

# Let's Get Dynamic: Why a Dynamic Warm-Up is Superior to Static Stretching

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# Disclosures

- I have no conflicts of interests with this presentation

# Objectives

- Define dynamic warm-up
- Brief review of literature
- Discuss how to develop a dynamic warm-up
  - General versus specific

# Dynamic Warm-Up

- Definition: “Dynamic Warm up can be easily defined as a series of movement drills performed in a progressive, deliberate sequence from low to moderate intensity.”
- Involves specific movement drills and light aerobic exercises
- What it Does for the body:
  - Increases body temp
  - Prepares muscles for force they will experience during sport/exercise
  - Prepares cardiovascular system for vigorous activity
  - Increases nervous system activity

# Literature Review

- McMillan et al. 2006:
  - “For tasks requiring power and agility, the results suggest that a dynamic warm up might offer performance benefits not found with static stretching or no warm up”
- Oppleret & Babault 2018
  - Conclusion: “There is a substantial amount of evidence pointing out the positive effects on ROM and subsequent performance (force, power, sprint and jump)”

# Literature Review

- Haddad et al. 2013
  - Findings: “Sprint performances (10, 20, and 30 m) and horizontal jumps 24 hours after the dynamic stretching (DS) were significantly better than those after the no-stretch and static stretching (SS)”
- Simic et al. 2013
  - Findings: “SS before exercise has significant and practically relevant negative acute effects on maximal muscle strength and explosive muscular performance ... we recommend that the usage of SS as the sole activity during warm-up routine should generally be avoided”

# Literature Review

- Behm et al. 2016
- Findings:
  - “The data indicated that SS- (−3.7%), DS- (+1.3%),...induced performance changes were small to moderate with testing performed immediately after stretching”
  - “greater performance deficits with  $\geq 60$  s (−4.6%) than with  $< 60$  s (−1.1%) SS per muscle group.”
  - “SS...had no clear effect on all-cause or overuse injuries; no data are available for DS”

# General Warm-Up

- Just a basic full body warm-up
- Benefits:
  - Great prior to a full body workout or general sport participation
  - Easy to teach to a large group of people
- Negatives:
  - Lacks in specificity to sport or workout

Lateral Lunge



Lunge with Backward Lean



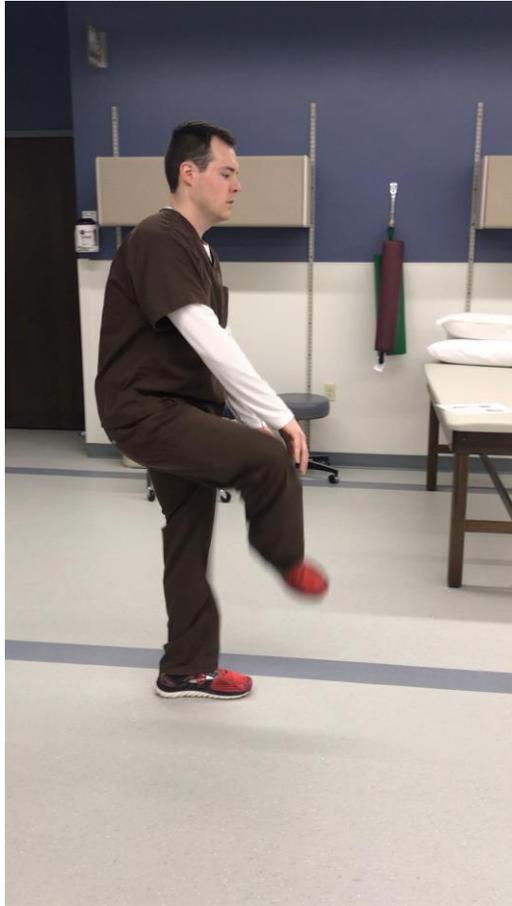
Butt Kickers



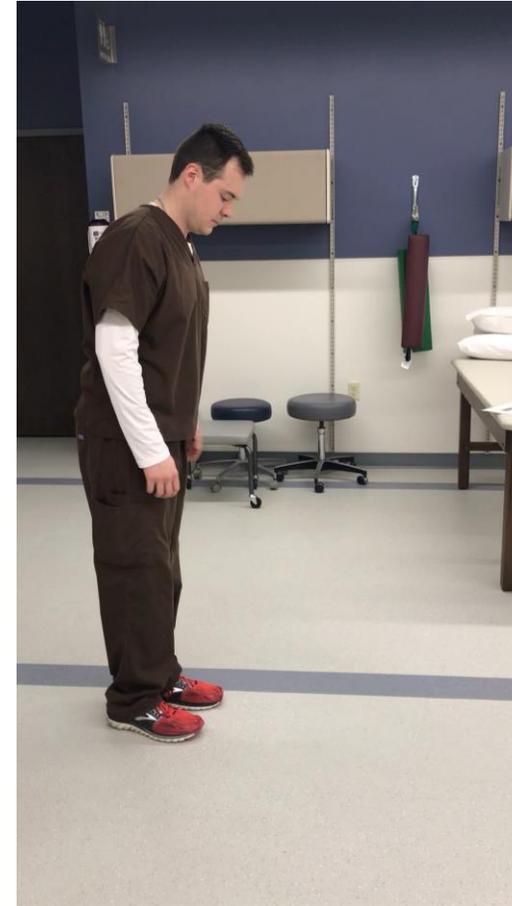
High Knees



Figure Four



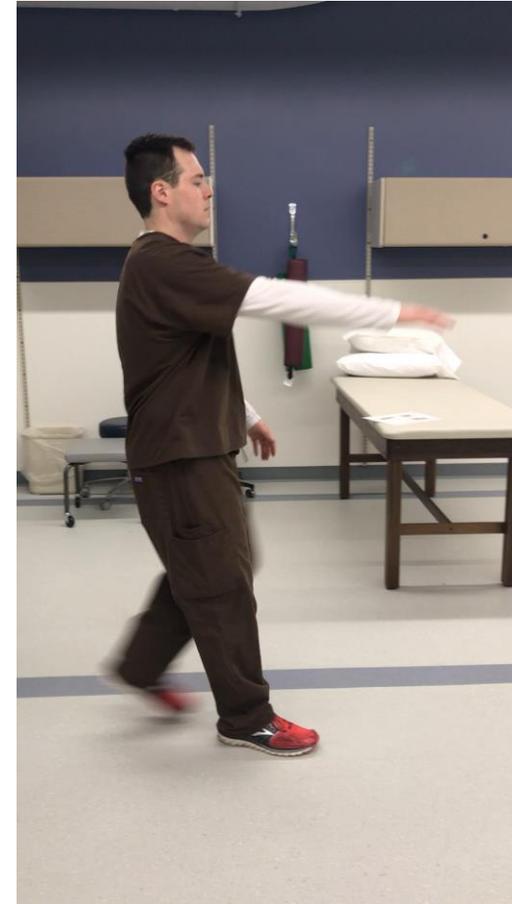
Step Toe Sweep



World's Greatest Stretch



Monster Walk



# Specific Warm-up

- Focus is more sport/task specific
- How to develop?
  - What are the demands
  - What do you have available
    - Time
    - Equipment
  - Where is the warm-up going to be performed

# Example

## Emory University Men's Golf Team Dynamic Warm-Up

- Demands:
  - Hip/Spine/Shoulder ROM/Strength
- Time: 10-15 minutes
  - How much team thought was reasonable
- Location: golf course
  - Equipment was limited
    - Provided team with resistance bands

# Example

- Mobility Drills:

- Quadruped Thoracic Rotation with IR: 2x10 each direction
- Kneeling Hip ER/IR Stretch: 2x15 each direction
- World's Greatest Stretch: 2x10 each side
- Arm Windmills: 2x10 each side/forward and backwards

- Resistance Exercises

- Band Bilateral Shoulder ER: 2x15
- Reverse Lunge: 2x10 (each side)
- Lateral Lunge: 2x10 (each side)
- Modified Side Planks: 1x15 (each side)
- Partner Resisted Trunk Rotation: 3x30s

- Regular Warm-Up Shots

- \*Some content used from [mikescaduto.com](http://mikescaduto.com)

# Additional Resources

- United States Tennis Association (USTA):  
<https://www.usta.com/en/home/improve/tips-and-instruction/national/dynamic-warm-up-and-flexibility-training.html>

Questions?

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