

∞ vector

Gait & Safety System®





◀ SCAN TO SEE THE VECTOR IN ACTION

VECTORING TOWARDS CONFIDENCE, PERFORMANCE, SAFETY.

The **Vector Gait and Safety System** is an innovative over-ground gait and safety system designed to improve mobility and balance while

- Promoting faster recovery for reduced length of stay
- Minimizing risk to both patients and clinicians
- Increasing independence

Designed for both physical and occupational therapy, the Vector System leverages *dynamic body weight support (DBWS)* to provide a safe environment and real-world experience for adult and pediatric patients recovering from stroke, amputations and orthopedic, brain and spinal cord injuries.

“I don’t need a second, third or fourth pair of hands. I can focus on what the patient is doing at the very moment and not think... are they going to fall?”

– Kristin , Occupational Therapist

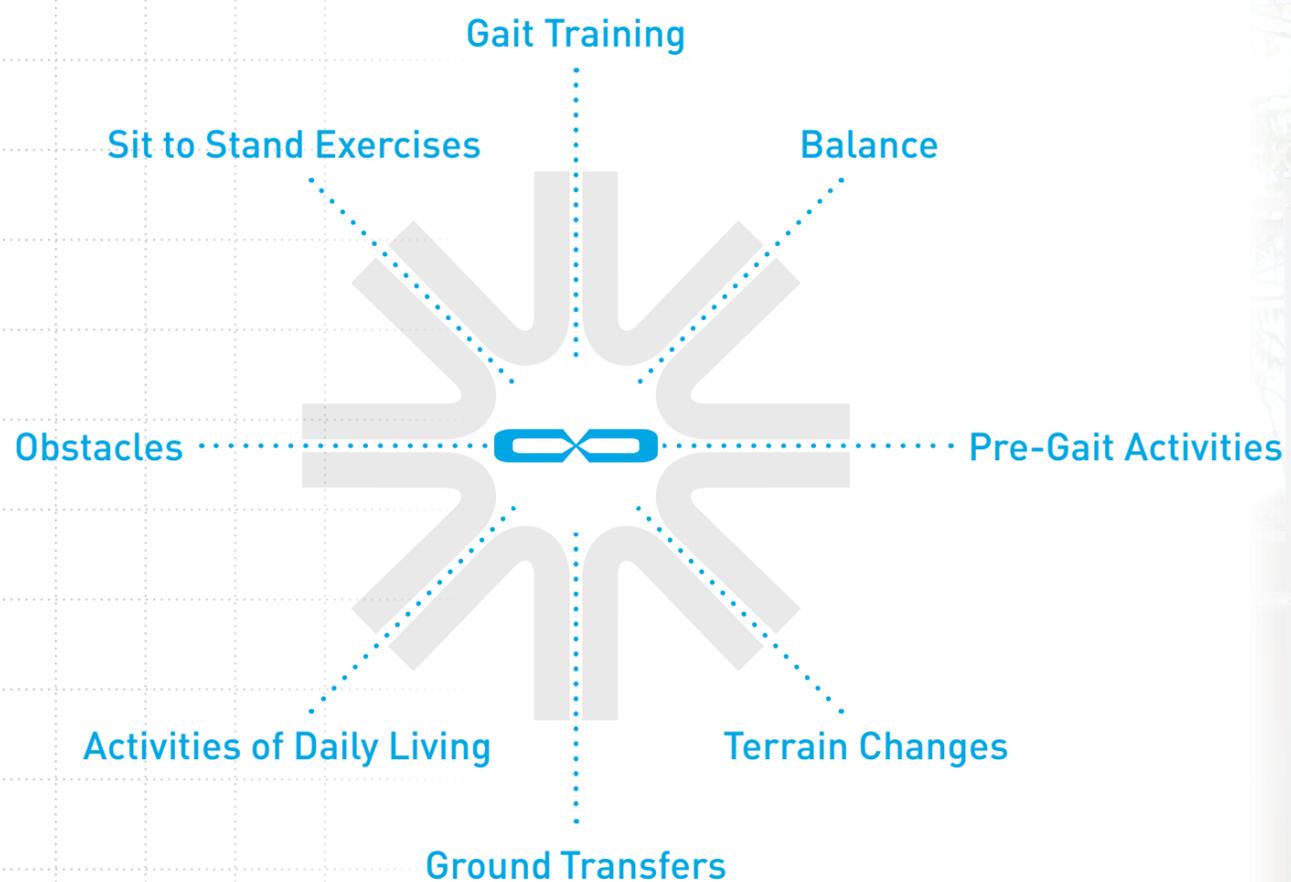

vector



CREATE **ENDLESS** POSSIBILITIES FOR **IMPROVED** PATIENT OUTCOMES

Vector's ceiling-mounted, robotic trolley tracks patient ascent, descent and movement along the ground. This allows rehabilitative teams to increase patient mobility using customized regimens while reducing the risk of injury. With the patient's body weight off-loaded, only *one clinician* is necessary, increasing clinical productivity and efficiency.

SEAMLESSLY TRANSITION BETWEEN ACTIVITIES WITHOUT PAUSING



EXPERIENCE **DYNAMIC BODY WEIGHT SUPPORT**

PROVIDES a REAL-WORLD EXPERIENCE for MORE EFFECTIVE TREATMENT

Over-ground gait training closely mimics a real-world gait experience. During over-ground training a clinician is able to incorporate pre-gait activities (e.g. transfers), balance exercises, stair-climbing, obstacle avoidance, surface changes and treadmill endurance training.

ENABLES NATURAL KINEMATIC MOVEMENTS

During normal gait, an individual's center of mass moves in all three planes: sagittal, frontal and transverse. The use of over-ground DBWS enables the patient to practice natural kinematic movements in all three planes without the fear of falling.

While secured in the Vector, a patient can safely feel balance reactions and experience mistakes to achieve motor learning and develop effective movement strategies.

Vector's Dynamic Body Weight Support *continually* offsets a selected amount of the patient's weight as they move, enabling them to safely and confidently perform rehabilitative exercises.



INTUITIVE ICON BASED TOUCH SCREEN

Seamlessly set and change session parameters on the fly

Manually control the winch and the trolley

FALL PREVENTION

Unload a precise percentage of body weight

Complete control with both the handheld remote and PC

Safety controls always available

Track patient outcomes over time



“I find the handheld system and the PC itself very user friendly, particularly for someone that’s not very tech savvy.”

- Emma , Physical Therapist

EMPOWERS CLINICIANS

All session controls are immediately at the clinician's fingertips during patient treatment, making for a seamless and time efficient session. Patient metrics, session data and notes are securely stored and tracked over time in an encrypted, HIPAA compliant database.

FACILITATES QUALITY INTERACTION

The Vector allows the clinician to maintain an uninhibited/full access hands-on approach as well as create a completely safe environment for both themselves and their patient.

PROVIDES a SAFE ENVIRONMENT

By allowing patients to experience how it feels to fall and to be caught when they fall, patients soon become comfortable in the system and assured of their safety. In providing this feeling of security, the Vector System encourages patients and clinicians to attempt more challenging activities, thus promoting faster rehabilitation times.

ENHANCES PRODUCTIVITY

The safe support and multiple trolley capability of Vector helps create a productive and effective clinic by enabling a one-to-one clinician/patient ratio.



THE VECTOR **ADVANTAGE**

The Vector System's market-leading features and operating system provide clinically effective, comprehensive rehabilitation solutions to promote better patient outcomes and reduce healthcare costs. A safe therapeutic experience combined with session documentation helps clinicians develop focused strategies and track progress to improve patient results.

INNOVATIVE TECHNOLOGY

Vector features a 100% wireless trolley that can move freely with the patient, an icon driven intuitive user interface, comprehensive session tracking and reporting with a HIPAA compliant database, and the ability to treat multiple patients on the same rail.

CUSTOMIZATION

Vector's customizable track designs, available in lengths of 5-400 feet, will meet the needs of any clinic no matter the size or layout. It features limitless track design options including closed loop (race track), linear or curved.

VERSATILITY

Seamlessly integrate various occupational and physical rehabilitation strategies into one Vector session. These can include gait training, stand and sit exercises, balance, weight-bearing exercises, treadmill training, step training and ADL practice.

“The Vector is doing tremendous things for my patients. It's helping them meet their goals faster. They're happy at the end of the day.”

– Kristin , Occupational Therapist



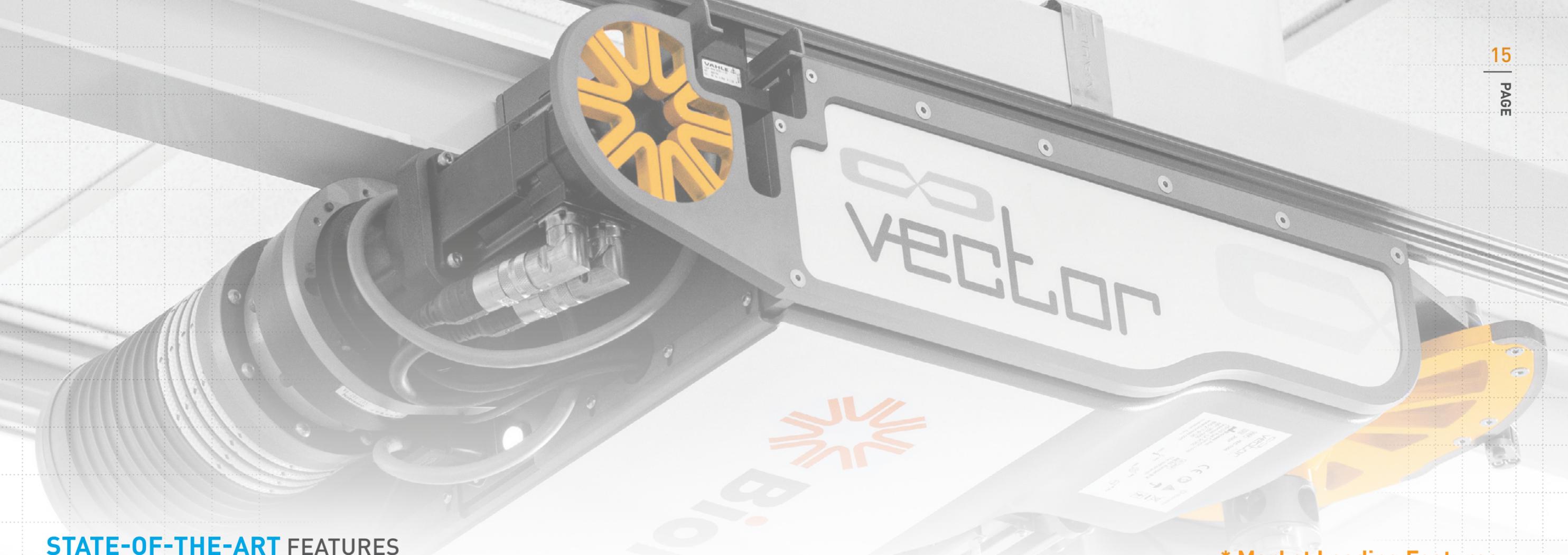
BIONESS REHABILITATION SOLUTIONS

Bioness offers a complete program of integrated rehabilitation technologies for facilities and patients. With complementary Bioness devices, you can enjoy ease of use, service and product support.

BIONESS SUPPORT

From comprehensive on-site training and technical support to continuing education, financing programs and marketing tools, Bioness is committed to providing superior service to our customers.

Can you imagine the endless *possibilities?*



STATE-OF-THE-ART FEATURES

100% WIRELESS

- Patented power rail design allows for unlimited patient movement, and track layouts
- Complete operational control with the wireless, handheld remote

MOVEMENT DETECTION

- Sensors monitor and mirror patient movement at 1000x/second
- System responsiveness to patient movement is maximized by an enhanced algorithm and the cam design

WEIGHT RANGE

- Up to 500lbs (227 kg) Static Body Weight Support
- Up to 200lbs (91 kg) Dynamic Body Weight Support

* Market Leading Features

CLINICAL EFFICIENCY

- Up to 3 robotic trolleys to treat multiple patients on a single track
- Promote one-on-one clinician patient interaction
- Compliments other Bioness Programs: L300[®] Foot Drop System, L300[®] Plus & H200[®] Wireless Hand Rehabilitation System, BITS[®]

COMMUNICATION

- Operates on a configurable 2.4 GHz or 5 GHz, closed, secure network
- Database sync features for multiple trolley systems

CUSTOM TRACK CONFIGURATIONS

- Closed loop, Linear, Curve, etc.
- Design & Length customized to any clinic (5-400 ft.)¹
- Ceiling mounted, Zero-footprint, floor space free

SOFTWARE

- Integrated Outcome Measures
- Customized Fall Prevention Settings
- Auto Fall Recovery
- Secure, HIPAA compliant Patient database
- Save and print reports
- Available in 12 languages

QUALITY STANDARDS & CERTIFICATIONS

- UL[®] Certified
- ISO 13485 Compliant
- IEC 60601-1 3rd Edition
- Class I CE
- FDA Listing Number: D203102

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Patents Pending

1. A complete site assessment is required before installation

NESS®, NESS H200® Wireless, NESS L300®, NESS L300® Plus, Intelli-Gait®, Intelli-Sense Gait Sensor®, Vector Gait & Safety System®, Bioness and the Bioness Logo® are trademarks of Bioness Inc. | www.bioness.com

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CERTIFICATIONS

The Vector Gait & Safety System is manufactured and guaranteed to perform according to the regulations set forth by the following compliance bodies/organizations:

1. U.S. Food and Drug Administration (FDA)
2. CE Mark
3. International Organization of Standards (ISO)
4. Underwriters Laboratories (UL)



Listing Number: D203102



Class I CE



Intertek

Bioness Inc. is ISO certified thus our products, including Vector, are manufactured under the ISO 13485:2003 standard. The primary objective of ISO 13485:2003 is to facilitate harmonized medical device regulatory requirements for quality management systems.



Vector Elite is certified by Underwriters Laboratories (UL) to IEC 60601-1, Edition 3 Harmonized Medical Device Standard. UL is an independent, globally recognized agency that certifies, validates, tests, inspects and audits corporations and products.



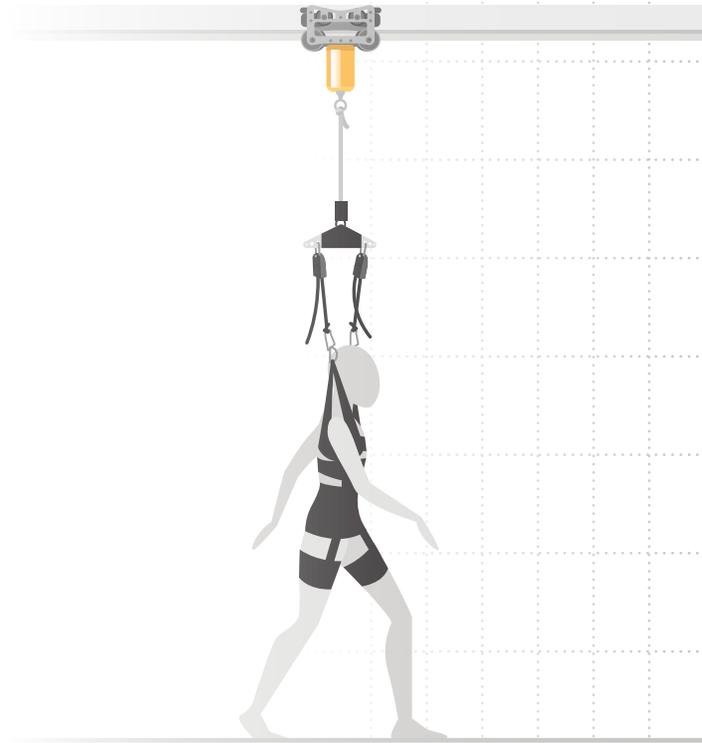
EXPAND YOUR VECTOR SYSTEM

- > Up to 3 Vector Elite Robotic Trolleys on one track
- > Up to 4 Vector Base Trolleys on one track

The **Vector Base** establishes a natural and safe walking environment in any clinic by providing non-robotic body weight support. Vector Base is an entry-level investment that contributes substantially to patient and clinician safety. Operating on the same track as your **Vector Elite** robotic trolley, the Vector Base allows treatment of multiple patients simultaneously, bolstering efficiency and productivity.

The Vector Base:

- Unloads a portion of the patient's weight (up to 180 lbs), via a linear tension spring, while their center of mass moves during ambulation
- Can treat patients up to 400lbs (181 kg)
- Is designed with the optimal amount of friction between the trolley and mechanical rail to continually track the patient but limit trolley momentum, allowing for a more natural gait experience



VECTOR COMPLIMENTS OTHER BIONESS REHABILITATION SOLUTIONS:
L300® Foot Drop System, L300® Plus & H200® Wireless Hand
Rehabilitation System, BITS®

EXPANDED OPTIONS



vector Training Session

Control Panel:

- Speed Control: Left, Right, Up, Down arrows
- Audio Recording: On/Off toggle
- Emergency Stop: Red X button
- Power On/Off: Power button
- Stop: Stop button
- Fast Forward: Double right arrow
- Fast Reverse: Double left arrow
- Full Prevention: On/Off toggle

Current Status:

Distance: 1.7 ft	Unloading: 1 lbs 1 % (body weight)	Falls Prevented: 00
Speed: 0.00 m/s		Rope Position: 34.9 in
Total Timer: 00:02:00		Training Time: 00:00:00

Smartphone Interface:

- Speed Control: Left, Right, Up, Down arrows
- Audio Recording: On/Off toggle
- Emergency Stop: Red X button
- Power On/Off: Power button
- Stop: Stop button
- Fast Forward: Double right arrow
- Fast Reverse: Double left arrow
- Full Prevention: On/Off toggle

SUPERIOR PATIENT SECURITY & COMFORT

Promotes natural, uninhibited movements

Simple care and cleaning

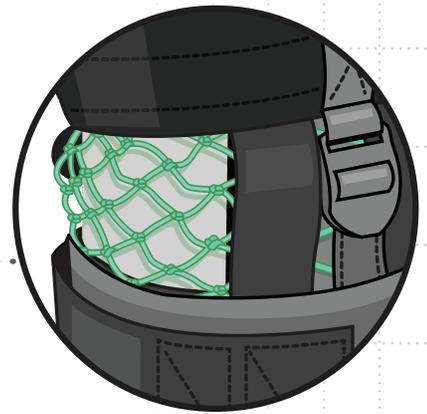


3-stage safety carabiners for quick, easy attachment to the Vector spreader bar

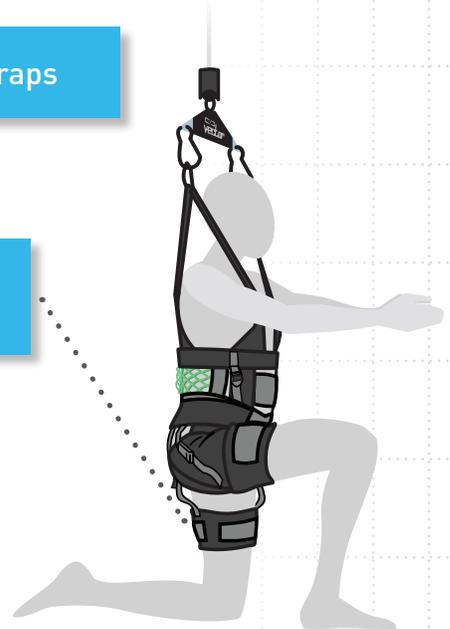
Velcro straps close in the front for easy donning, doffing, and adjustment

Adjustable shoulder and leg straps

Comfortable leg cuffs allow a full range of motion

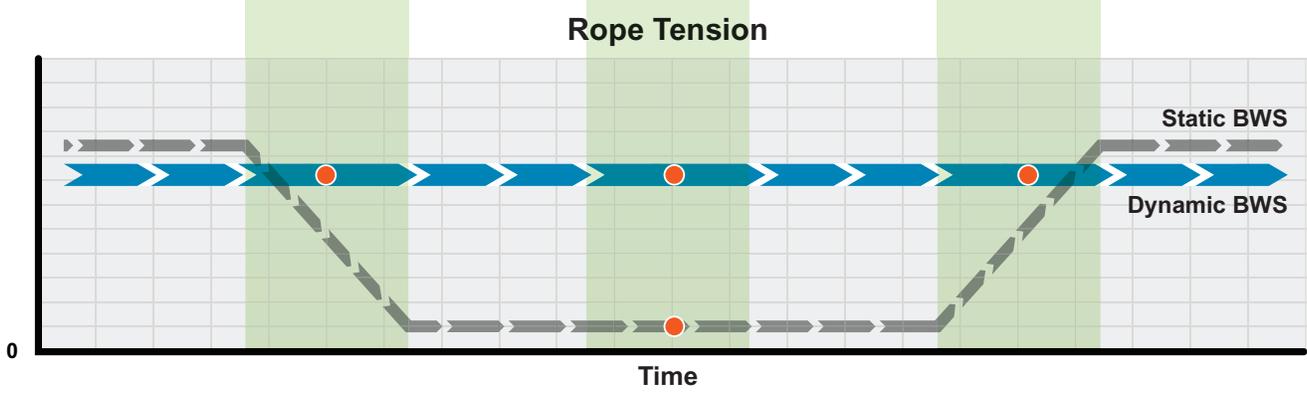
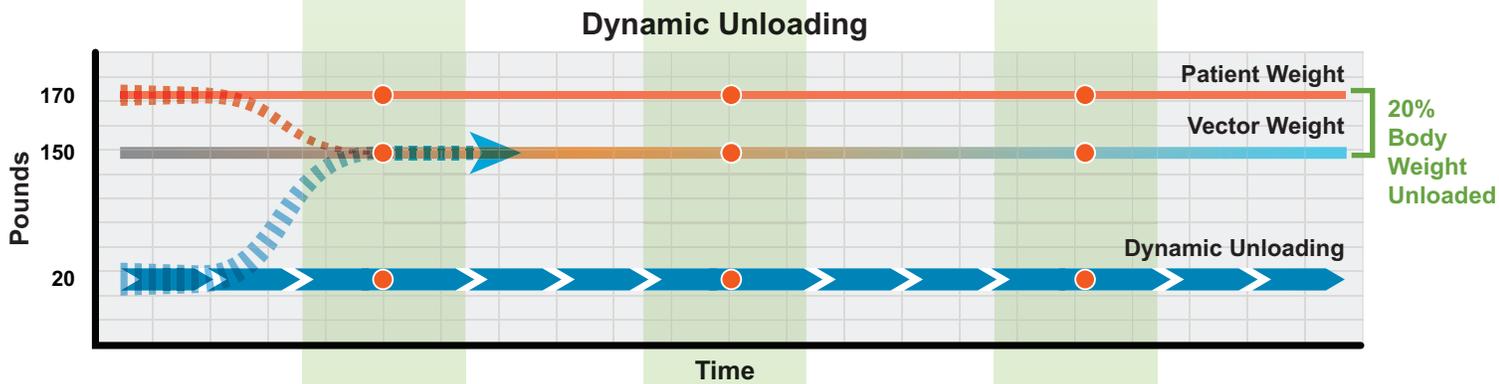
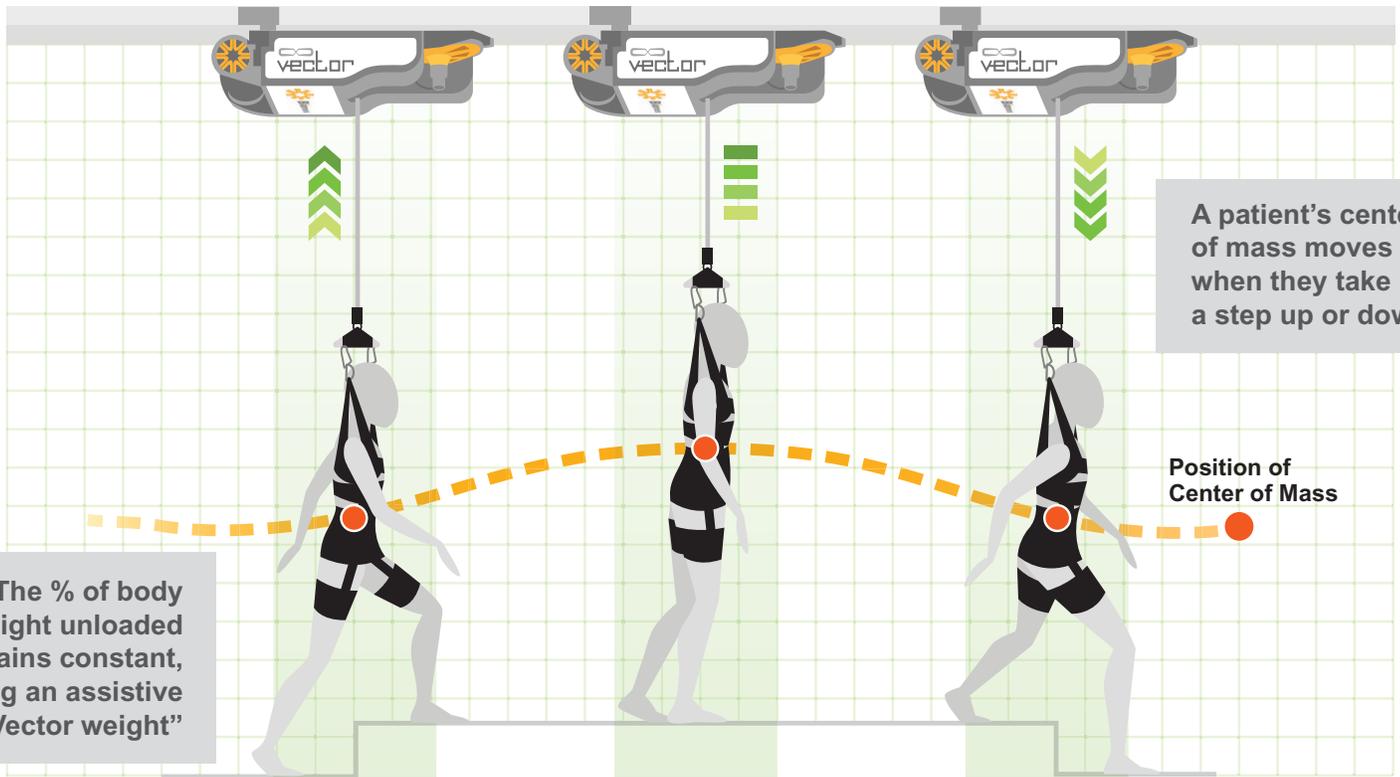


Patented netting technology securely grips the torso and prevents harness migration



VECTOR HARNESS



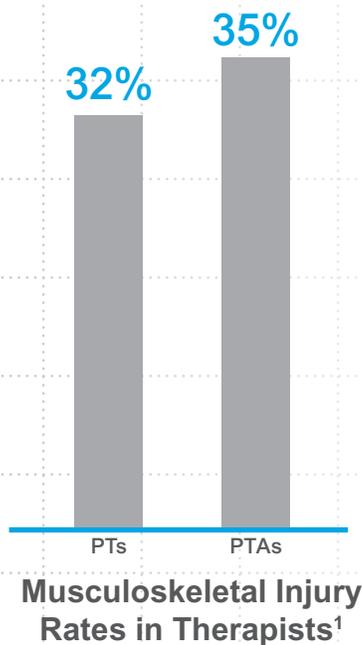


During a step, Dynamic Body Weight Support keeps the rope taught in order to provide the selected unloading. This also prevents falls. Static Body Weight Support systems provide no such benefits during active movement.

DYNAMIC BODY WEIGHT SUPPORT



VECTOR CAN **IMPACT** the SUCCESS of YOUR PRACTICE



REDUCE COSTS BY REDUCING THERAPIST INJURIES

- Protect therapists from back injuries and strains that result in lost productivity, workers compensation claims, and sick time and have a *direct economic impact* to the clinic

> *Average direct cost of back injury: \$25,000²*

> *Average direct cost of back strain: \$4,000²*

- Satisfies the need to comply with no lift regulations and safe patient handling programs

SHORTEN LENGTH OF STAY

- Reduce healthcare expenditures by preventing patient falls and resultant setbacks
- Remove the fear of falls for more effective one-on-one interaction and treatment
- Promote independent walking to accelerate rehabilitation and shorten length of stay

INCREASE PRODUCTIVITY

- Reduce the number of clinicians required to safely assist patient ambulation
- Treat multiple patients on a single track simultaneously
- Protect clinicians from injuries and strains that result in lost productivity, low morale and sick time

INCREASE PATIENT REFERRALS

- Providing the latest and most advanced technology will put you on the cutting edge of rehabilitation
- With a Vector installation a facility will receive a Vector Enterprise Kit that will provide marketing materials and support for patient and physician outreach

1. Holder, et al. Physical Therapy. July 1999. Vol. 79 no 7. 642-652

2. Cal OSHA Report

 **Bioness**



IMPROVING SAFETY + REMOVING FEAR = EXPANDED TREATMENT TECHNIQUES

FALLING IS THE # 1 RISK OF INJURY DURING TREATMENT AND CAN IMPEDE THE REHABILITATION PROCESS BY CAUSING LOSS OF CONFIDENCE, ANXIETY, ACTIVITY RESTRICTION AND INJURY.

The Vector can help accelerate recovery rates and improve patient outcomes.¹

Without having to worry about a patient's safety, clinicians can focus more closely on creating a challenging and individually customized training program.

Adjust the fall limit setting on the fly

Fall Prevention set by distance, velocity or completely disabled.

The screenshot displays the Vector training software interface. On the left, a red alert box reads "FALL PREVENTED!" and provides instructions: "For patient safety, the system has entered Static-Holding Mode. To resume training, use Winch Up to return the patient to a standing position, or use Emergency Lower or Winch Down to lower the patient before closing this alert dialog and attempting to resume training." Below the alert, it shows "Unloading 13 lbs 11% (bw)". The main interface includes "Manual Controls" with up/down arrows, "Training Controls" with icons for trolley position, dynamic unloading, and a gear icon, and a "Session Status" section with metrics: Distance: 9.1 ft, Speed: 0.0 mph, Total Time: 00:04:32, Unloading: 44 lbs (29% body weight), Training Time: 00:01:50, Falls Prevented: 00, and Rope Position: 3.8 in. On the right, a "Fall Prevention" panel features a vertical scale from 0 to 4.0 in, a "DISABLE" button, and a "Live feedback to anticipate & monitor falls" callout.

Live feedback to anticipate & monitor falls

Ensures patient and therapist safety

SCAN TO SEE THE VECTOR IN ACTION



1. McCain KJ, et al. 2008. Arch Phys Med Rehabil. 89:684-691



SAMSUNG

5:48 PM

Vector Gait and Safety System

vector

FALL PREVENTED!

For patient safety, the system has entered Static-Holding Mode.
Return the patient to a safe position before attempting to resume training.

Emergency Lower



Winch



16 lbs, 8 % (bw)



Close