Peripheral Issues for Jumpers

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BIOMOTOR ABILITIES

- Flexibility
- Coordination
- Endurance
- Strength
- Speed
- Other
Flexibility

- R.O.M.

- Lack of Flexibility will prevent from proper muscle firing sequence

- Static

- Dynamic
Coordination

- Technique
- Bilateral Symmetry, Ipsilateral Symmetry
- Timing of Upper and Lower body
- Postural Integrity Pelvis-Spine-Hip
- Decrease in activity in younger athletes
Endurance

- Strength Endurance
- Speed Endurance
- Jump Endurance

The benefits of aerobic work on the anaerobic system (Elliott, Wagner, and Chiu, 2007)
- But how do we get the benefits?
- (i) an increased aerobic response to the excess post-exercise $V'O_2$; (ii) an improved lactate removal; and (iii) an enhanced PCr regeneration
- Improved body composition
Strength

- Weight Room – Limit Size of Muscle Growth
- Power
- Sprint Strength
- Core Strength
- Jump Strength
  - Muscle Stiffness
    - Spring Effect
  - Elastic Energy Component
    - Concentric vs Eccentric vs Isometric Strength
Speed

- Maximizing the braking, support, propulsion
- $F=ma$
- Acceleration vs Maximum Velocity
- How do we obtain a closer $Mv$ value on the runway
- Technique needed for sprinting
Other Variables

- Specific Strength and Correlation
  - Bonarchuk, Soviet Training Correlations
  - Using a new method of training that is different from block periodization

- Steering Component
  - Competition vs Practice setting

- Individualization of Training

- Men vs Women

- FMS/Body Analysis
Other Variables (cont)

- Continuous Assessment of Athletes
  - Blood Work
  - Salivary Testing
  - Conversation

- Sleep Habits - sleep is the number one recovery method for the human body

- Nutrition -
  - Timing of nutrients, i.e. protein, CHO, H20
  - Strength/Weight Ratio
Video of specific training
Thank You

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