



Why Evidence-Based Practice Now?

- A growing body of scientific knowledge
- Increased interest in consistent application of quality services
- Increased interest in outcomes and accountability by funders
- Past missteps in spreading untested "best practices" that turned out not to be as effective as advertised
- Because it works !!

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Peer-Reviewed Research

Peer review – A process used to check the quality and importance of research studies. It aims to provide a wider check on the quality and interpretation of a study by having other experts in the field review the research and conclusions.

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Gold Standard for Evidence

- **Randomized controlled trial (RCT)** – Participants are randomly assigned to either an intervention or control group. This allows the effect of the intervention to be studied in groups of people who are the same, except for the intervention being studied.
 - Any differences seen in the groups at the end can be attributed to the difference in treatment alone, and not to bias or chance.

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EBP means integrating individual clinical expertise with the best available external evidence



Say no to "scorched earth" reinvention.

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How is EBP Accomplished?

1. Frame the Question

- Problem/population
- Intervention/Exposure
- Comparison
- Outcome

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Case scenario

Esther is a 65 y.o. female who experienced a left sided stroke 2 weeks ago. Her primary complaint is that she cannot move her R UE during functional activities, although she does have some AROM at the shoulder, elbow, wrist, and hand.

She is an active woman who likes to garden and spend time w her granddaughter. She styles her hair each day with a hairdryer, applies makeup, and chooses her clothes with care daily.

Her therapist is thinking about mCIT as an alternative to the positioning and NDT exercises that she learned in school.

Would either be effective with her? Which would be best?

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Step 1: Frame the Question

Problem – Intervention – Comparison – Outcome/Endpoint

P: 65 y.o. female s/p acute stroke, some UE AROM

I: CIT

C: Traditional Therapy; NDT at the facility where I did this search

O: Functional use of UE

“in older females w stroke, would some form of CIT be better for regaining use of the affected UE?”

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Step 2: Finding the Evidence



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EBRSR Modules

Chapter 9: Lower Extremity Interventions

This review contrasts the compensatory and restorative approaches to lower extremity rehabilitation. Literature pertaining to specific treatments is summarized and recommendations are made based on levels of evidence. [More Details](#)



Chapter 10: Upper Extremity Interventions

In this review, rehabilitation therapies of upper extremity deficits are summarized, the current literature describes and assesses randomized controlled trials for these therapies, and conclusions about interventions' efficacy are made. [More Details](#)



Chapter 11: Hemiplegic Shoulder Pain & Complex Regional Pain Syndrome

This review provides a complete discussion of the current literature on hemiplegic shoulder pain and complex regional pain syndrome post stroke. Levels of evidence are provided to clarify research based recommendations. [More Details](#)



Chapter 12: Post-Stroke Cognitive Disorders

This review provides information regarding the importance and impact of cognitive impairment and delirium post stroke. Treatment interventions are reviewed and levels of evidence assigned. [More Details](#)



Chapter 13: Perceptual Disorders

Unilateral spatial neglect (USN) affects a significant number of individuals with stroke. The present review focuses on interventions to improve USN either by increasing patient's awareness of or attention to the



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Key Points

Neurodevelopmental techniques are not superior to other therapeutic approaches in treatment of the hemiparetic upper extremity.

It is uncertain whether enhanced therapy results in improved short-term upper extremity functioning.

Repetitive Task Specific Training techniques improve upper extremity function.

It is uncertain whether sensorimotor training results in improved upper extremity function.

Sensorimotor training with robotic devices improves functional and motor outcomes of the shoulder and elbow, however, it does not improve functional and motor outcomes of the wrist and hand.

There is preliminary evidence that virtual reality in combination with real-world therapy improves functional and motor outcomes post stroke

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GAIT			
LoE	Conclusion Statement	RCTs	References
1b	Task-specific training may produce greater improvements in gait than conventional therapy .	3	Verma et al. 2011; Kuberan et al. 2017; Kwon et al. 2015
2	Lower limb task-specific training may produce greater improvements in gait than upper limb task-specific training .	1	Dean et al. 2000
2	Stair training may not have a difference in efficacy compared to flat surface training for improving gait.	1	Park et al. 2015
2	Task-specific training with ankle joint mobilization may not have a difference in efficacy compared to task-specific training for improving gait.	1	Kluding et al. 2008

FUNCTIONAL MOBILITY			
LoE	Conclusion Statement	RCTs	References
2	Virtual reality balance training may produce greater improvements in functional mobility than virtual reality seated training .	1	McEwen et al. 2014
1b	There is conflicting evidence about the effect of virtual reality training to improve functional mobility when compared to conventional therapy .	2	Llorens et al. 2015; Braun et al. 2016
2	Virtual reality with treadmill training may not have a difference in efficacy compared to treadmill training for improving functional mobility.	1	Jaffe et al. 2004

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Remember our question???

- P: 65 y.o. female s/p acute stroke, some UE AROM
 - I: CIT
 - C: Traditional Therapy (NDT at facility)
 - O: Functional use of UE
- “in older females w stroke, would CIT be better for regaining use of the affected UE?”**

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Let's go into the EBRSR

- EBRSR.com
- Upper extremity module (Chapter 10)
- Constraint-induced therapy section
- "Control + F"/"Command F" and type in "Forced Use"
- **Important feature when you take the CSRS exam!**

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"In older females w stroke, would CIT/Forced use be better for regaining use of the affected UE than NDT?"



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Where else can you find studies to answer your questions?



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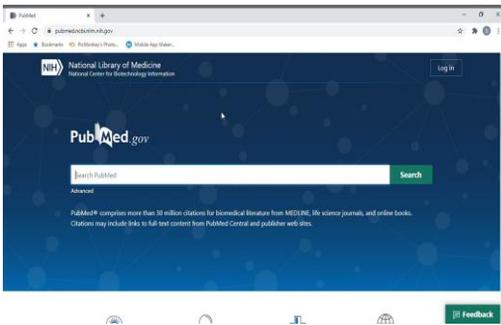
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PT: Hooked on evidence
 OT: OT Seeker
 (general)



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PubMed Example
 (less general, but wide net)



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Thank-you!

Questions?

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