



**BIODEX**  
A MIRION MEDICAL COMPANY

ISSUE 63



# Physical Medicine

Neuromuscular Evaluation  
& Therapeutic Exercise

Sports Medicine  
Orthopedic  
Wellness

Neurorehabilitation  
Injury Prevention  
Medical Fitness

Older Adult  
Neuromuscular Research  
Cardiopulmonary Rehabilitation

ISO 13485:2016  
CERTIFIED

# A Better Path to Injury Recovery & Performance

Through science and innovation, we empower our customers to deliver a better patient experience at every turn, from enabling more effective training protocols to promoting faster injury recovery.

For decades, Biodex™ physical medicine devices have been relied on by top facilities around the world to aid in patient recovery and research. Our science-based technology and programs keep you on the cutting edge of rehabilitation exercise – and on top of patient care.





# The Biodex Team is Proud to be Part of Mirion Medical

In July 2022, Mirion Technologies announced the rebranding of its Medical segment as the Mirion Medical group, comprised of the organization's healthcare-focused Dosimetry Services, Sun Nuclear, CIRS, Biodex, and Capintec business units.

*"Given the expanding scope of our work and commercial reach, it is natural to bring our healthcare businesses together under a unified banner," notes Thomas Logan, CEO of Mirion Technologies and acting Mirion Medical President.*

The Biodex brand remains focused on Physical Medicine and Medical Imaging, providing science-based solutions for rehabilitation exercise and injury recovery, as well as advanced surgical and ultrasound tables to support a quality imaging experience for practitioners and patients.

*"Mirion Medical represents the science of better. We're committed to enhancing the delivery and ensuring the safety of healthcare treatments to truly better the human condition. For practitioners, our advanced technologies streamline workflows and reduce risk, while their patients benefit from a safer, more efficient healthcare experience," notes Mr. Logan.*

The Mirion Medical group will take on a family brand identity that carries across all business units in the group. The new logos will feature the Mirion "M", symbolizing the strength of this group as part of the Mirion Technologies family.



**MIRION**  
MEDICAL

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# System 4

## Benefits:

- Advanced dynamometer technology for greater performance.
- Seat design accommodates athlete to pediatric applications.
- Windows 10 Enterprise LTSC prevents intrusive update pop-ups and requests.
- Software interface, no other system is faster or easier to use.
- Feature rich software proves need, progress and outcome.
- Touchscreen for quick, easy operation.
- Simplified patient positioning with on-screen audio and visual aids.
- Requires only 64 sq-ft of operating space.
- Activity-specific work simulation exercises.
- Wide range of normative data, from pediatric through adults, ages 5 - 83.
- Excellent after-sale support, installation and continuing education programs.



As the premier multi-joint system for objective testing, the Biodes™ System 4 Dynamometer helps you provide the best outcomes for your patients, supports your research, and separates your facility from the rest.



## System 4 PRO™

Accommodates a wide variety of positions and exercises.

The Pro-level System 4 features a positioning chair with 360° of rotation, motorized seat height and superior stabilization. Standard attachments: ankle, knee, shoulder, elbow, wrist and hip. Optional attachments: hamstring, back extension/flexion, linear closed-chain, upper extremity and an array of work simulation attachments.



## System 4 MVP™

A mid-level solution, without compromise.

The MVP model features front-to-back chair positioning and 360° rotation with fixed seat height. Dynamometer accommodates side-to-side positioning and fully assisted height adjustment. Standard attachments: ankle, knee, shoulder, elbow and wrist. Optional attachments: hamstring, back extension/flexion, linear closed-chain, upper extremity, hip and array of work simulation attachments.



## System 4 Quick-Set™

Designed for knee, ankle, shoulder elbow and wrist.

If budget is your primary concern, the Quick-Set model provides easy patient setups while still ensuring maximum stabilization. This system features a fixed-height positioning chair with 360° rotation and front-to-back travel. Standard attachments: ankle, knee, shoulder, elbow and wrist. Optional attachments: hamstring, back extension/flexion, linear closed-chain, upper extremity, hip and array of work simulation attachments.



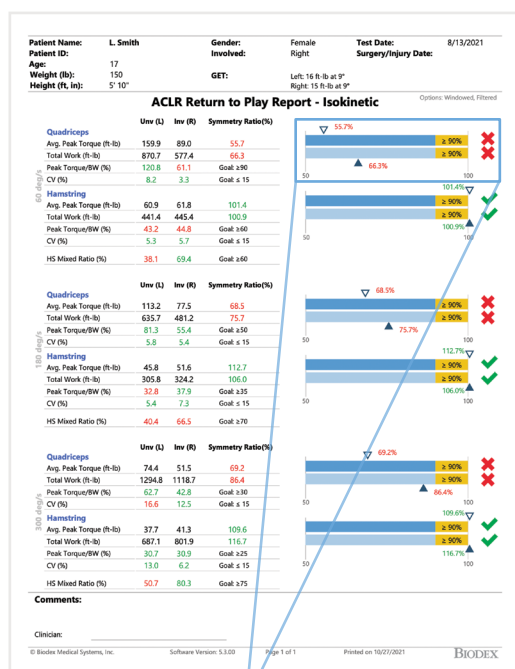
## The industry standard isokinetic system used by top facilities around the world

More than 30 years have passed since we introduced the world's first multi-mode computerized robotic dynamometer. That event and subsequent "firsts" have made the Biodex dynamometer the choice in the most distinguished clinics and research facilities around the world.

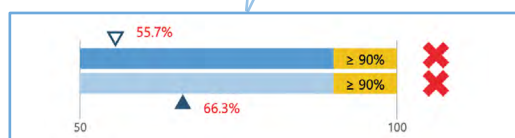
Featuring five modes of operation, the Biodex System 4 continues to offer pioneering breakthroughs in neuromuscular testing and rehabilitative technology. Assessments of physical impairments provide patients a fast, effective, documented return to function.

### Return-to-Play Report

With reporting such as the ACL and hamstring return-to-play reports, test results are easier to understand and easier to communicate to patients, physicians, third-party payers and employers.



When Limb Symmetry Index is 90% or greater, risk of reinjury is reduced.<sup>1</sup>



Limb symmetry index

Ask Us about Upgrade,  
Trade-In and Remanufactured Options

# Advantage BX™ SOFTWARE



### Next-Generation Software For Biodex Isokinetic Systems

Streamlined and intuitive, Advantage BX software simplifies operation of the System 4 Dynamometer to help more staff members capture and document every stage of the rehabilitation process.

- Increase utilization by staff on more patients
- Help more stakeholders understand the benefits of isokinetics
- Repeat favorite activities using the Quick Start
- Seamlessly guide a clinician through rehab or testing sessions
- Easily manage clinical research studies and keep data separate

[biodex.com/s4bx](http://biodex.com/s4bx)

Reference:

1. Kyritsis P, et al. (2016). Br J Sports Med; 50:946–951. • Grindem H, et al. (2016). Br. J Sports Med: 50 804-808.

# System 4

## Multiple applications and pathologies with a single investment

### Optional Attachments

#### Dual Position Back Extension/ Flexion Attachment

Provides testing and rehabilitation in the semi-standing and lumbar isolated positions.

#### Closed Kinetic Chain Attachment

Provides closed chain exercise for early rehab of upper and lower extremities.

#### Work Simulation Tools

Provides activity-specific assessment and rehabilitation capability.

#### Hamstring Attachment (Lengthened State)

Knee uppers provide an additional 30° of range. Required to perform the Lengthened State Multiple Angle Comparison Test.

#### Hip Attachment

For hip abduction/adduction and extension/flexion. Included with PRO.

#### Seat Back Brace Attachment

Attachment to provide extra support when seat back is fully reclined. Included with PRO.

#### Anti-Shear Attachments

Anti-Shear, Left Pivot and Anti-Shear, Right Pivot

#### Pediatric Attachments

Pediatric Left Knee, Pediatric Right Knee, Pediatric Shoulder and Pediatric Hip

#### UE Hemiparetic Attachments

Designed to promote neuro recovery and improve strength for patients with physical limitations of the upper extremity. Compatible with all System 3 and System 4 setups.



Closed Kinetic Chain Attachment



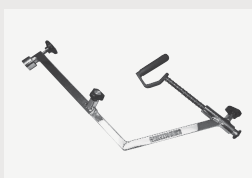
Work Simulation Tools



Hamstring Attachment



Hip Attachment



Pediatric Shoulder Attachment



UE Hemiparetic Attachments

### Hamstring Solutions

Advantage BX software supports two commonly used hamstring protocols: Lengthened State Multiple Angle Comparison and Mixed H/Q Ratio. Upgrade paths available. Contact us for details.



- 850-000** System 4 PRO 230 VAC
- 852-000** System 4 MVP 230 VAC
- 840-000** System 4 QUICK-SET 230 VAC
- 840-000-20** System 4 QUICK-SET 230 VAC, Knee Only
- 840-000-40** System 4 QUICK-SET 230 VAC, IPSC Ind Med (Shoulder, Knee, No Cart)
- 850-820** System 4 PRO Remanufactured  
Export models available.

#### Advantage BX Software Upgrades:

- 850-824** System 4 Win 10 Computer Application Upgrade
- 850-829** System 3 Win 10 Computer Application Upgrade

#### Optional:


- 830-113** Chair Wedge
- 830-120** Wide Seat

#### Attachments:

- 830-450** Attachment, Back, Dual Position Ex/Flex  
Includes docking clamp for PRO configuration
- 830-451** Attachment Clamp, Back Attachment, Quick-Set  
For 830-450 back attachment when used with Quick-Set configuration. Order docking clamp with 830-450.
- 830-520** Attachment, Closed Chain
- 830-269** Attachments, Work Simulation Tools
- 830-550** Attachment, Hamstring
- 830-315** Attachment, Hip
- 830-320** Attachment, Seat Back Brace
- 830-260** Attachment, Anti-Shear, Left Pivot
- 830-261** Attachment, Anti-Shear, Right Pivot
- 830-474** Attachment, Pediatric Left Knee
- 830-475** Attachment, Pediatric Right Knee
- 821-321** Attachment, Pediatric Shoulder
- 830-316** Attachment, Pediatric Hip
- 830-540** Attachments, UE Hemiparetic

[biodex.com/s4](http://biodex.com/s4)





Neurorehabilitation



Work Simulation

# Think Bigger Beyond Sports Medicine

Highly versatile and adaptable, the System 4 dynamometer is used worldwide on a variety of joints and patient populations, well beyond sports medicine. Expand your options and increase your value.



Pediatrics



Orthopedic Medicine  
Beyond the Knee



# Balance System™ SD

## Features:

- Static and Dynamic (SD) – Offers 12 levels of platform control as well as static force setting.
- Balance Training – Includes proprioception, stabilization, range of motion and weight shift exercises.
- Microsoft SQL Database – Allows clinician to easily store and retrieve patient data, multiple tests per patient. Export to Excel for reporting and analytics.
- Objective Documentation – Printed color reports prove need, track progress and document outcomes – ideal for insurance reimbursement.
- Custom Reporting – Allows entry of unique comments to test results and assignment of CPT codes.
- Normative Data – Healthy populations stored for test comparison of older adults for fall screening and student athletes for concussion management.
- Audio/Visual Biofeedback – Motivates patient by prompting proper balance control in real time. Allows clinician to easily monitor patient during interactive testing/training.
- Multipurpose Connectivity – Allows connection to larger monitors and projectors to enhance interaction for visually impaired patients.
- Support Handles – Adjustable from 26" - 36.5" above platform (66-93 cm). Handles can be removed when not in use or interchanged with the optional FreeSway™ Handles.
- FreeSway Handles – Floating handles provide security without impeding balance recovery.



The only static and dynamic system that provides fast and accurate Fall Risk Assessment and Conditioning for older adults; plus closed-chain weight-bearing assessment and training for lower extremity patients.



The optional Step Stool non-slip surface assures stability and patient safety.



Clinical Test of Sensory Integration of Balance (CTSIB) Indexed Pad (included) standardizes foot positioning for improved consistency and result comparisons.



The (CTSIB) test helps determine which sensory system (visual, somatosensory, or vestibular) the patient relies on to maintain balance.

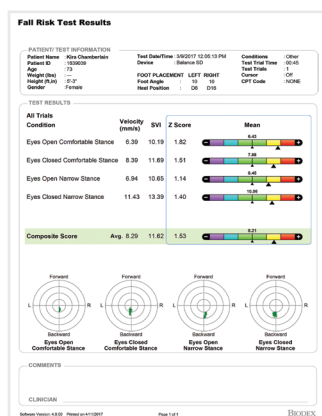
# Static and dynamic balance testing and training

## The Most Popular Balance System... Now Even Better

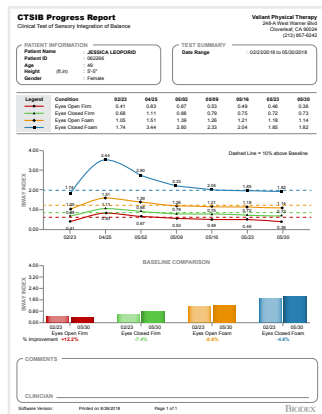
The Biodex Balance System SD has been designed to meet the needs of everyone looking to improve balance, increase agility, develop muscle tone and treat a wide variety of pathologies. Featuring easy-to-follow touchscreen operation, the Balance System SD is simple to learn and operate, leading the user step-by-step through testing protocols and training modes in both static and dynamic formats. Extremely versatile, it is the only system that provides a fast, accurate Fall Risk Screening and Conditioning Program for older adults; closed-chain, weight-bearing assessment and training for lower extremity patients, and adds the objective balance assessment component to a concussion management program.

## Balance Testing, Training, Documentation

All test results and training sessions can be stored and printed. Comparison to normative data helps communicate need, progress and outcome.



*Fall Risk Screening Test – Identify a potential problem in just two minutes. All test results and training sessions are documented on easy-to-read reports. Compares balance test results to population-specific normative data.*

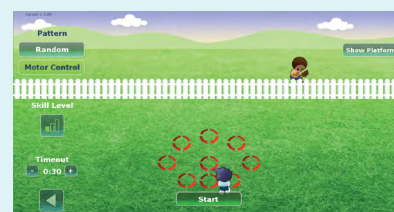


*Concussion Management Protocol – Preseason baseline testing and post injury return-to-play management using the Clinical Test of Sensory Integration of Balance (mCTSIB).*

## Games for Balance

Single task games focus on exercise that challenges balance control, while encouraging repetition and motor learning. Dual tasking that challenges motor and cognitive function to improve gross motor performance.

### SINGLE TASK = BALANCE CONTROL



Catch Game

### DUAL TASK = COGNITIVE + MOTOR



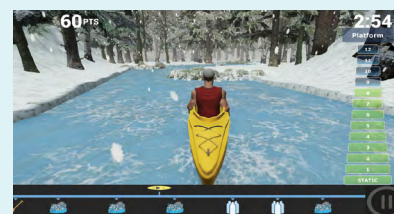
Ball Maze



Word Search

## Recovery Rapids

Deliver high-repetition balance training with Recovery Rapids – Power a boat downstream, steer around bends, collect items and avoid obstacles, all through weight-shifting on the balance platform.



Co-developed by patient partners and neurorehabilitation researchers.

# Balance System SD

Multiple applications and pathologies with a single investment

## Six Standardized Training Modes

1. Postural Stability
2. Maze Control
3. Weight Shift
4. Random Control
5. Motor Control
6. Percent Weight Bearing

Sample screens available: [www.biodex.com/balance/training](http://www.biodex.com/balance/training)

## Six Standardized Testing Modes

1. Fall Risk Screening
  2. Motor Control
  3. Limits of Stability
  4. Postural Stability
  5. Bilateral Comparison
  6. Sensory Integration – including CTSIB and BESS
- Sample screens available: [www.biodex.com/balance/testing](http://www.biodex.com/balance/testing)



## Specifications:

- Dimensions:  
Base: 28.5" w x 37" depth x 8.5" h (71 x 94 x 21.5 cm)  
Platform: 21.5" diameter (55 cm)
- Product Weight: 235 lb (106.5 kg)
- All-In-One Flat Panel Display: 15.6" Color Touchscreen, Windows Operating System, Ethernet, USB, Video/Audio Out, Built-In Speakers and Color Printer. USB connectivity for data transfer and software upgrades.
- Display Height: Adjustable from 55" to 68.5" h (139.7 to 174 cm) from center of display to floor, and 46" to 60" (117 to 152 cm) from center of display to platform.
- Stability Levels: 12 dynamic levels, plus locked for static measurements
- Platform Tilt: 20° from horizontal in all directions
- Support Handles: Adjustable from 26" to 36" above platform (66 to 91 cm). Handles can be removed from the system when not in use or interchanged with the optional FreeSway Handles.
- User Weight Capacity:  
Maximum: 400 lb (181 kg)  
Minimum: 60 lb (27 kg)
- Printer: HP DeskJet
- Printer Stand: 24" x 24" (61 x 61 cm)
- Power: 115 VAC, 50/60 Hz, 15 amp line or 230 VAC, 50/60 Hz, 15 amp line
- Power Rating: 520 watts
- Certification: CE Marked. See website for details.



**950-440** Balance System SD, 15.6" Display, 115 VAC  
*Includes: Printer, printer stand and CTSIB Indexed Pad.*  
*Export models available.*

### Optional:

- 950-430** VibroTactile™ System  
*Includes: Transmitter, two tactile belts (S/M and L/XL), each with wireless receiver and connection cables.*
- 950-450** FreeSway™ Handles  
*Fits latest model Balance System SD with adjustable-height handles only.*
- 950-306** Step Stool

**[biodex.com/balance](http://biodex.com/balance)**



# FreeSway™ Handles

## Optional enhancement for the Balance System SD



*Optional FreeSway Handles are designed to fit the current model Balance System SD.*

### Promote Safe Freestanding Balance Training

It is widely accepted that patients should avoid holding on in order to reap full functional benefits of balance training. However, patients with fear of falling require some degree of stability. The FreeSway Handles for the Balance System SD are the only balance training option that allows patients to experience unimpeded postural sway – while holding on.

Key therapy benefits:

- Improve safety
- Minimize fear of falling
- Enhance efficacy of balance training

### Remember Learning to Ride a Bike?

Think of the FreeSway Handles as training wheels for balance. The handles “float” securely within support rings. If the patient sways too far or loses their balance, the handles will touch the outer edge of the ring and allow the patient to correct the movement. Patients will progressively gain an understanding of their sway envelope, which will carry over into everyday activities.

### Applications:

Versatile and simple to use, the FreeSway Handles aid in the performance of dynamic balance activities with the eyes closed.

- Fall Risk Screening and Conditioning
- Senior Rehab
- Neurorehabilitation
- Vestibular Disorders
- Wellness
- Sports Medicine/Orthopedic
- Concussion Management

### Specifications:

- Dimensions: 16" l x 9.5" w x 20" h (41 x 24 x 51 cm)
- Accommodates patients from 5' to 6'4" tall.
- Weight:  
Grab Handle: .90 lb (.41 kg)  
FreeSway Handle: 8 lb (3.6 kg)



*Adjust diameter to restrict float of handle depending on patient need.*



*Adjust handlebar height to accommodate patients 5' to 6'4" tall.*

**950-450** FreeSway Handles for Balance System SD  
Fits latest model Balance System SD with adjustable-height handles only.

U.S. Patent No. 9,415,287 B2

[biodex.com/freesway](http://biodex.com/freesway)

# Broaden Your Applications, Increase Your Clinical Value

## Looking to maximize your investment?

The Balance System™ SD helps you address the needs of a variety of patient populations:

- Fall Risk Screening and Conditioning
- Senior Living and Rehab
- Neurorehabilitation
- Sports Medicine/Orthopedic
- Vestibular Disorders
- Wellness
- Concussion Management

**Ask Us about Turnkey Programs to Help Grow Your Business.**



**BIODEX**  
A MIRION MEDICAL COMPANY



# VibroTactile™ System

## Enhanced biofeedback for Biodex balance technology



### Vibration Cueing Adds Sensory Feedback

Once integrated with the Balance System SD or the BioSway Portable Device, the optional VibroTactile System offers an additional form of sensory feedback to help detect changes in postural sway. Using wireless technology, the tactile belt responds with a vibrating sensation when the patient sways outside the therapist-set parameters.

### Adds Sensory Enrichment to Therapy Tasks

Real-time biofeedback is an important component of balance rehabilitation. Typically therapists cue patients with a tap or verbal command. Vibrotactile cueing heightens the therapy process by adding a mechanized, reproducible sense and objective feedback. More pronounced than audio and visual feedback, vibrotactile cueing directly engages the motor learning system, enhancing neuroplasticity and reducing falls.

### Especially Suited for Evaluation and Treatment of Vestibular Disorders

Vibrotactile cueing allows patients to safely receive positional feedback with their eyes closed. Patients with vestibular challenges are overly dependent on visual and somatosensory systems. To bring a greater focus to the vestibular system during balance training, the visual sense needs to be eliminated.



*Allows patients to receive positional feedback with their eyes closed.*

### Applications:

- Vestibular disorder
- Balance anxieties
- Stroke
- Proprioception such as peripheral neuropathy
- Cognitive impairment
- Amputation

### Specifications:

- Belt Dimensions:  
Small/Medium: 28"-36" (71-91 cm)  
Large/Extra Large: 36"-48" (91-122 cm)

#### Transmitter

- Voltage: 5V DC
- Current: 50 mA
- Auxiliary Ports: RS-232; USB

#### Receiver Box

- Voltage: 5V DC
- Current: 260 mA (when charging)
- Auxiliary Ports: USB (wired); LR-WPAN (wireless)
- Total Shipping Weight: 5 lb (2.3 kg)
- Warranty: One year parts and labor

*Compatible with Windows CE, 7 and 10. Field updates available*



**950-430** VibroTactile System

*Includes: transmitter, two tactile belts (S/M and L/XL), each with wireless receiver and connection cables.*

**[biodex.com/vibrotactile](http://biodex.com/vibrotactile)**



# BioSway™ Portable Device

## Features:

- Lightweight Instrumented Platform – Sets up in minutes to provide static force testing for interactive training modes or standardized testing environments.
- Fully Portable – Hard-shell travel case provides added protection when transporting to community-based health fairs or school settings.
- Custom Reporting – Allows entry of unique comments to test results and assignment of CPT codes.
- Marketing Support – We provide marketing materials to help you build a concussion program around balance assessment.
- Games for Balance – Single- and dual-task high-repetition balance training games enhance patient engagement and drive better outcomes.
- Audio/Visual Biofeedback – Motivates patient by prompting proper balance control in real time. Allows clinician to easily monitor patient during interactive testing/training.
- Normative Data – Healthy populations stored for test comparison of older adults for fall screening and student athletes for concussion management.
- Microsoft SQL Database – Allows clinician to easily store and retrieve patient data, multiple tests per patient. Export to Excel for reporting and analytics.
- Multipurpose Connectivity – Allows connection to larger monitors and projectors to enhance interaction for visually impaired patients.
- Display Stands – The tabletop stand can also be used to wall mount the display. The display can even attach to compatible display mounts.

CTSIB Indexed Pad (included) – standardizes foot positioning for improved consistency and result comparisons

15.6" touchscreen display accommodates external keyboard and mouse

A telescoping adjustable stand, available separately, is compact and portable with its own travel bag



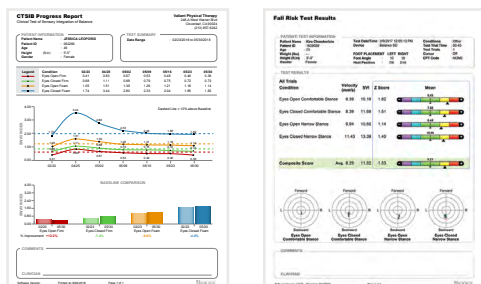
For therapists in the clinic or on the go, the BioSway portable device features static balance platform used for balance assessment for concussion management, older adults/fall screening, neurological, vestibular, post-surgical or trauma patients.

## Portable balance assessment

The BioSway device is a portable balance system ideal for clinicians on the go. The lightweight instrumented platform with large touchscreen display is easy to transport and sets up in minutes to provide static balance testing and training from clinic to courtside.

Similar to our Balance System SD, this fixed-platform assessment and training device is a powerful rehabilitation tool that can be used across a broad scope of populations for general orthopedic and neuromuscular rehabilitation, senior wellness, and athletic conditioning. Choose from interactive training modes or standardized testing environments, including the Clinical Test of Sensory Integration of Balance (CTSIB).

### Objective Documentation



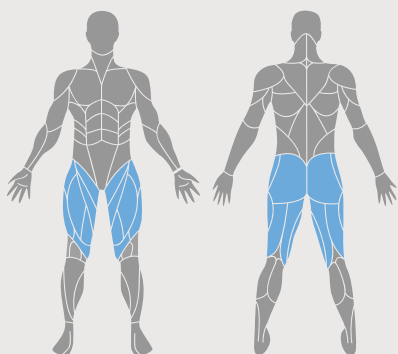
# Sit2Stand™ Squat-Assist Trainer

## Features:

- Assistance Selector – An exclusive Biodex design that provides graded concentric and eccentric exercise throughout the sit-to-stand motion. The system also provides the option to perform gentle, progressive plyometrics for developing fast-twitch fibers which are so important for older adults.
- One-Touch Assist Control – Provides 15 levels of weight-bearing assistance ranging from 5 lb to 250 lb.
- Arm Supports – Contribute to upper extremity strengthening and can be moved out of the way for easy on/off access.
- Indexed Foot Base – A foot placement grid provides clear reference for therapists to easily communicate and continually repeat correct foot positioning.
- Retractable Stabilization Belt – The fully adjustable belt provides a secure environment for patients with limited torso control.
- Range-of-Motion Limiter – Allows for two starting positions to accommodate users with limited range of motion.



## Primary Muscles Strengthened:



- Hamstring
- Quadriceps
- Adductors
- Abductors
- Gluteals

Strengthens lower extremities in a safe, progressive environment. Reinforces seated to standing movement in rehabilitation and wellness settings.



Physical Therapy



Wellness



Senior Living



## Increase strength. Improve balance and mobility

### The Most Fundamental Motion for Functional Independence

One of the most fundamental motions required to maintain/sustain a greater quality of life is the ability to stand from a seated position. Performed many times throughout the day, this biomechanically demanding movement requires more lower extremity joint torque and range of motion than walking or stair climbing.<sup>1</sup>

The Sit2Stand Squat-Assist Trainer is ideal for strengthening the lower extremities of weakened, older, or sedentary patients/residents, or for cardiac rehabilitation, where standing from a seated position without reliance on the upper extremities is crucial.

### Wellness

Easy to use with conveniently located adjustment levers for seat height and assistance, and biomechanically positioned arm supports. Wellness members can utilize the device with minimal supervision, strengthening both upper and lower extremities, important for maintaining independence.

### Physical Rehabilitation

Provides a safe setting for a patient to move through the seated to standing motions, either independently or with a therapist's guidance. By repeating the motions, a patient builds both lower and upper-body muscular strength and endurance, improves flexibility and ultimately gains independence.

By varying seat height and foot position, the patient will learn the effects of body position and joint angle to control center of mass and the role of momentum in rising.<sup>2</sup> The large, comfortable contoured seat with pivoting backrest articulates naturally to correspond with pelvic tilt during sit-to-stand motion. Adjustable start and end seat position accommodates varying amounts of hip flexion and orthopedic condition.

### Specifications:

- Dimensions: 31.75" w x 51" deep x 52" h (83 x 125 x 132 cm)
- Seat Height:  
Adjustable: Seven preset increments accommodate patients of various heights.  
Seated Height: 18.5"
- User Capacity: 350 lb (159 kg)
- Weight: 147 lb (66 kg)
- Assistance Range: 45 lb to 250 lb
- Warranty: One year parts and labor



*Accessible for walker-assisted patients or those approaching in a wheelchair.*



**Stand – Sit – Stand → Repeat**  
Improve Strength • Build Endurance • Increase Flexibility

**950-560** Sit2Stand Squat-Assist Trainer  
Includes stabilization belt

**[biodex.com/sit2stand](http://biodex.com/sit2stand)**

#### References:

1. Lomaglio M.J, Eng Janice. Muscle strength and weight-bearing symmetry relate to sit-to-stand performance in individuals with stroke. *Gait & Posture* 22(2005) 126-131.
2. Janssen WGM, et al. Determinants of the Sit-to-Stand Movement: A Review. *Phys Ther*. 2002;82:866-879

# BioStep™ 2

## Features:

- Self-Powered, Self-Charging – Cordless capability; use it anywhere.
- 1:1 Arm to Leg Motion – For natural arm swing rhythm.
- Rotating Seat – To 90° on either side with step-through design for easy and safe access.
- Movable Armrests – For added comfort and stability when needed.
- Seat Belt – Offers support and security for patients with limited torso control.
- Optimized Seat Height – For wheelchair transfers and controlled hip flexion.
- Constant Resistance – 20 effort levels provide greater program options.
- Heart Rate Monitoring – Polar contact hand grips (telemetry compatible) to ensure proper training intensity.
- Large, easy-to-use “Quick Start” Display – Features time, rpm, watts, calories, METs, distance, total steps, heart rate.
- Large Utility Holder – Provides a convenient storage place for water bottles and allows for hands-free reading.
- Robust Design – For heavy institutional use.



Combine smooth, elliptical cross-training with the comfort and stability of semi-recumbent positioning. Biomechanically correct arm, leg and ankle motion emulates natural walking.

## Optional Stabilization Kit

The combination of a padded foot restraint and pivoting calf support is a convenient and comfortable means to secure the foot to the footplate, maintaining correct loading of the joints and postural alignment during exercise.

*NOTE: Pivoting Calf Support can be easily removed when not in use.*

Patients with hand and wrist limitations will find comfort with the articulating hand grips and security of maintaining stable hand position throughout the exercise session. The Hand/Wrist Cuffs allow users with limited or no hand strength or control to enjoy the benefits of the BioStep unit's upper body exercise.

*NOTE: Hand/Wrist Cuffs are also sold separately.*



Padded Foot Restraint



Pivoting Calf Support



Hand/Wrist Cuff



Seat rotates 90 degrees on either side with step-through design for easy and safe access.

## The difference is in the motion

### Naturally Smooth... Positively Effective

The motion of the BioStep 2 Semi-Recumbent Elliptical is naturally smooth and continuous, offering exceptional comfort. Its low-impact, elliptical motion reduces the jarring start/stop direction change often associated with other recumbent steppers, eliminating the need for users to lift or strike their feet on the footplate. The step-through frame, easy-to-use display, and comfortable robust design, make the BioStep 2 the obvious choice for older adults.

The fluid, elliptical motion is forgiving on the knees, ankles, hips and lower back...a natural closed-chain, low-impact, functional exercise. By combining lower extremity motion with upper body exercise, the BioStep 2 provides a total body workout in both forward and reverse directions, thereby involving different muscle groups.

### Great for Cardiac Rehabilitation

BioStep 2 incorporates both the upper and lower extremities into the cycling motion; patients experience less local muscle fatigue. This allows similar heart rates to be achieved at lower rates of perceived exertion when compared to traditional exercise ergometers. Blood pressures can be checked while the patient continues to exercise by simply releasing one arm while the other three extremities comfortably continue to perform the exercise.

BioStep 2 is ideal for patients who may experience leg claudication during exercise. Patients can easily reduce the effort in the involved leg, while keeping heart rate elevated, by transferring a greater portion of the workload to the non-involved extremities. When the cramping subsides, exercise can be transferred back, proportionately, to all four extremities.



### Applications:

- Senior Rehab
- Wellness and Fitness Centers
- Neurorehabilitation
- Cardiac Rehabilitation
- Orthopedic/Sports Medicine

### Specifications:

- Dimensions: 54" l x 28" w x 44" h (137 x 71 x 112 cm)
- Resistance: Constant resistance with 20 effort levels
- Work Rate Range: Up to 600 watts (120 rpm)
- Heart Rate Monitoring: Polar contact hand grip (telemetry compatible)
- Readouts: Time, rpm, watts, calories, METs, heart rate, distance and total steps
- User Capacity: 500 lb (227 kg)
- Weight: 202.5 lb (92 kg)
- Power: Self-powered; no external power requirement at user work rates over 30 watts and 50 rpm; adapter is provided to power system and charge battery during applications below 30 watts and 50 rpm; battery automatically recharges at work rates above 30 watts and 50 rpm. AC Adapter included.
- Certifications: See website for details.
- Warranty: Two years parts; one year labor



**950-240** BioStep 2, 100-240 VAC  
Includes: Rotating seat, foot straps, hand straps, seat belt and movable armrests.  
Export models available.

### Optional:

- 950-242** Stabilization Kit  
Includes: pivoting calf support, padded foot restraint and hand/wrist cuffs (large).
- 950-247** Hand/Wrist Cuffs, Small (pair)
- 950-243** Hand/Wrist Cuffs, Medium (pair)
- 950-234** Hand/Wrist Cuffs, Large (pair)

[biodex.com/biostep](http://biodex.com/biostep)



# medBike® Cycle

## Features:

- For residential and professional use.
- Use comfortably from any chair or wheelchair.
- Highly effective in assisting neurologic rehabilitation.
- Research shows the higher rpm levels offered by medBike cycle in Pedal Assisted mode (90 rpm) may improve motor function for patients with Parkinson's.
- Speed can be controlled based on user capacity.

## Optional Calf Supports

For people with partial or complete paraplegia of the lower body, lateral control of the lower legs is highly important during motion training to prevent muscle shortening and joint stiffness. Optional Calf Supports provide safe guidance.



The medBike cycle requires minimal space and is easy to transport, making it an ideal addition for home exercise.



*Motion exercise for those with physical limitations.*



*Open-access design – ideal for wheelchairs.*

## Adding motion to movement disorders

### Promote Movement Exercise

Designed for people with physical limitations, the medBike Cycle enables safe upper and lower movement training in one compact device. Users can access forward and reverse pedaling in three modes of customizable exercise:

1. Active Mode – patient drives movement
2. Passive Mode – motor drives movement
3. Pedal-Assisted Mode – motor supplements patient movement when needed

### Fully equipped for today's health and wellness environment:

- Program Personalized Exercise  
Program an individualized exercise session with specific resistance and time values. Forward and reverse pedaling movement can even be combined into one training session.
- Support Training with Data  
Individualized training sessions are set using the easy-to-read touch display, and end with a detailed exercise summary.

### Meet the Needs of Older Adults

Aging and older adults, and post-acute patients not suited to traditional cycling equipment can exercise safely using the medBike Cycle. Wheelchair access, easy-to-understand touch display and simple operation make the medBike Cycle perfect for both residential and professional use. The Continuous Control System in Pedal-Assisted mode avoids overstraining the lower- and upper-leg muscles, creating safe exercise conditions.

### Expand Medical Wellness Offerings

Physical therapy patients are seeking additional exercise sessions at gyms and wellness centers. With ease of use, safety features and proven benefits for neurological rehabilitation, equipment like the medBike Cycle will help attract members with medical fitness needs.

### Boost Neurological Rehabilitation

Proven to be very effective for MS and Parkinson's disease, medBike Cycle movement training helps gently loosen and strengthen muscles and reduce spasticity. Research shows some people with Parkinson's disease may benefit by exercising in the Pedal-Assisted mode at the higher rpm levels the medBike Cycle offers, up to 90 rpm.<sup>1</sup>

### Specifications:

- Dimensions:  
Lower Body: 25" l x 20.6" w x 39.6" h (64 x 52 x 101 cm)  
Whole Body: 26.5" l x 21.8" w x 48" h (67 x 55 x 122 cm)
- Height Adjustable: Telescoping handlebar post: Range 4" (10 cm)
- Display: 10" (25.4 cm) TFT touchscreen
- Hand Grips: Non-allergic, high density; telescopic handlebar post
- Pedal Cranks: Fully articulating with heel cup and safety straps
- Finish: Full metal frame, enamel powder, electrostatic
- Wheels: Durable transport
- Speed Control: 10-90 rpm in passive mode
- Work Rate Range: 1-120 watt  
(100 watts at 90 rpm in Active Mode)
- Weight:  
Lower Body: 75 lb (34 kg)  
Whole Body: 104 lb (47 kg)
- Warranty: Two years parts; one year labor



**950-192** medBike Cycle, Lower Body

**950-194** medBike Cycle, Whole Body

### Optional:

**950-193** Calf Supports

**950-247** Hand/Wrist Cuffs, Small (pair)

**950-243** Hand/Wrist Cuffs, Medium (pair)

**950-234** Hand/Wrist Cuffs, Large (pair)

**[biodex.com/medbike](http://biodex.com/medbike)**

### Reference:

1. Ridge, A.L., Phillips, R.S., Walter, B.L., Diskenzo, F.M., Loparo, K.A. (2015). Dynamic high-cadence cycling improves motor symptoms in Parkinson's disease. *Frontiers in Neurology*, 6:194.

# Upper Body Cycle

## Features:

- Self-Powered, Self-Charging, Cordless Capability – Use it anywhere!
- Pivoting Actuator – Accommodates wide range of cycling positions.
- Adjustable Crank Length – Crank adjusts from 6" to 16" to help control range of motion provided for a variety of arm and upper body exercises.
- Instantaneous Retro-Cycling.
- Up to 600-watt work rate range to accommodate a wide spectrum of patients.
- Isokinetic Resistance – (Speed control) for building strength.
- Heart Rate Monitoring – Telemetry compatible to ensure proper training intensity.
- Easy-to-use "Quick-Start" control panel with large buttons.
- Large, easy-to-view LED display.
- Ergonomically correct for patients from 4'6" to 6'10" tall, and weighing up to 500 lb.
- Removable seat for wheelchair or standing access.
- Comfortable rotating seat with seat belt and grab handles - easy wheelchair transfers - belt and handles provide added security, especially for patients with balance deficiency or palsy.
- EZ-Grip handgrips allow patients with hand control limitations to hold onto crank handles.



An upper-body ergometer that will exercise individuals with limited lower-body function, help rehabilitate a wide variety of shoulder, back, neck, wrist, and elbow patients, and give healthy athletes a grueling workout.



Removable seat and adjustable head and cranks allow for easy, stable standing exercise.



The seat assembly is removable to accommodate wheelchairs.



The optional hand/wrist cuffs allow users with limited or no hand strength or control to enjoy the benefits of upper body exercise.



Large rotating seat accommodates patients with ambulatory difficulties.



EZ-Grip handgrips accommodate patients with hand control limitations.



## Invaluable for upper extremity rehabilitation and conditioning

### Functional Diversity

The Biodex Upper Body Cycle is a versatile ergometer that meets the demands of any orthopedic rehabilitation, cardiac, sports medicine, wellness, or general conditioning program.

### Unique Self-Powering System

Use the Upper Body Cycle anywhere. There is no need for AC power at work rates at or above 30 watts and 50 rpm. The battery-supported system maintains all settings and LED displays before and after cycling. The internal battery is automatically recharged when work rates reach or exceed 30 watts and 50 rpm. An AC adapter is provided for extended use at work rates below 30 watts and 50 rpm.

### User Friendly

The "Quick-Start" feature gets your first-time cyclists right into their exercises. Isokinetic (speed control) provides accommodating resistance throughout the cyclist's entire range of motion for the duration of the exercise period. Resistance continuously matches effort, accommodating to variations in the patient's force output due to weakness or pain at specific points in the individual's range of motion, and to fatigue over the course of the cycling period. With a selection of 15 speeds (50 to 120 deg/sec), this resistance mode maximizes strength gains while minimizing the potential for injury.

### Full-Function Retro-Cycling

Rehabilitation and conditioning capabilities are expanded by providing bi-directional cycling to alternately work reciprocal muscle groups.

### Built for High-Use Environments

The welded heavy-gauge steel frame, epoxy powder-coat finish, and moisture-resistant ABS plastic enclosure round out a rugged and durable design that will withstand extensive use in the busiest settings. Large wheels make transporting and repositioning easy. Heart rate monitoring can be achieved with a telemetry chest strap to track heart rate without interrupting exercise – useful for protocols utilizing target heart rate, and for monitoring high-risk patients.

### Applications:

- Orthopedic
- Sports Medicine and Athletic
- Training Exercise
- Cardiopulmonary
- Exercise
- Older Adult Exercise
- Wellness

### Specifications:

- Dimensions: 64" l x 29" w x 62" h (162 x 74 x 157 cm)
- Crank Axis Height: Adjustable from 37" to 58" (94 to 147 cm)
- Crank Arm Length: Adjustable from 6" to 16" (15 x 41 cm)
- Resistance: Isokinetic (speed control): 15 speed settings (increments of 5 deg/sec)
- Work Rate Range: Up to 600 watts (120 rpm)
- Speed Control Range: 50 to 120 deg/sec
- Readouts: Time, rpm, watts, calories, METs, heart rate, total work, total cycles
- Heart Rate Monitoring: Telemetry compatible
- Communication: RS232
- User Capacity: 500 lb (227 kg)
- Weight: 230 lb (105 kg)
- Power: Self-powered; no external power requirement at user work rates over 30 watts and 50 rpm; 115 VAC adapter (230 VAC available) is provided to power system and charge battery during applications below 30 watts and 50 rpm. Battery automatically recharges at work rates above 30 watts and 50 rpm.
- Certification: See website for details.
- Warranty: Two years parts; one year labor



**950-148** Upper Body Cycle, Clinical Pro  
Includes: Rotating seat, seat belt and  
EZ-Grip handgrips  
Export models available.

### Optional:

- 950-247** Hand/Wrist Cuffs, Small (pair)  
**950-243** Hand/Wrist Cuffs, Medium (pair)  
**950-234** Hand/Wrist Cuffs, Large (pair)

**biodex.com/ubc**

# Gait Trainer™ 3

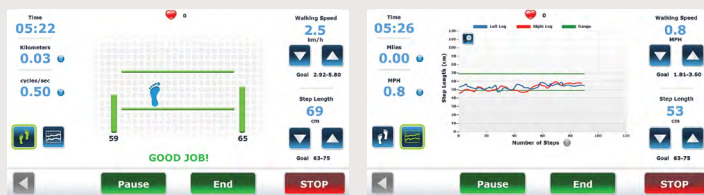
## Features:

- All-In-One Flat Panel 15.6" Color Touchscreen, Windows Operating System, USB and Speakers.
- Open Platform – Enables patient access for therapist interaction.
- Instrumented Deck – Platform monitors and records step length, step speed and step symmetry.
- Audio Cueing and Visual Biofeedback – Motivates patients and prompts proper gait patterns.
- Music-Assisted Therapy Package – See pages 26-27.
- Microsoft SQL Database – Easily store and retrieve patient data, multiple tests per patient. Export to Excel for reporting and analytics.
- Objective Documentation – Lets you quantify patient progress and demonstrate the benefits of treatment.
- Normative Data – Robust database of healthy population by age and gender for comparative patient assessment.
- Heart Rate Monitoring – Polar contact handgrips (telemetry compatible) ensures proper training intensity.
- Connect & Engage – Allows connection to external keyboard, mouse, large monitors and projectors to enhance interaction for visually impaired patients.



The only treadmill with an instrumented deck that monitors and records step length, step speed and right-to-left time distribution, providing a comparison of real-time footfall to target step length. Audio cueing and visual biofeedback prompt patients into a proper gait pattern. Performance is documented with a printed color report.

## Visual Biofeedback



Footfall Screen.

Histogram Screen - plots right and left step lengths/symmetry.

## Handrail Configurations



Gait Trainer™ 3 shown in use with Biodes NxStep™ Unweighing System.



Includes Extended Handrails\*.



Includes Geriatric/Pediatric Handrails\*.

\*Shown with Music Therapy option

## Bring patients up to speed with the right step length

### Equipped to Drive Better Patient Outcomes

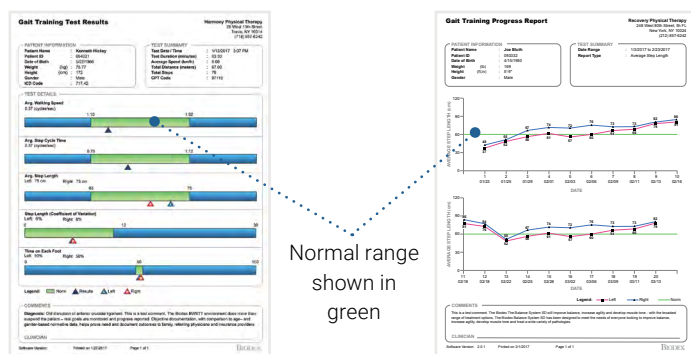
The only treadmill with an instrumented deck that monitors and records step length, step speed and step symmetry, the Gait Trainer 3 lets you prove patients are getting better, faster – and documents results. More than a treadmill, the Biodex Gait Trainer 3 puts evidence-based techniques at your fingertips.

### Real-Time Biofeedback

The addition of real-time visual biofeedback has been shown to motivate patients, prompting them into proper gait patterns.<sup>1</sup> Only the Gait Trainer 3 provides a comparison of actual footfall to target step length. This real-time biofeedback helps patients stay on target in each phase of rehabilitation.

### Objective Documentation

Reports track progress and document outcome. The Gait Trainer 3 quantifies time and distance measurements compared to age and gender-based normative data.



*Progress Report – perfect for showing need, progress and outcome for specific gait parameters:*

- Average walking speed over time
- Total exercise time
- Total distance and steps taken
- Average step length: RT vs. LT
- Step length variability: RT vs. LT
- Time on each foot: RT vs. LT

### Applications:

Goal: Develop symmetrical gait by improving step length, step speed and right to left time distribution.

- Older Adult
- Orthopedic
- Stroke/TBI
- Spinal Cord Injury
- Amputation of Lower Extremity
- Parkinson's Disease
- Neurologic
- Vestibular Patients

### Specifications:

- Dimensions: 86" l x 27" w (218 x 69 cm)  
Walking Area: 64" l x 20" w (160 x 51 cm)  
Printer Stand: 24" l x 24" w (61 x 61 cm)
- All-In-One Flat Panel PC: 15.6" Color Touchscreen Windows Operating System, Ethernet, USB, Video/Audio Out, Built-In Speakers and Color Printer. Bolsters connectivity options to other devices, enabling remote operation for data transfer and software upgrades.
- Deck: 1" thick (2.5 cm) reversible Teflon impregnated high-density composite fiber
- Motor: 2 HP with 2Q-Pulse Width Modulation Control
- Treadmill Speed Range:  
Forward: 0-10 mph (0-16 km/h)  
Reverse: 0-3 mph (0-4.8 km/h) in 0.1 mph (.16 km/h) increments  
Gait Trainer Speed Range: .3 - 4.5 mph (.48 - 7.2 km/h)
- Elevation: 0-15% Grade
- Heart Rate Monitoring: Polar contact handgrips (telemetry compatible)
- Printer: HP Color DeskJet
- Power: 115 VAC, 50/60 Hz, 20 AMP dedicated line, or 230 VAC, 50/60 Hz, 20 AMP dedicated line. Includes hospital grade plug with 12' (3.7 m) power cord.
- User Capacity: 60-400 lb (27 x 182 kg)\*
- Weight: 395 lb (179 kg)
- Certification: CE Marked. See website for details.
- Warranty: Two years parts; one year labor

\*Does not accommodate less than 60 lb in gait trainer mode.



- 950-400** Gait Trainer 3, 115 VAC\* 50/60 Hz  
Includes Support Bar
- 950-402** Gait Trainer 3, 115 VAC\* 50/60 Hz  
Includes Extended Handrails
- 950-406** Gait Trainer 3, 115 VAC\* 50/60 Hz  
Includes Geriatric/Pediatric Handrails

*Export models available.*

\*Includes printer and printer stand

### Optional:

- 950-413** Music-Assisted Therapy Package  
Compatible with Gait Trainer 3 featuring Windows OS.  
Includes music library and sound bar with input for headphones and microphone.

**[biodex.com/gaittrainer](http://biodex.com/gaittrainer)**

### Reference:

1. M. Druzicki, A. Guzik, G. Przysada, et al. (2015). Efficacy of gait training using a treadmill with and without visual biofeedback in patients after stroke: A randomized study. *J Rehabil Med*, 47: 419–425.



# Improve Your Programs Expand Your Business

A Biodex purchase goes beyond technology. We provide turnkey programs, protocols and marketing support packages to help you grow your business and gain referrals. Ask us how we can support your offerings for some of the most common indications and pathologies.

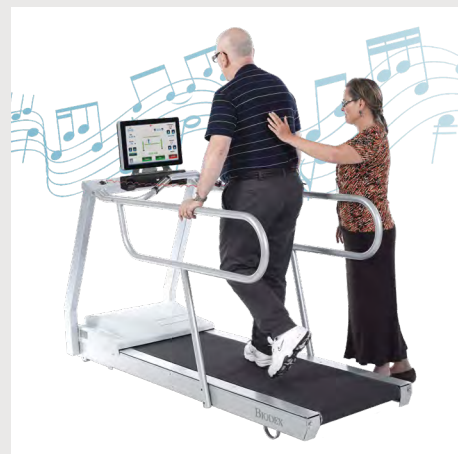
Contact [biodex@mirion.com](mailto:biodex@mirion.com) or 800-224-6339 (Int'l +1-631-924-9000).



Fall Risk Screening & Conditioning



Neurorehabilitation



Parkinson's Disease



Concussion Management



Wellness Solutions



Peripheral Neuropathy

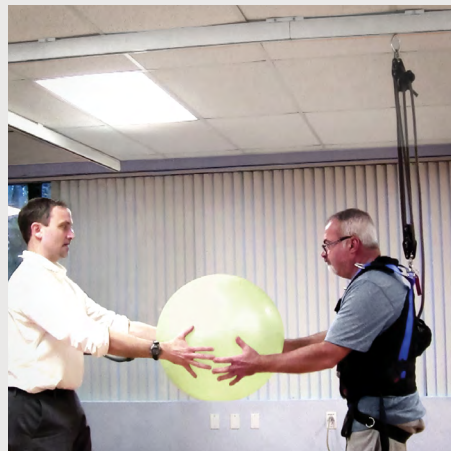
# Safe Patient Handling & Mobility

## Protect Staff and Patients from Injury

Biodex safe patient handling and mobility devices promote rehabilitation and facilitate functional recovery while maintaining safe conditions for therapists, rehabilitation nurses and caregivers.

### Benefits to Your Facility:

- Protect well-being of valued employees and reduce staff turnover
- Avoid costly downtime and workers' compensation claims
- Raise patient engagement in activities
- Attract patients with superior equipment and safe environment



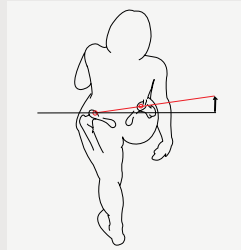
Learn more at [www.biodex.com/sphm](http://www.biodex.com/sphm)

# NxStep™ Unweighing System

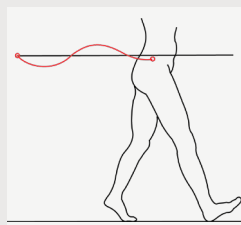
## Features:

- Full Patient Access – Open frame design encourages therapist facilitation and clears an unobstructed forward view for patients.
- One-Handed Control – Press a button to raise or lower patient; another to set unweighing load. Magnetically attach to anywhere on the frame.
- Counters Harness Slippage – Auto Unload feature compensates for potential harness movement due to slippage or posture changes.
- Pelvic Stabilization – Possible as single or two-point stabilization with retention cords.
- Tall and Small – From pediatric to 6'3" when standing over a treadmill with a 7" step-up, such as the Gait Trainer 3.
- Handrails As Needed – Easily removable for specific balance training exercise.
- Room-to-Room – Collapses to 32" (81 cm) wide to fit through standard door frames.

## Allows Functional Gait Patterns to be Practiced



**Pelvic rotation.**  
As patients progress in therapy, the Biodex single-point suspension system allows functional pelvic rotation to occur.



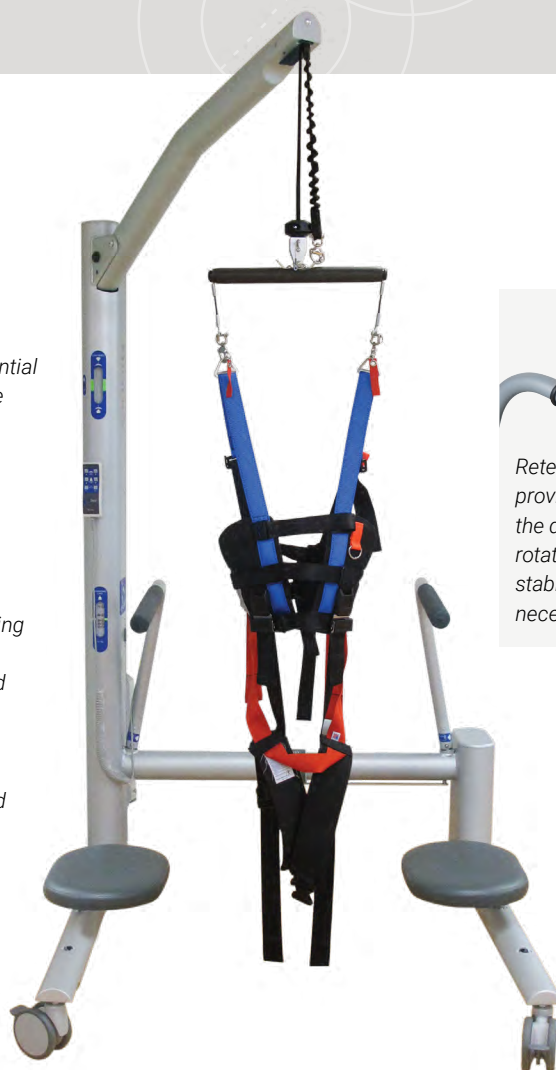
**Vertical displacement.**  
The Biodex dynamic suspension system allows up to 4" of vertical displacement, which helps the patient respond to ground reaction forces.

Overcomes potential harness slippage with unique auto unload feature.

NxStep Unweighing System shown with the Standard Unweighing Harness and two Therapist Seats (second seat sold separately).



Retention cords are provided to govern the degree of pelvic rotation when pelvic stabilization is necessary.



A Partial Body-Weight Support System that provides an open, accessible rehabilitation environment with automated harness compensation.



Combine the NxStep Unweighing System with the Gait Trainer 3 for body-weight supported treadmill training (BWSTT).



Allows patients to practice ambulation without fear.



Enables reactive, postural control exercise.



## Early rehabilitation, BWSTT or over ground

### Restore Functional Mobility

The NxStep Unweighing System enables partial weight-bearing therapy with open access to the patient. Offloading a percentage of body weight allows the opportunity for early rehabilitation while providing a safe environment for patient and therapist. Therapists can focus on treating their patients, manually facilitating lower extremities.

### Gait Kinematics

This system allows full and partial weight bearing without compromising proper gait kinematics. Depending on walking speed, up to four inches of vertical displacement is permitted while the system maintains a consistent level of unweighing.

The ability to allow pelvic rotation has its own advantages. Unlike two-point suspension systems that have a tendency to restrict rotation on a horizontal plane, the single-point method of NxStep system permits functional pelvic rotation and versatility when walking, side-stepping, retro-walking and turning. Patients can engage in reactive postural control exercises or change direction without repositioning the entire support system.

The unique, forward corner-mounted design of the NxStep system enables many advantages. Therapists can view patients from all angles; patients have full visibility of treadmill display and, the open design allows natural arm swing, an essential component to encourage neuroplasticity.

### Applications:

- Stroke
- Spinal Cord
- Head Injury
- Amputees
- Orthopedic
- Neurologic
- Vestibular
- Older Adult

### Specifications:

- Dimensions:  
Operational:  
I.D.: 38.8" w x 48" depth x 94" h (99 x 122 x 239 cm)  
O.D.: 47.5" w x 48" depth x 94" h (121 x 122 x 239 cm)  
Retracted (not for operation)  
O.D.: 32" w x 48" depth x 79" h (81 x 122 x 201 cm) will fit through a standard 36" x 80" door. Battery adds 4" (10.2 cm) to depth.
- Accommodates patients from pediatric to 6'3" (191 cm) when standing over a treadmill with 7" (18 cm) step-up, such as the Gait Trainer 3.
- Includes one therapist seat
- Accommodates treadmill up to 38" w x 13.5" h (97 x 34 cm)
- Vertical Adjustment: 50" (127 cm)
- Unloading Weight Capacity: 160 lb (73 kg)
- User Capacity: 400 lb (181 kg)
- Power: 115 VAC
- Battery: Rechargeable 24 V. Battery automatically charges when system is plugged in.
- Weight: 275 lb (125 kg)
- Shipping Weight: 415 lb (189 kg)
- Certification: CE Marked. See website for details.
- Warranty: Two years parts; one year labor



**950-485** NxStep Unweighing System, 115 VAC  
Includes: Standard unweighing harness, one therapist seat, a set of retention cords and an Allen wrench.  
Export Models Available.  
U.S. Patent No. 6,302,828

### Optional:

- 950-486** Additional Therapist Seat
- 945-462** Retention Cords, Pelvic Stabilization
- 056-862** Battery and Wall Charging Unit, 115 VAC
- 056-863** Battery and Wall Charging Unit, 230 VAC

**[biodex.com/nxstep](http://biodex.com/nxstep)**



# Mobility Assist™ Device

## Features:

- Safety Harness – Securely supports patients during lift and ambulation.
- Safe Patient Support – Encourages independent movement and addresses disuse atrophy.
- No Patient Lifting Required – Mitigates injury to staff and reduces risk of falls.
- Frame – Fits around standard wheelchairs and can pass through 36" doorway.
- Motorized Control – Either therapist or patient can operate the hand-held controller for assisted standing.



Hand-held, motorized control.

- Rechargeable Battery – Easily recharged to provide many hours of service.



## Closed-Seat Harness



The full seat of our redesigned safety harness supports patients securely and comfortably. Easy-to-read labels and color coding make the harness simple to put on and adjust.

Used as an ambulation therapy aid to help therapists, nurses and caregivers work with patients who have difficulty rising from seated to standing position.



Frame fits around standard wheelchairs.



Harness safely supports patient during stand assist without risk to therapist.



With the protection of a safety harness, the device lifts patients from a seated to standing position.



Patient has controlled body weight and standing balance – ready to initiate ambulation.

## Motorized stand assist and walker – in one device

### Improve Rehabilitation

It is important to get patients up and walking. This basic activity overcomes circulation problems, disuse atrophy, stimulates neural pathways, and plays a role in the psychology of a patient's sense of independence.

The Biodex Mobility Assist™ unit is a motorized stand-assist device that brings patients from a seated to standing position with the protection of a safety harness. As the patient stands using correct biomechanics, their center of gravity remains within the support of the device.



Once standing, the patient has controlled body weight and standing balance and can initiate ambulation. If they can move their legs, they can walk with the Mobility Assist device. From bedside or wheelchair to anywhere in the clinic or hospital setting – even outside to enjoy good weather in the courtyard – the Mobility Assist device will mobilize patients who have difficulty rising from a seated to standing position.

### Safe Patient Handling

While essential to invest in equipment and training to prevent patient falls, it is equally important to protect therapists, rehabilitation nurses, caregivers and visiting family from injury when trying to lift or support a patient.

Currently many states have enacted "Safe Patient Handling" laws that improve safety for both patient and healthcare provider. Powered lift-assist devices promote rehabilitation and facilitate functional recovery – while maintaining safe conditions.

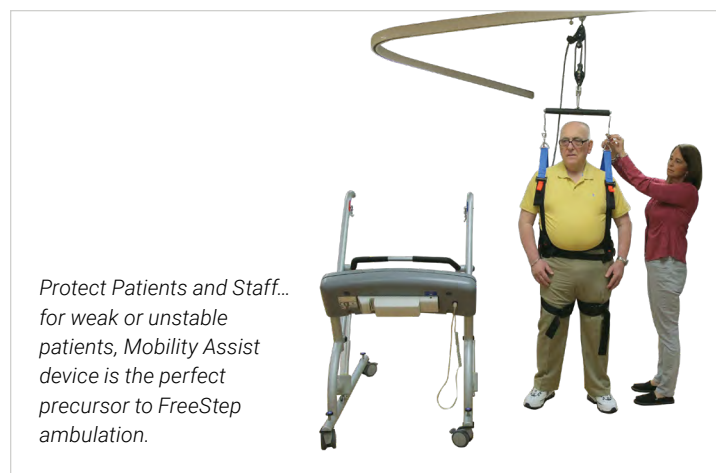


### Applications:

Suitable for any weakened or deconditioned patient, the Mobility Assist device supports patients from a seated to standing position, then allows them to proceed as with a durable walker. Safety of the harness protects patient and therapist from risk of injury while strengthening ambulation skills.

### Specifications:

- Dimensions:  
Outside: 44" l x 32.5" w x 37.5" h (112 x 83 x 95 cm)  
Inside width: 26.5" (67.3 cm)
- Weight: 90 lb (40.8 kg)
- User capacity: 350 lb (158.8 kg)
- Power: Rechargeable lead acid battery
- Certification: See website for details.
- Warranty: Two years parts, one year labor



*Protect Patients and Staff...  
for weak or unstable  
patients, Mobility Assist  
device is the perfect  
precursor to FreeStep  
ambulation.*

**950-570** Mobility Assist Device  
*Includes rechargeable battery, battery charging cable,  
stabilization strap and one universal safety harness.*

### Replacements:

- 950-574** Harness, Closed Seat  
**950-579** Stabilization Strap

**[biodex.com/mobilityassist](http://biodex.com/mobilityassist)**



# FreeStep SAS

## Features:

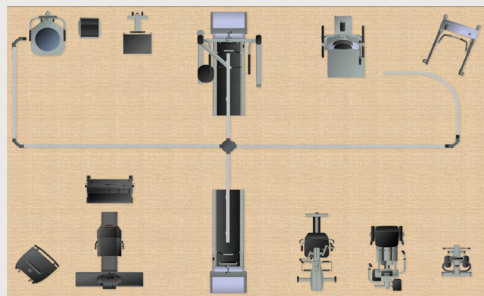
- Provides patient support during rehab activities:  
Sit-to-stand  
Over ground, treadmill walking  
Climbing and descending stairs  
Balance training
- Reduces number of therapists needed to safely assist patient ambulation.
- Minimizes fear of falling that inhibits patient effort.
- Protects therapists and caregivers from injuries when guarding patients.
- Accommodates concurrent use by multiple patients.
- Reduces liability risks for the facility by reducing patient falls as well as Workers' Compensation claims.

## Optional Portable Motorized Lift

The P-600 is designed to provide complete control for the therapist. With a patient load capacity of 600 pounds, it is suitable for environments where the demand for higher weight transfers is a reality.



## Customized Layout



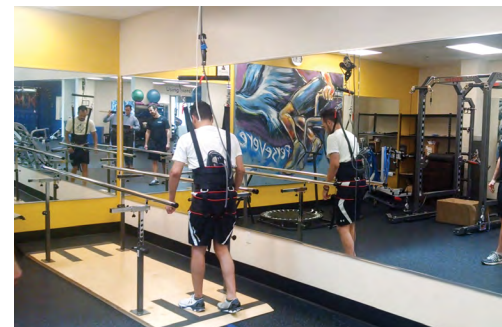
Customize your own floor plan using Biodes Floor Planner at [www.biodes.com/floorplanner/physmed](http://www.biodes.com/floorplanner/physmed)



Safe ambulation and support over ground, stairs, parallel bars or equipment.  
Multi-user capacity optimizes equipment and staff in a safe environment.



Performing a side step.



Walking backwards.

## An overhead track and harness system for patient and therapist safety

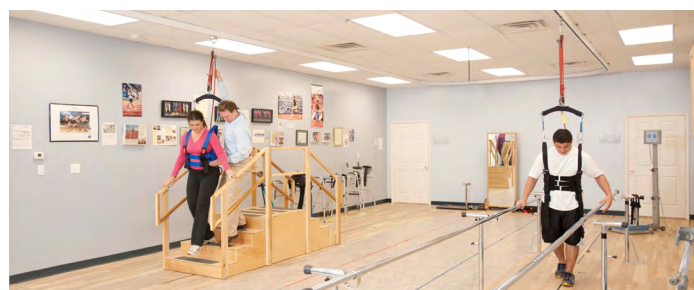
### Support Weak or Balance Deficient Patients Using Less Floor Space and Staff

Biodex FreeStep SAS is an overhead track and harness system that provides a safe ambulation environment for both therapist and patient. Without the fear of falling, patients can focus more fully on their tasks of gait and balance. Likewise, therapists can focus on assisting, rather than supporting.

### Custom Configuration to Suit Your Facility

Biodex FreeStep SAS can be custom configured to your facility, complementing the existing equipment floor plan. Install as a simple loop for continuous ambulation over stairs or through parallel bars, or add side branches for equipment-specific stations to include treadmill exercise or balance training.

Whatever material is behind your ceiling, FreeStep SAS can be installed... wood beam, steel or even concrete. Standard installation can support up to 750 lb per, or two 375 lb patients on one 8-foot track. The construction of FreeStep SAS allows multiple users performing varying exercises to benefit from supported ambulation without increasing PT attention. Therapists can treat high-risk patients one-on-one, without adding a second therapist to assist.

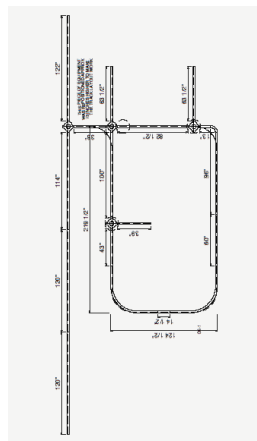


### Applications:

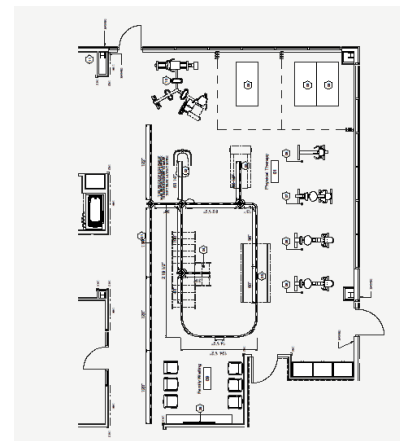
FreeStep SAS is suitable for any facility working with weakened or balance-deficient patients:

- Skilled nursing homes and assisted living facilities
- Stroke rehabilitation, Parkinson's patients
- Head injury, TBI and SCI patients
- Amputee rehabilitation
- Orthopedic patients, especially total hip/knee, where a fall could be a major setback

### Sample Configurations



Simple loop with side bars.



Simple loop with side bars set over stairs and parallel bars.

### The First Step toward FreeStep SAS

Determining the best layout for your track system begins with a basic drawing of your existing or future equipment floor plan. Detailing clear dimensions is essential. A Biodex Product Specialist will work with you to realize optimum utilization of your equipment, space and supported ambulation enhancements. Contact the Biodex Team to begin the process!

### Optional:

- 960-117** Portable Motorized Lift
- 960-143** Trolley Assembly, Standard
- 960-144** Trolley Assembly, Braking
- 960-145** Pole, Tightening
- 960-146** Single-Line Drop, Adjustment, Ropeman

[biodex.com/freestepsas](http://biodex.com/freestepsas)

# The Bottom Line

Biodex Rehabilitation Equipment is commonly used in rehabilitation services based on a physician referral using specific reimbursement codes.

**The following CPT codes may be applied.**

**Reimbursement amounts vary among plans and states.**

- 97110 Therapeutic procedure, one or more areas, each 15 minutes; therapeutic exercise to develop strength, endurance, range of motion and flexibility.
- 97112 Neuromuscular re-education of movement, balance, coordination, kinesthetic sense, posture, and/or proprioception for sitting and/or standing activities.
- 97116 Gait Training (includes stair climbing)
- 97530 Therapeutic activities, direct (one-on-one) patient contact by the provider (use of dynamic activities to improve functional performance), each 15 minutes
- 97750 Physical performance test or measurement (e.g., musculoskeletal, functional capacity) with written report, each 15 minutes

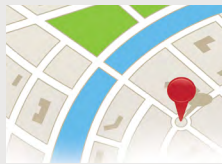


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