Workout Considerations: Individualization and Grouping

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How to develop speed/power athletes through sound principles of training

Neuromuscular System Training: First Things First

- The *neuromuscular system* adapts best to a certain type of training emphasis
  - HIGH QUALITY OF WORK: Speed qualities place high demand on CNS
  - SUFFICIENT RECOVERIES: within workouts and between CNS heavy workouts
  - MANAGEABLE VOLUMES: high intensities demand reasonable, doable volumes
    - Should not be compromised at the expense of other training modalities.

PHYSICAL PERFORMANCE COMPONENTS

Speed = ability to move the body and its parts rapidly

Strength = the ability to produce large amounts of force

Coordination = ability to perform motor skills with precision

Endurance = ability to perform large workloads and resist fatigue

Flexibility

movement

Compatible Training

- The use of similar training components per session of work
- Utilize ***neural*** or ***physiological*** concepts to identify the individual type of work being conducted per workout.
- Utilize ***physical performance characteristics*** to organize workouts into systematic training units

Complimentary Training

- The use of ***successive training sessions*** to offer the best training effects sequentially
- The theory that training sessions are **NOT** created independent of one another.
- Training sessions cause a positive effect on subsequent sessions.
- Groups of training sessions cause a longer positive training effect on subsequent groups of workouts.

Multilateral Training

- Defined as the planning of training to include all five of the physical performance characteristics
- ***Balance***: Training all five of the physical performance characteristics in order to develop a holistic approach to athletic development
- ***Planned Balance***: Balancing the different modalities of training to achieve optimal results
- Need not be equally distributed
- Coach will decide which of the physical performance components are most necessary at any given point in the training program.
- Organizing these modalities around a predetermined plan is most effective.

General Training Principles

- Stimulus and Adaptation
- Training Theory
- Overload
- Reversibility
- Specificity of Adaptation
- Supercompensation
- Variance/Diversification
- Training Age and maturation
- Volume and Intensity
- Density

Specialization

- ***Age and experience*** of an athlete may dictate overall training plan
- Older, more well developed athletes, will achieve training markers faster and once achieved time spent on this facet of training can be decreased.
- Example: Absolute strength training
- Emphasis in one area must be accompanied by a decrease in another area
- Time can be spent in other areas to achieve a greater level of technical expertise.
- Highly specific training is generally reserved for the latter stages of an annual plan or older athletes

Compatible Training: Neuromuscular Components

- Neural Components
  - Acceleration : Speed
  - Max Velocity : Speed
  - Speed Endurance: Speed
  - Bilateral Training : Speed/Coordination
  - Agilities : Speed/Coordination
  - Plyometrics : Elastic Strength
  - Olympic Lifts : Power (strength and Speed)
  - Specific Strength : Strength
  - Hurdle Rhythm Maintenance (short) : Speed/Speed Endurance/Coordination
  - Speed Endurance: Speed/Coordination

Compatible Training: Physiological Components

- Physiological Components
  - Body Circuits : General Strength
  - Med Ball Circuits : General Strength/Flex
  - Core Circuits : General Strength
  - Combination Circuits: Strength/Endurance
  - Tempo : Endurance
  - Fartlek : Endurance
  - Aerobic Training : Endurance
  - Static Stretching: Flexibility
  - Dynamic Stretching: Flexibility/Coordination

Workout Organization: Limiting Factors

- Spatial/Facility Limitations
- Time Constraints
- Coaching Availability and expertise
- Training age of Athletes
- Events: Primary and Secondary
- Seasonal Adjustments (Indoor/Outdoor)
- Injuries and Injury prevention
- Academic Priorities
- External Factors
  - Holidays etc.

Grouping: Practice Organization

- By Event Groups
- By Age
  - Chronological
  - Training Age
- By ability
- By capacity
- By Themes (CNS/Physiological)

Complimentary Events

- What are events that can be grouped in training?
- Jumps/Sprints
- Jumps/Hurdles
- Sprints/Hurdles
- Throws/Sprints

- Why?

Sprints/Hurdles

	Sprinters	Hurdlers
Monday	Acceleration/Speed	Short Hurdle Work
Tuesday	GS	GS
Wednesday	SD/Relays/LS work	Long Hurdle Work
Thursday	GS	GS
Friday	Pre-Meet	Pre-Meet
Saturday	Competition	Competition

- Hurdlers make great curve runners on relays
- Hurdlers are often aggressive by nature, so first leg is an option
- Organizing by theme is the best way to maximize training loads.

Sprints/Jumps

	Sprinters	Jumps
Monday	Acceleration/Speed	Acceleration/Speed
Tuesday	GS	Jump Tech/GS
Wednesday	SD/Relays/LS work	Approaches/Relays
Thursday	GS	GS
Friday	Pre-Meet	Pre-Meet
Saturday	Competition	Competition

- Relay work should be pre-planned in order to maximize the jumpers contribution to the team/relay process.

Training Priorities: Balancing the Demands on the Individual

- What are your goals for the team as a coach?
- Have those goals been conveyed properly to the individuals?
- Is team success your ultimate goal?
- How do you balance individual achievement with the overall success of the team?
- What are the individual goals and expectations of the athlete regarding your coaching style and demands?

THANK YOU

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