



# ReoAmbulator™

High Level of Gait Training Platform.  
Uses repetitive motion for neural retraining post  
lower limb orthopedic injuries or neurological trauma





## The ReoAmbulator™

Is a high level of gait training platform that Improves gait outcomes, accelerate recovery and reduce cost of care through intensive, repetitive retraining of normal movement. This solution continuously engages the patient in a virtual reality environment, incorporating cognitive and motor challenges and providing instant feedback.

The ReoAmbulator™ includes active modes of therapy that guide and enhance participation during a range of gait events. The system guides the patient through the activation of the lower leg muscle with the correct timing and force while incorporating visual and audio feedback from cameras and sensors that detect lower limb kinematics and muscle activation levels throughout entire session.

## Visual gait feedback

The therapist can display patient's heel to toe gait pattern on-screen for instant visual feedback using three cameras located around the ReoAmbulator™ treadmill. Visual demonstration enables the therapist and patient to see the foot kinematic motion starting from heel touching the walking surface to foot rolling forward during shifting weight to foot clearance and forward propulsion during the swing phase.

## Muscle resistance force quantification

The ReoAmbulator™ allows monitoring of the actual muscle resistance forces (spasticity) ,that are applied by the patient's lower limb muscles.

Quantification of muscle resistance forces during different gait stages enables the therapist to normalize resistance by modifying various parameters i.e. treadmill speed, body weight support, step size.

## Biomechanical gait profiles

There is a large and diverse number of pre-programmed biomechanical gait patterns, also known as gait profiles, which can be adapted to a wide range of patients.



## Indications

- Cerebral Vascular Accident (CVA) - "Stroke"
- Spinal Cord Injury (SCI) - complete and incomplete
- Traumatic Brain Injury (TBI)
- Multiple Sclerosis (MS)
- Parkinson Disease (PD)
- Cerebral Palsy (CP)
- Orthopedic conditions



## Tracked parameters include

Time in motion	Symmetry in body weight	Cadence	Muscle resistance	Cognitive and motor ability
Weight bearing	Treadmill speed	Step size	Active force	Visual kinematics- cameras



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## Technical specifications

Length	Length with ramp	Width	Height	Weight
313 cm (123.2 in)	405 cm (159.4 in)	131 cm (51.6 in)	275 cm (108.7 in)	960 kg (2116.8 lb)
Treadmill width	Treadmill length	Adjustable hip width	Patient weight	Patient height
70 cm (27.5 in)	130 cm (51.2 in)	24-61 cm (9.4-24 in)	max 150 kg (330 lb)	up to 200 cm (78.7 in)
Treadmill speed	Main screen size	System Rating	Frequency	Pediatric module (optional)
Max 10 km/hr (6.21 mph) without robotic legs   max 3.5 km/hr (2.17 mph) with robotic legs	40 in. HD TV	115/230 VAC	50-60 Hz	Minimal height - 115 cm (45.3 in)
	therapist touch screen size: 22 in.	50/60 Hz MAX 2,500 VA		
<b>Integrated wheels for easy transport</b>		<b>Integrated wheels for easy transport</b>		

## Patient benefits

Neural retraining of natural gait pattern

Objective outcomes show progress from session to session

Various modes of operation

Real-time audio and visual feedback

Multiple clinical gait training modules including virtual reality-multitask and gait coordination training

Visual feedback provided by cameras and sensors

Muscle resistance- spasticity

## Therapist benefits

Set up in less than 10 minutes

Highly intuitive user interface

Resistance- Spasticity measurement

Visual display of foot loading pattern

Efficient gait training - passive and active modes with biofeedback

Earlier patient participation

Wheelchair access and removable robotic legs for patients at a wide variety of functional levels