

LiteGait[®] THERAPY

Clinical Basis and Rationale
for Use

Guide

for Clinicians and Caregivers



Table of Contents

I.	What is LiteGait?.....	4
II.	Gait Components.....	6
III.	Clinical Foundation.....	8
IV.	Perfect Practice Makes Perfect.....	10
V.	Adaptations to Maximize Performance.....	16
VI.	Alternative Uses of the LiteGait Device.....	18
VII.	Preparing for Your First Session.....	20

What is LiteGait?

LiteGait is a postural control device that creates a fall-free environment for the proper, upright practice of walking, standing, and participating in other functional activities. LiteGait utilizes an overhead support system and a specialized harness that transfers a percentage of body weight from the legs to the torso. This environment also corrects posture and promotes balance while permitting free movement of the user's arms and legs. LiteGait can be used over a slow moving treadmill, which provides an "endless walkway". It can also be rolled over ground for carryover, functional practice, and activities beyond gait. LiteGait provides the ideal environment for Partial Weight Bearing Gait Training. (PWB-GT)

What is PWB Gait Training?

Partial Weight Bearing (PWB) gait training has been documented in both laboratory and clinical settings as being an effective means for gait and balance training. Research identifies key components to an efficient and effective PWB protocol. It must:

- Correct posture
- Be safe/ prevent falls
- Allow systematic, progressive adjustments in the amount of support
- Provide slow rhythmic stimuli that can be increased in intensity
- Allow transfer of skills to the overground

What are the advantages of LiteGait Therapy?

- Therapy sessions are more efficient and effective
- Fewer staff
- Safer for patient and therapist
- Task-specific
- Opportunity for whole task practice
- Enables gait training to begin earlier, even in non-ambulatory individuals
- Frees therapist to provide specific assistance to the lower body to promote -
 - ♦ Rhythmicity: Constant rate of treadmill promotes reciprocal pattern
 - ♦ Coordination: Therapist assistance of foot placement and weight shift
 - ♦ Progression: Increase speed, decrease support

Who Receives LiteGait Therapy?

Anyone who needs gait training... and even some that don't!

- Low to high level of function
- Individuals who are ambulatory and non-ambulatory

* [See Contraindications & Precautions](#)

Common diagnoses appropriate for LiteGait:

- Cerebrovascular Accident
- Spinal Cord Injury
- Parkinson's Disease
- Multiple Sclerosis
- Cerebral Palsy
- Down syndrome
- Acquired Brain Injury
- Guillain-Barre Syndrome
- Medical deconditioning following prolonged bed rest
- Orthopedic conditions such as TKA, THA, post-fracture
- Post-Amputation/Prosthetic Training

***For a list of Contraindications and Precautions, [click here](#)**

What is LiteGait?

LiteGait® Anatomy

Basic

- | | |
|--------------------|-------------------|
| 1. Yoke | 4. Lift Mechanism |
| 2. Overhead Straps | 5. Handlebars |
| 3. Harness | 6. Base |

Anatomy of LiteGait

1. Yoke: The two arms of the yoke allow for the independent support of each side of the body.

- Rigid support provides stability
- Flexible support provides postural/balance challenges

2. Overhead straps: Individual overhead straps can be adjusted as necessary to provide control in both sagittal and frontal planes.

- Promote postural alignment
- Accommodate one-sided weakness

3. Harness:

- Wrap: Stabilizes pelvis, freeing leg movement
- Groin piece straps: Anchors harness wrap; not a weightbearing surface

4. Lift Mechanism:

- Enables the caregiver to adjust the amount of support provided with the push of a button.
- Lifts the user from sit to stand and onto a treadmill.

5. Handlebars: The adjustable handlebars provide many options for hand placement.

- Height adjustable
- Removable: encouraged hands-free walking
- Horizontal or vertical orientation.

6. Base:

- Allows for seamless transitioning from treadmill to overground walking
- Directional casters keep the device rolling in a straight line
- Open design allows access to the lower body so therapist can provide assistance



“See Accessories and Add-ons available”

Gait Components

One of the most debilitating aspects of many central nervous system (CNS) and musculoskeletal disorders is the loss of the ability to ambulate. There are four main components of locomotion: **posture, balance, strength, and coordination**. One or more of these components can be affected by a variety of neurologic or musculoskeletal disorders, thus limiting the individual's ability to walk with normal patterns.

Posture

Poor postural alignment makes normal walking difficult or impossible to achieve. A caregiver does not have enough hands to manually correct trunk posture, keep a client from falling, and facilitate proper gait patterns. Posture can be affected by:

- Joint contractures
- Muscle weakness
- Bony changes
- Joint dislocations

For example, forward lean of the trunk prevents hip extension, yielding inefficient and unsafe gait.



Coordination

Most neurological impairments affecting the brain or spinal cord interfere with coordination of movements especially during gait function. Parameters affected include:

- Heel strike
- Weight shifting
- Symmetry

These parameters are difficult to achieve with traditional treatment techniques, particularly with non-ambulatory clients. Component training does not address the coordination of multiple aspects of gait.

Component training does not address the coordination of multiple aspects of gait.



Gait Components

Strength

Muscle weakness may result in collapsing at the ankle, knee, hip, or torso, impeding upright function. The danger of collapsing requires use of a support device or caregiver assistance to prevent injury. Using one's arms for support limits upper extremity function and avoids loading the legs, resulting in further weakness.

Slow walking rates have high energy cost and therefore limit the functional use of walking for activities of daily living.

Balance

Balance deficits result in fear of falling, which cause people to limit their walking activity. Traditional physical therapy treatments incorporate the use of:

- parallel bars
- walking aids
- caregiver support/guarding

for balance and safety during gait training. These modify posture and require significant upper body strength, contributing to gait deviations.

Impaired walking is often slow and asymmetric. Slow walking rates have high energy cost and therefore limit the functional use of walking for activities of daily living. This form of walking relies more on conscious attention and less on automatic processes of the brain and spinal cord.



Clinical Foundation

LiteGait Therapy is “More Better”: An established treatment technique that can produce MORE quantity and BETTER quality of practice. Based on the basic and applied research demonstrating success of supported treadmill training in subjects with SCI, this form of treatment has also been clinically applied to patient populations with a variety of other disorders with good success. Subsequently, techniques have been developed to assist in the retraining of walking function for a wide range of impairments.

These techniques are sometimes referred to as:

1. Partial Weight Bearing (PWB) Gait Therapy
2. Body Weight Supported Treadmill Training (BWSTT)
3. Locomotor Training (LT)
4. Supported Treadmill Training

LiteGait Therapy relies on a combination of three elements:

1. A postural control device that reduces the amount of weight borne by the patient
2. A treadmill operated at slow speed to retrain proper patterns of walking
3. Clinician reinforcement of symmetric, coordinated limb movement.

Prevailing approach to gait intervention:

In inpatient care, ability to walk is a large determinant of discharge planning. Patient ability to walk is even referred to as the 6th vital sign. It has been well established that patient outcomes for walking are correlated to the amount of practice they receive. Caregivers should spend a large amount of time on such an important element of function, yet research has shown that very little walking practice takes

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place in rehabilitation. There are several barriers that hinder walking practice, many of which have been discussed, such as patient safety, stamina, and lack of staffing necessary to handle difficult cases. One such study shows that gait training occurs for as little as 8 minutes a day.

Researchers have concluded there are many advantages to supported treadmill training as compared to traditional gait intervention. These include:

- Allowing the manipulation of postural instability and balance through a weight bearing progression while facilitating stepping. **BETTER**
- Safety for those who cannot be easily guarded during over ground gait training. **BETTER**
- Can be initiated earlier. **MORE and BETTER**
- Reduces the cardiovascular demands. **MORE**
- Eliminates the fear of falling. **BETTER**

As mentioned, patient stamina is a large factor in limiting amount of gait practice. Patients with neurological deficits have a much higher energy cost of gait. They demonstrate excessive co-contraction of their lower-limb muscles while walking, leading to an inefficient gait pattern. BWSTT yields more normal (reciprocal) muscle firing patterns in stroke survivors, promoting a more fluid, energy-efficient gait pattern. **MORE and BETTER**

In a study of non-ambulatory stroke survivors in inpatient rehabilitation, those who received body

Clinical Foundation

weight supported treadmill training walked 5 times as far per session in the first week of therapy compared to those receiving traditional gait training. In the final week of therapy they walked twice as far per session. Those receiving BWSTT were more likely to walk independently, and did so sooner than those receiving traditional therapy. They were also more likely to be discharged home from the stroke rehab center. **MORE**

In a study comparing BWSTT to over ground gait training in acute stroke survivors, those receiving BWSTT were able to walk more independently,

Example: $3 \times \text{of } 5 \text{ min @ } 0.5 \text{ mph} = 660 \text{ ft}$ - Compare this distance to distances normally covered during gait training sessions by a patient who can only walk 0.5 mph- usually <150'.

PERFECT PRACTICE MAKES PERFECT!

LiteGait Therapy is
*“More Better”: An established treatment technique that can produce **MORE** quantity and **BETTER** quality of practice.*

farther and faster than those who trained over ground. **MORE** They were also more symmetrical, and even demonstrated return of full ankle motion while walking. **BETTER**

A Summary of the Clinical Advantages of LiteGait Therapy

- Allows for whole task practice at a difficulty level that is “just right” for user
- Reduced fear of falling for patient
- Increased safety - caregivers don't lift or hold patient
- Caregiver has their hands free for facilitation and cueing = **BETTER PRACTICE**
- Makes symmetry an achievable goal
- Treadmill creates endless walkway
- Can achieve high intensity of practice- challenging walking speed combined with endless walkway= **MORE PRACTICE**



Perfect Practice Makes Perfect

Whole task training is proven to be the most effective strategy for motor learning. Supporting an individual in an upright posture gives the opportunity and assistance needed for the production of a quality gait pattern. Active participation on the client's part is necessary for learning. Decreasing the difficulty of the task makes the task more "do-able", without requiring excessive effort or manpower for assistance. This can be accomplished via:

- increasing body weight support
- increasing amount of assistance
- moving the floor under the person's feet

Amount of practice has been identified across multiple studies as the key factor in motor learning outcomes. Many repetitions of high quality stepping patterns are needed to promote better outcomes for gait performance.

Safe and effective LiteGait training combines a slow moving treadmill stimulus with modifiable amounts of support and facilitation to promote quality gait practice, and large amounts of it.

A safe and effective LiteGait Training protocol is comprised of thoughtful consideration of the following parameters:

- Walking Speed (on Treadmill or Over Ground)
- Amount of Weight Supported
- Cueing and Facilitation by the Caregiver
- Duration & Frequency of Gait Training Sessions

Speed of Walking

The speed of walking is of primary importance to the success of the gait training sessions. Using a treadmill, with a constant rate of movement, provides rhythmic input which reinforces a coordinated reciprocal pattern of movement. Proper coordination is further assisted by the manual placement of the feet and/or weight shifting by the therapist. Walking over ground does not diminish the need for this coordinated, rhythmic, reciprocal movement pattern.

Speed is usually the first parameter to be advanced/progressed as the patient improves. Initial LiteGait sessions can begin with a treadmill speed as slow as 0.10 mph, depending on the patient's abilities. Starting at slower speeds may be necessary to deal with the mechanics of gait in a non

-ambulatory patient. However, it is important to progress to a speed of at least 0.5 mph as soon as possible to establish rhythm. As training sessions progress, treadmill speed is increased up to community walking speed. The treadmill belt should be wide enough to accommodate the wide gait of many neuro patients and long enough for a full stride length.



Perfect Practice Makes Perfect

Amount of Weight Supported

The amount of support provided by the LiteGait device is dependent on the coordination, balance, strength and function of the individual. Weight bearing during stance facilitates extensor activity via adequate loading. The limb in the stance phase of the gait cycle cannot be permitted to collapse. Initially, the individual is supported to the point where gait is as normal as possible, up to approximately 40% of the patient's weight. Weight support should be weaned down toward 0% as able.

LiteGait support comes from the four overhead straps that connect the harnessed patient to the yoke above. The amount of tension on each strap correlates to the amount of support being provided.



Shortening a strap will increase the tension/support while lengthening a strap will decrease the tension/support.

The Bisym scale provides a visual display of the amount of support provided. When no BiSym scale is in use, amount of support can be measured by squeezing the front and back straps together to gain a tactile sense of the tension in the straps. This is a surprisingly effective way to gauge the amount of support provided, and can be recorded as min support, mod support, max support etc. 0% support is a condition where the user remains connected to the LiteGait as a safety net but does not receive any weight support, i.e. no tension in overhead straps.

The amount of un-weighting is not fixed, but is varied during the treatment depending on the patient's condition and walking speed. Above 40%-50% of support leads to a deterioration of gait, inhibiting locomotion. To prevent this, ensure the individual's heel comes in contact with the walking surface during stance phase. There are times when supporting more than 40-50% of body weight is indicated, such is the case for orthopedic weight bearing restrictions or for patients who cannot participate in standing or gait without an excessive amount of body weight support. In these cases, sessions should be limited to just a few minutes at a time, and skin checked upon harness removal.

[Adjust the overhead straps](#) as necessary to position the individual in a proper symmetrical, upright posture. Adjust straps where you would intuitively place your hands to assist them. For



Perfect Practice Makes Perfect

example, if the torso or shoulders are leaning forward, carefully tighten/shorten the front two straps until the chest and shoulders are upright and over the hips.

Cueing and Facilitation by the Caregiver

Manipulating the components of proper gait such as weight shift, hip extension, foot placement, heel strike, timing, etc. is an important aspect of a complete and effective gait training program.

LiteGait training requires the therapist or caregiver to actively work with the individual so that good quality gait is practiced. In cases of severely impaired patients, the legs are moved manually in order to establish a proper gait pattern. Initially, therapists may be doing the work of initiating the step as needed.

Hip extension during terminal stance (known as “trailing limb posture”) stretches the hip flexors which activates the central pattern generator in the spinal cord. This is the most critical afferent input! If pelvic rotation or forward trunk lean is permitted, hip extension is lost. If the patient is allowed to step prematurely, then hip extension is also lost. The LiteGait harness was designed for this purpose: when properly applied, it allows for control of the pelvis while promoting hip motion with extension.

The LiteGait device allows access to the body to gain control of trunk rotation, work on symmetry, work from proximal to distal, assist/resist limb movement, etc. It is a tool allowing the effective use of other treatment techniques such as cueing, electrical stimulation, and adding resistance.

As the client progresses, be sure to maintain good quality gait. Facilitate manually, verbally, and visually as needed to maintain symmetry, trailing limb posture, well-timed weight shifting, etc. The therapist should always be doing some type of intervention, even if just verbal or visual cues.

Examples of Verbal Cues:

- “Step all the way toward the front of the treadmill”
- “Walk slower”
- “Step to the beat of the music / metronome”
- [“Push off with your big toe”](#)

Examples of Visual Cues:

- Laser pointer for target to step toward
- [Chalk marks to step on or over](#)
- Small obstacles placed on treadmill belt
- Ball to kick

Spinal Cord Injury Application

While this discussion is not diagnosis specific, it is worth noting that individuals with spinal cord injuries have a specific need for a large amount of sensory input to the nervous system. The LiteGait environment holds the patient upright while the therapist imposes rhythmic, reciprocal movement of the lower extremities. In the case of incomplete injuries, intact pathways may reach the brain stem, augmenting gait.

Facilitatory cues should focus on two key components so that quality steps are practiced and the central nervous system receives the appropriate afferent input.

- Limb loading and unloading in mid-stance
- Hip extension (stretch on the iliopsoas) in terminal stance.



Perfect Practice Makes Perfect

Duration and Frequency of the Gait Training Sessions

Initial gait training sessions should start conservatively and may begin with any recommended warm ups.

- If at any time in the walking period, the stepping patterns begin to deteriorate, end that walking period and begin a resting period.
- For non-ambulatory or severely compromised individuals, begin with **up to 3 minutes** of training and **5 minutes** of rest. For higher functioning individuals, longer periods of walking may be initiated as tolerated. As the individual begins to respond to the training, gradually increase the training periods by 30 – 60 second intervals.
- Rest periods do not have to be total rest. Consider doing an alternative activity between walking periods, still within the security of the LiteGait environment. Examples would be standing/sitting balance or strengthening exercises.

Repeat this walking/resting pattern as time permits or until the individual or clinician becomes fatigued. Walking @ 0.1 mph for just ten minutes covers 88 feet!



Typically, the treatments are 30-60 minutes long, and occur one to three times/wk for outpatients and as often as daily for inpatients, depending on the tolerance of the individual.

- Recent research of effective rehab strategies consistently favors intensity of training: a higher number of minutes of walking practice correlates with better outcomes.
- Evidence shows that intensity is often lacking in treatment settings: a lower number of minutes of walking practice may need a longer episode of care for the same results.

Treatment frequency varies based on setting. [Visintin et al \(1998\)](#) reported results from typical rehab inpatients with relatively acute strokes 4-5 x per week. [Seif & Herman \(1999\)](#) reported several case studies, one four years post-head injury, treated as infrequently as 1x/wk. What is well-established is

A higher number of minutes of walking practice correlates with better outcomes.

that the amount of practice has a direct correlation to gait outcomes. The number of minutes of continuous steps practiced per session should be maximized, regardless of frequency of sessions. It is imperative that most of the “steps” taken during therapy are taken with correct patterns.

Each session should end when time has expired, the patient’s gait has deteriorated, or the therapist / patient is feeling fatigued. Commonly, rest periods are offered at least every 15 minutes.

REPETITION of good walking patterns is the essential element of this therapy. It is important to provide therapy as prescribed, regularly over the course of training, without interruptions.

Perfect Practice Makes Perfect

The Progression of Gait Training Sessions

Over a two to three week evaluation period, the patient is expected to make some gains in their ability to coordinate movement of the legs during treadmill walking. In acute cases, a re-evaluation after the first two weeks of therapy is suggested. The program could continue for eight to twelve weeks or longer if there is progress, and may continue for additional weeks in cases of slower improvement.

Measurable improvement is sometimes difficult to judge, particularly among chronic patients and/or severely impaired patients. The improvement in some cases may be in the form of therapist assessment: that the provision of gait assistance has become easier. This may be due to some increased participation by the patient, reduction of dynamic tone, or formation of new movement patterns.

Upright, symmetrical posture is essential to ensure that proper, biomechanically optimal stepping patterns are established/re-established

Progress the patient rapidly. Treatment is advanced over a period of days or weeks by increasing the speed of the treadmill and/or reducing the amount of weight support provided by LiteGait (for safety, leave the harness and overhead straps connected even if support is reduced to zero). Studies indicate speed should typically be increased before reducing the weight support. One situation where reduction of weight support before speed would be indicated would be when patient discharge from facility is imminent and patient needs to practice bearing full body weight during ambulation.

The limbic system may help to explain why the harness needs to be left on even though the patient is

full weight bearing. Perhaps the harness acts to reduce the patient's fear-of falling and facilitates the acquisition of balance control.

Specific Elements of Effective Facilitation, regardless of protocol chosen:

1. Upright, symmetrical **posture** is essential to ensure that proper, biomechanically optimal stepping patterns are established/reestablished.
2. Therapist input is necessary for appropriate timing of stance/swing phase, weight shift and foot placement facilitates learning of efficient stepping patterns.
3. Weight bearing load must be adjusted to accommodate the needs of each patient's current condition, with a goal of performing rhythmic and correct stepping patterns.



Perfect Practice Makes Perfect

4. Rhythmic stimuli, generated by the treadmill, may need to begin at slow speeds, allowing the patient to actively complete as much of the normal step cycle as possible.
5. The amount of the weight bearing load must be progressively increased to full weight bearing, with a corresponding increase in the walking speed.
6. The body position and the amount of bodyweight support provided should allow for full and sequential extension of the hip and knee joint during the stance phase.
7. The pelvic girdle should be controlled to facilitate the loading of the knee and ankle joint in the sagittal plane.
8. Full hip extension must occur to prevent the patient from “sitting” in the LiteGait device. Full hip extension can be accomplished with a combination of manual cueing and properly applying the harness and Q-straps so that it inhibits the seated posture.

The performance of gait is largely a non-cortical task. Providing auditory, visual, and/or manual cues to achieve optimal sensory input and biomechanically

correct movement patterns is helpful for augmenting gait training.



Adaptations to Maximize Performance

With LiteGait, clinicians and caregivers have the unique opportunity to keep their hands free from holding gait belts and supporting patients. Rather, they can focus on helping the user maximize their performance. The clinician can promote and facilitate normal stepping patterns and assist with weight shift and lower extremity clearance. Additional external supports can be added to provide more assistance. In cases of individuals already ambulatory, certain components of the LiteGait device can be manipulated for an added challenge. The clinician or caregiver can make adaptations to the treatment plan and alter the targeted interventions as needed to maximize the user's performance and outcomes.

Solutions for Head Control

- use collar or brace
- video or tablet for visual engagement
- mirror
- use BiSym or GaitSens, if equipped, for Patient Feedback
- tie Theraband to posterior straps at head level to provide a boundary to prevent excessive head excursion posteriorly
- Use cut pool noodle on straps to support



◇ Long trunk or low tone:

- Consider [4 buckle “tall” harness](#)
- Use foam or towels under harness that are taller than harness (give more proximal support)

◇ Lateral sway, excessive movement:

- Open FlexAble yoke
- Use Q-straps (straight or crisscrossed) to improve stability
- Shorten overhead straps/increase support

Solutions to Promote Arm Swing

- Increase treadmill speed to naturally produce arm swing
- Remove handgrips so user can't hold on; replace with Q-straps, Theraband, etc.
- Use stacking cone or tube threaded around Q-straps as a grip for patients with spasticity, contractures, etc.
- Hula hoop, canes, or dowels guided by clinician

Solutions to Improve Hip Extension

- Manual correction of pelvis, trunk, and lower extremities



Solutions for Trunk Control

◇ Shoulders slip forward between straps

- Tie Theraband around the lower anterior end of the straps.
- Place soft ball between the strap and the shoulder anteriorly to fill in any gaps.

Adaptations to Maximize Performance

- Stimulate muscle and/or verbal cueing
- Q-straps connected from LiteGait or treadmill to harness at hips
- Therapy ball between the hips and LiteGait post
- Intersperse bouts of walking with exercises designed to isolate hip extension
- Increase overhead support

Solutions to Improve Swing Limb Clearance

- ◇ **Foot Drop:** poor ankle control
 - Use elastic bandage in place of AFO to promote closed chain dorsiflexion in late stance
 - Manual facilitation to improve clearance
- ◇ **Stiff Limb:** using rectus femoris to advance swing limb
 - [Exercises to isolate hip flexion from knee extension](#)
- ◇ **Flaccid, Heavy Limb:** poor psoas strength/initiation of step
 - Strengthen psoas: hip flexion w/knee flexion
 - [Use pillowcase over foot to pull limb forward](#)

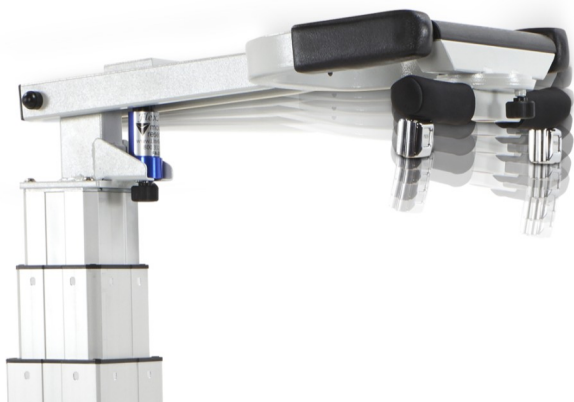
A Note about Balance Training with LiteGait

LiteGait can be used to train balance in standing or seated positions, or even while walking. Initially, the LiteGait support is rigid to offer the patient stability and a feeling of security. As a patient progresses, it

is important to allow more mobility and trunk excursion to promote balance and motor learning. Opening the [FlexAble yoke](#) gives the patient the opportunity to experience a “fall” without danger. The LiteGait FlexAble yoke will allow a controlled amount of vertical displacement without placing the patient at risk for injury. This challenges the limits of the patient’s stability and the trial and error process improves motor learning. The spring mechanism of the FlexAble yoke may dampen some of the extraneous movements in individuals with ataxia. *For LiteGait devices not equipped with FlexAble yoke, [FlexiStraps](#) are available to add bounce to the overhead straps.*



For more ideas on maximizing LiteGait use, tune in to: [Clinical Tips and Tricks](#)



Alternative Uses of the LiteGait Device

Most activities, procedures, or techniques already used by the clinician for gait, balance, or activities of daily living (A.D.L.) may be incorporated with the LiteGait. Since it is a postural control device, it allows freedom for the therapist to work on specific tasks without having to manually control all of the components of gait, balance and upright posture. The amount of support provided by the straps can be adjusted to give more or less support to the individual either on one side or both sides of the body.

Quadruped Activities

[Using Crawling harness](#) or [Using LiteGait Harness with or without adapters](#)

- reciprocal crawling forward, backward, sideways
- forearm support
- head control
- reaching
- weight shifting
- rhythmic stabilization
- strengthening exercises
- equilibrium, righting reactions
- wheelbarrow walking
- lifting UE &/or LE alternately



Sitting

If exclusively working on sitting position, consider placing harness just above hip joints to allow 90 degree flexion of hip (no groin piece used).

- **Posture:** Loosen one or more straps equally or asymmetrically
- **On ball/bench/stool:** working on equilibrium/righting reactions
- **Upper body work:** gross and fine motor activities, strengthening
- **Sit to stand transfers:** Use device to lift user to standing. Front straps should be left a bit looser than back straps.
- If combining sitting and standing activities, use a higher surface (ex. raised mat) to allow a greater hip extension angle necessary for an upright pelvis in sitting



Alternative Uses of the LiteGait Device

Standing

The individual can face toward or away from the LiteGait post/actuator.

♦ Pre-gait/Balance

- ball throwing/catching/kicking
- stepping forward, backward, sideways, on stool
- weight shifting
- standing on one leg
- tandem standing or walking
- reaching
- upper body movements
- ankle/hip/stepping balance strategies
- components of gait
- bouncing, on mini-trampoline or [using FlexiStraps](#)
- balance board, foam, or other compromised surface

♦ Posture

- loosen one or more straps equally or asymmetrically.
- incorporate therapeutic techniques, eg. NDT

♦ A.D.L. *Stand facing away from the device, toward environment.*

- at blackboard, easel, table, counter
- Dressing
- Grooming



Beyond Walking

[For individuals who need a challenge beyond gait training](#)

♦ Over Treadmill

- walking backward, sideways, incline/decline
- crossover stepping or other fancy footwork
- jogging

♦ Over Ground

- walking backward, sideways, crossover steps
- turning, pivoting
- tandem
- stepping over obstacles
- with assistive device: platform walker, standard walker, crutches, cane(s)



Preparing for your First Session

We highly recommend you take advantage of the onsite and online training and educational opportunities offered by Mobility Research-Institute of Continuing Education (MoRe ICE). This will give you the best start with LiteGait and will help address the most common misconceptions or mistakes. When starting out or refreshing yourself on LiteGait use, take some time to practice harness application. Harness application is the key to successful utilization of the LiteGait. Having a thorough understanding of the features of your LiteGait device and the accessories available will enhance your treatment sessions, as you will be more confident and have better command of the equipment during treatment.

Please contact **MoRe ICE** to see what options we can offer **YOU!**

Send us a video and we will give feedback! PT@litegait.com

A few notes on Patient Selection:

Start with patients who have some ability to ambulate.

- Apply harness in standing.
- Once proficient, it should take less than 3 minutes to set the patient up in LiteGait from standing.
- Expect more time initially during learning process.
- Expect more time for new patients, for problem solving.

Progress to the more impaired patient over time:

Once skill of harness application, LiteGait set up, and basic facilitation has become comfortable, initiate use of LiteGait on more impaired patients.

- Apply the harness in supine, with a rolling or bridging technique.
- Once proficient, it should take less than 5 minutes to set the patient up in LiteGait from supine
- Expect more time for new patients, for problem solving.

How do you do it by yourself?

- Prioritize within a session- most important component to work on “Right Now”
- Add external supports as needed

[Q-straps](#)

Theraband

Ankle wrap

If you are “working too hard” try...

- Adjust support
- Adjust speed (slow is NOT necessarily easier)
- Adjust strategy/hand placement
- Adjust timing of cues (don’t jump the gun!)
- Add supports (e.g. q-straps, wrap ankle)
- Can the patient do more?

Refer to <https://www.litegait.com/page/harness-videos> for harness application videos and step-by-step guidance.