

Organizing Run Training for Sprinters

Program Components

- **Speed and Power Development**
 - Accelerative and Absolute Speed Capabilities
 - Strength Training (Jump – Lift)
- **Fitness Training**
 - Tempo, Speed Endurance, Lactate Tolerance
- **Restoration**
 - General Strength, Medicine Ball, Weight Circuits

Components of 400 Meter Run Training

- Acceleration Development Training
- Speed Development Training
- Capacity Work
 - Short Efforts, Short Rests to Insure Quality
 - Extensive Tempo, Speed Based LAT
- Special (Race Modeling) Endurance
 - Longer Efforts, Longer Rests to Insure Quality
 - Intensive Tempo, Distance Based LA

Speed Development

A Philosophy of Speed Development

- **Prioritizing Speed Development**
- **Patience and Progression-The Scientific Model**
- **Absence of Shortcuts and Avoiding Gimmicks**
- **Absence of Preconceived Notions**

A Philosophy of Speed Development

- Speed, Talent and the Nervous System
- Speed in the 400
- Training the Nervous System
 - Quality of Work
 - Long Rests
 - Low Volumes
- Percentage of Neural Work

Designing the Speed Program

- Speed Training Components
 - Acceleration Development
 - Speed Development
 - Speed Endurance

Designing the Speed Program

- Acceleration Development Training
 - Categories
 - Sprinting (10m-40m)
 - Resisted Runs (20m-50m)
 - Volumes
 - Rest Intervals
 - Lactate Accumulation
 - Reduced Recovery Times
 - Supplementation

Favorite Workouts

- 4x10, 4x20, 4x30 from a crouch start
- 4x20, 4x30, 4x40 from a crouch start
- 12x30 resisted (tires) using a rollover start
- 9x30 from blocks
- 3x20,25,30 from blocks
- Chasers
 - 6x60 @ 2-3 min recoveries
 - 4x80 @ 2-3 min recoveries

Designing the Speed Program

- Speed Development Training
 - The 3 Second Window
 - Categories of Speed Development Training
 - Sprinting (40m-70m)
 - Variable Speed Runs (70m-90m)
 - Volumes
 - Rest Intervals

Favorite Workouts

- Sprint Float Sprint
 - 4-6 Runs, 45/65/80
- Sprint Float Sprint
 - 3-5 Runs, 50/70/90

Designing the Speed Program

- Speed Endurance Training
 - Categories of Speed Endurance Training
 - Sprinting (80m-120m)
 - Variable Speed Runs (100m-150m)
 - Volumes
 - Rest Intervals
 - Speed Endurance - Indoor Season and the Curve

Favorite Workouts

- Sprint Float Sprint
 - 4-5 Runs, 70/90/110, rest 6-8 minutes
- Sprint Float Sprint
 - 3-4 Runs, 80/110/150, rest 6-8 minutes

Assembling the Speed Program

- Sequencing Speed Training
 - 1. Acceleration Emphasis
 - 2. Absolute Speed Emphasis
 - 3. Speed Endurance Emphasis
- Sequencing Rationale
- Time Spent Per Phase
- Densities

Fitness Development

Designing the Endurance/Supportive Program

- **Lactic Acid: Friend and Foe**
- **Periodizing Lactate Production**

Designing the Endurance/Supportive Program

- **Endurance Components**
 - Extensive Tempo
 - Intensive Tempo
 - Lactate Tolerance
- **Cyclic Training and Timeframes**

Assembling the Endurance/Supportive Program

- Extensive Tempo Training
 - 70%-80%
 - Rests 2 -3 minutes
 - Runs 100-200 Meters

Favorite Extensive Tempo Workouts

- 6x200, recoveries 2-3 minutes
- 8x150, recoveries 2-3 minutes
- 10x120, recoveries 2-3 minutes
- 12x100, recoveries 2-3 minutes

Assembling the Endurance/Supportive Program

- Intensive Tempo Training
 - 80%-90%
 - Rests 4-5 minutes
 - Runs 150-300 Meters
 - Ladder Constructs
- In Season Concerns

Favorite Intensive Tempo Workouts

- 300, 2X250, 2X200, recoveries 4-5 minutes
- 250, 2X200, 3X150, recoveries 4-5 minutes
- 200, 2X150, 2X100 recoveries 4-5 minutes

Managing Tempo

- Extensive vs Intensive
 - Accumulation
 - Single Efforts
- Power Output Preservation
 - Employing Sets
 - Cutdowns or Ladders
 - Budgeting the Drive Phase
 - Target Times
 - Faith in the Rest Interval

Assembling the Endurance/Supportive Program

- **Lactate Tolerance Training**
 - **Lactate Tolerance via Total Accumulation**
 - **Key Variable - Distance**
 - **Lactate Tolerance via Rate of Accumulation**
 - **Key Variable - Velocity**

Assembling the Endurance/Supportive Program

- **Lactate Tolerance Training - Accumulation**
 - **90-100%**
 - **Rests 12-20 minutes**
 - **Runs 300-600 Meters (or Broken)**
 - **Ladder Constructs Possible**
 - **Tempo Introductions**

Favorite Lactate Tolerance Workouts

- (300-100 w/ 1' Rest) x 2, recoveries 12-20 minutes
- 300, 250, 200, recoveries 12 – 20 minutes
- 350, 300, 250 , recoveries 12-20 minutes
- 450, 350, 250, recoveries 12 - 20 minutes
- Meets

Race Modeling Example

58" 400 Runner

- Based on 2 Second Differential
- Workout – 450, 350, 250
- Phase 1 – Come Through 200 in 28
- Phase 2 - Come Through 250 in 35.5
 - $30/4 = 7.5$
 - $28 + 7.5 = 35.5$
- Phase 3 - Come Through 300 in 43
 - $28 + 7.5 + 7.5 = 43$

Race Modeling Example

48" 400 Runner

- Based on 2 Second Differential
- Workout – 450, 350, 250
- Phase 1 – Come Through 200 in 23
- Phase 2 - Come Through 250 in 29.2
 - $25/4 = 6.25$
 - $23+6.25 = 29.25$
- Phase 3 - Come Through 300 in
 - $23+6.25+6.25 = 35.5$

Assembling the Endurance/Supportive Program

- **Lactate Tolerance by Rate**
 - **Runs of 80-120 Meters**
 - **Rests As Needed – 1-3 Minutes**
 - **Total Volume 600 – 800 Meters**
 - **Velocities - 5% Faster than Race Pace**

Favorite Lactate Tolerance Workouts

- **10x80 @ Race Pace -5%, Recoveries 2', Set Recoveries 5'**
- **8x100 @ Race Pace – 5%, Recoveries 2", Set Recoveries 5'**

Race Modeling Example

58" 400 Runner

- Average Race Pace = 14.5"
- $14.5 \times 5\% = .725$
- $14.5 - .6 = 13.7$ Pace
- 8x100 @ 13.7 w/ 2 minute Rest
- When You Miss Take a Set Break

Race Modeling Example

48" 400 Runner

- Average Race Pace = 12"
- $12 \times 5\% = .6$
- $12 - .6 = 11.4$ Pace
- 8x100 @ 11.4 w/ 2 minute Rest
- When You Miss Take a Set Break

Program Assembly

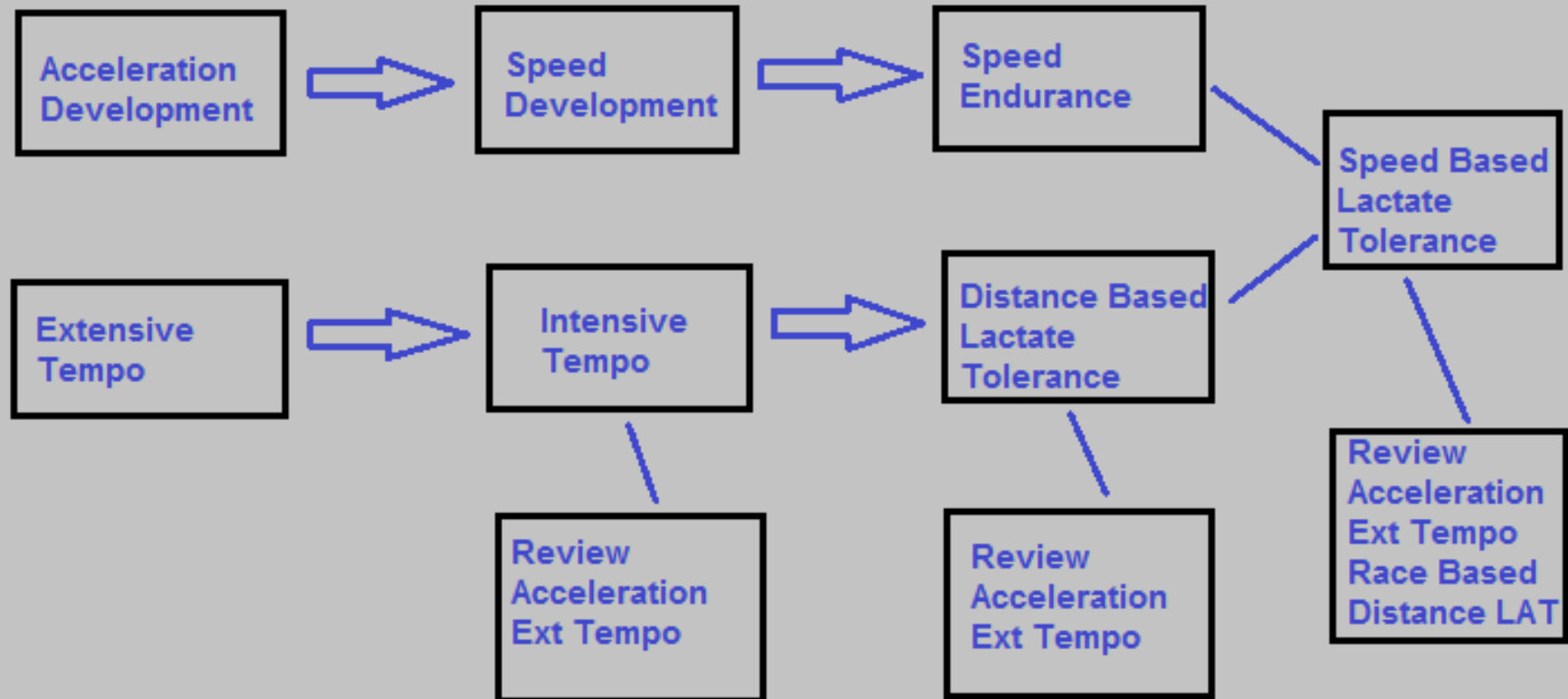
Yearly Scheduling

General Preparation

Specific Preparation

Indoor

Outdoor



Yearly Scheduling – General Prep

| Monday | Tuesday | Wednesday | Thursday | Friday |
|-----------------------------|------------------|-----------------------|------------------------------|------------------|
| Acceleration Dev. (Sprints) | Extensive Tempo | Stadium Singles | Acceleration Dev. (Resisted) | Extensive Tempo |
| Multijumps (Hz Bounds) | General Strength | Medicine Ball Circuit | Multijump Circuit | General Strength |
| Olympic Lifts | Weight Circuit | | Olympic Lifts | Weight Circuit |
| Static Lifts | | | Static Lifts | |
| | | | | |

Yearly Scheduling – Specific Prep

| Monday | Tuesday | Wednesday | Thursday | Friday |
|----------------------------|-----------------|-----------------------|-------------------|------------------------|
| Acceleration Dev. (Blocks) | Intensive Tempo | General Strength | Speed Development | Mild Lactate Tolerance |
| Multijumps (Hz Bounds) | Weight Circuit | Medicine Ball Circuit | Vertical Bounds | General Strength |
| Olympic Lifts | | | Olympic Lifts | |
| Static Lifts | | | Static Lifts | |
| | | | | |

Yearly Scheduling – Competition

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---------------------------|--------------------------|------------------|-------------------------|-------------|
| Acceleration Dev. (Mixed) | Speed Endurance or | General Strength | Acceleration Dev (Stim) | Competition |
| Multijumps | Lactate Tolerance (Hard) | Weight Circuit | Olympic Lifts | |
| Olympic Lifts | Medicine Ball | | | |
| Ballistic Lifts | | | | |
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SAC

Schexnayder Athletic Consulting



www.sacspeed.com
bschex@sacspeed.com