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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?”

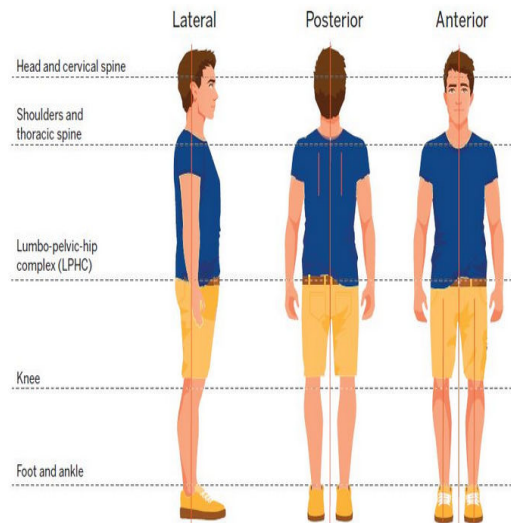
According to NASM, the kinetic chain refers to major joint locations of the body, starting at the ground and moving up, that serve as observation points when assessing an individual's static and dynamic posture.



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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.

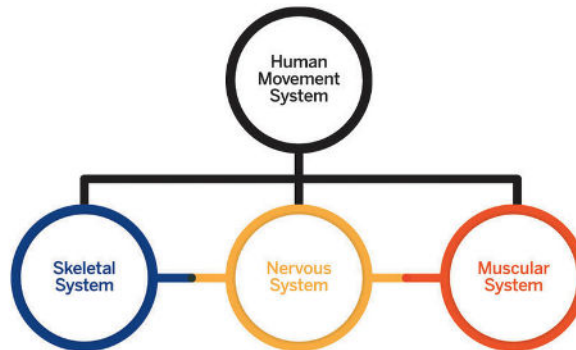


FIGURE 2-1 Components of the human movement system

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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!

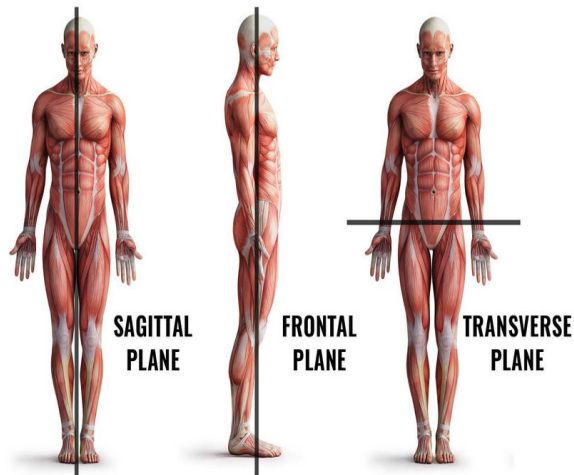


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THE 3 PLANES OF MOTION

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

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

LET'S PRACTICE!

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

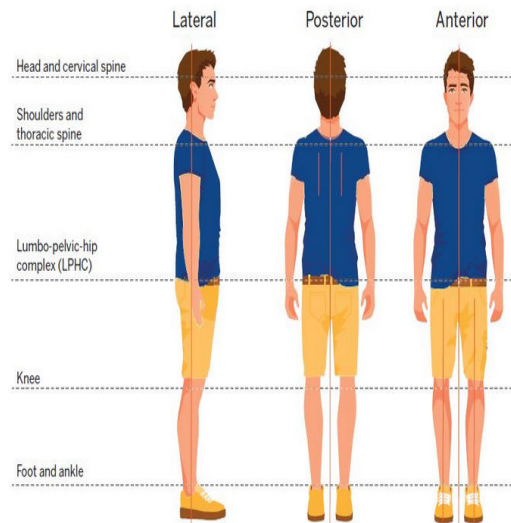
1. Static and/or Dynamic Stretching
2. Length of Time and/or Number of Exercises
3. Types of Exercises – Upper, Lower, Core or Multiplanar
4. Appropriate BPM – 110, 128, 130 or 140
5. Build / Decrease Intensity – Low Impact, Active or Athletic
6. Activate. Cue. Evaluate – Let’s A.C.E it!



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REVIEW: 5 KINECTIC CHAIN CHECKPOINTS

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BREAKOUT SESSION #3: SAMPLE WORKOUT

LET'S WORK!



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FINAL THOUGHTS

QUESTIONS? COMMENTS?

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