

2021 NSCA PERSONAL TRAINERS VIRTUAL CONFERENCE

#NSCPT21

CONFLICT OF INTEREST STATEMENT

I have no actual or potential conflict of interest in relation to this presentation.

Objectives

- Review of internal and external attentional focus.
- Describe how attentional focused cues affect performance based on exercise modality and intensity.
- Identify how and when to apply cues that target internal or external focus to optimize training for clients.

What is Attentional Focus?

INTERNAL VS EXTERNAL



Voluntary focus or concentration on the body movement, external surroundings, or a specific outcome.

- Exercise cueing and motivation
- Skill-learning / motor development
- Mind-body connection
- Distraction from discomfort
- Force development
- Specific to the client, level of expertise, and goal of activity

What cue should I use?

INTERNAL VS EXTERNAL

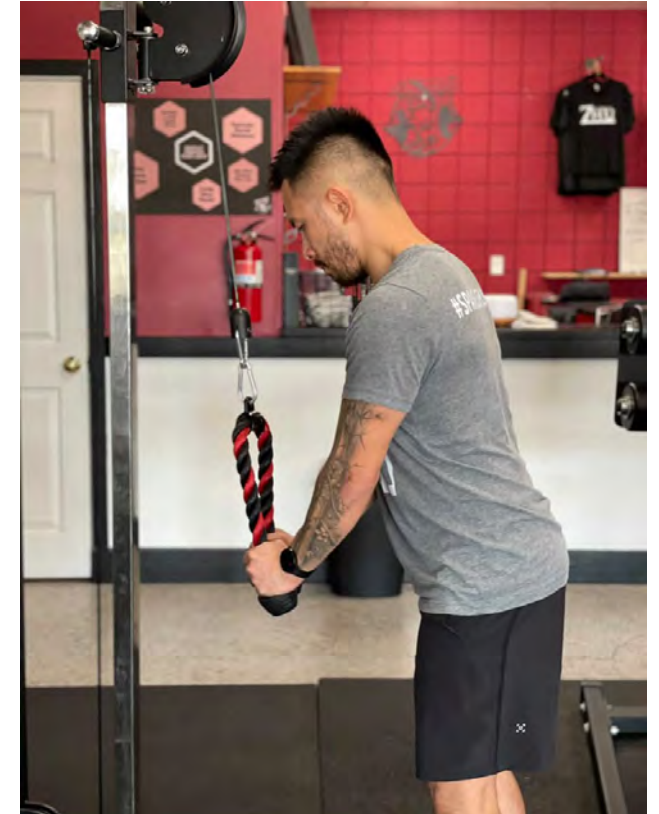
Example 1



What cue should I use?

INTERNAL VS EXTERNAL

Example 2



External Attentional Focus Cues

Definition

Guides attention to:

- The outcome/goal of movement
- Interaction with ground of external forces
- One's surroundings

Examples of external focused cues:

- **Push the ground away** from you as you rise from a squat
- Think about **the desired pathway** as you throw
- Focus on **pulling the bar** toward you in a bent-over row

External Attentional Focus

Application

Advantageous in heavy resistance training, speed and jump training, complex movement patterns, and balance training

- IMTP
- Sport-specific movements
- Multi-joint movements
- Balance/ coordination drills
- High speeds or explosiveness
- New movement patterns

External Attentional Focus

Exercise	External Focus Cue (most beneficial in this context)	Internal Focus Cue (use in technique-focused session)
Power Clean	Push the ground away, forcefully pull the bar, stay close to the bar	Engage the leg muscles as hard as you can, elbows up
Sprint	Push off the ground, ball of the foot rebounds like a bouncy ball, bounce off the ground	Activate glutes, drive with the knees, kick heel upward
CMJ	Push the ground away, touch the sky, get off the ground fast	Explosively extend ankles, knees, and hips at once
Landing technique	Don't make a sound when you hit the ground	Roll through your toe, ball, heel
Weighted Step-up with balance	Stay long and narrow, push against the step, keep bar horizontal	Engage abdominals, keep knee in alignment, keep foot horizontal on step, engage glutes

Internal Attentional Focus Cues

Definition

Guides attention to:

- Body segment movement
- Engaging/ contracting a specific muscle

Examples of internal focused cues:

- **Contract your glutes** as you rise from a squat
- Focus on **landing on the midfoot** during running long-distance
- **Contract the latissimus dorsi** while performing a pull-up

Internal Attentional Focus

Application

Advantageous in mind-body connection, hypertrophy training, early learning of movement skill, precision sports

- Muscle activation measured with EMG
- Muscle building activities
- Upper body targeted
- Form correction
- Single-joint movements
- Ancillary repetition drills

Attentional Focus for Resistance Training

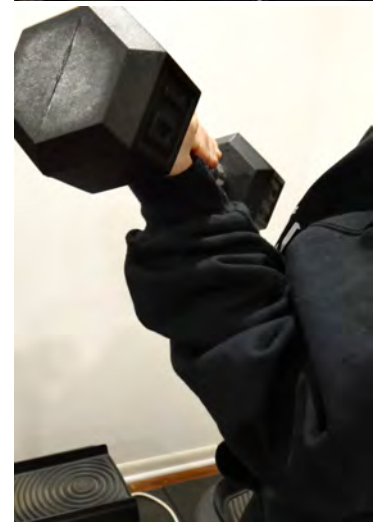
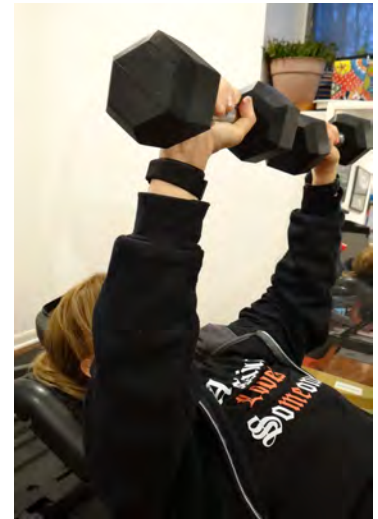
INTERNAL VS EXTERNAL

At lower loads:

- Internal focus for 50-75% 1RM
- Improved hypertrophy & EMG activity
- Single/ Compound movement
- More conscious control of movement

At higher loads:

- External focus for 75%+ 1RM
- All-out movement performance outcome
- Motor recruitment exceeds conscious neuromuscular control



Attentional Focus for Resistance Training

Progression

Take-home: As intensity (load) increases, cues should shift from internal to external attentional focus



Resistance Training Cues Based on Goal

Exercise	Goal	External focus cue	Internal focus cue
Squat	Strength	**Bend the bar, Spread the floor, Push against the ground**	Simultaneously extend the ankles, knees, and hips
Bench Press	Strength	**Push the bar away, explosively move bar towards the ceiling**	Activate the pectoralis major, move your arms away from you, extend the elbow
Leg Curl	Hypertrophy	Pull ankle pad towards you	**Activate the hamstring, bend at the knee**
Lat Pull-down	Hypertrophy	Pull the bar down down, try to bend the bar inward	**Engage latissimus dorsi to pull arms down, contract biceps to bend elbow, bring elbows to side of body**
Deadlift	Strength	**Drive your feet through the floor, pull the bar**	Hinge at the hips, keep back straight, extend hip, knee, and ankle

Attentional Focus for Aerobic Training

INTERNAL VS EXTERNAL

External focus (the surroundings, distance traveled, the ground, music, or videos) improved:

- Running economy
- Perceived exertion
- Perception of aches and pains
- Enjoyment

*More experienced runners may be able to shift more readily to internal cues.



Attentional Focus for Aerobic Training

Exercise	External focus cues (improves running economy and RPE)	Internal focus cue (only use in shorter, technique-focused sessions)
Running	• Gently fall forward as if someone is holding you up in front of you • Focus on distance covered or surroundings • Stay off the ground	• Focus on inhale and exhale • Land midfoot • Engage abdominals • Activate glutes • Drive knees up
Walking	• Lengthen away from the ground • Feel a string pulling you up from crown of head • Shoulders in back pockets	• Activate glutes • Push hips forward • Pull shoulders back • Engage abdominals

Take-Homes on Attentional Focus

INTERNAL AND EXTERNAL

1. Externally focused cues are beneficial in high-velocity, complex movement patterns.
2. Internal focus develops a mind-body connection which improves hypertrophy in targeted muscles.
3. Cues should progress as total load of resistance training increases.
4. Aerobic endurance training benefits from externally focused cues, particularly in novice runners.
5. There is a role for both cues in motor development, skill learning, and technique/form correction.
6. Cues should be individualized for the client, level of expertise, and goal of the exercise.

THANK YOU!

QUESTIONS?   



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