

WEEK 1 ASSESSMENT OF ACUTE CONDITIONS WITH THE POTENTIAL TO RECOVER – STROKE, TBI, GBS

STROKE – upper motor neuron lesion, (UNML), an interruption of the blood flow to the brain, resulting in swelling causing cell death and brain damage.

TRAUMATIC BRAIN INJURY (TBI) – UMNL, trauma to the brain and resulting and swelling causing brain damage.

GUILIAN BARRE SYNDROME (GBS) – LMNL, loss of myelin sheath around peripheral nerves preventing nerve conduction.

New	Health Condition	Body Structure and Function (Impairment)	Activity (Limitations)	Participation (Restrictions)
	MS-LBP Fractures Neuro-Stroke, TBI, SCI, CP CP-COPD, Heart attack	<ul style="list-style-type: none"> •Weakness/ •Paralysis •Reduced endurance •Reduced dexterity, motor control, incoordination •Reduced ROM •Spasticity •Pain •Altered breathing mechanics 	<ul style="list-style-type: none"> •Sitting •Standing up •Standing •Walking •Running •Jumping •Reaching •Grasping •Lifting throwing •Eating •Speaking 	<ul style="list-style-type: none"> •Socialisation •Recreation •Work •Domestication personal external

IMPORTANT COMPONENT

- The critical kinematic characteristics of the action without which the task cannot be effectively performed.

ADAPTIVE STRATEGIES

- The patients attempt at compensation for their underlying impairments.

STANDING UP

INITIAL ALIGNMENT

- Reduce thigh support, ankles in dorsiflexion.
- Feet placement (knee flexion to place feet back in ankle dorsiflexion).
- Inclination of trunk forward by flexion at the hips with an extended trunk.
- Movement of the knees forward.
- Extension of the hips and the knees for final standing alignment.

ADAPTIVE STRATEGIES

PRE- EXTENSION PHASE

- Weight borne mostly through adaptive side.
- Wide base of support

EXTENSION PHASE

- Falls backwards
- Push through arms and doesn't bring weight forward.
- Weight bare through intact side

EVIDENCE BASED PRACTICE: USE OF CLINICAL PRACTICE GUIDELINES, SYSTEMATIC REVIEWS, CLINICAL TRIALS IN STROKE, TBI, GBS

WHAT IS EVIDENCE BASED PRACTICE

- Evidence based medicine is clinical practice that is supported by the best research evidence with clinical expertise and patient values

P – Patient or population (e.g person with stroke)

I – intervention (e.g electrical stimulation)

C – comparison (e.g sling)

O – outcome (e.g subluxation)

FOREST PLOTS

- If the diamond is bigger this means that there is a greater variability
- Standardised mean difference (0.2 = small, 0.5 = medium, 0.8 = large)

WHAT ARE THE BENEFITS OF HAVING GUIDELINES?

- In the health medical fields, NHMRC guidelines provide the evidence based information needed to achieve best practice. In regard to ethical issues in those fields, these guidelines reflect the communities range of attitudes and concerns.

CLIENT HISTORY

When looking at the social history you must take into consideration the clients home, living space, work, leisure, hobbies and mental health which will assist with creating the best treatment plan.

WEEK 2 INTRODUCTION TO REHABILITATION

PRINCIPALS OF TRAINING (important components)

- Set up of environment
- Patient alignment (position/ moving in the correct way)
- Manual guidance (may have to assist with the movement)
- Instructions (what, why and how)
- Therapist position
- Feedback.

OTHER IMPORTANT COMPONENTS WHEN TEACHING A MOVEMENT

- Be straight to the point of what, why and how you are going to do the movement and why it is important for the clients rehab.
- Be at their eye level and give a demonstration.
- Let them attempt with their good and bad side while using a wall for safety if needed.
- Make sure that the bed is at a good height and use a stool if needed for lower movements.
- Give positive reinforcement by telling them what they are doing that is good.

CLINICAL IMPLICATIONS

- Level 1 evidence supports the importance of the amount of practice is good for recovery after stroke.

STRATEGIES TO INCREASE THE AMOUNT OF PRACTICE

Mental practice, work stations, classes, weekend therapy, caregiver involvement, exergames, enriching the environment.

MONITORING PRACTICE

- Can use electronic devices to record practice and progress and to send information back to therapist about practice completed.
- Exergames may include a function where progress is recorded automatically.

TAKE HOME MESSAGES

- Both the type and the amount of practice makes a difference.
- Optimise the practice with good use of environment, patient alignment, manual guidance, instructions and therapist position.
- Maximise the amount of practice completed (mental, workstations, classes, weekend therapy, caregiver involvement, exergames, enriched environments)
- Typically, you will use a number of these strategies in your practice, it is harder for people with more severe impairments but not impossible.
- Monitor the practice completed to help motivate the patient and to provide therapists with information about what the patient is doing.

REACHING (adaptive)

- Abduction of glenohumeral joint, lateral flexion of trunk towards unaffected side.
- Shoulder elevation of scapulothoracic joint.
- Internal rotation.
- This could be due to muscle weakness of the shoulder flexors or ability to co-ordinate muscles.

GRASPING (normal)

- Hand should open at the start of the movement
- Hand should open just wide enough for object.
- More wrist flexion than expected.
- The transport component and manipulation components happen together and are interrelated. This means that the hand begins to open at the start of the reach and the hand achieves maximum aperture at the same time as the low velocity transport begins therefore the arm and hand is functioning as a single unit.