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Recovery of arm and hand function following stroke using the Feldenkrais Method, a SaeboFlex™ orthosis, and specific task training: a case study.

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The background of the study:

Recovery of arm and hand function following stroke is often incomplete. In this case study, we report the combined use of the Feldenkrais Method, a SaeboFlex™ orthosis, and movement re-education techniques to restore arm and hand function following stroke.

The method used:

The patient received 33 Feldenkrais Integration lessons starting at 6 months after stroke onset. One movement re-education lessons (45 minutes each) was given about once a week for 10 months. At 16 months post-onset, the patient was fitted with a SaeboFlex™ orthosis to facilitate wrist and finger extension while performing specific arm and hand tasks. The patient received one hour of instruction with the SaeboFlex™ four times a week and was asked to practice functional movement tasks unsupervised for 45 minutes a day.

The results obtained:

The Feldenkrais Method reduced spasticity in his right arm from a 3+ to 1 (Modified Ashworth Scale). Clonus at the wrist disappeared and there was a marked relaxation of the fingers, thumb, and wrist flexors. There was palpable tension in the wrist and finger extensors on command but insufficient to initiate any joint motion. The SaeboFlex™ orthosis facilitated a return of voluntary finger and thumb flexion, and active assistive extension of the wrist and finger muscles. The patient has full active range of motion of the 5th digit. The ability to grip and release objects at varying shoulder positions of elevation markedly improved as well as the performance time for each task.

The conclusion reached:

The combined effects of Feldenkrais training with a SaeboFlex™ orthosis and repetitive task training facilitated a reduction in arm and hand spasticity, restoration of shoulder and elbow function when grasping and releasing objects. Functional performance changes indicate that neuroplastic changes were occurring in the cortex more then 18 months post infarction.