

## EXTERNAL CUES FOR UE AND LE WITH STROKE

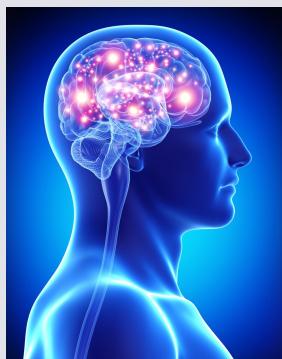
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## Learning Objectives



### 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

<p><b>Enhance Expectancies</b> Diminishing the perceived task difficulty</p> <p><b>Autonomy</b> Giving choices</p> <p><b>External Focus</b> Focus on intended outcome</p>	<p>For “OPTIMAL” motor learning during therapy sessions, you should…</p> 
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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.

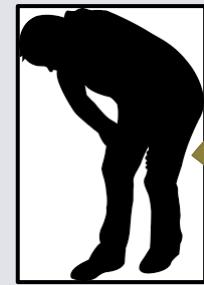
	<p><b>External focus facilitates production of effective and efficient movements patterns</b></p>	
	<p>Less mental effort Increased movement efficiency Increased effectiveness of movement Decreased energy expenditure Greater automaticity of movement More functionally relevant goals</p>	<p>Wulf G, Lewthwaite R. Effortless motor learning? An external focus of attention enhances movement effectiveness and efficiency. <i>Effortless attention: A new perspective in attention and action</i>. 2010 Apr 9:75-101.</p>

## 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?

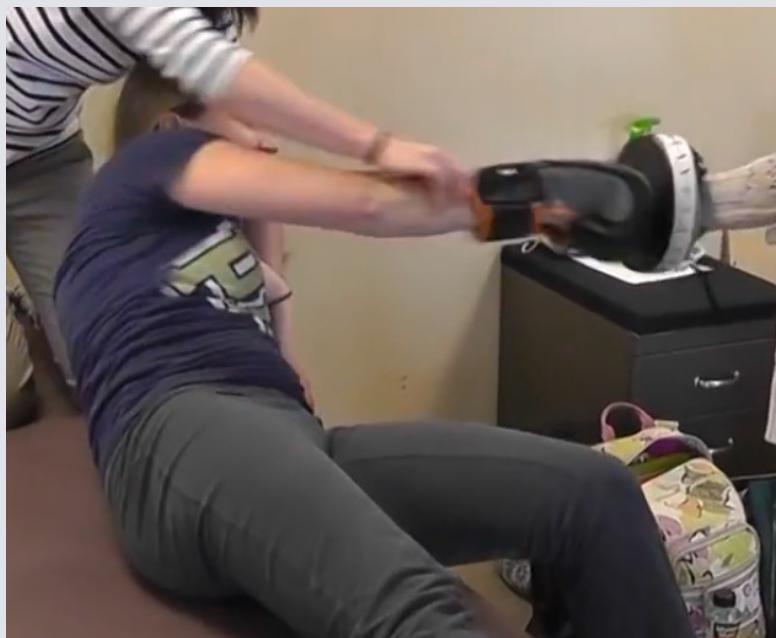
**External focus:** What is the external focus? How could we set up the environment?

**Instructions:** What are the instructions for success?



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

# Supine



**SUPINE  
ACTIVITIES  
WITH  
EXTERNAL  
CUES**

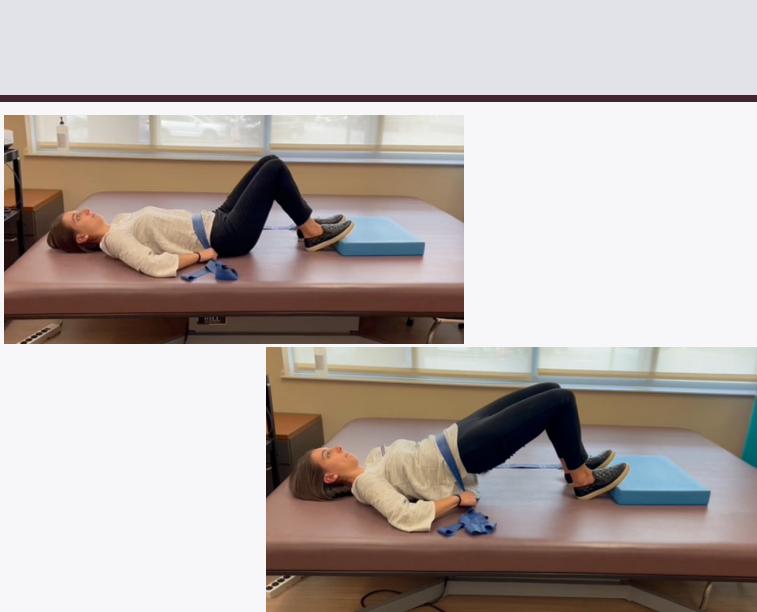
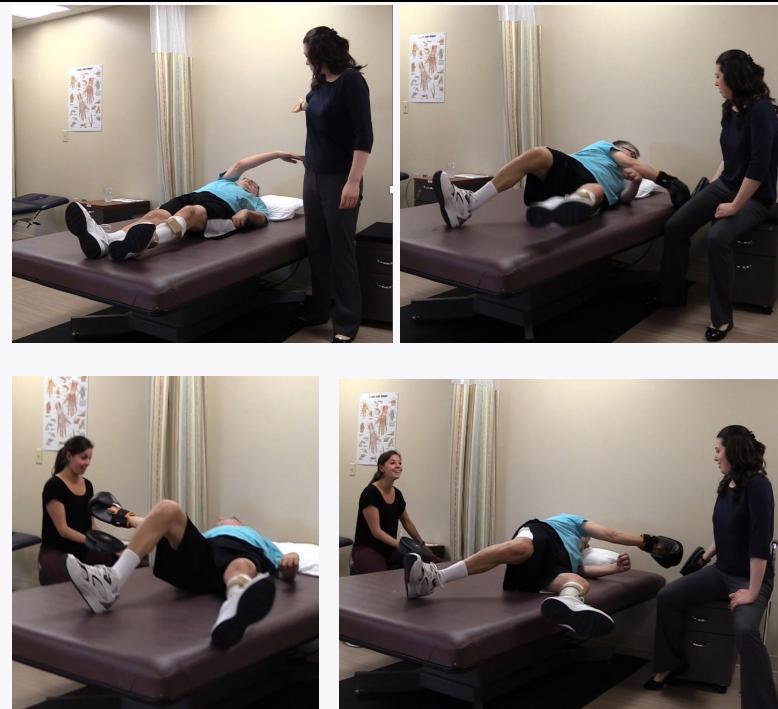
## Rolling and Punching

**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**

**Sit to Stand**

**Internal Focus**

**Push up with your arms**

**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

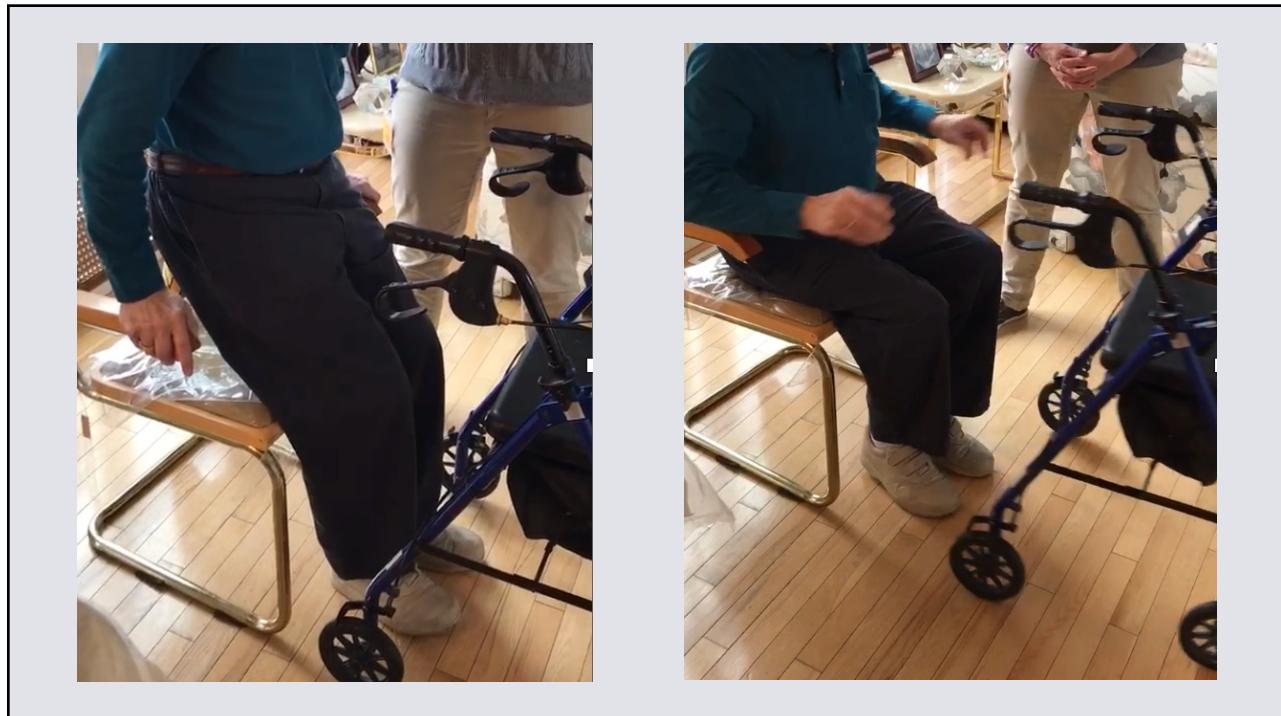
External Focus: Counting

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 unininvolved 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





## SUPINE TIDAL TANK

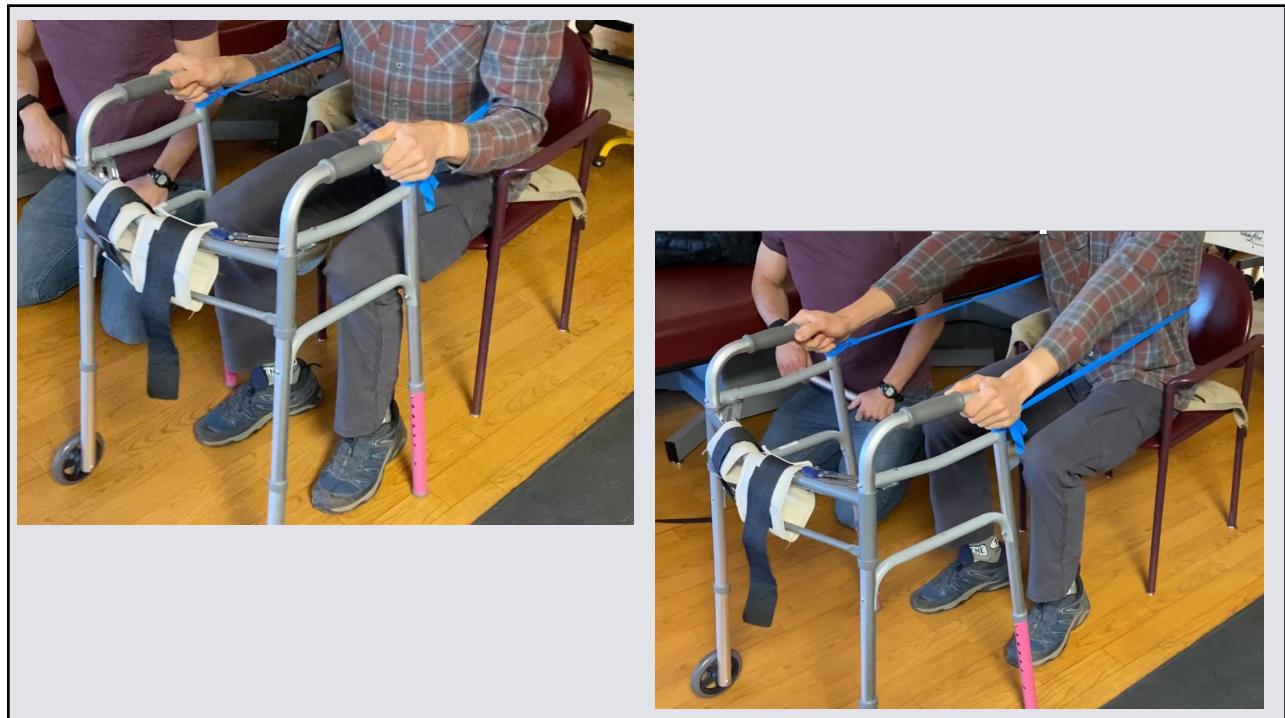
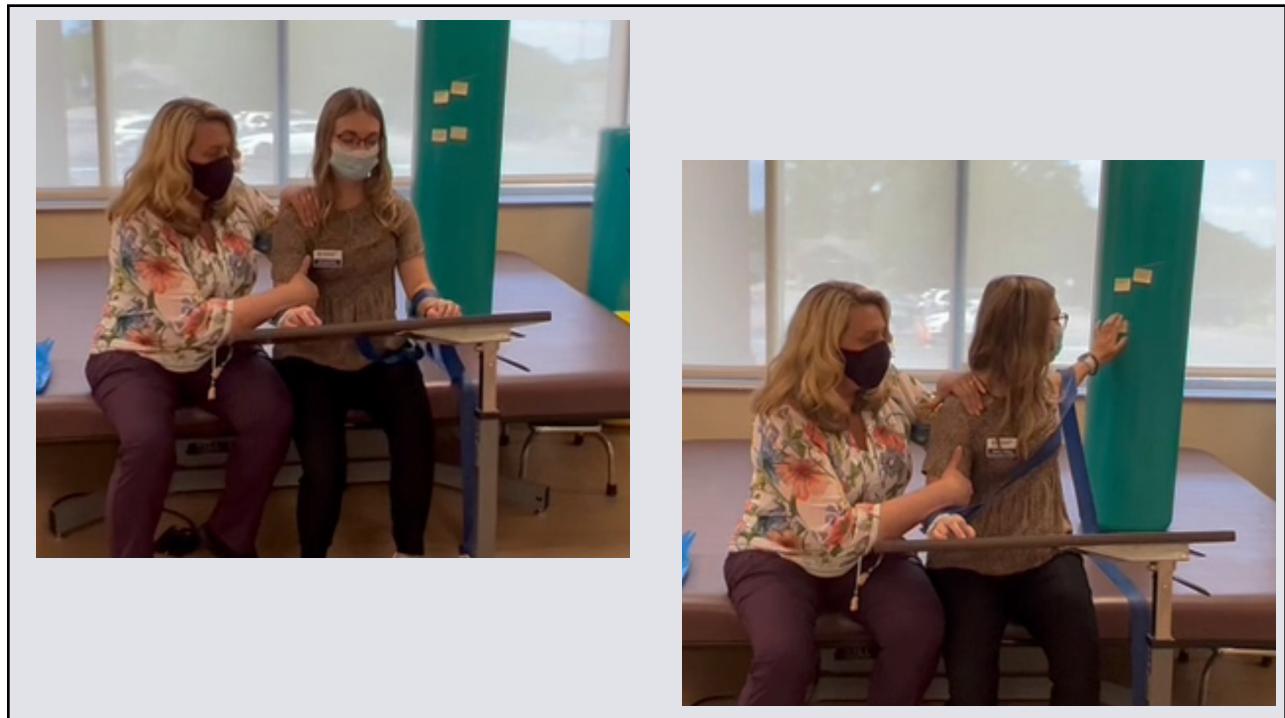
<https://www.tidal-tank.com/>

**Focus on moving against water,  
balancing the water, moving with the  
water and use external cues**

**Tidal Tank - <https://www.tidal-tank.com/>**



**Carrying a dog  
Carrying a child  
Swinging a child**



# Gait

## Example

**Goal:** Increasing stride length or improving symmetry

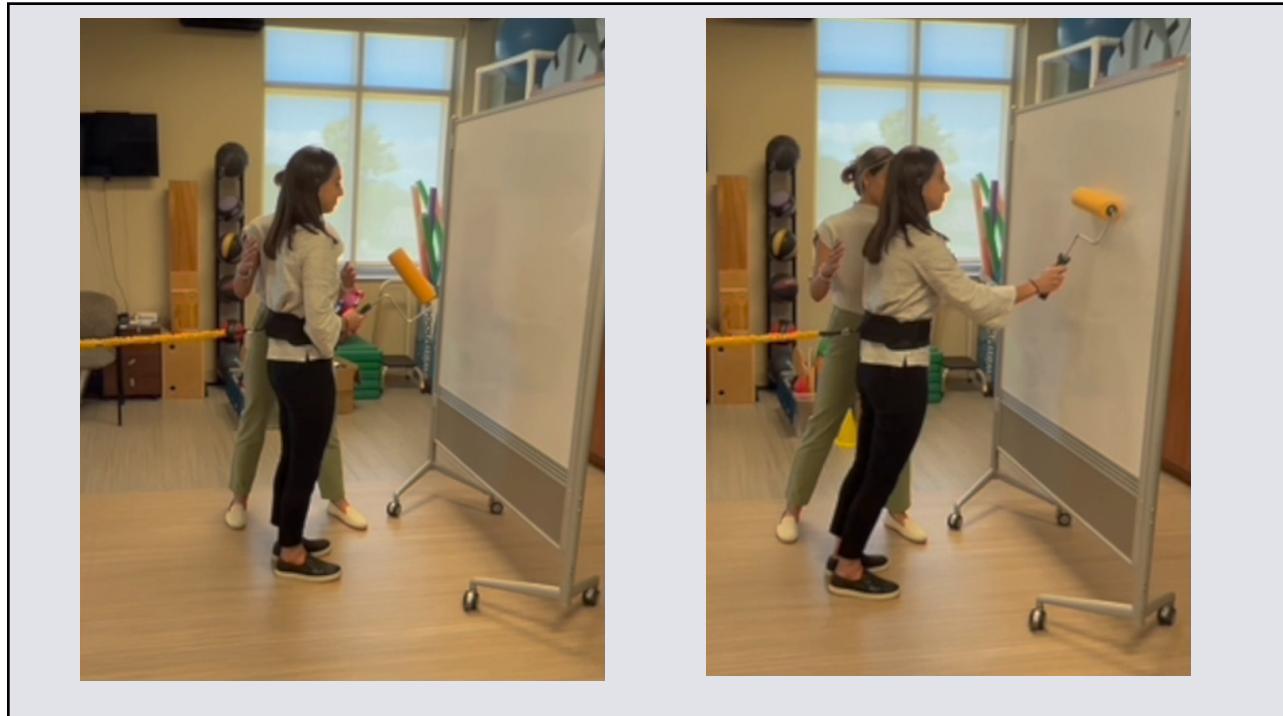
**Internal focus:** "take a bigger step"

**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**



