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Back to Basics
Better Setup=Better Results

- LiteGait **setup** from start to finish
- Harness wraps, straps, options...deciphering what's what
- Harness application tips
- Suggestions for most commonly reported issues

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Steps for great LiteGait setup

1. Prepare
 - a. Choose harness/groin pieces/etc for best fit
 - b. Choose patient position for harness app, transfers required, treatment plans
2. Apply
 - a. Step-by-step harness application
 - b. Connect to LiteGait
3. Adjust
 - a. Lift patient to standing/to treadmill
 - b. Overhead straps tension to desired support

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The LiteGait Harness

- The key to LiteGait success
- Harness application is a motor skill: Learn by Doing!!
- Requires practice initially -- Regular use enhances success
- Begin with easiest clients, progress to more difficult
- Adjustable side straps -- wide range of girths with a single harness [One Size Fits Most](#)

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LiteGait
Harness Options

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Harness Specifications

Size	Girth range (in)	GPs (in)	GP type	Buckles	Ext option	Typical pt wt* (lbs)
XL	42-84	17, 19	Metal	Metal	XL	400-500
XLS	40-70	17, 19	Metal	Metal	XL	325-500
Std Adult	25-60	10, 13	Plastic 1.5"	Metal	Std Adult	120-400
Sm Adult	22-45	10, 13	Plastic 1.5"	Metal	Sm Adult	85-140
Junior	17-33	6, 8	Plastic 1"	Metal	Peds	30-100
Pediatric	16-33	6, 8	Plastic 1"	Plastic	Peds	25-100
Diaper	12-32	N/A	N/A	Plastic	N/A	Under 35

*Maximum weight is ALWAYS the weight limit of the LiteGait device
NOTE: All weights are approximate. Harness fit is dependent on girth

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Client seems too large for current harness?

Troubleshooting:
Too large in what way? Girth or Height?

Girth => a) larger harness or b) harness extender

Height => a) larger harness or b) taller (4 buckle) harness

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Larger than average adults:
Client is within weight limit but girth comes close to or exceeds harness

Harness Extender Set
Extender Panel plus Groin Piece (GP)

VS

Extra Large Harness (XL or XLS)
For Patients up to 500# (or weight limit of LG)

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Harness Extender Set

- Adds extra girth to existing harness
- Comes with longer gp - accommodates larger girth
- Lower expense than new harness
- Available in peds, small adult, standard adult, XL

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Extra Large Harness Options – Bariatric
For use with LGI-500

- XL harness wrap – 4 buckles/side straps
- 14.5" top to bottom
- For largest clients
- XLS harness wrap – 3 buckles/side straps
- 12" top to bottom
- Less bulky, lighter weight

Individual groin straps (not H-shaped): 17", 19"

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Child Too Large for Peds Harness

Peds Harness Extender Set
Extender Panel plus Groin Piece (GP)

VS

Move up to next harness size
(if device weight limit allows)

VS

Four Buckle/Tall Harness

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Four Buckle/Tall Harness

- Offers more surface coverage for long torso – greater comfort, improved support
✓ distributes weight throughout abdomen
- Extremely weak or low tone – needs extra trunk support

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Two Buckle/Short Harness

- Short torso – “can’t breathe”
—interfering with ribcage
- Uncomfortable—interfering with breast tissue
- Kyphosis
- Ostomies



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Choosing the right groin piece

- General guidelines for adults:
 - Up to approx. 180-200# use 10.5" groin piece
 - Over 180-200# use 13" groin piece
 - Under 120# use 9" sm adult groin piece/sm adult harness if available



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Choosing the right groin piece

- General guidelines for pediatric harness:
 - Up to approx. 65# use 6" groin piece
 - Over approx. 65# use 8" groin piece
 - Under 25-30#, pad under harness or use diaper harness



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Groin Piece Tips

- Groin piece selection based on patient size from anterior-posterior.
- H-shaped stitching goes against body
- Symmetrical - No front/back orientation



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Client Position for Harness Application

Apply in *neutral* hip position:
Either **STANDING** or **SUPINE**

Standing – w/ assistive device, parallel bars, holding LG as needed

Supine – roll or bridge




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Why not apply LiteGait harness to seated patient?

- Hip must be captured in a neutral position to encourage hip extension with gait.
- Can't position lowest side strap at greater trochanter while pt sits.
- Soft tissue is positioned differently in sitting—once pt stands harness won't be tight enough.
- Follow “modified standing” instructions if patient can stand for short periods only.

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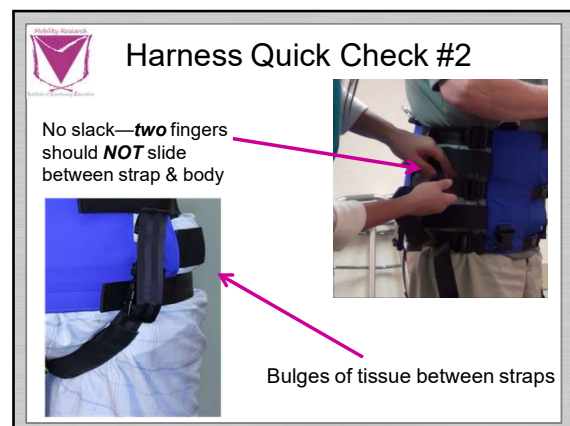
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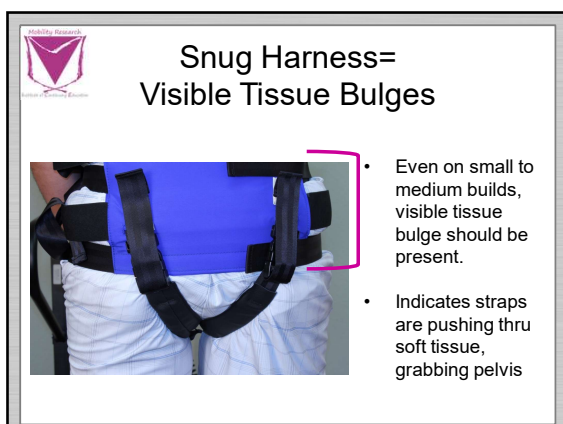
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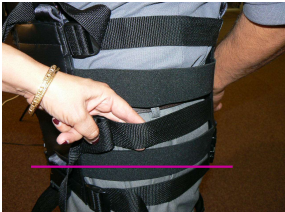


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Harness should NOT look like this:



- Too loose—*fails “two finger tightness test”* – Harness WILL ride up
- Too low—*doesn’t allow adequate hip flexion*

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Harness should NOT look like this:



- Too high—way above greater troch.
 - Will ride up
 - Doesn’t promote hip extension

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Groin piece should NOT look like this:



- GP too short—too much unpadded strap
- Also assess harness placement – too high = GP appears too short

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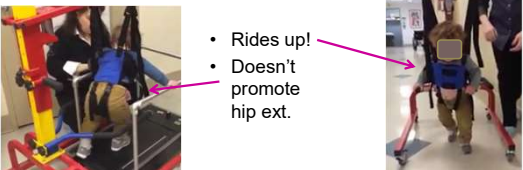
Harness should NOT look like this:



- Inadequate tightening
- Chose incorrect groin piece

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Harness should NOT look like this:



- Too high—way above greater trochanter
- Upside down—groin piece buckles are integrated into front panel. Overhead buckle attachment is sewn into top seam.
- Rides up!
- Doesn’t promote hip ext.

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Pediatric Harness Tip

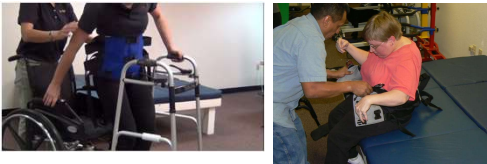


- Both overhead and groin piece buckles look the same (plastic, 1” wide).
- Overhead buckles sewn into top seam of harness
- Groin piece buckles integrated into front panel

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“Modified Standing”
Client can stand for short periods only

- Make initial girth adjustments with client seated
- Connect top buckles of harness wrap.
- Stand up to position and tighten as necessary.
- Allow seated rest as needed



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Sitting vs Standing

Q: Once applied, can the patient sit in the harness?

- ✓ Fine for short periods of rest.
- ✓ Posterior lean or higher surface is most comfortable.
 - Hip replacement pillow on chair
 - Elevate mat table if using
 - Sitting on large therapy ball



If using **ONLY** in sitting, place harness a bit higher, and loosen top straps while sitting.

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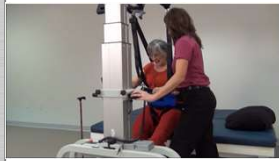
Connecting the Harness User to LiteGait



- Plan ahead
 - w/c transport needed?
 - Overground vs Treadmill?
 - Extra hands needed for supine to sit?
- Adjust height of LiteGait – overhead buckles should be just above the user's head – whether in sitting or standing
 - Plays role in adequate trunk support
- Connect client to LiteGait in sitting or standing
 - Slide harness buckles into overhead strap buckles (no need to move padding to expose buckle)

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Lift to Stand



- Let client know you are going to use LG to assist them; ask them to wait for instructions to stand (otherwise they may “pop up” too soon and bump head)
- Press up arrow to lift. Roll LG forward simultaneously.

Use leg inside base to guide and push LiteGait forward

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Tips for Lifting to Stand

Take note: Not all four wheels are alike!

- One leg of LG base has total locking casters -- lock in place when depressed.
- Other leg of LG base has directional casters -- lock to prevent swiveling when in parallel with base. They don't stop movement completely, just allow movement in forward/backward direction.
- Lock directional casters when lifting to stand, walking overground, or rolling onto treadmill for a smooth, straight glide.



*Kneel behind for support
Use foot to roll LG forward*



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Lift to Treadmill



- Even non-ambulatory users can walk on treadmill
- Highly recommended for non-ambulatory (at least 80% of time on treadmill)
 - Rhythmicity
 - Amount of practice
 - Easier for therapist
 - ✓ Stationary
 - ✓ Hands free for facilitation

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Adjusting Overhead Straps
for postural & body weight support

Think about where you would place your hands...

- Sagittal Plane Correction: Shorten the straps the patient is leaning into so they can achieve an upright posture.
- Frontal Plane Correction: Shorten the straps on the side that needs more support or assistance.
- Overall support – shorten all four straps using up button, or shorten each strap manually



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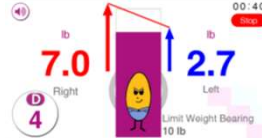
Measuring Weight Support

Measure weight support (offloading) and postural imbalance using **BiSym**

- BiSym Digital Scale
- BiSym Tablet (app-based program)

Create meaningful goals as client progresses

T 48.6 lb	R 2.5 lb
R 24.5 lb	L 5.3 lb



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Ready to Roll with LiteGait!

- Upright, midline positioning
- Providing enough body weight support to make tasks do-able (pre-gait, gait, and beyond gait)
- Proceeding with safe gait training, balance training, therapeutic exercises, and more
 - Even with clients who are non-ambulatory & wouldn't otherwise be a candidate

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Tips and FAQs
LiteGait harness

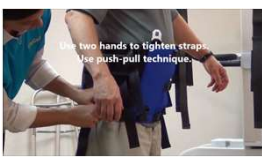
- Reminders about application
- Cleaning
- Precautions/padding
- Additional options
- Crawling/Quadruped



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Tips to remember:

- Check for symmetry
- Lowest side strap at greater trochanter
- Two-finger tightness test
- Remove slack as needed using two-handed tightening technique
- It will be tighter than you think it should be!
- Don't be tempted to loosen for pt comfort



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Tips to remember:

- Pull up and laterally when tightening groin pieces
- Always finish with tightening back of groin piece
- Pull clothing down and away from groin pieces to increase comfort
- Harness shouldn't be uncomfortable – Don't just "live with it"



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Taking the Harness Off

- Unlike application, can remove harness in seated position
- Unbuckle harness and front gp clips
- Clear groin piece straps
- Slight shift of weight
- Slide harness out from behind

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Do you have an older harness (pre-2012)?

FABRIC HARNESS IMPERMEABLE HARNESS

- Slick black material on sides replaced by elastic straps
- Allows for easier application on *larger bodies* - elastic "grabs" soft tissue, holds in place better
- Standard fabric replaced by impermeable material
- Recommend replacement

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Cleaning the I-Harness

Impermeable "I"-harness and gps

- Easy to disinfect with wipes or spray
- Ideal to decrease cross contamination
- Standard product sold to facilities

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Cleaning the Harness

Fabric Harness

- Launder in Hot/Cold cycle with standard detergent
- Air/Line Dry—NO Heat
- Decrease soiling by using blue pad/chux between patient and harness

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Don't have much soft tissue to help the harness grip?

For very slender builds, add towels or foam to artificially create bulk for straps to grab onto.

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Larger Girth – Applying the Harness Extender

Buckle Extender Panel into Harness Wrap

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Padding for Catheter Tubing



Create a tunnel with foam or rolled washcloth

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Padding for Ostomies

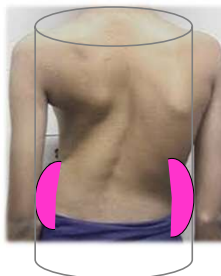
- Create foam cutout or roll towels
- Encircle tubing/ostomy
- Relieves direct pressure



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Addressing Asymmetry in Trunk

- Consider padding areas of indention
- Create cylinder shape – imagine sliding a cylinder over patient then filling up the gaps with foam
- Goal: approx. even side straps length = SYMMETRY



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Symmetry Top to Bottom

More curves=less column-shaped.

Use folded towels or dense foam to create symmetry

Ex. “Pear” shape—pad waist area
Ex. “Apple” shape—pad buttocks and/or lower abdomen

Large buttocks? place bottom edge of harness under apex of buttocks curve so it doesn't have slope to ride up



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Tips for Clothing to Wear Under Harness

Appropriate clothing:

- Thin cotton pants and shirt

What NOT to wear:

- Bulky clothing, i.e. corduroy, jeans, thick sweats
- Slick clothing, i.e. windpants, yoga pants athletic shorts

Add a layer of Dycem or shelf liner over clothing if necessary to keep harness in place

Hospital gown and NO pants available?

- Drape with towels and apply harness over

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Alternative to Groin Piece: Harness Leg Straps

Certain pts aren't able to accept or tolerate contact with the groin.

- Post-surgical hip pt with adduction precautions—gp may cause tendency to adduct.
- Post-surgical, wound, or other groin condition
- Young male who is very uncomfortable or embarrassed
- Pts who have had a bad past experience.

Harness leg straps snap into groin piece buckles - use in lieu of groin piece.

- Unilateral or bilateral
- Not standard, but a common add-on



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Harness Leg Straps



• [https://vimeo.com/showcase/5518264/video/297823013-Got Leg Straps](https://vimeo.com/showcase/5518264/video/297823013-Got%20Leg%20Straps)

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Leg Straps *aren't* for everyone



- If not properly applied, can restrict leg movement
- Can cause abduction of hips with gait
- Fit isn't as snug => harness can ride up
- Requires muscle or soft tissue bulk in thighs to hold thigh cuffs in place

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For the clinician finds two-handed strap tightening difficult

Hold-Tite Harness – with ratcheting style closure
--think ski boots
Replaces tightening side straps



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Going from Vertical to Horizontal

LiteGait works for crawling and quadruped activities – for kids and adults

- LiteGait 75/100 series allows easy positioning by attaching overhead straps to harness buckles
- LiteGait with metal seat belt buckles (≥150 lb wt limit) requires crawling connectors to achieve quadruped positioning.



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Crawling Harness

- Separate harness with straps used for quadruped position
- Simpler to use than standard LiteGait harness if only planning to do crawling position



Wheelbarrow walking over ground

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Problems and Solutions

- Don't be afraid to experiment to find what works best for the client.
- The goal is finding the quickest, safest route to get user into LiteGait with good harness placement.
- Contact Clinical Support for assistance
- Custom solutions can be addressed by Mobility Research

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More Webinars

litegait.com/webinars

Journal Club – 60 min discussion of recent pertinent research article presented quarterly

Case Reports – 30 min webinar. Clinicians present interesting clinical cases – variety of patient scenarios

Clinical Tips & Tricks – 60 min presentation with rotating themes – designed to help the clinician use LiteGait more efficiently and effectively; presented quarterly

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Questions?
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