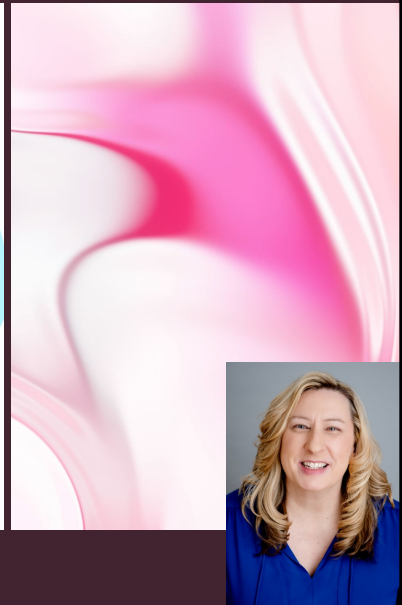


EXTERNAL CUES FOR UE AND LE WITH STROKE

J.J. Mowder-Tinney PT, PhD, NCS,
CSRS, CEEAA

jjmowder@gmail.com

Instagram: jjmowderpt



Learning Objectives



Review

- Review the Optimal Theory and the benefits of the approaches

Integrate

- Integrate various motor learning strategies into patient interventions.

Choose

- Choose activities appropriate for incorporating externally focused cues

Enhance Expectancies

Diminishing the perceived task difficulty

Autonomy

Giving choices

External Focus

Focus on intended outcome

For “OPTIMAL” motor learning during therapy sessions, you should...



Wulf, Gabriele, and Rebecca Lewthwaite. "Optimizing performance through intrinsic motivation and attention for learning: The OPTIMAL theory of motor learning." *Psychonomic Bulletin & Review* 23.5 (2016): 1382-1414.

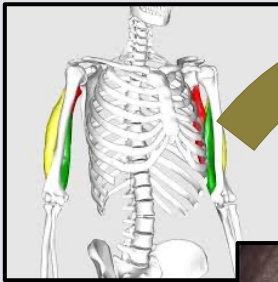
External focus facilitates production of effective and efficient movements patterns

Less mental effort
Increased movement efficiency
Increased effectiveness of movement
Decreased energy expenditure
Greater automaticity of movement
More functionally relevant goals

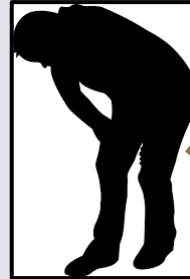


Wulf G, Lewthwaite R. Effortless motor learning? An external focus of attention enhances movement effectiveness and efficiency. *Effortless attention: A new perspective in attention and action*. 2010 Apr 9:75-101.

Instead of giving a Movement goal Give an Action goal



Instead of
straighten your
arm ask for
them to reach
for the glass



Instead of
straighten your
hips or stand
up tall ask for
them to bring
hips toward
the walked



Process

Observation: What does the movement look like?

Goal: What is the goal of the patient?

External focus: What is the external focus? How could we set up the environment?

Instructions: What are the instructions for success?



<https://www.roguept.com/>

Supine



**SUPINE
ACTIVITIES
WITH
EXTERNAL
CUES**

Rolling and Punching

Observation: Unable to roll over to the side

Goal: Increase mobility of rotation

External Focus: sparring glove

Instructions: Take a deep breath in and blow out and cue them to punch the glove.



BRIDGING
WITH
EXTERNAL CUE

Sit to Stand

Internal Focus

Push up with your arms

Sit to Stand

External Focus

Push the chair into
the ground

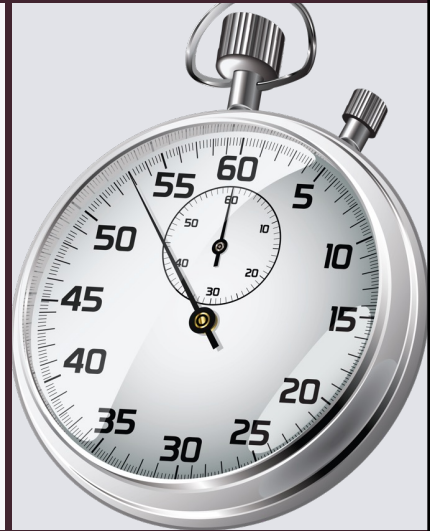
Counting out loud when sitting to increase eccentric control

Observation: Patient is plopping when sitting

Goal: increase control

External Focus: Counting

Instructions: Take a deep breath in and count out loud while sitting. Start with 4 and have them choose when they want to increase.



Activator poles
(could focus on
pushing forward)
AND **ADD** counting
when sitting to
prevent a plop to
the ground.





Observation: When standing their heel comes up in the air with AFO on.

Goal: Increase forward translation of the tibia.

External Focus: Loosen strap and cueing to aim for the strap.

Instructions: When coming forward aim to touch the strap and then stand up.



**Be careful to place the cue in
the correct spot**

**What could
we do here?**



Observation: Increased WBing on uninvolved side.

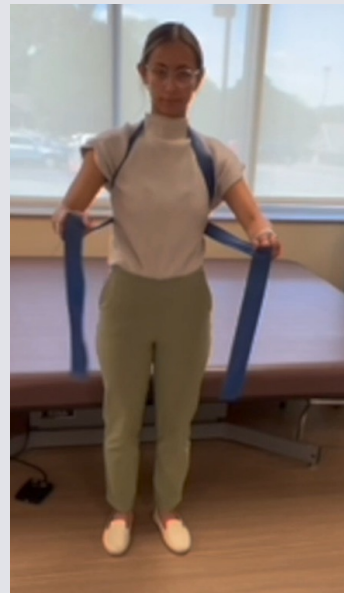
Goal: Increase WBing on involved side.

External Focus: Adjust environment and put the table Or counter on the right side.

Instructions: Keep your hip close to the table.



Upper Extremity



How do you use External Cues?





Rolling ball forward, use back of chair to roll forward toward someone who needs it? OR out of the way.

Rolling/pushing stool forward. TRY different cues of rolling versus pushing to see if one works better.

Rolling/spinning chair



		<p>SUPINE TIDAL TANK</p>
<p>https://www.tidal-tank.com/</p>		

	<p>Focus on moving against water, balancing the water, moving with the water and use external cues</p> <p>Tidal Tank - https://www.tidal-tank.com/</p>	 
	 	<p>Carrying a dog</p> <p>Carrying a child</p> <p>Swinging a child</p>



Gait

Example

Goal: Increasing stride length or improving symmetry

Internal focus: “take a bigger step”

Switch to external focus: Count how many steps they took in a certain distance (ie. 25feet). If it took them 28 steps to complete that distance, have them do it again but with less steps.

Or better yet improve self-efficacy and ask them “how many steps do you think you can make this distance in?”

Video them doing this at home and give them a sheet to write out how they do.





**Backward Walking:
Inability to Flex knee
first for Backward
Walking or Stairs**





**Change in
movement from
an external cue**



**Other ways
to increasing
knee flexion
in swing**



