

REJOYCE

Hand, Arm and Shoulder Therapy

1.866.896.7277 (Toll Free in Canada and the USA)

Rehabtronics Inc.
#4352, 10230 – Jasper Avenue
Edmonton, AB
Canada T5J 4P6

T: +1 780 628 2520
E: inquiries@rehabtronics.com
www.rehabtronics.com



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Maximizing Recovery During Upper Extremity Rehabilitation

Studies show that upper extremity function is vital to a person's independence and quality of life ^{i, ii}.

According to EBRSR (www.ebrsr.com) and SCIRE (www.scireproject.com), the leading meta-reviews of evidence-based research in rehabilitation, movement therapy can improve upper limb function in many people living with stroke and spinal cord injury.

Repetitive daily practise of task-oriented exercises reinforces brain and spinal cord pathways, and can lead to significant functional gains ^{iii, iv}.

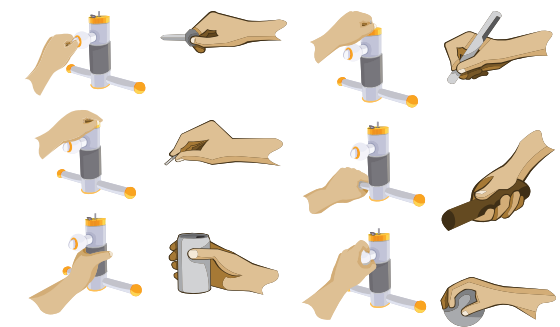
Motivation is an important factor in rehabilitation and greatly affects compliance^v. Conventional exercise activities are often boring and require burdensome levels of supervision by therapists.

ReJoyce Therapy

ReJoyce is an upper extremity rehabilitation workstation for use in either a clinic or at a patient's home. Featuring a range of exercise games with adjustable difficulty levels and a standardized hand and arm function test, ReJoyce is designed for both rehabilitation of tasks of daily living, fitness training, and client performance measurement.

ReJoyce maximizes motor recovery while substantially reducing client supervision overheads. ReJoyce therapy is based on five core principles:

1. Provide standardized upper limb exercises representing activities of daily life (ADL).
2. Disguise intensive training with motivating games.
3. Track functional improvements with an automated, objective hand and arm function test.
4. Offer patients the opportunity to continue ReJoyce exercise therapy in their own homes after leaving the clinic, tele-supervised over the Internet.
5. Enable therapists to tele-supervise from anywhere: the clinic, their own home, or even while traveling.



Examples of numerous hand grasps and activities of daily life that are trained on the ReJoyce rehabilitation system.



Motivation and Efficiency

When compared to conventional rehabilitation techniques, therapists have reported a significant increase in client motivation during ReJoyce-based rehabilitation^v. In many cases, ReJoyce therapy significantly reduces supervision requirements, allowing therapists to treat clients more efficiently and effectively.



The system is ready out of the box, and comes with everything you need so that you don't have to waste time and effort setting things up. We recommend attaching the device to a sturdy table



1. ReJoyce Manipulandum
2. ReJoyce Arm
3. Laptop Computer (software pre-installed)
4. Quick Reference Card

5. Instruction Manuals
6. Laptop Power Adaptor
7. ReJoyce USB cable

“The ReJoyce ... enables a person to do meaningful tasks, and provides the motivation to do them.”

– Professor Mary Galea,
Professor of Clinical Physiotherapy and Director,
Rehabilitation Sciences Research Centre



RAHFT

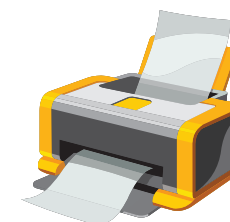
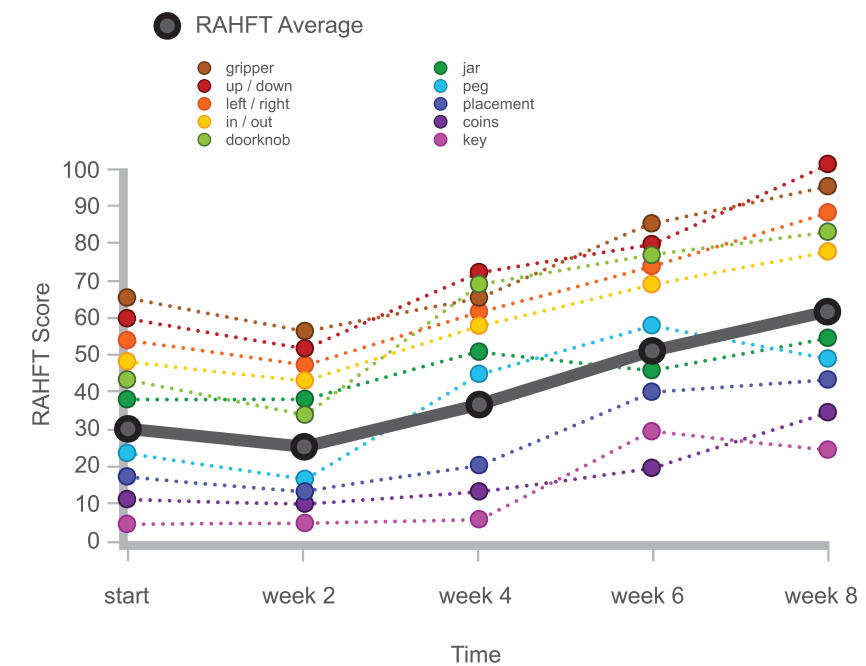
ReJoyce Automated Hand Function Test



Assessment with the RAHFT (ReJoyce Arm and Hand Function Test)

ReJoyce's RAHFT takes a client between 5 and 10 minutes to complete, and tracks multiple performance metrics over time. In a recent study the RAHFT was 3 times faster to administer than the ARAT and 4 times quicker than the upper extremity portion of the Fugl-Meyer test. The RAHFT is fully automated and correlates closely with several conventional hand function tests^{vi}.

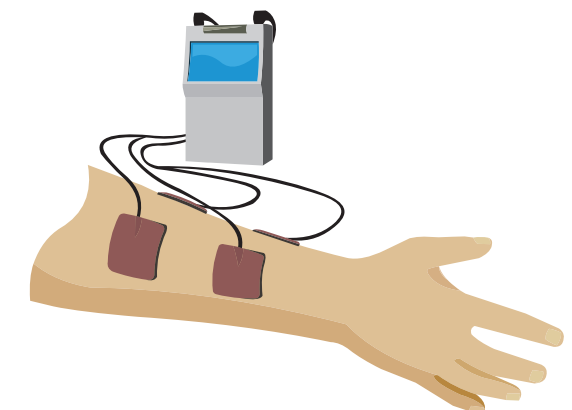
Improvements in a client's range of motion and speed are recorded and time-stamped with each test. ReJoyce software displays progress graphically and data can be easily exported for analysis and updating charts.



Patient progress is stored electronically for electronic records but it can also be printed with a single click and used as a hard copy.

ReJoyce and FES

ReJoyce has been combined with FES (Functional Electrical Stimulation) devices for the hand. Off-the-shelf devices, such as the Bioness H200, EMS 7500 stimulators can be used to help with grasp and release tasks used in several ReJoyce games.

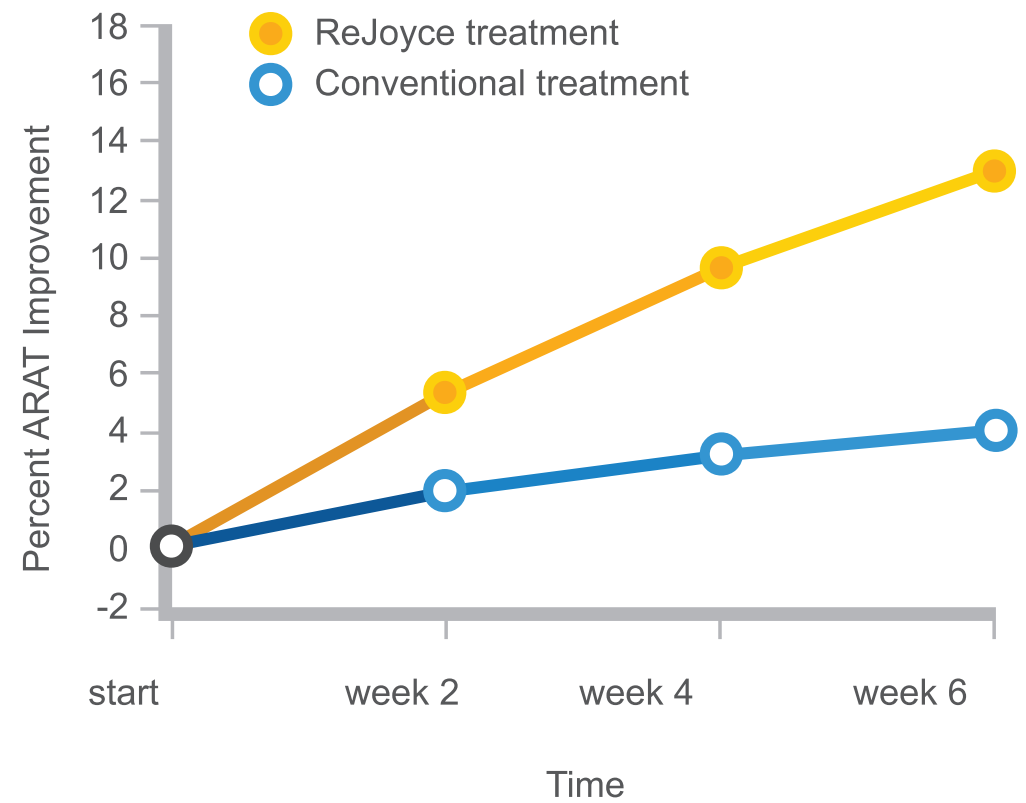


Clinical Trials

ReJoyce has been the subject of clinical studies around the world from North America to Australia. Studies have tested ReJoyce for use with acute and chronic stroke and spinal cord injured populations. In several studies, ReJoyce was combined with FES (Functional Electrical Stimulation) devices for the hand.

A 2008 survey of occupational and recreational therapists graded the ReJoyce a 4.32/5 on a perceived benefit scale, with all agreeing that it offered either more or far more therapeutic benefit over routine therapy.

Patients graded the ReJoyce a 4.33/5 on the same scale



Kowalczewski et al. 2011^{vii}



"I've found that, in everyday-tasks, I'm using my hand a lot more than before, and that I can pick things up with a firmer grip."

– Gabriel Moraitis, Study Participant



Home-Based Therapy, Remote Supervision

ReJoyce is as much designed for use in the clinic as it is for use in the home. Using the Hometelemed.com platform, licensed clinics and therapists can offer their clients specialized high-intensity home-based therapy.

Telerehabilitation is ideal for rural clients, clients with reduced mobility, or clients simply preferring home-based rehabilitation services.



Proven Benefits

Numerous scientific studies have demonstrated the efficacy of ReJoyce-based telerehabilitation in patients. A recent ReJoyce-based telerehabilitation study involving FES resulted in outcomes 3 times better than conventional home-based therapy delivered with off-the-shelf devices (ARAT improvements of $13.0\% \pm 9.8\%$ for the ReJoyce home based therapy vs improvements of $4.2\% \pm 9.7\%$ for conventional treatment)^{vii}.

Dramatic Cost-Reduction

Earlier patient discharges with continued at-home telerehabilitation can reduce the cost pressure on rehabilitation wards while actually increasing standard of care. Hometelemed integrates easily into existing clinical practices to increase patient throughput without compromising care.

Expand Your Business Reach Over-Night

Hometelemed.com takes care of all equipment and maintenance overheads and is, by far, the fastest way to increase the geographic reach of your neuro-rehabilitation business. ReJoyce-based tele-rehabilitation requires no additional office space or capital costs, and allows therapists to work from home or any other location with Internet access.

Availability

ReJoyce telerehabilitation platform through Hometelemed.com is currently only available in select regions. For information about availability in your area, please contact us.

