THE BEST STUDY
Best Evidence Stroke Therapies

HOW TO GUIDE:
REPETITIVE TASK SPECIFIC TRAINING

PRINCIPLES/ RECOMMENDATIONS:

Practice of a movement results in improvement in that specific movement. Large amounts of practice are required to master a motor skill however the ideal dose of practice is not agreed upon in the current literature.

The focus of repetitive task specific training sessions on different days should be randomly ordered to increase ability to generalise the learning of movement. It is important to grade the task to suit the individual patient, practice the task in different settings and if appropriate, different positions.

Repetitive task-specific training should be relevant and meaningful to the patient. Training should focus on activities that relate to the patient’s goals and where possible, should be in context. The evidence suggests it is not beneficial to prescribe a series of upper limb exercises without having a relationship to the mastering of the task that is important to the patient.

Repetitive task-specific training should aim towards reconstructing the whole task.

- Some patients require the whole task to be broken down into component parts or skills – it is recommended to start with the skill acquisition and practice of the individual component parts.
- Gradually aim to regroup some components together with mass practice of this sequence.
- The overall aim is to regroup all components to form the whole task and spend time repeating the whole movement.
- When breaking down the task, it is important (if possible) to include the patient and explain the reasoning. Continue to reinforce the reasons behind practising the skill acquisition.

Repetitive task-specific training should be positively reinforced. All therapy should include timely and positive feedback however this should reduce over time to prevent unnecessary dependency.

It is important to consider a patient’s posture when completing this intervention. Repetitive task-specific training is aimed at improving motor skills therefore activating the correct muscles of the sequence. Overuse of trunk and shoulder abduction are common compensatory methods for a reach movement. When completing task specific training it is recommended correct technique of muscle movement and pattern be practiced and compensatory methods corrected.

HOW TO

1. Start by setting goals with your patient using appropriate goal setting tools i.e. COPM – Refer to the BEST Study’s guide regarding goal setting
2. Observe the patient completing the goal related activity - identify their ability to complete the required steps.
3. It may be necessary to break down the task so the patient can practice components of the task and gradually regroup the components to enable retraining of the whole task.
4. Develop session plans – aim for 2-3 tasks per session. Grade the tasks to suit your patient’s level of function – tasks should challenge but not overwhelm your patient’s motor capabilities.
5. Set patient up at a table or in a comfortable position appropriate for the task. A pillow behind the patients back may provide more support. The use of a mirror might prompt the patient to maintain their posture and provide visual feedback.
6. Complete a series of repetitions of the selected tasks. The 2-3 tasks should complement each other and could include bilateral tasks, gross motor skills and fine motor skills.
7. Monitor the patient for signs of fatigue or pain and indications the task is too easy or too hard.
8. If the affected arm has little or no movement, physical guidance may be required to participate in the action. Examples of assistance include hand over hand assistance or equipment such as ESTIM. Aim to gradually decrease the need for assistance i.e. may need to start with ESTIM, progress to verbal prompting etc.
**EXAMPLE**

**CLIENT GOALS**

- Drinking from a cup
- Eat independently
- Play golf

**INITIAL EVALUATION RESULTS**

- Difficulty with grasp due to decrease strength in finger flexion
- Decrease coordination of right arm
- CAHAI score 31/63

**SELECT TASKS/ACTIVITIES**

- Drinking from cup
- Pour glass of water from bottle

**HOW TO GRADE TASK**

- Use unaffected hand to assist with maintaining grasp around cup - gradually decrease level of hands on assistance
- Start with larger cups or cups with a grip on them - gradually decrease size and weight of cup
- Sit down and place cup on table in between grasps - gradually stand and get cup from overhead shelf

**HOW MUCH**

The evidence for repetitive task specific training does not give a clear recommendation for the amount and intensity of the sessions.

One randomised control trial, which found repetitive task specific training beneficial for immediate and long term outcome, provided repetitive task specific training for one hour a day, five days a week for four weeks (total of 20 hours).

The National Stroke Guidelines recommend as much therapy as possible with a minimum of one hour active practice per day for at least five days a week. It also recommends upper limb training should commence early and appropriate interventions should begin in the first week after stroke.

**REFERENCES**
