**Javelin: Speed to Mechanics**  
**Presented by:** Ramona Pagel

**Overview:**  
Javelin technique can be broken down into the approach, penultimate and the plant. We will be discussing training and mechanics as it pertains to the approach.

**Areas of concern:**
- Fall Conditioning Cycle
- Power Cycle
- Pre Competitive Cycle
- Competition Cycle
- Suggestions for gathering data on the approach.

**Fall Conditioning Cycle**
Running drills- 100m - stamina  
Specific to technique used in approaches  
Grass Running  
  - barefoot –strengthen lower leg/feet  
Sand Running- if possible

**Emphasis**
- Strengthen connective tissue  
- Approach running technique  
  - Straight back/high knees (Michael Johnson)  
  - Using hips change body position  
  - Drive knees forward  
  - Pushing through hips

**Forgotten areas**
- Core strength – inside  
- Stabilizing hip/core/low back  
- Balance

At this point there is some javelin throwing, but only in a associate manor, little emphasis is place on fine technique.
Strength training
High rep low volume
Major muscle groups, utilizing Olympic lifts
Specific Javelin strength is not emphasized

This segment is 6-8 weeks long and the
segments are tapered.

Power Conditioning Cycle
• Running technique is still emphasized
• Power element is included
  – Tire pulls
  – Stadium stairs
  – Hill running
  Important that restorative aspect is included in training regimen

Actual Approach
• Along with the conditioning, training of the approach 2-3 session a week are used to organize actual approach.
• Emphasizing the same aspect used when running. Speed development and transitional movement.
• This approach work are not at athletes full speed rather even and rhythm and tempo are examined.

Emphasis in Approach is acceleration:
if peak speed on cross-steps is 5.5m/sec then at right foot touch down speed should be at least 5.5m/sec.

Power Conditioning / Lifting
• Working on body segment speed
  – Olympic lifts-clean, snatch, jerks,
  – Power lifts used for gross strength should not be a major emphasis
  – Take notice of lifts for specific injuries prevalent in Javelin throwing, elbows, shoulders, backs.

Power Conditioning-other
• Med ball
• Swiss ball
• PNF resistance
• Gymnastics
• Stabilization
**Pre-competitive Cycle**

- You need a good picture of what approach will look like – Both Athlete and Coach must match concepts
- Acceleration through cross steps-working into penultimate and block.
- Peak speed at left foot touch down

**Pre-competitive – training**

- Approach
- Approach with throwing
- Conditioning more specific
- Generalized training localized and minimized but not left out
- Specific strength is larger portion of training.

**Pre- competitive**

- Drill sequencing
- Runway timing
- Putting throw together- there will be mis-timing and discordance with in the throw, small percentage of throws need to be all out, larger percentage of throws working rhythm and body position.

**Pre-competitive lifting**

- Maintain lifting strengths- snatches/cleans
- Increase specific lifting
- Increase core strength
- PNF strength through entire range of motion
- Flexibility should be a factor both as part of the workout and as recovery

**Competition Cycle**

- Work Rhythm
- Consistency – check marks if needed
- Posture
- Running Cross steps
- Hard Block

By this time in training the body is conditioned to absorb but the timing may not be exact.

**Competitive Cycle**

- Meets once a week part of throwing training
- Do not have two meet throwing days in a row unless well rested
- Use restorative therapy after every workout and meet.
First Suggestion

- Force plate analysis to determine the amount of horizontal velocity at the plant
  - Using three force plates to measure the amount and direction of the last two steps and plant
  - We would also be looking for consistency in approach

First Suggestion con’t

- Using video to synchronize the visual with the data from the force plate
- Allows for greater understanding of the actions of the athlete not just using sense or historical data

Second- Suggestion

- Using film both historical and 09 season competitions to determine individual ideal speed on runway
- Establish a personal rhythm for throw
- Establish a consistent approach

Contributors:

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Thank you both for your help and input!