

Neofect Smart Pegboard



Neofect Smart Pegboard

Neofect Smart Pegboard provides visual and auditory feedback to motivate users through gamified training as they rehabilitate.



Concept

Restoration of hand mobility is very important for the self-reliance of patients with central nervous system disorders in their daily lives. Functions of hands involve reach, grasp, grip, pinch, carry, release, in-hand manipulation and so on. The pegboard is a great device for the trainings on these functions and enables sensorimotor training and eye-hand coordination training at the same time. A repeated and regular training routine is necessary for rehabilitation to enhance and maintain brain plasticity. Neofect Smart Pegboard provides training routines composed of functional game factors, visual feedback, auditory feedback and increases the patients' motivation, encouraging them to keep up with the repeated routines with fun. Cognitive factors that will improve the patient's attention, memory, problem solving abilities are also applied to the training programs. This cognitive exercise therapy is based on the development process of cognition and creates positive effects for the restoration of hand functions. While following the trainings featuring the cognitive factors, patients will not only be focused but also have a sense of accomplishment for finishing the task.



Neofect Smart Pegboard

- Digital rehabilitation**
- Gamification of boring training
 - Visual and auditory feedback
 - Display of training results
 - Cognitive components
- Neurorehabilitation of analog pegboard**
- Repeated rehab training
 - Hand mobility increase
 - Sensorimotor training
 - Eye-hand coordination

Contents

There are more than 25 functional and cognitive training options. The result includes overall time, the number of pegs in the right place, success rate, and reaction time.

Training type	Purpose of training
Freestyle	Free Exploration
Row Completion	Task Performance
Shape Completion	Task Performance
Blackout	Task Performance
Randomizer	Task Performance
Smash a Mole	Reaction time
Snake Trap	Reaction time

Training type	Purpose of training
Visual Training 1	Visual tracking
Visual Training 2	Visual field
Shape Recognition	Shape sense
Memory Placement	Memory
Simon Says 1	Memory
Simon Says 2	Memory
Pathfinder	Problem solving ability
Find Home	Problem solving ability

Upper limb function training example

Shape Completion

Place the pegs to complete the shapes.

Snake Trap

Trap the snake's body with a peg while it moves.

Cognitive training example

Memory Placement

Memorize the locations and place the pegs in the correct holes.

Pathfinder

Connect all three lights to make a path.

Smart Pegboard Hardware



Components

- Base Unit
- Standard Board
- Standard Pegs
- Mixed Shape Board
- Mixed Shape Pegs
- Pinch Board
- Pinch Pegs
- Charger
- Training Guide

