

#ideaworld



# LIMITLESS

## “BUILD-A-CLASS: THE KINETIC CHAIN & GROUP FITNESS”

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### WORKSHOP OBJECTIVES

- **DEFINE** *kinetic chain* – “WHAT IS IT?”
- **IDENTIFY** THE “FIVE” KINETIC CHAIN CHECKPOINTS
- **UNDERSTAND** REGIONAL INTERDEPENDENCE (RI) MODEL & THE HUMAN MOVEMENT SYSTEM
- **EXPLAIN** THE “3” STRETCHING METHODS
- **DEMONSTRATE** PLANES OF MOTION FOR EXERCISE PROGRAMMING
- **DEVELOP** A LIBRARY OF EXERCISES FOR EACH “CHECKPOINT”
- **APPLY** THE “FORMULA” TO ANY GROUP FITNESS FORMAT
- **DELIVER** A SAFE, EFFECTIVE GROUP FITNESS CLASS!



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## “WHAT IS THE KINETIC CHAIN?”

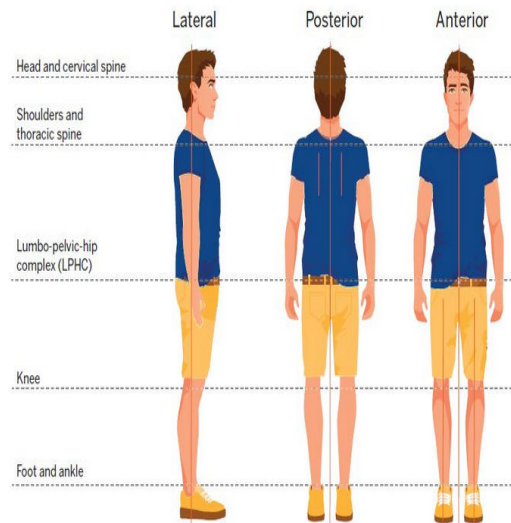
According to NASM, the kinetic chain refers to major joint locations of the body, starting at the ground and moving up, that serve as observation points when assessing an individual's static and dynamic posture.



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## THE 5 KINETIC CHAIN CHECKPOINTS

- 1. Foot and ankle:** Neutral arch of the foot (not flattened and toes not scrunched), feet parallel and pointing straight ahead, hip-to-shoulder width apart
- 2. Knee:** In line with the second and third toes of each foot and not flexed or hyperextended
- 3. Lumbo-pelvic-hip complex (LPHC):** Neutral sagittal hip position (no excessive posterior or anterior tilt) and hips level in the frontal plane
- 4. Shoulders and thoracic spine:** Not rounded forward and in line with the hips and ears from a lateral viewpoint
- 5. Head and cervical spine:** Neutral cervical spine (no excessive forward positioning of the neck), ears in line with the shoulders, and a level chin



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## THE REGIONAL INTERDEPENDENCE (“RI”) MODEL & HUMAN MOVEMENT SYSTEM

Assessment and intervention model used by clinicians based on the concept that the site of a patient’s primary complaint or symptoms is affected by dysfunction in remote musculoskeletal regions.

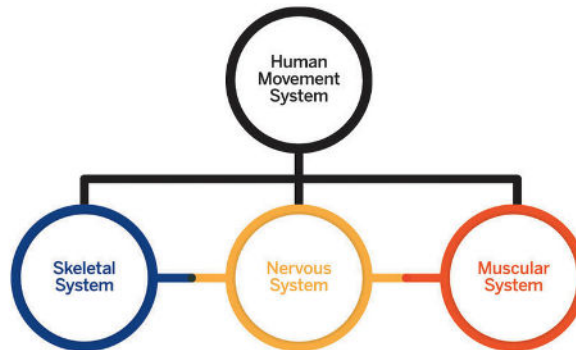


FIGURE 2-1 Components of the human movement system

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## “3” METHODS OF STRETCHING

*An active process to elongate muscles and connective tissues, improve ROM, and decrease muscle/tendon injury.*

- **Static:** Passive extension of a muscle to the point of tension held for a minimum of 30 seconds. (*ie. downward dog*)
- **Dynamic:** Active extension of a muscle using its force production and momentum to take a joint through the full ROM. (*ie. arm circles*)
- **Neuromuscular:** Isometric contraction and static stretching of a target muscle to create increases in ROM. Held for 10-30 seconds then active contraction for 5-10 seconds, performed with stretch bands or a partner.

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## BREAKOUT #1: STRETCHING

# LET'S GET MOVING!

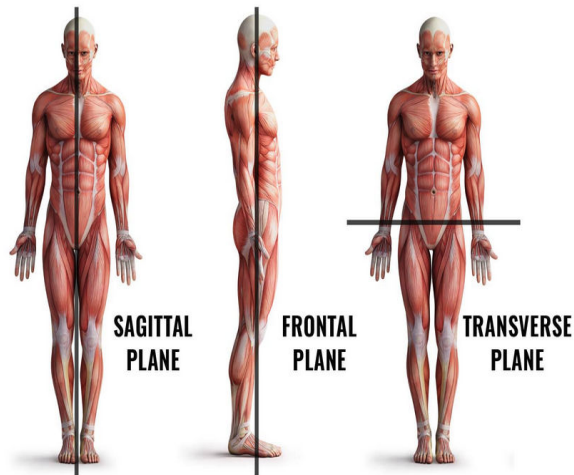


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## THE 3 PLANES OF MOTION

***Push, Pull, Hinge, Flex, Lunge, Bend, Extend & Twist to mimic movement in a 3D world.***

- **Sagittal:** Cuts the body into left and right halves. Forward (flexion) & backward (extension) moves.
- **Frontal:** Cuts the body into front and back halves. Side-to-side moves.
- **Transverse:** Cuts the body into top and bottom halves. Twisting moves.



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## PLANES OF MOTION EXAMPLES

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### **SAGITTAL**

Squats  
Pushups  
Bicep Curls  
Front Lunge  
Shoulder Press  
Tricep Extension  
Crunches  
Prone back Extensions  
Front Shoulder Raise

### **FRONTAL**

Speed Skaters  
Lateral Shoulder Raise  
Side Lunges  
Side Shuffles  
Side-lying Leg Lifts  
Skiers  
Military Press  
Seated Hip Abduction  
Side Planks

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## BREAKOUT #2: UPPER BODY vs LOWER BODY

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**LET'S PRACTICE!**

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## 6 KEYS TO THE “WARM-UP” vs “THE COOLDOWN”

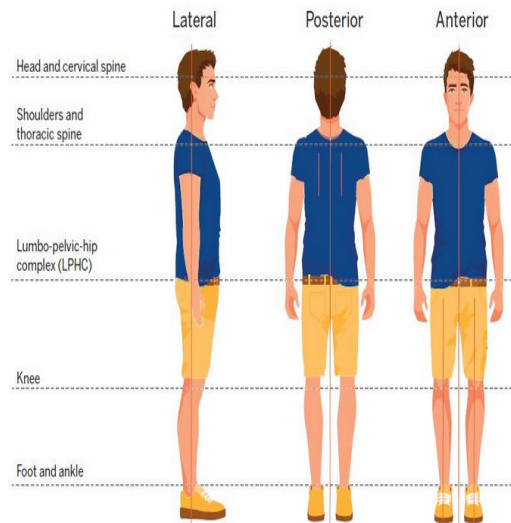
1. Static and/or Dynamic Stretching
2. Length of Time and/or Number of Exercises
3. Types of Exercises – Upper, Lower, Core or Multiplanar
4. Appropriate BPM – 110, 128, 130 or 140
5. Build / Decrease Intensity – Low Impact, Active or Athletic
6. Activate. Cue. Evaluate – Let’s A.C.E it!



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## REVIEW: 5 KINECTIC CHAIN CHECKPOINTS

1. **Foot and ankle:** Neutral arch of the foot (not flattened and toes not scrunched), feet parallel and pointing straight ahead, hip-to-shoulder width apart
2. **Knee:** In line with the second and third toes of each foot and not flexed or hyperextended
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## BREAKOUT SESSION #3: SAMPLE WORKOUT

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LET'S WORK!



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## FINAL THOUGHTS

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QUESTIONS? COMMENTS?

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