Upper Limb Assessment & Treatment Guides

# 8. Task-specific Training

## Introduction / Background

Task-specific training is a treatment approach that focuses on practise of functional activities that are meaningful to the client. The activity is graded/progressed by the therapist to ensure it remains a challenge for the client. It is repeatedly practised to enable ‘learning’.

Evidence in the literature to support task-specific training is not consistent. Some research reports positive results, when compared to ‘usual treatment’, generally emphasizing the need to include meaningful, real life activities, as well as increased repetition (Hubbard et al, 2009; Arya KN et al 2012). However, other research findings report ‘low to moderate’ quality evidence in support of task specific training and recommend further research is needed (Pollock et al, 2016; French et al 2016).

Task-specific training is also referred to as task-oriented or task specific repetitive training and is generally distinguished from ‘repetitive’ training. Repetitive training involves increased volumes of repetition but this is often of part of a movement or component of an activity. For task specific training the key features appear to be: repetition and progression of meaningful functional tasks.

Hubbard et al (2009) outlined some strategies to incorporate into a programme of task specific training.

1. Training should be relevant to the client, including meaningful and real life activities
2. Training activities should be random, so task order, context and environment are varied
3. Training needs to be repetitive
4. Training may initially involve components of a task but should always aim towards reconstructing the whole task
5. Training should include positive feedback.

## Competencies required

Knowledge of stroke impairments and recovery

Knowledge of skill acquisition

Sequencing and progression of activities

## Equipment required

Specific equipment is not essential as task specific training involves everyday items that are used for functional tasks.

However, there are some devices available that may make it much easier to increase the number of repetitions e.g. saebo flex or saeboglove, and these can be incorporated into a programme of task-specific training. Other treatment approaches which require equipment, e.g. constraint induced movement therapy (CIMT) or body weight support treadmill training (BWSTT) for the lower limb, are considered to be types of task-specific training.

## Procedure

No specific treatment procedures are required.

Treatment will involve:

* assessment of the client’s upper limb impairments and functional ability
* setting of client goals (functional tasks of interest/importance to client)
* analysis of the activity
* development of task progressions

## Inclusion / Exclusion Criteria

Clients can be included if they are able to participate in an exercise programme

Clients would be excluded if they have substantial pain, neglect, communication or cognitive deficits

## Precautions

If clients are undertaking the task specific practise independently, care needs to be taken to ensure they are able to do so correctly

## Evidence

National clinical guidelines for stroke (UK) 5th ed 2016

AHA/ASA guidelines for Adult stroke Rehabilitation & Recovery May 2016 – Upper Extremity Activity Recommendations

[www.ebrsr.com](http://www.ebrsr.com) – Stroke rehabilitation clinician handbook 2014. Chapter 4.7 Rehabilitation Management of the Upper Extremity

Winstein CJ, Rose DK, Tan SM, Lewthwaite R, Chui HC, Azen SP. A randomized controlled comparison of upper-extremity rehabilitation strategies in acute stroke: A pilot study of immediate and long-term outcomes. Arch Phys Med Rehabil. Apr 2004;85(4):620-628.

Harris JE, Eng JJ, Miller WC, Dawson AS. A self-administered Graded Repetitive Arm Supplementary Program (GRASP) improves arm function during inpatient stroke rehabilitation: a multi-site randomized controlled trial. Stroke. Jun 2009;40(6):2123-2128.

French B, Thomas LH, Leathley MJ, et al. Repetitive task training for improving functional ability after stroke. Cochrane Database Syst Rev. 2007(4):CD006073.

Arya KN, Verma R, Garg RK, Sharma VP, Agarwal M, Aggarwal GG. Meaningful task-specific training (MTST) for stroke rehabilitation: a randomized controlled trial. Top Stroke Rehabil. May-Jun 2012;19(3):193-21.

Hubbard IJ, Parsons MW, Neilson C, Carey LM. Task-specific training: evidence for and translation to clinical practice. Occup Ther Int. 2009;16(3-4):175-189.

Biennerhassett J, Dite W. Additional task-related practice improves mobility and upper limb function early after stroke: A randomized controlled trial. Aust. J. Physioth. 2004;50:219-24.

Bosch J, O'Donnell MJ, Barreca S, Thabane. L, Wishart L. Does task-oriented practice improve upper extremity motor recovery after stroke? A systematic review. ISRN Stroke. 2014;Article ID 504910.

Hafsteinsdottir TB, Algra A, Kappelle LJ, Grypdonck MHF. Neurodevelopmental treatment after stroke: A comparative study. J. Neurol. Neurosurg. Psych. 2005;76:788-92.

Han C, Wang Q, Meng PP, Qi MZ. Effects of intensity of arm training on hemiplegic upper extremity motor recovery in stroke patients: A randomized controlled trial. Clinical Rehabilitation. 2013;27:75-81.

Langhammer B, Stanghelle JK. Bobath or motor relearning programme? A comparison of two different approaches of physiotherapy in stroke rehabilitation: A randomized controlled study. Clinical rehabilitation. 2000;14:361-9.

Stuck RA, Marshall LM, Sivakumar R. Feasibility of SaeboFlex upper-limb training in acute stroke rehabilitation: a clinical case series. Occupational Therapy International. 2014:3:108-14.

Bayona NA, Bitensky J, Salter K, Teasell R. The role of task-specific training in rehabilitation therapies. Top Stroke Rehabil. Summer 2005;12(3):58-65.

## Information for Patients / Families / Whanau

Information sheet: Task Specific Training – see attached document

