SYREBO®
SY-UEA2

Upper Limb Rehabilitation Robot

Advanced Gamified Rehabilitation for Arm and Shoulder Recovery

NEURO REHAB RECOVERY

Revolutionizing Upper Extremity Rehabilitation

The Syrebo® Upper Limb Rehabilitation Robot SY-UEA2 combines flexible robotics, high-precision optical positioning technology, and engaging interactive games to provide effective, fun, and motivating training for arm and shoulder function recovery.

Key Innovation: By merging advanced robotics with neuroscience and gamification, the SY-UEA2 transforms repetitive therapy into an engaging experience that maximizes patient motivation, treatment adherence, and clinical outcomes.

Core Features

High-Precision Optical Positioning Technology

Millimeter-Level Accuracy

- Advanced optical sensors track every movement
- Real-time monitoring of motion parameters
- Intelligent recognition of user status
- Precision reaching millimeter (mm) level
- Ensures accurate measurement and documentation

Ergonomic Design

Patient-Centered Engineering

- Adjustable arm length for wide range of patients
- Specialized accessory combination
- Compatible with wheelchairs
- One-touch height adjustment
- Suitable for multiple positions

Omnidirectional Mobile Chassis

Freedom of Movement

- Full-featured mobile platform
- Extensive training range
- Portable and compact design (only 8kg)
- Adaptable to multiple scenarios (sitting, standing, bedside)
- Easy movement between treatment areas

Multidimensional Training System

Comprehensive Rehabilitation

- 3 training goals: Motor, Cognition, ADL
- 4 motor training modes: Passive, Assistive, Active, Resistive
- Covers entire rehabilitation cycle
- Cognitive training integrated
- Activities of Daily Living (ADL) practice

Motor Training 4 Progressive Modes

Comprehensive Coverage of Rehabilitation Cycle

Passive Training (MMT Gr.0)

For patients in early recovery stage

- Robot fully guides arm movement
- No patient effort required
- Maintains range of motion
- Prevents contractures and stiffness

Assistance Training (MMT Gr.1-2)

For patients with minimal movement

- Robot provides partial assistance
- Patient contributes some effort
- Gradually increases patient participation
- Builds strength progressively

Active Training (MMT Gr.3)

For patients with fair strength

- Patient initiates and performs movement
- Robot follows the intended trajectory
- Provides guidance and support as needed
- Encourages maximum patient effort

Resistance Training (MMT Gr.4-5)

For patients in late-stage recovery

- Robot provides controlled resistance
- Strengthens muscles
- Challenges patient capabilities
- Prepares for functional independence

Visual Feedback:

- Host trajectory (blue line): Robot's guided path
- Patient trajectory (orange line): Patient's actual movement
- Real-time comparison for immediate feedback

Cognitive Training

Enhance Neuroplasticity Through Engaging Activities

Improve user's cognitive function and enhance neuroplasticity through exercises targeting memory, attention, perception, and other functions.

Attention Training
"Catch Bees" Game

- Divided attention exercises
- Visual tracking practice
- Sustained attention building

Sensory and Perceptual Training
"Categorization" Game

- Colour recognition exercises
- Shape recognition challenges
- Visual discrimination practice

Memory Training
""Let Goods Back" Game

- Spatial memory development
- Focused attention training
- Working memory enhancement

Unilateral Neglect Training
"Something New" Game

- Working memory challenges
- Focused attention improvement
- Spatial awareness enhancement

ADL Training

Restore User's Ability for Daily Living

By practicing in real-life situations, users gradually improve their attention, strength, and ability to carry out daily activities.

Functional Task Practice

Tidy the Room

- Attention training
- Muscle strength development
- Simulates organizing objects
- Real-world application

Shopping

- Attention enhancement
- Muscle strength building
- Grocery selection simulation
- Practical life skills

Benefits of ADL Training

- Bridges therapy to real-world function
- Improves independence
- Increases patient engagement
- Provides meaningful context
- Prepares for home environmen

Diversified Customizable Training Programs

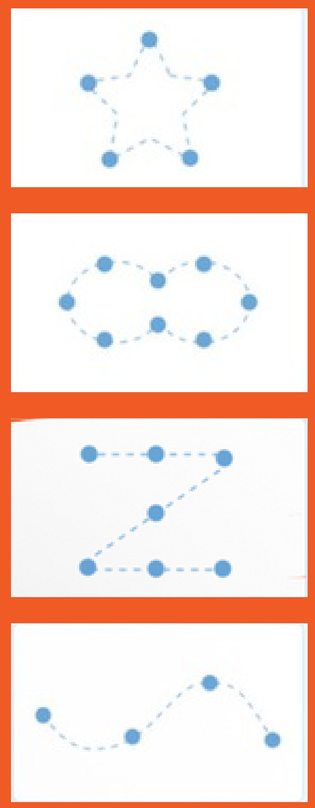
Pre-Set Trajectories

Joint-Specific Movements

- Protraction & retraction of scapula - Shoulder blade mobility
- Elbow joint flexion & extension - Bending and straightening
- Internal & external rotation of shoulder joint - Rotational movements

Complex Movement Patterns

- Range of motion training - Full arc movements
- Unilateral neglect training - Spatial awareness
- Balance training - Coordination and stability



Customize Trajectory

Patient-Specific Programming

- Create unlimited custom movement patterns
- Adapt to individual patient needs
- Adjust complexity as patient progresses
- Combine multiple movement types
- Save personalized programs.

Quantifying the Training Process

Intelligent Data Analysis & Evaluation

Comprehensive Progress Tracking

- Support multi-project training planning
- Combine evaluation with training data
- Quantitatively manage the rehabilitation process
- Generate detailed reports
- Evidence-based treatment decisions

Multi-Dimensional Feedback

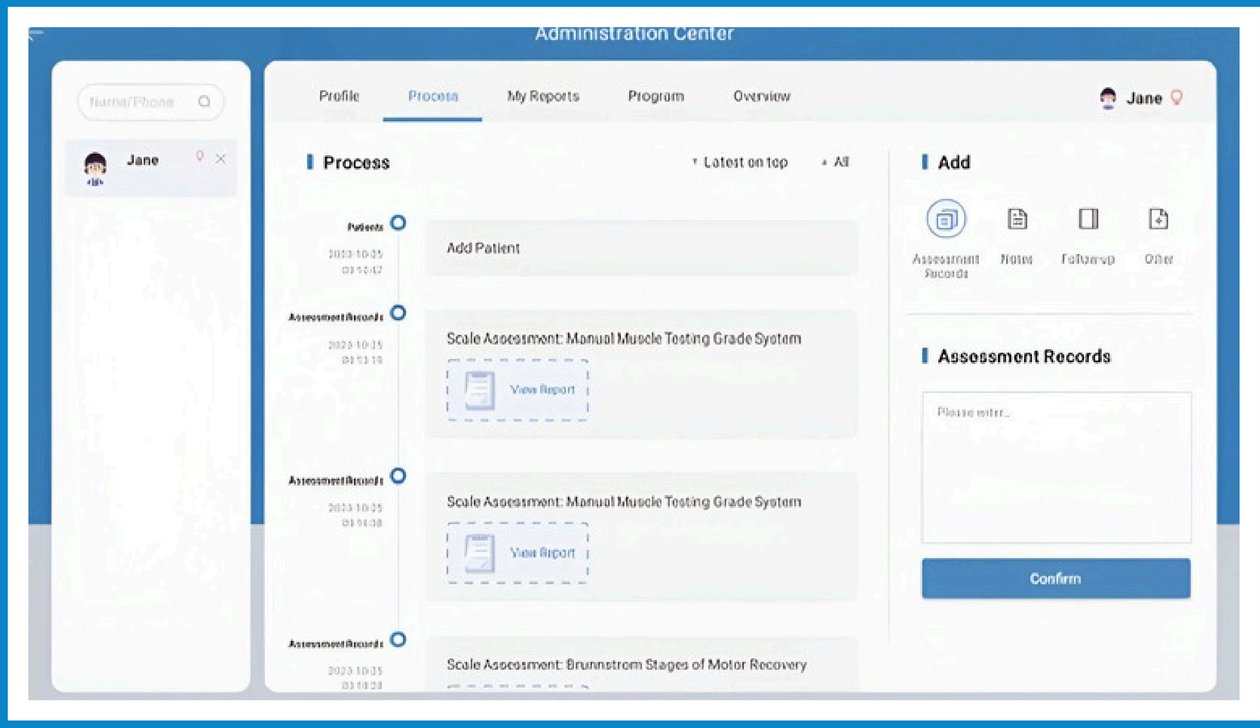
Real-Time Monitoring

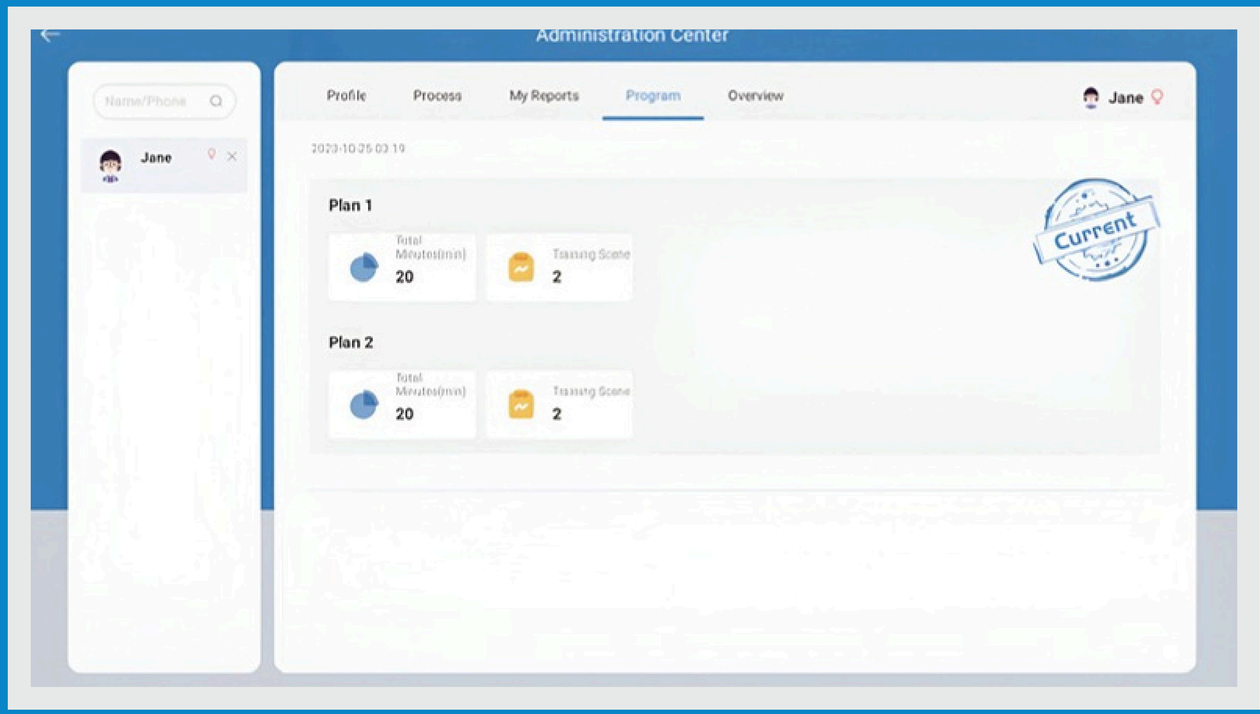
- Speed tracking during training
- Strength assessment
- Range of motion measurement
- Endurance evaluation
- Symmetry analysis

Therapist Benefits: According to real-time feedback, therapists can adjust the rehabilitation training plan in time to achieve closed management of the process.

Patient Benefits:

- Visual progress tracking
- Clear goals and milestones
- Motivation through visible improvement
- Objective measurement of gains





All-Round Safety Protection

4 Safety Systems

Force Limitation Protection (E10)

- Prevents excessive force application
- Protects patient from strain
- "Please stop force overly to avoid injury" alert

Overload Protection (E2)

- Monitors system capacity
- "Please restart the device or contact technical support" notification
- Prevents equipment damage

Emergency Stop Function (E8)

- Activated during safety periods
- "Please stop training manually after safety period" warning
- Immediate halt capability

Electronic Fence Touched

- Boundary protection system
- Prevents unintended movements
- Keeps training within safe zones

Indications for Use

Patient Populations

Patients with upper limb dysfunction caused by:

Neurological Conditions

- Stroke (CVA) - Arm and shoulder recovery
- Brain injury - Traumatic brain injury rehabilitation
- Cerebral palsy - Pediatric and adult treatment
- Parkinson's disease - Movement and rigidity improvement
- Alzheimer's disease - Cognitive and motor maintenance

Trauma and Injury

- Hand trauma - Arm and shoulder injuries
- Post-surgical rehabilitation - Orthopedic procedures
- Fractures - Upper extremity recovery

Other Conditions

- Lymphedema - Swelling reduction, mobility improvement
- Muscle weakness - Deconditioning recovery
- Limited range of motion - Stiffness and contractures

Suitable Clinical Environments

Multiple Department Applications

Rehabilitation Department - Primary treatment setting

Neurosurgery Department - Post-operative rehabilitation

Neurology Department - Neurological condition management

Geriatric Department - Elderly patient care

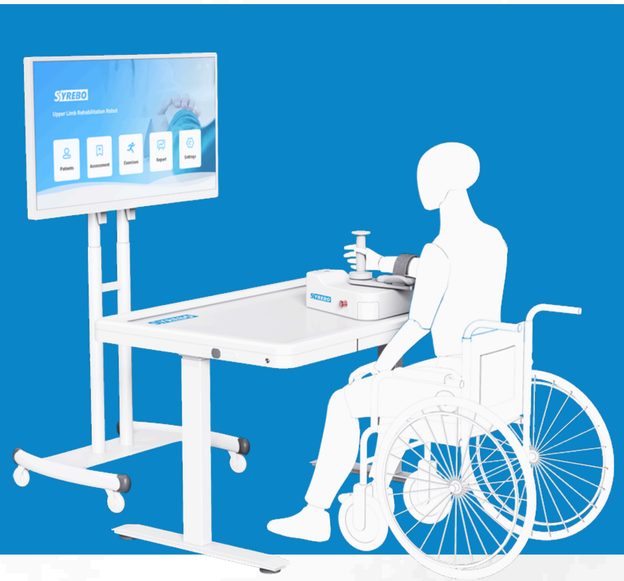
Pediatric Department - Children's rehabilitation (pediatric version available)

Orthopedic Department - Musculoskeletal recovery

Physical Therapy Department - Outpatient rehabilitation

Portable & Compact Design - Easy to Use

Meeting Various Scenarios: Adjustable for Multiple Positions



Bedside Use

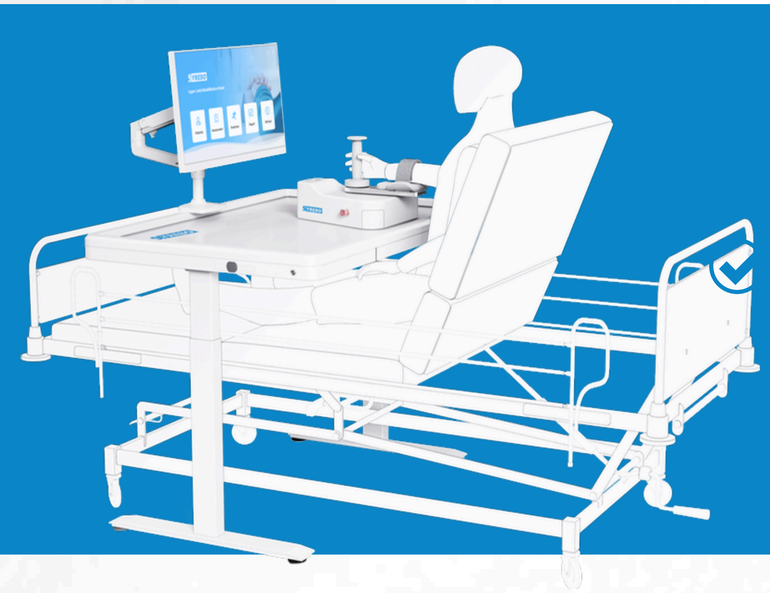
- Perfect for hospitalized patients
- Acute phase rehabilitation
- Intensive care settings
- Post-surgical early intervention

Standing Position

- For patients with greater mobility
- Advanced rehabilitation stage
- Functional training emphasis
- Balance integration

Sitting Position

- Standard outpatient clinic setup
- Most common configuration
- Comfortable for extended sessions
- Wheelchair compatible



One-Touch Height Adjustment

- Compatible with barrier-free wheelchairs
- Smooth height transitions
- No manual lifting required
- Accessible for all patients

Innovative Structure

Omnidirectional Moving Chassis

Training More Freely

- 360-degree movement capability
- Extensive workspace coverage
- Natural arm movement patterns
- No spatial limitations

High-Precision Optical Positioning Technology

Accuracy Reaching Millimeter (mm) Level

- Infrared sensors track position continuously
- Real-time coordinate mapping
- Precise trajectory following
- Microsecond response time

Specialized Features

- Ergonomic design
- Specialized accessory combination
- Adjustable arm length
- Suitable for a wide range of patients
- 4 sets of safety protection systems
- Increasing safety assurance

Evidence-Based Approach

Scientific Foundation

Based on recent clinical studies, upper extremity neurorehabilitation effectively improves arm and hand function by leveraging:

Key Principles:

- Intensive training - High-dose practice
- Task-specific activities - Meaningful movements
- High-repetition exercises - Neuroplasticity stimulation

Emerging Technology Benefits: Robotics, combined with virtual reality (VR) and engaging interfaces, show promise as effective complements or alternatives to conventional therapy, particularly for severely impaired patients.

Clinical Evidence:

- Dose and intensity matter: Higher dose of task-oriented training is superior to lower-dose conventional approaches for improving upper extremity motor deficits
- Applicable across phases: Effective in both subacute and chronic phases after stroke
- Motivation increases adherence: Gamification significantly improves patient engagement and treatment compliance

Why Choose Robotic Upper Extremity Rehabilitation?

Advantages Over Traditional Therapy

Consistent Dosage

- Robot provides exact same assistance/resistance every repetition
- Human therapists may fatigue or vary

More Treatment Options

- Motor training (4 modes) + Cognitive training + ADL training
- Traditional therapy typically focuses on motor only

Higher Repetition Count

- Patients can perform hundreds of repetitions per session
- Manual therapy limited by therapist endurance

Increased Motivation

- Engaging games make therapy fun
- Traditional exercises can become monotonous

Better Functional Tracking

- Detailed progress reports
- Visual proof of improvement

Data-Driven Decisions

- Evidence-based treatment adjustments
- Clear documentation for insurance and outcomes

Objective Measurement

- Precise tracking of every parameter
- Traditional therapy relies on subjective assessment

Technical Specifications

System Specifications

More Treatment Options

Weight	8 kg (portable)
Chassis Type:	Omnidirectional mobile
Positioning Technology:	High-precision optical (millimeter leve)
Workspace:	Extensive range, all directions

Training Capabilities

Training Goals:	3 (Motor, Cognition, ADL)
Motor Training Modes:	4 (Passive, Assistive, Active, Resistive)
Cognitive Games:	Multiple interactive options
ADL Scenarios:	Real-life task simulations
Pre-set Trajectories:	Multiple joint-specific patterns
Custom Trajectories:	Unlimited programmability

Features

More Treatment Options

Height Adjustment	Yes, compatible with wheelchairs
Use Positions:	Sitting, standing, bedside
Safety Systems:	4 comprehensive protection features
Real-time Monitoring:	Speed, strength, range, endurance
Report Generation:	Automatic with data analysis
Available Versions:	Adult and pediatric

Regulatory

CE Certified:	European medical device approval
FDA Registered:	United States authorization
Warranty:	2 years standard

Pediatric Version Available

Syrebo® Rehabilitation for Children

Specialized Design for Pediatric Patients

Syrebo has introduced a pediatric version of its rehabilitation robot, designed to assist children in hand and arm rehabilitation.

Ideal For:

- Pediatric cerebral palsy
- Traumatic brain injuries in children
- Congenital neurological conditions
- Post-surgical pediatric recovery
- Developmental delays

Child-Friendly Interface:

- Colorful, engaging games
- Age-appropriate challenges
- Shorter session durations
- Reward systems
- Parental involvement features

Special Features:

- Combines flexible robotics technology with neuroscience
- Helps with finger flexion and extension
- Reduces muscle tension
- Alleviates swelling and stiffness
- Promotes brain neuroplasticity
- Improves hand mobility
- Accelerates the rehabilitation process

Clinical Settings

Facilities Using the SY-UEA2

- Skilled Nursing Facilities (SNF) and Assisted Living (ALF) Use with elderly and frail persons requiring upper extremity rehabilitation
- Outpatient Neurological Training Centers Intensive therapy for stroke and brain injury patients
- Inpatient Rehabilitation Facilities Early intervention in acute and subacute phases
- Physical and Occupational Therapy Clinics Integration into comprehensive rehab programs
- Hospital Rehabilitation Departments Neurology, stroke, orthopedic departments
- Pediatric Rehabilitation Centers Specialized treatment for children with neurological conditions

Immersive Interaction Experience

Engaging Gamified Therapy. The Syrebo SY-UEA2 uses colorful, interactive games to:

Provide Immediate Visual Feedback

- See results in real-time
- Understand performance instantly

Challenge Cognitively

- Train brain while training movement
- Dual-task activities for neuroplasticity

Create Session Variety

- Multiple game options prevent boredom
- Progressive difficulty levels

Measure Progress Objectively

- Game scores correlate with function
- Clear improvement metrics

Example Game Scenarios:

- Underwater object collection
- Grocery shopping simulation
- Landscape navigation
- Object categorization
- Memory challenges
- And many more...

Complete Rehabilitation Ecosystem

The SY-UEA2 is part of Syrebo's comprehensive rehabilitation solution portfolio:

Hand Rehabilitation

- Robotic hand rehabilitation gloves
- Hand rehabilitation system with BCI (Brain-Computer Interface)
- Soft exoskeleton hand devices

Upper Limb

- Upper Limb Rehabilitation Robot SY-UEA2
- Dynamic Arm Support systems
- Shoulder training devices

Lower Limb

- Soft exoskeleton walkers
- Gait rehabilitation systems

Complementary Therapy

- Low and medium frequency electrotherapy systems
- Nerve stimulation devices

Global Presence & Trust

Worldwide Impact

- 80+ Countries & Regions Syrebo technology available across six continents
- 4,000+ Medical Units Hospitals, clinics, and rehabilitation centers using Syrebo systems
- 60,000+ Families Patients and families benefiting from Syrebo rehabilitation

Manufacturing Excellence

Shanghai Siyi Intelligent Technology Co., Ltd.

- Founded with focus on intelligent rehabilitation robotics
- R&D team with 10+ years of experience in robotics, rehabilitation medicine, and AI
- Collaboration with world-renowned rehabilitation experts
- Commitment to effective, safe, and affordable solutions

Quality Certifications:

- CE-MDR Certified
- FDA Registered
- ISO Standards Compliant

Comprehensive Support

by Neuro Rehab Recovery

As an authorized distributor of Syrebo in the United States, Neuro Rehab Recovery provides:

Clinical Training

Expert Instruction

- Training by certified neuro/ortho trained therapists
- Comprehensive operational training
- Best practice protocols
- Clinical application strategies

Ongoing Clinical Support

Continuous Access

- Neuro-trained physical therapist consultation
- Treatment optimization guidance
- Case discussion and problem-solving
- Protocol development assistance

Technical Support

USA-Based Service

- Repair and technical support resources
- Prompt response times
- Replacement parts availability
- Remote troubleshooting

Warranty

Quality Assurance

- 2-year standard warranty
- Reliable service and support
- Peace of mind protection

Flexible Business Models

- Purchase options
- Rental programs available
- Leasing arrangements
- Customized solutions for your facility

Why the Syrebo® SY-UEA2?

Complete Upper Extremity Solution

High-Quality Manufacturing

- Precision engineering
- Durable components
- Reliable performance

Fun and Easy to Use

- Intuitive interface
- Engaging for patients
- Simple for therapists

Functional Progression Tracking

- Objective measurements
- Clear progress documentation
- Evidence for insurance

Extensive Movement Options

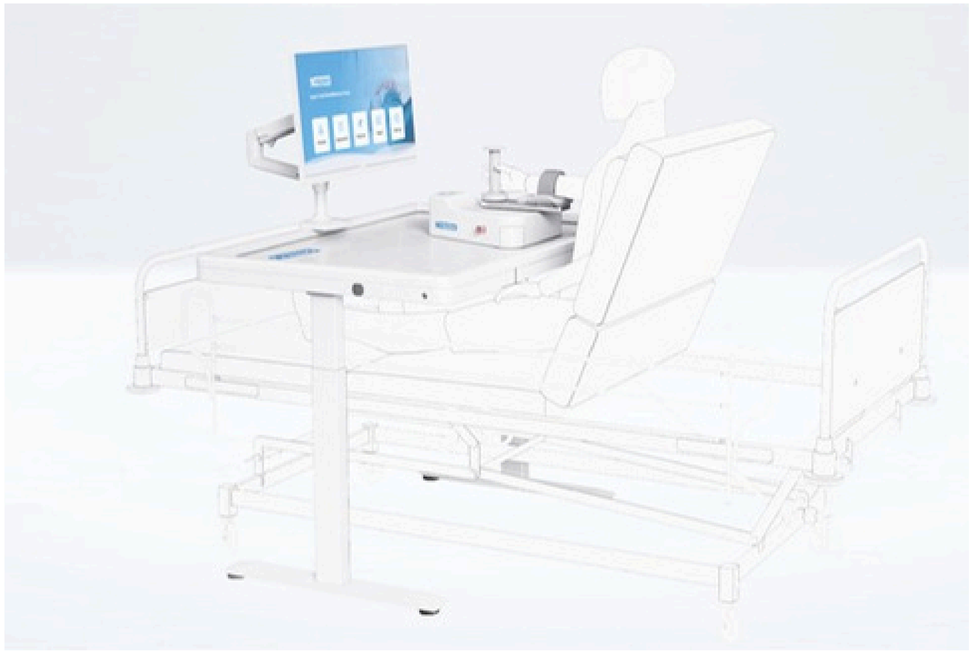
- Multiple trajectory patterns
- Customizable programming
- All major arm movements

Comprehensive Training Modalities

- Motor + Cognitive + ADL
- Full rehabilitation spectrum

Adjustable for All Patients

- Height adjustment
- Wheelchair compatible
- Bedside, sitting, standing



Pediatric and Adult Versions

- Solutions for all ages
- Specialized designs

Strong Warranty and Support

- 2-year coverage
- USA-based service
- Clinical consultation

Evidence-Based Approach

- Supported by research
- Proven clinical outcomes

Elevate Your Upper Extremity Rehabilitation Program

The Syrebo® Upper Limb Rehabilitation Robot SY-UEA2 offers advanced technology, evidence-based training, and superior patient experience.

Experience the Difference

Schedule a Demonstration and ask about our flexible financing programs

See the SY-UEA2 in action and discover how gamified robotic rehabilitation can transform your practice and your patients' outcomes.

Empowering Lives Through Advanced Neuro Rehabilitation

Contact Information:

1 (866) 476-6897

info@neurorehabrecovery.com

www.neurorehabrecovery.com

NEURO REHAB RECOVERY