern. Many younger male clients are also interested in using the poles to return to active outdoor activities such as hiking and snowshoeing that they can do with friends or family members. Be aware that clients will fatigue much faster using the poles because concentration is required and both upper and lower body muscles are involved.

10. Mental Health

Because of the benefits related to mood and fatigue, mental health clinics are using the poles for clients, such as those living in group homes with chronic mental health conditions.

11. Spinal Stenosis

Therapists generally assess using poles with clients 24 hours after surgery for daytime use if they are not long term walker users. May be prudent to suggest client uses ACTIVATOR® Poles during the day and a walker/frame during the night.

For further information on Specific Conditions, watch our recorded webinars with top physiotherapists from Canada and the US under Education on www.urbanpoling.com.

Assessment Protocol for Physiotherapists and Occupational Therapists

1. Fill in Assessment Form
2. The Timed Up & Go Test (TUG)
A timed test of basic functional mobility.
3. Dynamic Balance Index.
4. Mini Mental Status Exam (MMSE)
MF **Folstein**, LN Robins, JE Helzer - Arch Gen Psychiatry, 1983 -
ncbi.nlm.nih.gov
<http://jama.ama-assn.org/cgi/content/abstract/269/18/2386>
Use the standard cognitive screening test.
5. The Clock Drawing Screening Test
Use the standard cognitive screening test. For more information, see
http://www.neurosurgical.ca/ClinicalAssistant/scales/clock_drawing_test.htm
6. Trial Walk with the ACTIVATOR® Poles under your one-to-one supervision/assistance.

Assessment Protocol for Fitness Professionals (see forms after Appendix)

1. Grip Strength Test
2. Transfer from Sit to Stand Test
3. Standing with Poles Test
4. Weight Shifting Test
5. Marching Test

Steps to Starting an ACTIVATOR® Program For Less Active Older Adults

1. Assess the Suitability of Participants

Physiotherapists and occupational therapists, see Appendices B, C and D.

Fitness professionals, see Appendix E.

This assessment will help you determine who is appropriate for group classes, who is appropriate for one-on-one exercising and who should not be using ACTIVATOR® walking poles in a group setting.

Also, refer to “Contraindications to Participation” on page 18.

2. Determine the Location of Walks

Hold the first three sessions indoors. In fact, depending on the capabilities of your participants, it may be best to hold all of your classes indoors. Only venture outside if your group’s walking tolerance is high enough to safely complete the route, tolerate outdoor conditions (e.g., sun, rougher surfaces, wind, noise, etc.) and you are completely familiar with their limitations and abilities.

Exercising indoors makes it easier for instructors to determine each person’s maximum walking tolerance, provide one-on-one physical assistance, allows participants to sit if they are fatigued or need assistance, and keeps the group together.

Choose flat, non-slippery surfaces. Carpet is ideal. Check the grip of the poles on non-carpeted indoor surfaces before leading a class on that surface.

Stay indoors during slippery conditions including snow, rain and ice. Icy conditions are not safe for poling (or walking of any kind) for people of any age. Make sure your route does not include stairs.

Review safety issues and rules for keeping the group together prior to going outdoors for the first time.

3. Determine the Length of Walks

The initial session should be 30% of the distance or time that group members typically walk *without poles*. (For example, if they normally walk 30 minutes without poles, plan on 10 minutes for their first walk with walking poles.) For a care centre group, consider the lowest level walking tolerance of the most limited participant of your group and start at 30% of their walking tolerance. Your first walk outside could be as short as one block or 2 minutes of walking depending on the grade of the sidewalk. Make sure there are still places for rest breaks during the first walk outside.

The walk routes should be simple and in a circle or a figure-eight pattern to make it easy to maintain contact with participants. Increase the walking period of the group very gradually. Another option is to plan regular rest stations throughout the route where the group members can sit down and rest. Avoid walk routes with stairs.

4. Determine the Number of Instructors

If participants do not require one-on-one assistance, one instructor for every 5-10 participants is recommended. This will vary depending on the group’s fitness level. Be prepared to have more instructors if the group is frail. For groups where some participants use one or two canes or a walker, the ratio should not be greater than 2-3 participants per instructor.

5. First Aid

Instructor(s) should carry a first aid kit, money for a taxi and a cell phone in case of emergency. They should also carry emergency contact information and other relevant medical information with them. It is recommended that fitness professionals also have current First Aid, and CPR training.

6. Clothing

Instructors should wear bright or reflective clothing during early morning and evening hours for high visibility when crossing streets.

7. Medications

Be aware of your participant's medications and side effects which may affect their functional capability to walk. Follow guidelines under the CCAA Manual for the Senior's Fitness Instructors Course for medications and side effects.

8. Snacks/Water

Always bring more water than you would for regular walking. and snacks (particularly if group members have diabetes)

9. Weather

You may decide to run the program rain or shine. (Keep in mind that many people will not want to walk in the rain because of the slippery surface.) You could make this decision based on your group and simply ask them if they prefer to walk only in good weather. Be prepared to have a cut-off date for the program regardless of the weather, or your 6-week program could turn into 10 weeks.

10. Poles

Always make sure the poles are securely locked before proceeding on the walk.

The poles may be helpful in preventing a fall, however, once a person has landed or put excessive weight onto the poles during a fall or stumble, this may affect the integrity of the poles. Do not use poles which participants have fallen on or that are damaged in any way.

Instructors will be responsible for the poles and for keeping inventory.

11. Cost for Participants

The cost of the program will depend on several factors:

- a. Cost of the instructors
- b. Number of expected participants
- c. Length of the program

12: Promoting Your Clinic or Services

If your clinic orders our Urban or ACTIVATOR® Poles and you have taken our course, we will list your clinic on our website www.urbanpoling.com under Retailer or Classes or Rehabilitation Clinics (new category to be added by June 2011).

Please email us with your clinic name, phone number, address, website (if you have one) and email address and we would be happy to promote your clinic!

Flyers: As a graduate of this course, you can use our professional photos for your flyer or posters. Please go to our private instructor site at <http://urbanpoling.com/trainers/?/register/Vepu03>.

Grants: We have a grant template application that you can use to apply for funding for Urban or ACTIVATOR® Poles, promoting awareness and instructor fees. Funding from grants is generally for non-profit centres, community centres, educational institutes, health units, First Nation groups and associations. Please contact us at info@urbanpoling.com or call us at 1 877 499 7999.

Designing an ACTIVATOR® Exercise Program (group or one-on-one)

The design, length and intensity of your ACTIVATOR® exercise class will vary widely depending on the abilities of your participants.

Length of classes

A typical class is likely about 30 minutes; this time includes non-active activities such as giving instructions, answering questions, socializing, etc.

The first class, however, should be a very short session for walking with the poles. For the first session, plan for just 2-10 minutes of walking since participants will be unfamiliar with the poles. Ask participants who require assistance to wait in their chairs until you can help them.

Focus of classes

Start each class with sitting exercises so you can quickly assess your participants' current functional and physical abilities to determine if they will need additional assistance with using the ACTIVATOR® or should only do the sitting exercises. The sitting and standing exercises can also help improve balance and core strength which are very important to the participant's ability to pole safely.

Full-time walker users in particular may initially not have enough core strength for poling. Your first few classes should focus on assessing the abilities of participants and helping them to become comfortable and familiar with the equipment and exercises. After this point, the focus can move more toward conditioning and increasing exercise tolerance.

In general, classes should focus strongly on proper use of the ACTIVATOR® walking poles, activation, enjoyment, building confidence and socialization before improving conditioning levels.

Think safety

Ensure that participants always walk in single file and with adequate space between themselves to avoid creating tripping hazards with their poles.

Turning: Ensure that participants do not pivot or lift the poles to turn. Instead have participants walk in a big circle that allows them to keep moving and continuously using their poles.

Trips and Falls: Reinforce the benefit of having a strapless CoreGrip - clients can simply let go of the poles if they think they are going to fall or trip another client. Practice just letting go of the CoreGrip in the event of a fall or tripping episode.

Client should sign a waiver form (see Appendices F) and PARQ (for group fitness programs) (see Appendix G). Seek the approval of the participant's physician and physiotherapists if there any concern with their ability to attend your outdoor walking group.

Call us anytime with clinical questions at mandy@urbanpoling.com.

Progress cautiously

Once participants are using the ACTIVATOR® Poles safely and correctly, consider increasing walking distance, time or intensity of the class. You may want to gradually increase the exercise sessions by one or two minutes each week. Progression should be very slow.

Ordering equipment

Clinics and classes can purchase the ACTIVATOR® and Urban poles at special pricing in Canada contact orders@urbanpoling.com or info@urbanpoling.com for your local distributor.

Checklist for Retirement to Care Centre Groups (prior to taking your group outside)

- Assessed limitations of clients.
- Observed clients for 2-5 indoor sessions and determined which participants are appropriate for outdoor walking.
- Waiver forms signed.
- Leader has mapped out a short route (1-2 blocks or 3-10 minutes depending on the limitations of the lowest level participant).
- Route is level with no grade and no stairs or slippery sections.
- Route has places to take a rest if required.
- Plan for fast and slow walkers in your group.
- Ratio of one leader for every 2-3 clients if participants have stability or balance issues.
- Weather conditions – no snow, rain or slippery conditions.
- Poles for each participant are adjusted to the proper height and securely locked.
- Participants using the correct Right and Left poles.
- Start with indoor sitting exercises to assess client's present function.
- Ask participants if there is any reason they should not be walking with the group today.
- Inform group to stay in single file on sidewalk.

Checklist for Long-Term Care Clients

Start training with residents who are the most active until you gain more experience.

- Assess each client and be aware of their limitations
 - Start with clients who use one cane or need no walking devices
 - Start with a small group (up to 3-5 residents) doing sitting exercises using the poles
 - Train each client on a 1:1 basis indoors when first walking with the poles
 - The most important issue is safety rather than technique in the beginning
 - Support the client with one hand behind their back
 - Demonstrate how to use the poles first
 - Limit your verbal cues to hand grip, posture than cueing on opposite hand and leg (this should come naturally)
 - Provide lots of positive reinforcement
 - Provide 1:1 or 1:2 person supervision when taking clients outside for the first time (practice inside until you are confident the resident can walk outside).
- Perform these exercises holding the poles or the back of a chair.
 - Place participants in front of a chair while performing these exercises. If they need to sit or lose their balance, the chair will be immediately available.
 - Use phrases such as, "Sit when you need to," "Do what you can," "Please ask for assistance," "Don't try exercises that you feel you can't do safely," etc.

Nordic walking aka Urban Poling for Active Clients or Short-Term Rehabilitation

Features of Urban Poles

1. The **ergonomic CoreGrip** has a **shock absorption feature** to minimize vibrations to the wrist, elbow and shoulder joints.
2. Designed so users can loosely grip the CoreGrip and position the hand and wrist in a natural and functional position.
3. There is a Right and Left CoreGrip designation.
4. The **wide base of the CoreGrip** provides core strengthening when the outside edge of the hand applies pressure to it.
5. The **boot tips** are designed for traction and shock absorption. The boot tip faces backwards to provide a propelling-forward motion. Boot tips should be changed every 10 - 12 months for regular users or whenever they appear worn. If the boot tips are wearing down faster than usual, the user may be landing the poles too aggressively. Don't plant the poles too forcefully.
6. **Black ferrule** - Our unique ferrule reduces vibrations through the pole to reduce stress on joints and provides a quiet operation.
7. **Carbide tip** – Use this on grass, sand, gravel and trails.
8. Urban Poling poles are **telescoping**. The length can easily be adjusted for easy transportation, storage, sharing and for other activities including hiking, snowshoeing, in-line skating, various terrain and weather condition. (They can be adjusted for use by people from 4' 2" to 6' 2".)
9. A **snow basket** attachment can be added for rugged conditions such as ice, snow, loose rocks and mud, as well as for snowshoeing and skiing.



Adjusting Urban & Nordic walking Poles



1. Position the pole horizontally. Place your left hand on the CoreGrip end and your right hand near the bottom of the pole. Pull out the bottom section of the pole. If the pole doesn't lengthen, turn the bottom section according to the label near the bottom of the pole (lock/unlock).

2. **Never touch or attempt to turn the black ferrule that is at the base of the top section of the poles. The ferrule minimizes vibration and noise while walking on urban surfaces.**



3. Lengthen the pole until you see heights printed on the lower portion. Next, adjust the poles to 2 inches below your height, if you are a beginner. (Experienced participants can adjust the poles to their full height.)

4. To tighten the pole, turn the lower portion of the pole according to the "lock/unlock" label.

5. If the pole is in the wrong direction, it will take many rotations to readjust it. Be patient!

6. Tighten your poles each time before using them.

7. If you have difficulty unlocking a pole at the end of a walk, turn it upside down and anchor the CoreGrip between your feet. Now turn the pole with *both* hands in the *unlock* direction.

8. If using the poles in temperatures below zero, place the poles outside for 10-15 minutes to adjust to the temperature. Then lock them to the desired height.

Nordic walking/Urban Poling Technique

Pre-class pointers:

1. Hold your poles with an **“easy” grip**. Wrap your fingers all the way around the CoreGrip, but there’s no need to grip the CoreGrip tightly.
2. Keep the **boot tips behind you** at all times. (If you look down as you’re walking, you shouldn’t be able to see them!)
3. Keep your **arms straight**; let them swing at your sides like two long pendulums.
4. Lift your **ribcage up** and away from your lower body to engage the abdominal and core muscles.

***INSTRUCTOR TIP:** Create an acronym to help yourself remember these four pointers. For example: **GST** (grip, straight arms, boot tips....)*

Step 1. Place your poles aside, or hold them in the centre of the pole so they’re parallel to the ground. Walk and swing your arms as you would normally when walking. Notice that when your right arm swings forward, your left leg steps forward. (This natural rhythm is difficult for some participants when they think about it too hard!)

Step 2. Hold your poles by the CoreGrips. (Be sure the Left and Right poles are in the appropriate hands and that the boot tips are pointing backwards; never place your thumb on top of the CoreGrip!) Drag the poles on the ground behind you practising the same small arm swing as in Step 1. Start with just a small swing. (Some users find it complicated to drag and swing the poles. Have these people skip ahead to Step 3.) Be sure the boot tips stay well behind you at all times.

Step 3. Continue dragging the poles, but now swing the front arm up higher until it is in a “handshake” position. As the arm lowers, let it return down beside the thigh and even slightly behind it.

Step 4. What should naturally happen at this point is a very small lifting and lowering of the boot tips (versus dragging). Lift and plant the poles firmly but gently; don’t slam them into the ground!

Step 5. Press the outside edge of your hand onto the base of the CoreGrip. Feel your upper body and core muscles contract and feel your body being propelled forward by the poles.

Additional Techniques

1. **Going Uphill:** Keep your poles more upright. Lean forward slightly, and use the poles to push you up the hill. Keep the poles further in front of you, and shorten your stride. Bend your elbows, if necessary; but remember to transition back to the straight arm technique at the top of the hill!
2. **Going Downhill:** Keep your poles upright and out to the side slightly. Bend your knees and elbows, and slow down your momentum. It may be helpful to lengthen the poles.
3. **Trails, Gravel, Sand, etc.:** Take off the boot tips and use the carbide steel tips for additional stability.
4. **Rain and Snow:** Remove the boot tips for rainy conditions or other weather that may make the terrain slippery. However, poling in icy or slippery conditions is not recommended! Use the basket attachments for snowy conditions to make the poles similar to snowshoes.

ACTIVATOR® Poles & Urban Poles Specifications

ACTIVATOR®	Series 300	4Life	Adventure Series
			
red & grey	blue	hot pink	west coast motif
CoreGrip			
button-lock system	internal twist locking system	internal twist locking system	internal twist locking system
200 lbs or 91 kg weight-bearing capacity			
Bell tips	Boot tips	Pink 4Life Boot tips	Boot tips
Carbide steel tip for snow, sand, and rough terrain			
baskets optional	baskets optional	baskets optional	snow & trekking baskets
Anti-vibration features (CoreGrip, ferrule, rubber tips)			
2-section	2-section	2-section	3-section
29" collapsed	31" collapsed	31" collapsed	25" collapsed
heights 4' – 6'	heights 4' – 6'2"	heights 4' – 6'2"	heights 4' – 6'2"
max weight: 300 lbs. or 136 kg	max weight: 250 lbs or 113 kg.	max weight: 250 lbs or 113 kg.	max weight: 250 lbs or 113 kg.
New – ACTIVATOR2 for taller clients up to 6 ft 4' & collapse shorter for travel		Portion of proceeds to cancer wellness programs	Only available in Canada and Australia

Accessories

	<p>Replacement Boot Tips</p> <p>Flex on contact for a soft landing. Fit both Urban Poles and ACTIVATOR® Poles. * Replace when treads wear or every 10 -12 months.</p>
	<p>Replacement Bell Tips</p> <p>Flat base for stability and anti-vibration. For use with the ACTIVATOR® technique; fits both ACTIVATOR® and Urban Poles. * Replace when treads wear or every year.</p>
	<p>Replacement Pink 4Life Boots</p> <p>A perfect complement to the 4Life poles but fits all Urban Poles and ACTIVATOR® Poles. * Replace when treads wear or every 10 -12 months.</p>
	<p>Carrying bag</p> <p>Protects your poles in storage and in transit and makes carrying poles easier. Adjustable shoulder strap.</p>
	<p>Snow baskets</p> <p>Keeps poles on top of the snow while snowshoeing and skiing. Standard with Adventure poles. Fits both Urban & ACTIVATOR® Poles.</p>
	<p>Trekking baskets</p> <p>Upgrade your poles for hiking. Keeps your poles from sinking into loose rocks and deep mud. Standard on the Adventure Series. Fits both Urban and ACTIVATOR® Poles.</p>

Appendix A: ACTIVATOR® Exercises

Sitting & Standing Exercises based on Otago Fall Prevention Study.

Benefits of Using Poles for Stationary Exercises

- Better posture and forward movement
- Bilateral support
- Use poles for visual and sensory cueing
- Prepares clients for walking with poles
- Greater ROM
- Reduces impact from lower extremity joints
- New tool to increase adherence to exercise
- Exercise program can be done anywhere in the home

Sitting and Standing Exercises Using the ACTIVATOR® Poles

Assessment: TUG, Berg,

Targeting: knee flexion/extension, hip abductors, ankle plantar and dorsiflexion

Progression:

- Start with sitting exercises.
- Start with 3 to 5x. Gradually increase reps and frequency.
- Use weights and resistance band to upgrade the exercises.

Tips:

- Coach your client to sit upright.
- Keep coaching your client to breathe.
- Use a solid chair or chair against a wall.

ACTIVATOR Sitting Exercises

Jumping Jacks - With your arms apart, place your feet apart, then place your poles together and your feet together.



Reverse Jumping Jacks - Plant the poles together and place your feet apart. Then place your feet together and place your poles apart.



Lean Forward - Arms straight, and hold onto the poles while leaning forward.



Kick Forward - Kick out slowly and straighten the knee. Repeat with other leg.



Hip to Chest - Bring the knee as close to the chest as possible. Repeat with other knee.



Ankle Press - Rest the heel on the ground and point your toes to the ceiling pressing the pole on top of your toes.



Ankle Up & Toes Down - Rest the heel on the ground and point the toes to the ceiling.



ACTIVATOR Sitting Exercises

Foot Circle & Shapes - Lift and move the foot in a circle or square. Repeat with other foot.



Leg to the Side - Lift one leg and move to the side, then back together.



Buttocks Lift - With poles apart and leaning on them, lift the buttocks off the seat.



Buttocks Forward - Sit at the back of the chair. Lift and move the right buttock forward towards end of seat.



Ankle Turns - Lift and rotate one ankle in a circle. Repeat with other ankle.

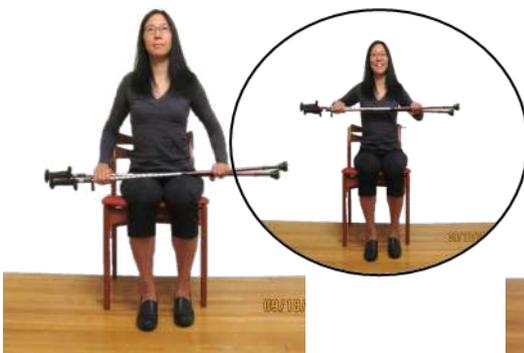


Neck and Arm Turn - Turn the head to the side & lift the pole to the side. Then look behind and lift the pole behind you.



Arm Strength - Hold poles with both hands on top and raise to chest level. **Arm Lifts** - Lift as high as possible overhead.

Graded Exercise - Do the same exercises and use weights. Start with one lb. and gradually increase weights.



ACTIVATOR Standing Exercises

Sit to Stand - Sit on the chair and slowly move to a stand position.



Standing Tolerance - Stand holding onto both poles.



Knee Lift - Hold onto the poles, and lift one knee and then the other.



Leg Side Lifts - Lift one leg to the side and bring back together. Repeat with other leg.



Marching - Hold on the poles and march on the spot.



Front to Back Weight Shifting - Step one foot in front of the other and weight shift from one to the other. Reverse and repeat.



Weight Shift Side to Side - Keep legs apart and shift weight from side to side.



On Your Toes - Stand on the toes and rock back slow onto the heels.



Lunge - Step one foot forward and bend the knee.



ACTIVATOR Standing Exercises

Marching - Hold onto the poles and march on the spot.



Leg Side Lifts - Lift one leg to the side and bring back together. Repeat with other leg.



Pre-Gait Exercises

Marching - Hold onto the poles and march on the spot.



Front to Back Weight Shifting - Step one foot in front and weight shift front to back foot.



Front to Back Side to Side - With legs apart, shift weight side to side. Apply pressure on the Ledge opposite the weight-bearing leg.



Knee & Arm Lift - March on the spot, lifting one leg and the opposite arm at the same time.



Leg Swing - Swing one leg in front with other knee slightly bent. Then swing from behind to in front.



Bend Knee & Push Back - Bend one knee and move the leg behind you.



Appendix B: Funding Sources

Funding Sources - Canada

The ACTIVATOR® has been approved for funding with:

- Veteran's Affairs Canada (POC 1) Aids to Daily Living

With Specific Clients:

- Auto Accident Insurance Plans: Related to Rehabilitation Goals or Walking Device
- ICBC: Related to Rehab Goals with a prescription or report from treating health care professional or therapists and/or physician (as per their guidelines).
- WCB/WSIB: Related to Return to Work Goals with a prescription or report from treating health care professional, physician or therapist (as per their guidelines)
- Some Extended Health Care Benefit Plans: specific to a chronic condition or injuries with a prescription from their required health care professional (i.e. physician, physiotherapist, occupational therapist, chiropractor, etc.).
- Soldier On: for fitness equipment to allow soldiers with injuries or chronic conditions to engage in fitness activities
- Mobility Program for March of Dimes

A Letter of Justification and prescription form are provided in under forms.

Post Your Clinic on our Website – Canada & USA

We will post your clinic, address & phone number on the urbanpoling.com Find a Clinic page. Send us the details after you have placed your first order for equipment.

Appendix C: Reference Links

Tug

<http://www.rehabmeasures.org/Lists/RehabMeasures/DispForm.aspx?ID=903>

Dynamic gait index

<http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=898>

Par-Q

http://www.csep.ca/CMFiles/publications/parq/PARQplusSept2011version_ALL.pdf

The Clock Drawing Screening Test

http://www.neurosurgical.ca/ClinicalAssistant/scales/clock_drawing_test.htm

Appendix D: Practicum Section

Part 2 – Optional Step -The Practicum (strongly recommended).

Complete 12 sessions of poling on your own and teach two or more individuals (in individual sessions) using the techniques and strategies learned in the course. Your certificate will be sent when you notify your course instructor that you have completed the requirements.

Optional Step Tracking Forms (for your reference only)

Your Poling Sessions (12 sessions (practice both the ACTIVATOR® and Urban Poling Technique))

Session #	Date	Time	Total Time
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

Your Teaching Sessions

Participant #1

Participant's name	Date	Techniques taught
		<input type="checkbox"/> The ACTIVATOR® Technique

Participant #2

Participant's name	Date	Techniques taught
		<input type="checkbox"/> the Urban Poling Nordic Walking Technique

Name:	Date of referral:
Suite/room number:	Referred by:
Phone #:	DOB (MM/DD/YY):
Reason for referral (include short term and long term goals):	
Indicate other disciplines involved:	
Medication review (side effects)	
Walking aids used:	
Has client had a fall within the last 3 months: Yes ___ No ___ If yes, describe: When: _____ How: _____ Where: _____ Severity of fall(s): (Please circle) 1. Serious injury (fracture or admission to hospital with an injury or required stitches) 2. Moderate injury: Bruising, sprains, cuts, abrasions, or reduction in physical function for at least 3 days resulted or client sought medical help 3. No injury	
Functional ROM for poling: (shoulders, elbows, wrist, hand, hips, knees, ankles)	
Grip strength (ability to hold onto the poles):	
Vision (ability to see placement of the poles):	
Hearing (ability to hear in a group program):	
Posture:	
Pain:	
Date of assessment: _____ TUG score: ___seconds DBI score ___/12 MMSE score: ___/30 Clock Drawing: ___/5 If cognitive concerns, is client able to follow directions? Yes No Comment on judgment and insight into abilities: Does this client require one-on-one supervision and training prior to attending a poling group?	
What are some of the barriers to participating in a group setting?	

Signature: _____ **Date:** _____

STEP 1

Ensure that your client is suitable for the assessment. See “Contraindications to Participation” (page 18), “Additional Considerations for Participation” (page 19), and “Specific Health Conditions” (page 20).

STEP 2

Tester instructions:

- Place a chair behind the client for each of these tests.
- Keep one hand behind the client’s back to help guide into the chair if necessary.
- Stop the test immediately if it appears that the client will not be able to complete the test safely.
- Finish the assessment by having the client sit in the chair.

1. Grip Endurance Test

Ask the client to hold your wrist in the same way they would hold the CoreGrip of the ACTIVATOR®. Instructions: “Hold onto my wrist and grip for 20 seconds.” Repeat with other hand. Client must be able to maintain a functional grip for the entire time.

Pass _____ Fail _____ Comments _____

2. Transfer from Sit to Stand Test (using arms or arm rests)

Instructions: “Please stand up.” Repeat this 3 times. Observe how easily the client rises from the chair. **Keep one hand behind the client’s back at all times.** Observe if s/he uses the arms of the chair or not. Assist the client in rising if necessary. Discontinue after one try if the client has difficulty or needs assistance.

Pass _____ Fail _____ Comments _____

3. Standing (with ACTIVATOR® Walking Poles)

Instructions: “Please stand for 10 - 15 seconds.” Observe how confidently the person stands.

Pass _____ Fail _____ Comments _____

4. Weight Shifting (with ACTIVATOR® Walking Poles)

- Instructions: “Please stand with your feet hip-width apart and shift your weight to your right foot. **Keep one hand behind the client’s back at all times.** Keep your left foot on the ground.” Poles are used for stability, and they do not move. Repeat 5 times to each side.
- Instructions: “Please stand with your feet hip-width apart and your right foot slightly in front of the left foot. Shift your weight to your right foot. Keep your left foot on the ground. Now shift your weight to your left foot.” Repeat 5 times, then repeat with the left foot in front.

Pass _____ Fail _____ Comments _____

5. March on the Spot (with poles static on the ground)

Instructions: "Please march for 30 seconds." **Keep one hand behind the client's back at all times.**

Pass _____ Fail _____ Comments _____

Total Passes _____ **Total Fails** _____

Failing 1 or 2 of the 5 tests is a failure.

PASS FAIL (circle one)

**If you indicated pass, do a trial walk test under your direct supervision/assistance for a couple of minutes with using the poles.

STEP 3

Based on the above assessment results and your own best judgment, do you think this person is at risk for falling while using the ACTIVATOR® walking poles in a group exercise class?

Yes [] No []

If you answered "Yes," one-on-one sessions may still be a safe option.

STEP 4

Seek the approval of the client's doctor or other health professional. Present your findings and recommendations.



**PARTICIPANT AGREEMENT, RELEASE AND ASSUMPTION OF RISK –
Outdoor Walking**

In consideration of the services of Urban Poling, their agents, owners, officers, volunteers, participants, employees, and all other persons or entities acting in any capacity on their behalf (hereinafter collectively referred to as "UP"), I hereby agree to release, indemnify, and discharge UP, on behalf of myself, my spouse, my children, my parents, my heirs, assigns, personal representative and estate as follows:

1. I acknowledge that urban poling entails known and unanticipated risks that could result in physical or emotional injury, paralysis, death, or damage to myself, to property, or to third parties. I understand that such risks simply cannot be eliminated without jeopardizing the essential qualities of the activity.

The risks include, among other things: the hazards of walking on uneven terrain and slips and falls; the forces of nature, including lightning and rapid weather changes; the risk of exposure to insect bites; the risk of cold including hypothermia; my own physical condition, and the physical exertion associated with this activity.

2. I expressly agree and promise to accept and assume all of the risks existing in this activity. My participation in this activity is purely voluntary, and I elect to participate in spite of the risks.

3. I hereby voluntarily release, forever discharge, and agree to indemnify and hold harmless UP from any and all claims, demands, or causes of action, which are in any way connected with my participation in this activity or my use of UP's equipment or facilities, **including any such claims which allege negligent acts or omissions of UP.**

4. Should UP or anyone acting on their behalf, be required to incur attorney's fees and costs to enforce this agreement, I agree to indemnify and hold them harmless for all such fees and costs.

5. I certify that I have adequate insurance to cover any injury or damage I may cause or suffer while participating, or else I agree to bear the costs of such injury or damage myself. I further certify that I am willing to assume the risk of any medical or physical condition I may have.

6. In the event that I file a lawsuit against UP, I agree to do so solely in the province of ____, and I further agree that the substantive law of _____ shall apply in that action without regard to the conflict of law rules of that Province. I agree that if any portion of this agreement is found to be void or unenforceable, the remaining document shall remain in full force and effect.

By signing this document, I acknowledge that if anyone is hurt or property is damaged during my participation in this activity, I may be found by a court of law to have waived my right to maintain a lawsuit against UP on the basis of any claim from which I have released them herein.

I have had sufficient opportunity to read this entire document. I have read and understood it, and I agree to be bound by its terms.

Signature of Participant _____

Print Name _____

Address _____

Date _____

ACTIVATOR® Poles Justification Letter

To: _____ Re: _____

Date: _____

Dear Sir/Madam:

The evidence-based ACTIVATOR® Poles are an assistive walking device specifically designed for both rehabilitation and a long-term mobility device. Backed by research with 8 current independent studies, this device is designed to improve stability, balance and confidence for walking.

Clinical Application(s):

Geriatrics/Aged-Care	Parkinson's Disease, MS, ABI, CVA	Hip & Knee pre/post surgery
Veterans	Spinal Conditions	Cancer Rehabilitation
Soft Tissue injuries and RTW	Arthritis (OA, OP)	Obesity (affecting walking ability)
Traumatic Orthopedic Injuries	Cardiac Rehabilitation	Diabetes (Neuropathy)
Vestibular Disorders	Other: _____	

ACTIVATOR® Poles Specification

Patent CoreGrip design :

- Maximizes offloading, weight bearing and balance.
- Strapless to reduce the risk of injuries associated with straps (Ref. Nordic Pole Walking injuries - Nordic Walking Thumb as Novel Injury Entity. Knobloch et al., 2006)
- Supports wrists in a neutral position
- Wide grip reduces the risk for repetitive strain injuries.



Button-lock system ensures the extendable shaft is securely locked for weight bearing capacity of up to 200 lb per pole (90 kg) vs. 20 to 90 lb of other poles. Adjustable in length. Maximum user weight: up to 300 lbs (136 kg)

Custom ferrule design reduces vibration and stress on joints.



Bell-shaped tips promote upright pole usage for stability and weight bearing.

Functional outcomes may include:

- Long-term primary walking device as an alternative to a cane, crutches or walker (only under the advice of a therapist or physician)
- Improved balance, stability and greater confidence while walking (factors to reduce the risk of falls)
- Improved walking tolerance and gait speed with less impact on lower extremity joints to reduce pain
- Improved core strength - key factor for ability to mobility and function in ADLs
- Improved posture - canes and walkers can promote rounding of the back and static arm positioning
- Encourages bilateral, rhythmical movement to improve co-ordination

Sincerely,



Patient Name: _____ Date: _____

Indications: _____

Recommendations: _____

Technique: _____ Frequency: _____

Duration/steps or specific exercises: _____

Urban Poling Equipment

- ACTIVATOR® Poles for rehab
- Series 300 (blue)/4Life (pink) fitness poles
- Boot-shaped traction tips
- Bell-shaped ACTIVATOR® tips

Signature: _____

Funding ICBC WCB EHB VAC OTHER



Benefits of Walking Poles may include:

- Improve posture and balance
- Take weight off joints in your legs
- Burn more calories than walking (up to 46%)
- Works your upper body and legs

How to Adjust Your Poles

Stand upright with your elbows at your side. Bend your elbows so that they are at 90 degree or an L shape. Use the grey stripe on the bottom portion of the poles to line up the button-lock system to the desired hole.

ACTIVATOR® technique

Step 1 - Place the Right and Left poles in your right and left hands. Wrap your hands loosely around the ergo CoreGrip.

Step 2 - Stand tall, placing your elbows at your sides at a 90-degree angle. Ensure the poles are upright the entire time you are walking.

Step 3 - Step forward with the poles and walk in the same manner as regular walking. **Swing** your right arm forward (with your elbow bent at 90 degrees) as your left foot steps forward. Repeat with the left arm and right foot. The tip of the right pole should land at the same time as your left foot.

Step 4 - To increase your stability and balance and your workout, press down on the lip or base of the CoreGrips.

Winter Time or Slippery conditions: If you remove the rubber tip you will find a carbide steel tip which is good for gripping on trails, snow and sand.

Equipment

- ACTIVATOR® Poles - button locking system, ergonomic/core strapless CoreGrip, anti-vibration, bell shape tip (for stability and balance or post surgery)
- Urban Poles (Nordic walking) Series 300 (blue) OR 4Life (pink) fitness poles - ergonomic/core strapless CoreGrips, anti-vibration, boot shape tip, twist locking system.

