Children with hemiplegic cerebral palsy (CP) have impairments in involved upper extremity function that often affect their independence and quality of life. Until recently, evidence-based treatments of impaired hand function have been largely lacking. Recent studies suggest that children with hemiplegia may benefit from intensive practice. One recent treatment approach providing intensive unimanual practice, constraint-induced movement therapy (CIMT), has shown promise for the improvement of unimanual hand function both in adults and children with unilateral impairments. Here we present evidence that CIMT may indeed be beneficial for some children with hemiplegia. We also suggest, however, that there are a number of conceptual problems and limitations associated with CIMT, with the most important being that CIMT is a unimanual intervention, and increased functional independence in the child’s environment requires use of both hands in cooperation. Thus we follow up with a behavioral and neurophysiological rationale for intensive bimanual therapy in children with hemiplegia. Our findings suggest that restraining the more affected upper extremity is not required to elicit changes in involved upper extremity function. Finally, we present data on specificity of training and suggest future avenues of research.

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