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Motor deficits and decreased use of the affected upper limb are frequent problems after stroke. To address these problems, it is important that effective rehabilitation approaches are developed. An intensive training model, Constraint-induced Movement Therapy, which includes forced use, has received much attention for some years. Evaluation of its impact and of the relative importance of its various components is necessary. Forced use refers to the use of the restraint component only. Effect detection requires adequate measurement. Numerous tests and measures are available after stroke, covering different constructs and important areas related to the International Classification of Functioning, Disability and Health (ICF). Reliable and valid measures of body function, activity capacity, and activity performance are needed specifically for following the recovery of arm and hand function.

This thesis presents different aspects of function and disability in the hand and arm in persons who are in the sub-acute phase after stroke. Both clinically rated and self-reported outcomes are used to evaluate the effectiveness of forced use on arm and hand recovery. The reliability of the Grippit instrument was investigated, as was the validity of the measure Motor Activity Log.