"The Clinical Advantage"™

Features & Benefits

BIODEX UNWEIGHING SYSTEM

BIODEX

Biodex Medical Systems, Inc.

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Ask your customer the following questions:

1. Is it your goal to return your patients to a **normal, functional gait**?
   YES?
2. Would you agree that an unweighing system should allow **normal, functional gait patterns** to be practiced?
   YES?

If they answer YES, then follow with:

Then there are several key points to consider to ensure you do not mistakenly buy a "patient lift" disguised as an "unweighing system".

- Many other unweighting systems are actually "patient lifts" and are not designed for gait training.

Major features that allow for normal, functional gait characteristics to be practiced are:

DYNAMIC SUSPENSION

The Biodex Unweighing System has a patented "**Dynamic Suspension**" that accommodates the natural vertical displacement component of gait.

"**Dynamic Suspension**" is important in restoring **normal functional gait patterns.**

- The center of gravity oscillates up to 3.5 inches during normal gait
- This "vertical displacement" component of gait causes a "ground reaction force" to occur during foot strike in the weight-bearing leg
- A critical component of gait restoration is teaching the neuromuscular system to respond (coordinate) properly to ground reaction forces

Footnote:

- The Biodex patented suspension system provides consistent unweighing throughout the whole range of vertical displacement.
- Other systems either provide no accommodation for vertical displacement at all or have inconsistent unloading (less unloading at top and more unloading at the bottom of the displacement travel (like a rubber band that is stretched). Biodex's vertical displacement range is also adjustable.

SINGLE POINT SUSPENSION

The Biodex Unweighing System has "**single point suspension**" that accommodates the natural pelvic rotation component of gait.

Single Point Suspension is important in restoring normal functional gait patterns.

- The pelvis rotates during gait to help maintain balance and lengthen stride
- A critical component of gait restoration is allowing natural pelvis rotation to occur

Additional benefits of **Single Point Suspension-** which cannot be achieved with ***double*** point suspension:

- Turn around to walk backwards on a treadmill - no need to turn the machine around
- Patients can perform side-stepping to develop coordination
- No need to do a U-turn while floor walking, simply turn the body around

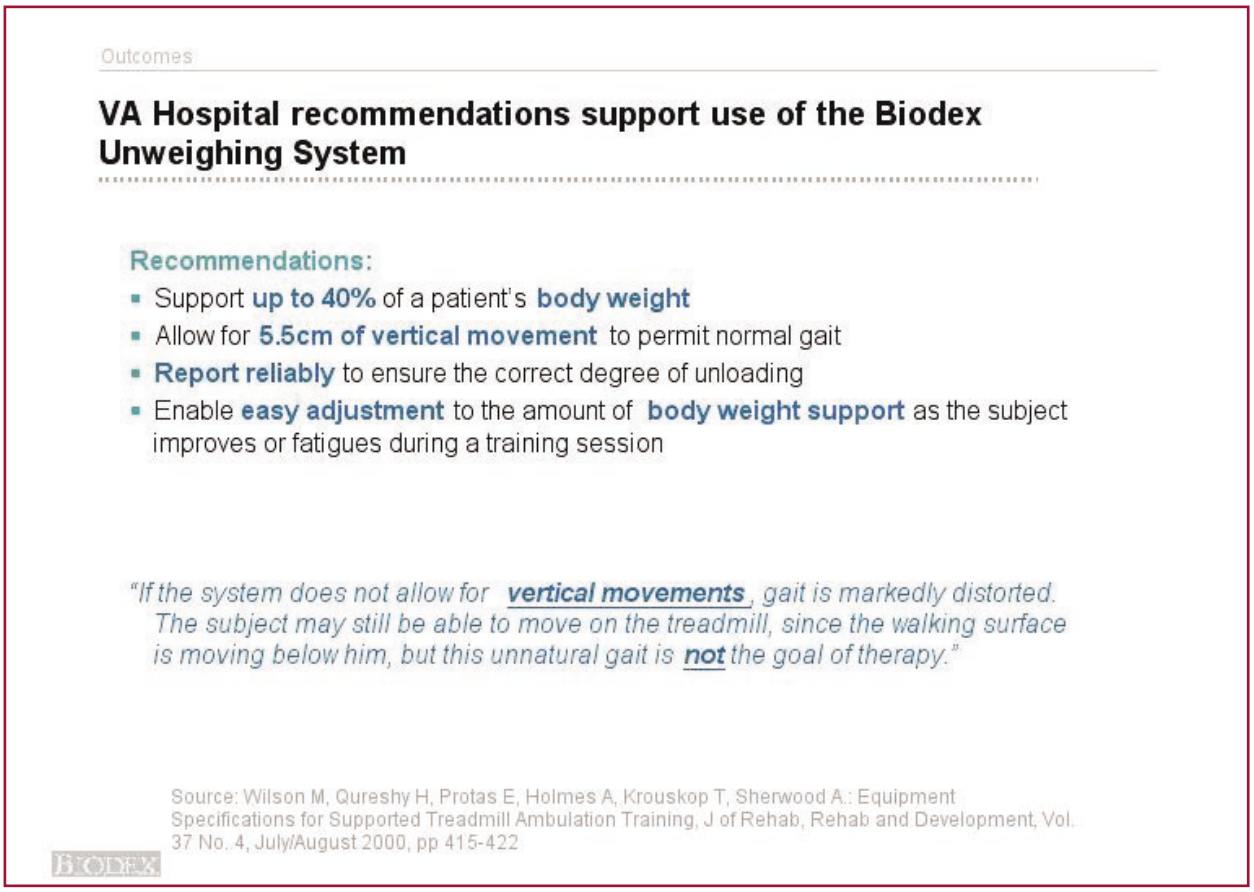
Footnote:

- During early stage gait retraining, it may be necessary to stabilize the pelvis and torso.
- The Biodex Unweighing System provides for varying degrees of pelvic rotation, from fully locked to totally unrestricted rotation. This accommodates early stage rehab to end stage rehab in a progressive manner.
- This is accomplished by use of the pelvis/torso stabilizing rings on the vest, and the attachment cords included with product.

ADDITIONAL IMPORTANT FEATURES:

- Open access to the patient for ease of therapist-patient interaction
- Attached, adjustable stool for therapist comfort and safety while interacting with patient (Offset System)
- Unobstructed view to patient from all four angles – allows clear observation for gait analysis
- Allows full and easy access to the treadmill control panel by the patient
- Digital, quantified unweighing enables tracking of patient progress - included in price
- Operates without electricity or air compressors
- One-size-fits-all vest provides universal patient support
- Lift mechanism allows the patient to be assisted to an upright stance from a seated position
- Meets the UL2601-1 Safety Standards for Medical Equipment required by all hospitals

VA Hospital research recommends features that an unweighing system should offer and highlights the importance of a suspension that accommodates vertical displacement.



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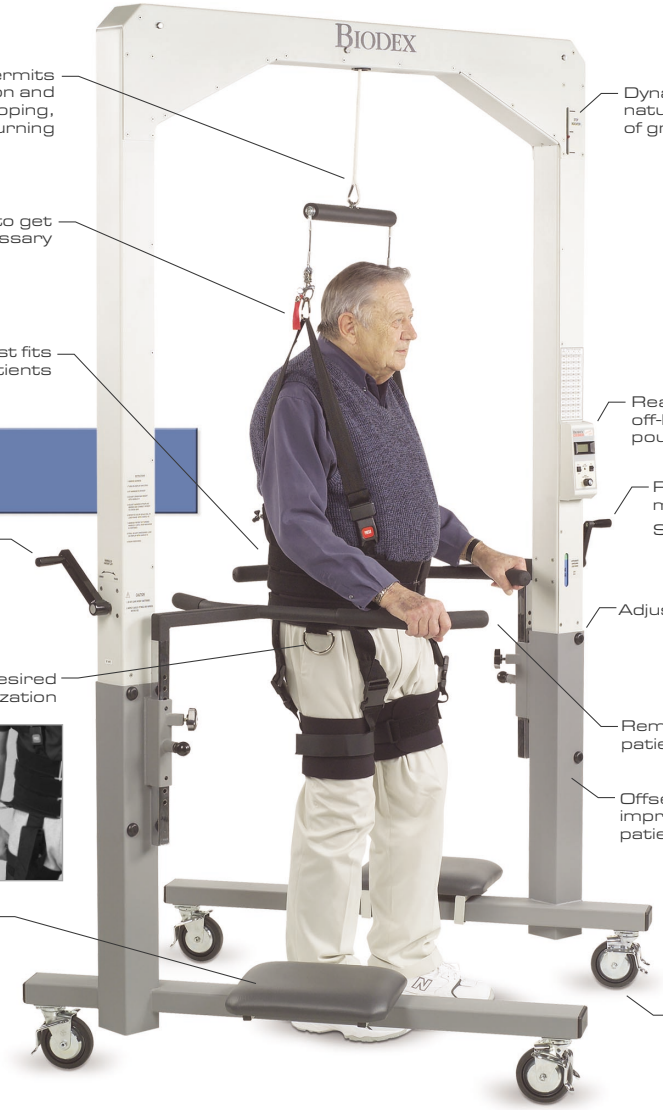
"If the system does not allow for vertical movements, gait is markedly distorted. The subject may still be able to move on the treadmill, since the walking surface is moving below him, but this unnatural gait is not the goal of therapy." - Stated in 2000 VA Hospital Study*

Biodex Offset Unweighing System



Single point suspension permits functional pelvic rotation and versatility when walking, side-stepping, retro-walking and turning

Quick release clips to get a patient out fast, if necessary

Universal Air Support Vest fits a variety of patients

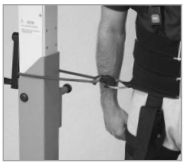
Two position handle for easy and efficient patient unloading

Accommodates children and adults

Attachment rings adjustable for desired degree of pelvic stabilization

Also accommodates other rehab strategies

Attach single side to load involved side



Therapist seats provide a place to sit during assistive exercise and provides a safer environment for therapist interaction

Dynamic suspension allows for natural vertical displacement of center of gravity

Real time digital scale displays off-loaded weight in pounds or kilograms

Patented off-loading mechanism maintains constant force

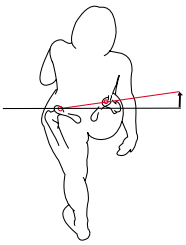
Simply dial in amount to offload

Adjust to fit 8' ceilings

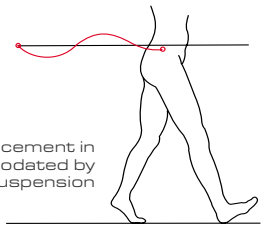
Removable and adjustable patient handrails

Offset frame design offers improved access to manually assist patient footfall and weight shift

Large locking casters for effortless mobility over ground



Pelvic rotation in gait accommodated by Biodex single point suspension



Vertical displacement in gait accommodated by Biodex dynamic suspension

VA Hospitals recommendations support use of Biodex Unweighing Systems

Recommendations:

- Support up to 40% of patient's body weight
- Allow for 5.5cm of vertical movement to permit normal gait
- Report reliably to ensure the correct degree of unloading
- Enable easy adjustment to the amount of body weight support as the subject improves or fatigues during a training exercise

* VA Hospital Study: Source: Wilson M, Qureshy H, Protas E, Holmes A, Krouskop T, Sherwood A.: Equipment Specifications for Supported Treadmill Ambulation Training, J of Rehab, Rehab and Development, Vol. 37 No. 4, July/August 2000, pp 415-422

Treat patients more efficiently and effectively...with **Biodex**
For a closer look contact: **sales@biodex.com**

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