Orchestrated Movement

“The spinal cord is the keyboard on which the brain plays when it calls for activity. But each key in the console sounds not an individual ‘tone’, such as the contraction of a particular group of muscle fibers, but a whole ‘symphony’ of motion……

The brain thinks in terms of whole motions, not individual muscles.”

---Irwin M. Korr

Function?

Functional Litmus Tests
criteria to human motion

• 1. How does the activity compare with the client’s relationship to gravity and the ground?
• 2. What is the segmental relationship to affect the whole?
• 3. To enhance function, movements must occur in three planes or motion.
• 4. How flexible or rigid is the system?
• 5. What are the loading drivers to influence the body’s transformations to change directions?
• 6. Is the program and movement pattern caused by a conscious or sub-conscious response?
• 7. Proprioceptors must be influenced by proper motion.

Tri-Plane Chain Reaction

FUNCTIONAL ACTION

Tri-Plane Loading

- Load
- Stretch
- Absorb
- Decelerate
- Eccentric

Tri-Plane Unloading

- Unload
- Shorten
- Propel
- Accelerate
- Concentric
Myotatic Reflex – the muscle will produce highest level and most efficient strength during eccentric loading.
**FLEXIBILITY HIGHWAY**

Key Intersections
- PERONEALS to ITB, TFL
- ITB, TFL to LATERAL GLUTEALS
- LATERAL GLUTEALS to QL, OBLIQUES
- OBLIQUES to OPPOSITE PECS & SHOULDER

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**Barriers?**

- Limited range of motion
- Dissociate the humerus from the scapula
- Does not involve the lower extremities
- Feel the resistance or barrier of bone because the scapula does not "clear" during this abnormal movement pattern
- Client does not feel this movement pattern is sport-like

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**Conventional Shoulder/Rotator Cuff Exercise**

- Limited range of motion
- Dissociate the humerus from the scapula
- Does not involve the lower extremities
- Feel the resistance or barrier of bone because the scapula does not "clear" during this abnormal movement pattern
- Client does not feel this movement pattern is sport-like

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**Relative Shoulder Motion - Sagittal Plane**

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**Relative Shoulder Motion - Frontal Plane**

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**Relative Shoulder Motion - Transverse Plane**
Progression Strategies

Easy
- No External Resistance
- Tri-Plane Hip Movement
- Wall Patterns
- Range Limited Low Reach
- Simple Movement Patterns

Hard
- Add External Resistance
- Tri-Plane Hip Movement with Upper Extremity Motion
- Ipsilateral Reach
- Contralateral Reach
- Rotational Reach
- Complex Movement Patterns

Thank you for coming!!

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