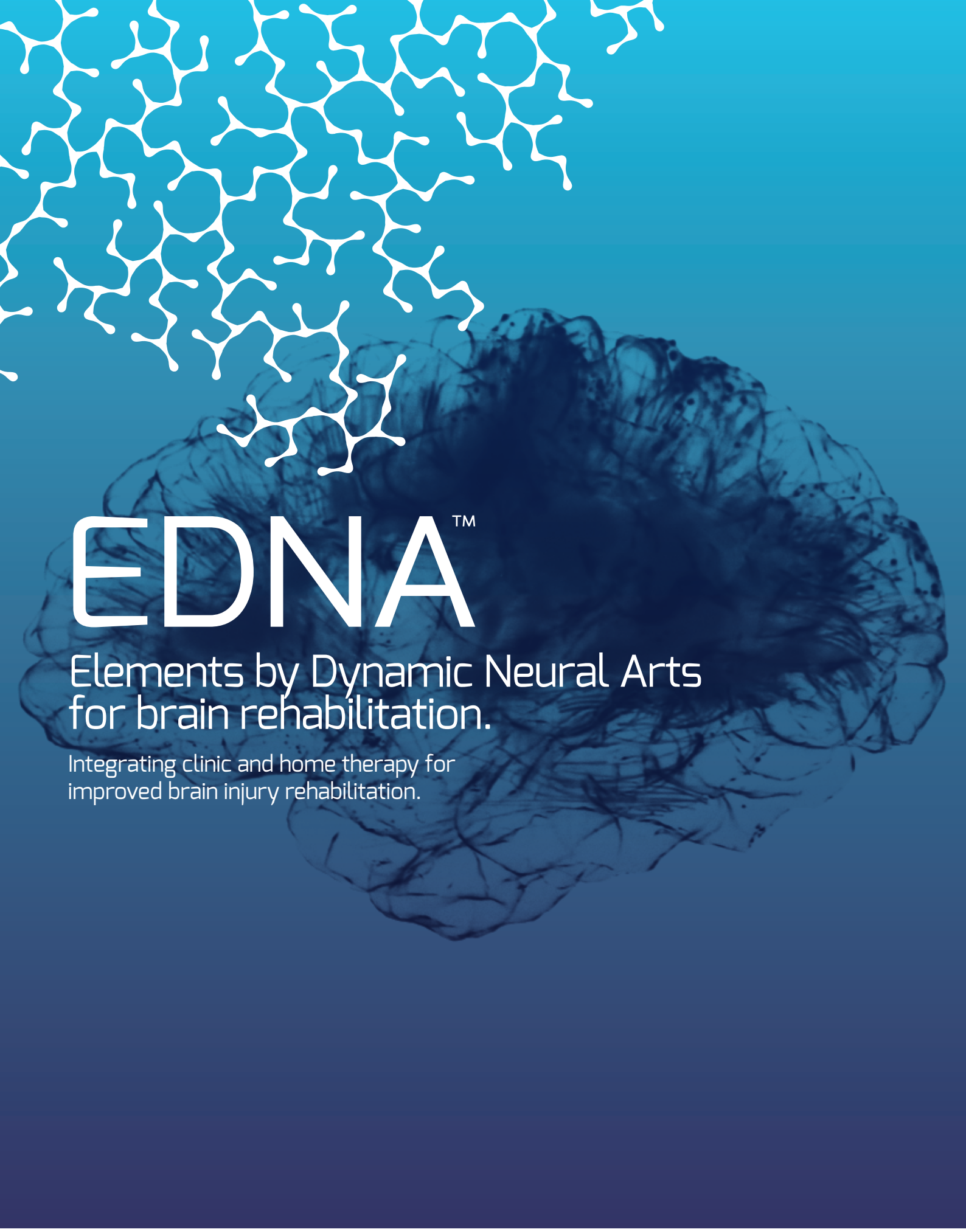


EDNA™

Elements by Dynamic Neural Arts for brain rehabilitation.

Integrating clinic and home therapy for improved brain injury rehabilitation.

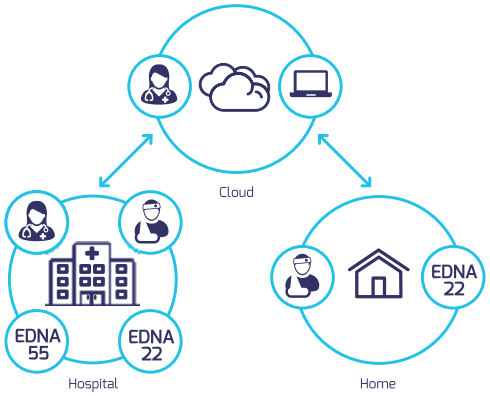
DYNAMIC NEURAL ARTS™

EDNA™
Elements by Dynamic Neural Arts

EDNA™ is the world's first upper-limb brain injury rehabilitation system to integrate clinic and home therapy to monitor recovery.

Elements by Dynamic Neural Arts (EDNA) is an interactive software application for rehabilitation of patients with an acquired brain injury, typically from stroke or trauma.

EDNA includes a range of engaging and intuitive game-like software tasks, tangible and graspable tools, and augmented feedback to enhance patient's motor function and cognitive skills.



EDNA-55

EDNA-55 is a tabletop touch screen for therapist led rehabilitation in the hospital or clinic.

EDNA-22

EDNA-22 is a mobile touch screen that allows delivery of a tailored rehabilitation program in the home.

Scientifically Accepted
Clinically tested and published in peer review journals.

Flexible
Tasks can be modified depending on the level of disability.

Mobile
Facilitates in-hospital and in-home usage.

Measurable
Quantitatively records performance over time to show improvement.

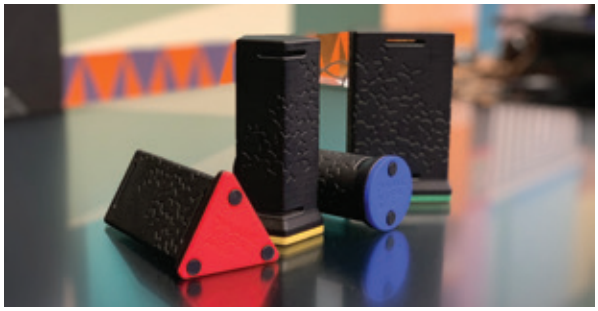
Effective
Demonstrates superior efficacy to 'usual care'.

Motivating
Captures patient attention and maintains patient motivation.

Item No.	Description
DNA-0001	**EDNA-55** - Tabletop 55 inch touchscreen display with integrated computer and EDNA software.
DNA-0002	**EDNA-55 Trolley** - Electric height-adjustable trolley with motorised tilt for the EDNA-55 display.
DNA-0005	**EDNA-22** - Portable 22 inch touchscreen display with integrated computer and EDNA software.
DNA-0006	**EDNA-22 Travel Case** - Hard shell foam lined protective travel case.
DNA-0007	**Mobile Broadband USB Modem** - Required if WiFi is not available.

EDNA TUIs

- Tangible User Interfaces (TUI)
- Real objects that permit intuitive interaction
- Specifically designed to connect to EDNA-22 & EDNA-55
- Velcro® hand straps for patients with difficulty gripping



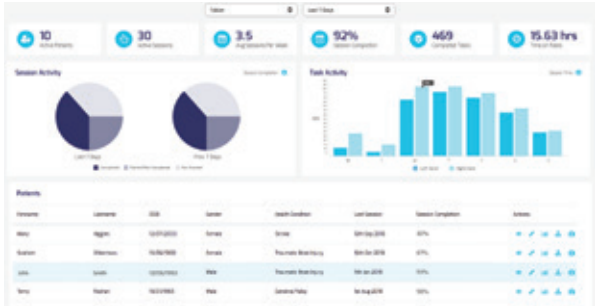
Item No.	Description
DNA-1001	Set of four TUIs for EDNA-55.
DNA-1006	Set of four TUIs for EDNA-22.
DNA-1011	Set of 4 Velcro universal straps.

EDNA Portal

- Web-based with secure therapist login
- Setup clinic and therapist access
- Add new patients
- Tailor prescription depending on patient ability

EDNA Reporting

- Dashboard view with all patient activity summary
- Review specific patient task performance graphs & tables
- Monitor patient adherence
- Export data for analysis

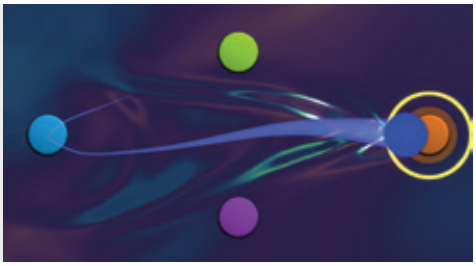


EDNA TASK - BASES

A goal directed task that consists of targets positioned in a 'diamond' shape on the screen. In turn, each target is cued by a flashing border, beginning with the near target and then progressing around the 'diamond'. The patient moves the object to each highlighted target, in turn.

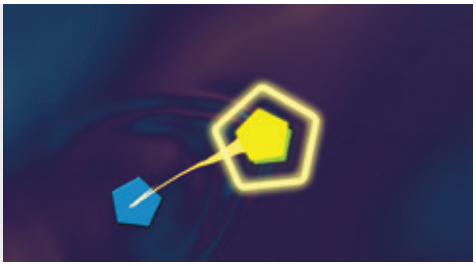
EDNA TASK - RANDOM BASES

A goal directed task that has the same task environment configuration as 'Bases'. However, this task has a higher level of stimulus-response uncertainty than Bases because targets are cued in a random order. This places higher demands on attention and motor planning.



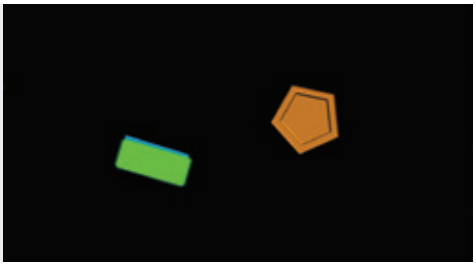
EDNA TASK - GO

A goal directed task with single targets presented at random locations on the screen. Upon object placement, the target disappears and then reappears at a new (random) location. Patients cannot predict the spatial location of targets in advance. Attentional and motor planning demands are higher than the two 'Bases' tasks. Reach trajectory and extent must be programmed for each individual movement because no positional cuing is available.



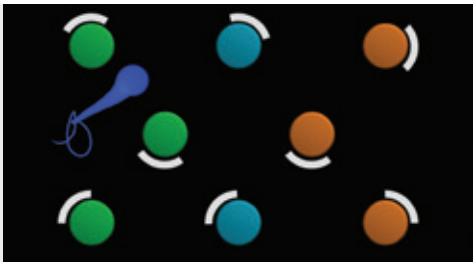
EDNA TASK - GO NO GO

A goal directed task that is similar to the 'Go' task but requires movement to a specific matching target while withholding responses to distractor shapes. This task places the highest demands on motor planning and cognition. Participants must plan object movement to a random target location while remembering to inhibit movement to distractors (or non-targets)



EDNA TASK - MIXER

An exploratory task that presents eight circular targets in a pattern. The patient can move or place objects on or near a target to activate its sound and to start a spinning animation. To vary sound pitch and volume, the object can be moved closer to the centre of the target or slid over it. To de-activate a target (and its sound), the object can be slid away from the target.

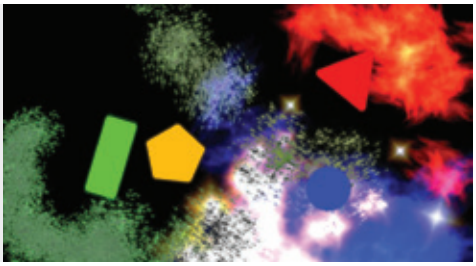


EDNA TASK - SQUIGGLES

An exploratory task that encourages participants to draw lines and shapes on the display using a combination of four objects (cylinder, pentagon, triangle and rectangle). Each object creates a different visual trail and sound effect when placed or moved across the screen. When the object is lifted, the trail continues creating an animated visual effect.

EDNA TASK - SWARM

An exploratory task that encourages bimanual control to explore the audio-visual relationships between the four objects. When placed on the screen, multiple coloured shapes slowly gravitate toward and swarm around the base of each object. As each object is moved the swarm follows. The movement, colour, size and sound characteristics of each swarm changes when the distance between objects is altered.



EDNA therapy as an adjunct, has shown to enhance performance of motor, cognitive, and everyday function.[8,9]

Published literature on the problem.

STROKE

- One of the most common forms of Acquired Brain Injury (ABI).[1]
- Leading cause of disability worldwide. [2,3]

THERAPY

- Early and intensive rehabilitation leads to improved function.[4]
- Only 50% of stroke patients receive adequate therapy.[5]

OUTCOMES

- Stimulating and motivating forms of therapy can enhance patient engagement and adherence.[6]
- Increased intensity with daily therapy leads to improved outcomes.[7]

EDNA evidence based research.

STROKE

- EDNA therapy system shows a 2-3 times greater improvement compared to those only receiving conventional therapy.[8]

TRAUMATIC BRAIN INJURY

- EDNA therapy can improve rehabilitation of upper-limb motor control.[9]

CEREBRAL PALSY

- Engaging rehabilitation tool to improve upper-limb function in children aged 4-15 with a hemiplegia.[10]

These studies support previous published literature that identified brain function can be enhanced by training that engages the patient, maintains motivation and provides performance feedback.

DYNAMIC NEURAL ARTS™

Dynamic Neural Arts combines digital art and science to enhance human potential.

Dynamic Neural Arts utilises innovative technologies to design and commercialise scientifically validated products that improve neural performance.

Dynamic Neural Arts is an organisation that brings together leading designers, software engineers, scientists and medical technology commercialisation experts. The collaborative effort has created an integrated software and hardware technology system for the global rehabilitation market. The team of researchers has worked together for over 10 years to develop the interactive digital media solutions for movement rehabilitation.

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