



2019 NSCA PERSONAL TRAINERS VIRTUAL CONFERENCE

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#NSCAPT19

Performance Recovery System

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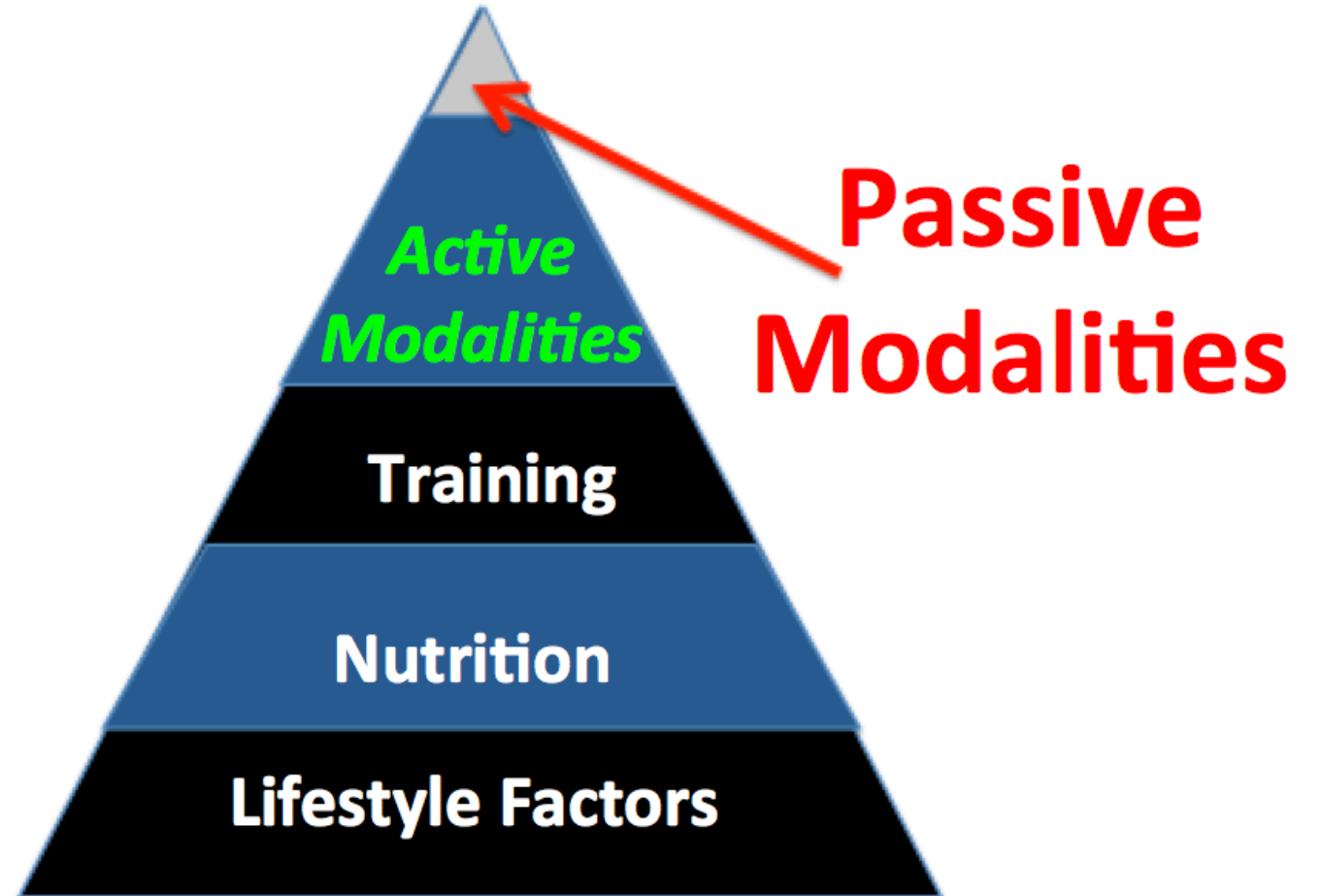
Conflict of Interest Statement

**I have no actual or potential conflict of interest
in relation to this presentation.**

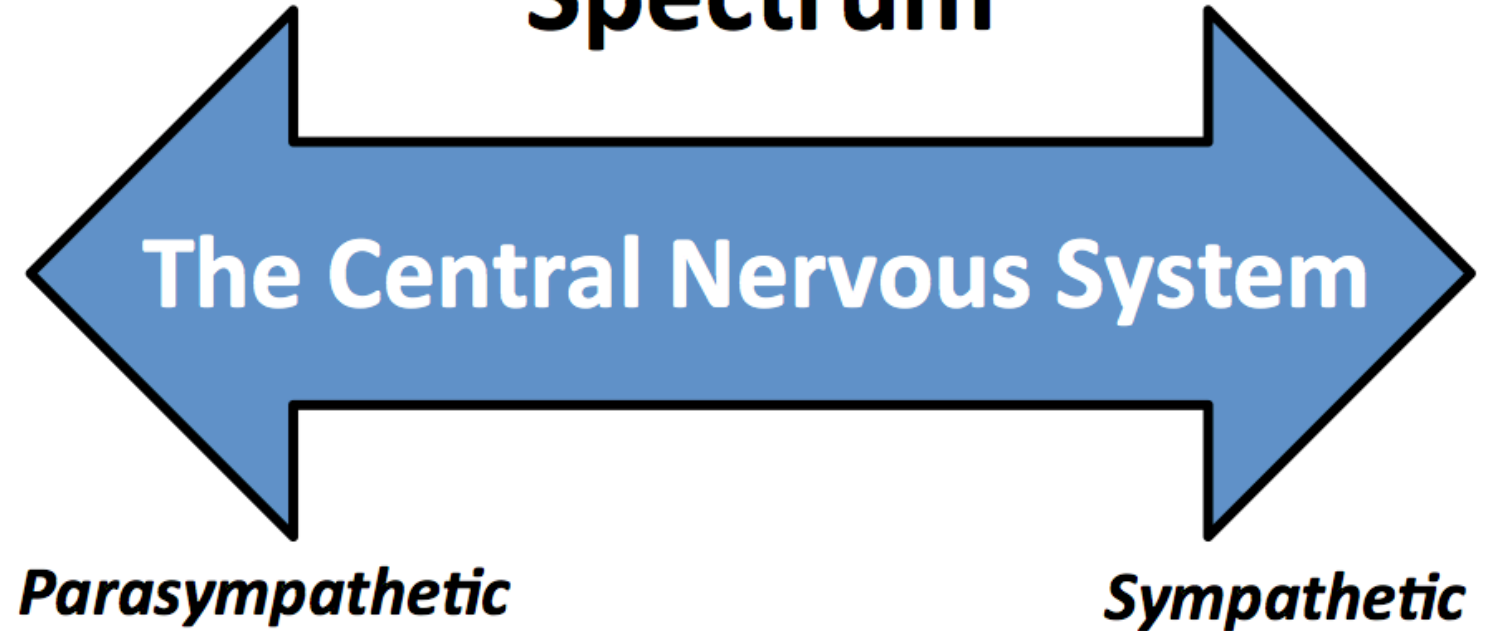
The Foundations of Recoverability



Recovery is **NOT** a Passive Process



Optimizing The CNS Spectrum



The Performance Recovery System

Expediting Mechanical, Neurological & **Systemic Recovery**

1. Global **SMR** Techniques
2. Bi-Phasic **Stretching**
3. Catch-All Flow Based **Mobility** Movements
- *Neural **Recharge** Training*
4. LISS **Cardio** and **Energy Systems Development**
5. Parasympathetic Positional **Breathing**

Global SMR Techniques

- Foam Rolling (SMR) For The Purpose of:
 - Lymphatic Drainage
 - Active Muscle Pump Stimulation
 - Parasympathetic Response

*Same SMR Set Up Positions
Different Execution Based on
Objective GOALS



Global SMR Protocol

- Spend **2-3 Minutes** on Each Structure
- Move Slowly With **6-12 Inches** of Relative Movement Under Roller
- Roll **Distal To Proximal** When Warranted
- Prioritize Broad & Dense Musculature
 - **Hamstrings, Quads, Glutes, Lats, Pecs**

*Deep **Diaphragmatic Breathing** Strategies Throughout

Bi-Phasic Stretching

Dynamic Oscillatory + Static Positional



Bi-Phasic Stretching

Bi-Phasic Stretching

- **Extend Both Dynamic Oscillatory and Static Positional Holds to 1-3 Minutes Each**
 - Target Primary Dynamic Movers Addressed In Global SMR Techniques Recovery Phase
 - Hamstrings, Glutes, Quads, Lats, Pecs
- *Remain Posturally Aware During Longer Duration Holds. Distal mobility secondary to proximal stability

Parameters of Bi-Phasic Stretching

- Dynamic Oscillatory Stretch – 30-90 seconds
- Static End Range Stretch – 30-60 seconds
 - **TOTAL: 1-3 minutes**

*Focused Intent Placed On **Proximal Stability**, Tension and Torque of the “Pillar”

*Deep Diaphragmatic Breathing

Catch-All Flow Based Mobility

- Corrective Exercise and Mobility Drills Executed With Constant Movement & Flow
- Targeting Multiple Areas of Deficits Within a Few Staple Locomotive Based Movements
- *Example: Walking World's Greatest Stretch*

Finding The **Optimal Flow**

- **Goal:** Move as many joints of the body through a full range of motion in reciprocating constant movement fashion as possible
- Differentiating Flow Recovery from Conditioning
- Minimize high spikes in vital metrics
- Incorporating mindful breathing

Neural RE-Charge Training

- **Explosive Neurologically Driven Movements**
 - Olympic Lifts, Dynamic Efforts, Plyometrics etc.
- **Low Total Training Volumes**
 - Duration Under 20 minutes
 - Total Reps Between 25-50
 - Full Recoverability Between Bouts - Avoid Metabolic Fatigue
- **Systemic Neural Restoration & Recovery**
 - “recharging” NT balance – sparked recoverability
 - Increased anabolic hormone production
 - Improved NM Function – MU recruitment and coupling
- **Extremely High Effort Based Work**
 - Focus on Movement Efficiency and Quality

Train Harder and Recover Faster With **Concentric Only Training (COT)**

- Maximize Concentric Phase While Minimizing or **ELILIMATING** Amortization and **ECCENTRICS**
- Maximizing Training Volumes, Frequencies, Intensities while minimizing cumulative neural or mechanical fatigue – when programmed properly **SPARKING RECOVERY**
- **Proven COT Modalities**
 - Barbells, Plyometrics, Sleds, Carries

LISS Energy Systems Development

- **Low Impact** Activity
 - Walking Preferred (And Mandatory With My Athletes)
- **Low Intensity** – Keep HR Under ≈ 120 bpm
 - Recovery to Zone 1 HR's Customized To Athlete
- Building A Cardiovascular **Base**
- Upper/Lower **Reciprocal Patterning** Preferred
 - Oblique Sling and Spiral Effects

Parasympathetic **Positional Breathing**

- **Positions That Allow **Deloading of Spine****
 - Centration of Hip and Shoulder Complexes
 - Maximize SA Contact on Supported Surfaces
 - *Crocodile or 90-90 Supine Supported Preferred***

- **Tempo Based Breathe**
 - “Box Breathing”
 - Recovery Breathing
 - Corrective Breathing
 - **Tactical Breathing Intra-Workout***

Quality of Breathing

- **“Type”** of Breathing Pattern
 - Chest vs. Belly Breathing
- **Symmetry & Smoothness**
 - Inhalation/Exhalation
- **Monitoring of Global Vital Metrics**
 - Heart Rate, Respiratory Rate, Blood Press, Blood Flow...
- **Mental & Emotional Acuity**
 - **Environment MATTERS**

Programming **Recovery Workouts**

- Recovery Workouts Can Be Programmed In Three Basic Ways For Maximal Benefit:

1. Post-Workout Window

- Directly On The Tail End of Training

2. Secondary Recovery Workout

- Preferred 4-6 Hours Post Workout

3. “Off” Day Programming

- Active Systemic and Neural Recovery

Quantifying Improved **Recovery**

A Synergy of the Overall Performance Landscape

- Heart Rate Variability (HRV)
- Training Performance and Goal Attainment
- Sport Specific Performance
- Cognitive Enhancement
- Localized/Systemic Inflammation
- Endless Metrics...