CONSTRAINT-INDUCED MOVEMENT THERAPY FOR LOWER EXTREMITY FUNCTION AND MOBILITY

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Constraint-Induced Movement therapy (CI therapy) is a rehabilitation approach designed to promote neural plasticity, improve movement control and increase functional independence in patients following neurological injuries. To date, most CI therapy research has been directed at examining the effects of CI therapy on upper extremity use. However, research has also demonstrated positive effects from CI therapy protocols directed at improving lower extremity (LE) function and mobility in persons with chronic hemiparesis after stroke and Multiple Sclerosis. The purpose of this presentation will be to describe the LE CI Therapy treatment protocol, research findings for this approach, and potential strategies for improving outcomes from LE CI therapy.

Session Outline

V. Introduction
a. Development of the CI therapy LE protocol
b. Theoretical basis behind effects of CI therapy
   i. Overcoming learned misuse
   ii. Promotion use-dependent cortical plasticity
c. Measurement philosophy
   i. Best effort measures
   ii. Real world measures
d. Participant selection
   i. Pre-treatment movement criteria
   ii. Balance and mobility
   iii. Cognition
   iv. Communication
   v. Pain
   vi. Pre-treatment real world use
VI. CI therapy protocol for LE recovery
a. Treatment components
b. Similarities/differences from other gait and mobility interventions

VII. Selected research
a. UAB studies
   i. Stroke
   ii. SCI
   iii. Hip fracture
   iv. MS
b. Other laboratories

VIII. The future of LE CI therapy (research and clinical application)

Selected References


