The 100 Meter Dash

Ryan Banta
Parkway Central High School
rbanta@parkwayschools.net
Author of the Sprinter’s Compendium
Basic Sprint Training Lingo and Terms

• Speed Development- Acceleration is developed first, followed by Maximum Velocity
• Speed Endurance- ability maintain near max velocity
• Lactate Tolerance- AKA Lactate Threshold; the ability to buffer the acid build up in muscle tissue due to high level physical activity (time & intensity dependent)
• Stride Length and Stride Frequency
Defining the Event

• 100m dash relies heavily on Speed Development - initial explosion & acceleration, Max Velocity, somewhat speed endurance

• Usain Explains - https://youtu.be/yLWejYWjANM
Acceleration Blocks

- Foot Placement 1.0
  - Which foot goes in front?
    - Thumb Test
    - Arm Test
    - Push Test

- Foot Placement 2.0
  - Block Placement?
    - Front peddle two from the start line
    - Back peddle three from the start line
    - Narrow or Wide Feet in the Blocks?
Acceleration Block Clearance

• Having a routine into the blocks
  – Number of prerace starts and taking advantage of Post Activation Potentiation
  – Breathing Control (out and in blocks)

• Block Clearance
Acceleration Drive Phase

• Push, PUsh, PUSh, **PUSH**!
  – Don’t rush
  – Running away from the blocks

• March Madness Block Start Tournament
Acceleration and Drive Phase Drills

• Arm Split from a Start position- https://youtu.be/oqnBJ5dRDSs
• Standing Long Jump w/weight vest- https://youtu.be/K4cVBz8tUEE
• Latif Hurdle Pushes- https://youtu.be/OKMbJ5GsdF8
• Sled Pulls- https://youtu.be/XGnrGHBRdWY
Transition Phase

• Progression
  – Not all at once
  – Eyes moving farther down the track
  – Heel Recovery getting higher each step
  – Sling shot

• Race Modeling
  – Cones for land marks
  – Once you are up your up
Transition Phase Drills

- Standing Falling Start- https://youtu.be/JdF8aRVoaPs
- Bench Drop- https://youtu.be/NTDEXyK9kG8
- Bullet Belt Contrast runs- https://youtu.be/sl53f_3Dbh8
- Mid position Medicine Ball Toss- https://youtu.be/B_Un1Rd3pJs
Maximum Velocity

• Posture
  – Styles should be limited
  – Commonalities
    • Front Side Mechanics, Heel Recovery, and Dorsiflexion

• Stride Length vs. Stride Frequency
  – Plyometric Training, Cued runs, and Drills biomechanics

• Dynamic Stereotype
  – In and Outs, Over Speed Work.
Drills for Maximum Velocity

- Cued intervals “A” Run- https://youtu.be/hqk7hKYlXXs
- Mini Hurdle Run- https://youtu.be/a8CeJb8u_C4
- Single Leg Hops- https://youtu.be/5ltdE_vDhNs
Speed and Special Endurance

• Speed Reserve
• Repeatable Performances
  – Preparing for the structures of competition
• Energy system development
  – Tolerance
• Special Considerations
  – Hamstring or Quadriceps Centric

  • A drill to help you evaluate https://youtu.be/Qa9pRtr8sTw

  – Training and Injury history
## Examples of Speed and Special Endurance Workouts

### Short to Long vs. Long to Short

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Duration</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lactacid: SpE Ladder Short</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1x60 at 95%+ [full]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1x80 at 95%+ [full]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1x100 at 95%+ [full]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1x120 at 95%+ [full]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Tempo

8x200 + After each exercise with run on track: 20xPushups, 16xCrab Kicks, 40xCrunches, 20xSideUps, 40xLunges, 80xA-Skip, 40xChinnies, 20xPushups

### Ladders

Lactacid: SpE Ladder Short

1x60 at 95%+ [full]
1x80 at 95%+ [full]
1x100 at 95%+ [full]
1x120 at 95%+ [full]

### Lactaid Stacking

1x150 Run @ 90% [45"]
4x40 Run @ 90% [40", 60"]
1x150 Run @ 90% [12']
1x150 Run @ 90% [45"]
4x40 Run @ 90% [40", 60"]
How to Plan the Week?

<table>
<thead>
<tr>
<th>Short Sprinters 100/200 (no meet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday- Acceleration and Maximum Velocity.</td>
</tr>
<tr>
<td>Tuesday- Tempo (longer interval)</td>
</tr>
<tr>
<td>Wednesday- Active Recovery, Visualization, Goal Setting</td>
</tr>
<tr>
<td>Thursday- Race Modeling Special Endurance</td>
</tr>
<tr>
<td>Friday- Tempo (short interval)</td>
</tr>
<tr>
<td>Saturday Speed Endurance I</td>
</tr>
</tbody>
</table>
Questions?

- Ryan Banta
  - Parkway Central Girl’s Head Track & Field Coach
    - USATF Level II Sprints, Hurdles, Relays, and Endurance
    - Emerging Elite Coach Olympic Training Center 2012
    - rbanta@parkwayschools.net
    - Twitter- SprintersCompendium@SprintersCompen
    - Facebook- https://www.facebook.com/SprintersCompendium/?ref=hl