

ViPR Training for 3D Strength

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OBJECTIVES

- Define "3D Strength"
- Discuss the physiological rationale and adaptations of Loaded Movement Training
- Present & have attendees experience Loaded Movement Training exercises, from simple to complex
- Provide guidance and structure on how to apply Loaded Movement Training into any clients' program



DEFINED

- Muscular Strength
 - the maximal force that a muscle or muscle group can generate at a specified velocity
- Movement Strength (i.e., 3D Strength)
 - the ability to generate purposeful, systemic force in a multidirectional environment

LOADED MOVEMENT TRAINING







RATIONALE

- We must be able to produce and transmit force in an integrated fashion
 - The neuromyofascial system responds better to variation than
 to repetition
- Whole body, "complex" movement is critical to systemic adaptation
 - Vector variable & proprioceptively rich exercise is extremely beneficial to the neuromyofascial system
- Loaded Movement Training allow muscles to turn on AND off
 - Efficiency, preparedness and capacity



- Wolff's Law:
 - Skeletal structure is organized/reorganized according to the applied lines of stress





- Davis' Law:
 - Soft tissue (contractile & connective) is organized/ reorganized according to the applied lines of stress





- Movement Skill
 - Motor learning, development & ability adapt according to the applied stress





Specific Adaptation to Imposed Demands (S.A.I.D)

- Specificity Paradox
 - The movement demands of sport & life are, specifically, variable...



Specific Adaptation to Imposed Demands (S.A.I.D)

• Required Outcome / "Specific Adaptation":

- Strong, powerful, skilled and safe movement in variable, reactive directions through a solid & robust architecture from non-traditional positions
- Needs Analysis / "Imposed Demand":
 - Training strategy that applies balanced variability (direction, speed & force)





UnLoaded





THERAPEUTIC REHAB RUNNING / SWIMMING ETC. RESTFUL POSES SAQ TRAINING INTERACTIVE MOVEMENT FUNCTIONAL REHAB TAI CHI GROUND TO STANDING DRILLS DOWEL ROD MOVEMENT PREP

UnLoaded



Loaded

LOADED MOVEMENT TRAINING

Defined:

Multidirectional, task-oriented resistance exercise, where there are at least 2 primary movement directions and outside resistance is applied to the body

Combines task-oriented movement patterning with resistance training.

<u>Transitional</u> <u>Movement - 3D /</u> <u>Variable</u>

Loaded

LOADED MOVEMENT TRAINING

Benefits include:

Greater adaptations in muscle, nerve, skin, fascia
Less compressive forces
Increased hormonal release
Improvement in multi-directional Stability / Strength / Power
Improved inter-muscular coordination
Whole body integration

<u>Transitional</u> <u>Movement - 3D /</u> <u>Variable</u>

The Importance of a Concept:

<u>Concept</u>	<u>Product</u>
Core Training	Stability Ball
Speed / Agility / Quickness Training	Speed Ladder
Resistance / Strength Training	Barbell / Dumbbell / Kettlebell etc.
Cardiovascular Training	Treadmills / Stationary Bikes / Rowers etc
Vibration Training	Vibration Plates
Suspension Training	TRX / Rings
MyoFascial Release	Foam Rollers
Functional Flexibility Training	Stretch Cages
Pilates	Reformer
Barefoot Training	Minimal Shoes
Loaded Movement Training	ViPR





IOM EXERCISE DESIGN AT A GLANCE

DRIENTATION	ACTION	PEVICE	FOOTPRINT	HANDPRINT	THRESHOLD
In which way will you orient your body to gravity / ground?	What gross movement is occurring in the body?	What external load are you choosing and why?	Foot position (stance) and / or foot movements while performing the exercise?	Hand position and / or hand movements while performing the exercise?	Acute variable manipulation (i.e. sets, reps, weight, ROM, speed etc.)



ACUTE VARIABLE	Threshold 1	Threshold 2	Threshold 3
SPEED	Slow	Medium	Fast
MOVEMENT	Known	Somewhat known	Unknown
STABILITY	Stable	Moderately dynamic	Dynamic
FORCE (WEIGHT)	Low	Moderate	High
COMPLEXITY	Simple	Moderate	Complex
SURFACE	Stable	Changing	Dynamic
BASE OF SUPPORT	Wide (stable)	Narrow	Varying (movement)
VOLUME (Sets + Reps + Intensity)	Low	Medium	High
ROM (Range of Motion)	Small (initial range)	Medium (self selected range)	Large (end range)



IoM Error Detection

Screening

Adequate Motion Observed?

Foot / Ankle Complex

Hip Complex

Thoracic Spine





Coaching Cues (Adapted from Chuck Wolf, MS)

1. Maintain Length in the Spine 2. Initiate Movement with the Hips





LOADED MOVEMENT TRAINING IN YOUR PROGRAMS

Client:	Date:						
Session Goal:			Load	Reps	Sets	Tempo	Rest
Prep:							
				•••••			•••••
Outcome-Based Training:							
Recovery:							
Notes:					•_		
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Thank You!!







