FitMi – Supporting Clinical Evidence

Designed with a science-first approach, FitMi incorporates four key features that have been clinically proven to increase recovery after stroke.

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:

- http://www.ncbi.nlm.nih.gov/pubmed/24867924
- https://www.ncbi.nlm.nih.gov/pubmed/20942915
- https://www.ncbi.nlm.nih.gov/pubmed/19801058

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:

- https://www.ncbi.nlm.nih.gov/pubmed/20164411
- https://www.ncbi.nlm.nih.gov/pubmed/23132605
- http://www.ncbi.nlm.nih.gov/pubmed/21843829

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:

- https://www.tandfonline.com/doi/abs/10.3200/JMBR.36.2.212-224
- https://www.ncbi.nlm.nih.gov/pubmed/24363337
- https://www.ncbi.nlm.nih.gov/pubmed/21813010

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:

- http://www.ncbi.nlm.nih.gov/pubmed/21642065
- https://www.ncbi.nlm.nih.gov/pubmed/27532880
- https://www.ncbi.nlm.nih.gov/pubmed/28628594

FlintRehab
Tools to spark recovery