Supporting Clinical Evidence for FitMi Home Therapy

MASSED PRACTICE

Increasing the number of exercise repetitions that stroke survivors practice during rehabilitation leads to an improved recovery.

In pilot studies with FitMi, users performed 12 times more exercise repetitions than the average for conventional therapy.

See these clinical studies:

Is more better? Using metadata to explore dose-response relationships in stroke rehabilitation.

The effects of increased dose of exercise-based therapies to enhance motor recovery after stroke: a systematic review and meta-analysis.

Observation of amounts of movement practice provided during stroke rehabilitation.

MULTI-MODAL FEEDBACK

Providing stroke survivors with both immediate and long-term feedback on their performance can significantly improve their recovery.

FitMi provides immediate visual, auditory, and haptic feedback as patients exercise, as well as daily summaries and long-term performance trends.

See these clinical studies:

International randomized clinical trial, stroke inpatient rehabilitation with reinforcement of walking speed (SIRROWS), improves outcomes.

Augmented visual, auditory, haptic, and multimodal feedback in motor learning: a review.

Biofeedback improves activities of the lower limb after stroke: a systematic review.

ADAPTIVE CHALLENGE

Recovery after stroke is enhanced when patients are challenged at an appropriate level (i.e. the "Challenge Point Framework").

FitMi incorporates an adaptive challenge algorithm that automatically adjusts the duration and intensity of exercise users perform based on their ability.

See these clinical studies:

Challenge Point: A Framework for Conceptualizing the Effects of Various Practice Conditions in Motor Learning

Use of the challenge point framework to guide motor learning of stepping reactions for improved balance control in people with stroke: a case series.

Feasibility of the adaptive and automatic presentation of tasks (ADAPT) system for rehabilitation of upper extremity function post-stroke.

MOTIVATING INTERFACE

Compliance to conventional home-based rehabilitation programs is notoriously low.

FitMi uses innovative movement sensors and interactive gaming elements that are clinically proven to sustain motivation to exercise over a long period of time.

See these clinical studies:

Adherence to a home-based exercise program for individuals after stroke.

Home-based hand rehabilitation after chronic stroke: Randomized, controlled single-blind trial comparing the MusicGlove with a conventional exercise program.

Telehealth, Wearable Sensors, and the Internet: Will They Improve Stroke Outcomes Through Increased Intensity of Therapy, Motivation, and Adherence to Rehabilitation Programs?

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