

Boo Schexnayder

Critical Factors in Speed Training Design

A Philosophy of Speed Development

A Philosophy of Speed Development

- **Planned Balance in Training**
- **Prioritizing Speed Development**
- **Patience and Progression**
- **Absence of Gimmicks and Preconceived Notions**

Speed, Talent and the Nervous System

- **Speed - a Neural Quality**
- **Training the Nervous System**
 - **Quality of Work**
 - **Long Rests**
 - **Low Volumes**
- **Percentage of Neural Work**

Speed and Strength – A Unique Relationship

Speed and Strength

- **Enhancing Strength via Neuromuscular Integration**
 - **Recruitment Increases**
 - **Rate Coding Improvements**
 - **Synchronization Improvements**

Speed and Strength

- **Strength Improvement as a Result of Speed Training Increases**
 - **Improved Neuromuscular Integration**
 - **High Tension Levels**
- **Advantages of Neural Based Strength Gains**
 - **Absence of Hypertrophy**
 - **Coordination Gains**
 - **Improved Movement Quality**

Compatible Training Design

Compatible Training

- **Speed - A Neural Quality**
- **Compatible Training Groupings**
- **Neural and General Groupings**
- **Other Neural Qualities**
 - **Power**
 - **Absolute Strength**
 - **Elastic Strength**
- **The White Noise Phenomenon**

Lactate Metabolism

Lactate Metabolism

- Lactate – Friend and Foe
- Lactate Based Restoration
 - Lactate and Endocrine Fitness
 - Oxidative vs. Endocrine Based Restoration
- Lactate Shock
- Scheduling Implications

Speed Training Components

Speed Training Components

- **Forms of Speed**
 - **Accelerative Power**
 - **Absolute Speed**
 - **Speed Endurance**
 - **Speed of Movement**
 - **Power**
 - **Multidirectional Speed**

Speed Training Components

- **Forms of Speed Training**
 - **Running Speed**
 - **Acceleration Development**
 - **Speed Development**
 - **Speed Endurance Work**

Acceleration Development Training

- **Isolating the Acceleration Component**
- **Parameters**
 - **Sprints of 10-40 Meters**
 - **Flat or Resisted**
 - **Contrast**
 - **Ratios**
 - **High Intensities**
 - **Nearly Complete Recoveries – Lactate Accumulation**
 - **Volumes of 300-400 Meters**

Speed Development Training

- **Basic Premises and the 3 Second Window**
- **Parameters**
 - **Constructs**
 - **Sprints - Runs of 40-70 Meters**
 - **Variable Speed Constructs**
 - **High Intensities**
 - **Complete Recoveries**
 - **Volumes of 400-550 Meters**

Speed Endurance Work

- **Basic Premises and the 3 Second Window**
- **Parameters**
 - **Constructs**
 - **Sprints - Runs of 80-150 Meters**
 - **Variable Speed Constructs (100-150 Meters)**
 - **High Intensities**
 - **Complete Recoveries**
 - **Volumes of 600-800 Meters**

Sport Specificity

Sport Specificity

- **Specificity – Is it Needed?**
 - **Acceleration Development**
 - **Speed Development**
 - **Speed Endurance**
- **Specificity Misunderstood**
 - **Conflicting Goals**
 - **Sport Specificity and Speed Development**

Training Readiness

Training Readiness

- **Speed – A Constant Focus**
- **Run Training Sequencing**
 1. **Acceleration Development**
 2. **Speed Development (if safe)**
 3. **Speed Endurance (if needed)**
- **Rationale**
 - **Safety**
 - **Preparation**
 - **Lactate Physiology**

Training Readiness

- High End Speed Training - Getting Wired
- Improving the Wiring
 - Improving Neuromuscular Integration
 - Modalities
 - Olympic (and similar) Lifts
 - Acceleration Development
 - Resisted Acceleration
 - (certain) Multijumps
 - Multithrows

Training Readiness

- **Power Training - The Setup for High End Training**
- **Short Term Considerations**
 - **Using Power to Set Up the Microcycle**
 - **Speed Placement in the Week**
 - **Avoiding Conflict – Complimentary Training**
- **Long Term Considerations**
 - **Using the Power Phase**
 - **Sequencing Speed to Power**

Training Readiness

- **Interference from Running and Lifting**
- **Power Output and Training Readiness**
- **Implications for Density**
- **Recovery Needs and Training Management**
 - **Developmental Athletes**
 - **Elite Athletes**
 - **Genetic Limitations**

Multidirectional Speed

Components of Multidirectional Speed

- **Linear Speed**
- **Plyometric Performance**
- **Body Balance - Strength Development Ratios**

Change of Direction Training

- **Two Strategies**
 - **Addressing Components**
 - **Addressing Skill**
- **Your Professional Approach**
 - **Contrast?**
 - **Pile On?**

Speed, Neural Function, & Rehabilitation

Phases of Functional Rehabilitation

- Reestablishing Neural Integration via Speed Training
- Reestablishing Functional Movement
- Removing Global Inhibition
- Regaining “Fitness”
- Budgeting Return to Play in Light of Fitness Status

Implications

- **Challenge, Don't Avoid**
- **Keep Densities Low**
- **Speed/Power Production in Necessary**
- **Strategies for Safe Speed Training are the Goal**
- **Apply Eccentric Rehabilitation**
- **Purposeful Training – Avoiding Training “Baggage”**

S A C

Schexnayder Athletic Consulting



www.sacspeed.com
bschex@sacspeed.com