

# ExoRehabX



## HOUSTONBIONICS

Accessible Devices for Efficient Therapy

ExoRehab X is designed for upper extremity rehabilitation . In therapies carried out with ExoRehab X, the patient starts exercise movements on their own and due to the integrated games they can maintain their motivation for a long time and thus highly repeated and intensive exercise can be provided.

## Effective Resistance Therapy

ExoRehab X is a passive exoskeletal device for upper-extremity resistance therapy

Configurable resistance modules can easily be installed on any joint for either isolated or functional therapy

Patient is active during the motion and a resistance is applied based on the patients' movement capability

Integrated video games are designed for subjects from different age\interest groups, and increase subject motivation

Using sensor data, patients' improvement progress is captured and reported via objective metrics

Compact design allows both clinical and home use



### RehabCode

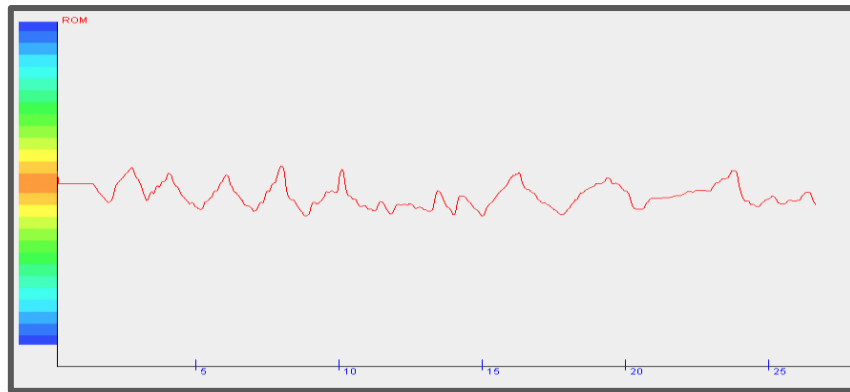
Can be installed on any Laptop or medical PC with Windows OS. Video games are designed to keep the subjects motivated and challenge them throughout the therapy. RehabCode can also evaluate the subject development over objective metrics such as improvement in the range of motion and movement smoothness. The data captured via motion sensors are processed and provided to the user/therapist to help to tailor the therapy for optimal outcome.



	Left wrist ROM	Max RPM	Ncm	Right wrist ROM	Max RPM	Ncm
1				91	27,5	1,8
2				28	14,67	2
3				63	27	1,5
4				87	28,17	1,7
5				35	23,33	1,9
6				18	17,67	2,1
7				61	24,33	1,7

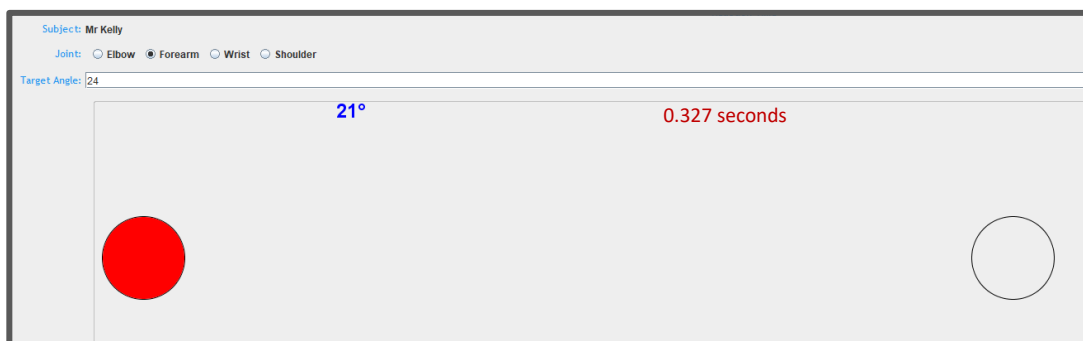
Records the patient's range of motion, speed and torque during game sessions. The patient's progress can be monitored in reports.

## Movement Smoothness



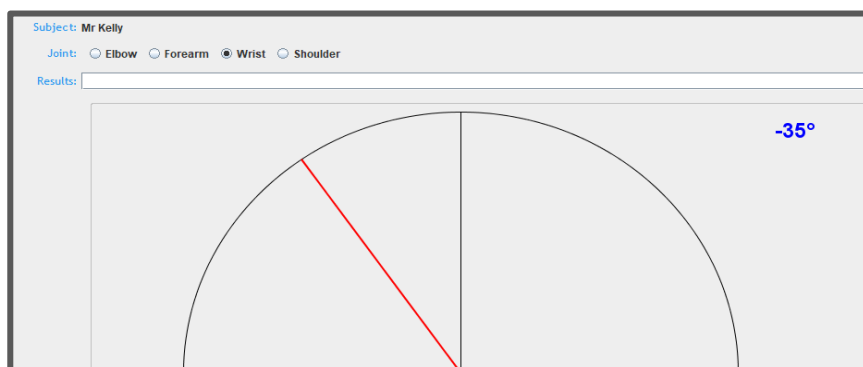
Graphically records the patient's movement smoothness. Proves the improvements via pre-treatment and post-treatment tests.

## Reaction Time



Tests the reaction time of the patient to the stimulus.

## Proprioception Test



Useful tools to examine the patient's proprioception

## Physiological Movements



Wrist flexion / extension

Wrist radial / ulnar deviation

Forearm supination / pronation

Elbow flexion / extension

Shoulder abduction / adduction

Shoulder flexion / extension

### ExoRehabX

Compact design enables bringing the therapy to the patient instead of vice versa

Isolate the joint you wish and apply resistance module to improve muscular strength and endurance

Various immersive games for patients from different ages/backgrounds

The theory behind ExoRehab X has been proven with clinical studies





**Contact us**



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