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The Movement Triad: Mobility, Stability and Strength **Presented by Helen Vanderburg**

Introduction

Mobility, stability, and strength have traditionally been categorized separately when training clients. In this interactive session learn the most current science and training methods as to why mobility, stability and strength may be best achieved when they are trained together. Using loaded mobility and multidimensional movement techniques learn movement complexes to enhance function and performance. Walk away with ready to use exercises to purposefully train the movement triad of mobility, stability, and strength.

Objectives:

1. Discuss the current science of mobility, stability, and strength training
2. Apply movement principles of training to multidimensional movement complexes to enhance efficiency and performance
3. Demonstrate specific techniques and exercises to enhance mobility, stability, and strength

Definitions:

- Flexibility
- Mobility
- Range of motion
- Stability

Integrated versus Isolated

- Interdependent versus Independent
- Relationship of the nervous system, boney architecture, muscle, and fascia!
- Focus on what joints need specific stability and mobility training for optimal efficiency and performance

Neuromotor Training

- Nerve impulses or messages transmitted from the brain to motor effectors
- Neuromotor Training can be defined as the ability of the nervous system to communicate with the musculoskeletal and fascial systems
- The fascial system is thought to be 6X faster than the neuromuscular response

Considerations and Limitations

1. Nervous system
2. Fascial system

3. Skeletal system
4. Muscular system

Causes of Movement Limitations

- Neuromuscular patterns
- Joint structure
- Fascial disfunction
- Underuse - sedentary
- Overuse – repetitive load and force
- Injury, surgery, and trauma
- Disease
- Inflammation
- Diet
- Rest and recovery

Common Imbalances

1. Upper crossed syndrome: relationship between the phasic and postural muscles of the upper body
2. Lower crossed syndrome: relationship between the phasic and postural muscles of the lower body

Effects of Breathing on Movement

- Physiology of breathing in relationship to movement
- Relationship of breath, movement, and mobility

Breathing Exercises		
Exercise	Equipment	Execution
Prone breathing	Pilates Ball	* Prone lying on ball * Contract abdominals on exhale * Relax on inhale
Lateral breathing	Pilates Ball	* Side seated on floor beside * Lateral flexion
Seated breathing	Pilates Ball	* Seated on floor with ball behind the back * Contact front ribs and curl forward on exhale * Lift front ribs on inhale

Assessing Movement

1. If you are not assessing, you are guessing.

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2. We are similar yet uniquely different. To best serve your clients we need to observe their movement patterns.

NASM PROTOCOL

1. APPEAL TO THE NERVOUS SYSTEM AND REDUCE OVERALL TENSION

The first step is to induce neurophysiological changes by reducing tension and overactivity in a targeted muscle.

2. APPEAL TO THE MECHANICAL SIDE AND INTRODUCE TISSUE MOVEMENT

Once there has been a reduction in tension, the next step is to induce mechanical changes by introducing active movements.

Movement Blocks

1. Movement Prep
2. Upper Body
3. Lower Body
4. Whole Body

Practical Application – Exercise Breakdown and Practice

Movement Triad Prep Exercises		
Target Area	Equipment	Exercise
Feet and Ankle	Massage Ball and Towel	* Rolling * Compression * Toe exercises * Pick up * 3D Foot/ ankle exercises
Ankle, Knee, Hip Mobility	Body Weight	* Sumo Squat * Deep squat with shifts * Sagittal plane hip rocks * Dynamic lateral lunges
Spine and Shoulder Mobility	Yoga belt/ resistance band / foam roller	* Shoulder flexion and extension * Spine flexion and extension * Infinity circles * Trunk rotation

Upper Body Movement Triad Exercises		
Body Position	Equipment	Exercise
Quadruped	Body Weight Resistance Band	* Cat and cow variations * Ribcage isolations/ rotation

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		<ul style="list-style-type: none"> * Thread the needle * Crouching tiger * Quadruped 3D Complex
Plank	Body Weight Resistance Band	<ul style="list-style-type: none"> * Scapula presses/Isolation * Pike * Tuck * T- stand + Lateral flexion * Plank 3D Complex
Table/Reverse Plank	Body Weight Resistance Band	<ul style="list-style-type: none"> * Shoulder/ arm flexion and extension * Shoulder horizontal abduction * Table * Reverse plank * Reverse plank 3D complex

Lower Body Movement Triad Exercises		
Body Position	Equipment	Exercise
Hip Hinge/ Squat	Body Weight Resistance Band Step or BOSU	<ul style="list-style-type: none"> * Standing Hinge (bilateral/ unilateral) * Hinge to squat * Sit to stand * Frogger * Squat 3D Complex
Lunge	Body Weight	<ul style="list-style-type: none"> * Balance beam * Lunge with rotation * Lunge 3D complex
Bridge	Resistance band	<ul style="list-style-type: none"> * Roll back to bridge * Single leg to thread the needle * Oblique mobility bridge * Bridge 3D Complex

Whole Body Movement Triad Exercises		
Exercise	Equipment	Execution
Supine to standing Complex	Body Weight	Supine to prone to kneeling to lunge standing. Standing to lunge, kneeling to supine