Managing Jump Training

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Kent State University
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Background

University of Northern Iowa
4 x All American
1975-1980

University of Northern Iowa
Associate Head Coach
1984-1999

University of Oregon
Assistant Coach
1999-2005

1980-1984
HS Coaching

2005-Present
Kent State University
Director of Track and Field / Cross Country
Overview

- Alternative Jump Training
- Strength Training
- Preventative Maintenance
- Performance Testing
Today’s Objectives

- Illustrate alternative jump training
- Emphasize weight room importance
- Introduce preventative maintenance
- Help reduce overuse
- Describe testing protocol
“You can’t **win** a championship in the fall, however, you can certainly **lose** it”

“**You can’t have a race without a racehorse**”
GOALS

Athletes need to develop the following:

- Strength
- Power
- Muscular Endurance
- Functional Strength
- Health
Alternative Jump Training
General Drills

- Applies to all Jumping Events
Hurdle Mobility

- Range of Motion
- Balance and Stability
- Overall Mobility
Med Ball Routine
Run Rocket / Sled Pulls
Sand Plyometrics

- Increased load
- Low impact
- Barefoot
Progressive Hurdle Hops

- Increasing barrier height
- Increasing contraction rate
- Increasing magnitude of load
- Be creative!
Low-Impact Conditioning

- Pit runs (30-20-10)
- Sand running
- Drill combinations (circuit training)
Event Specific Drills

- Applies to Specific Jumping Events
Pole Vault
Pole Vault cont.
Long Jump
High Jump
High Jump cont.
Strength Training
Strength Training Purpose

- Increase track and field performance
- Integrate strength and functional movement
- Injury prevention
Cycle Overview

Week 1-2: General Preparatory Phase
Week 3-4: Reps Testing
Week 5: De-Load
Week 6-7: Eccentric
Week 8-9: Isometric
Week 10-11: Concentric / Max
Week 12: De-Load
Week 13-14: Reactive
Triphasic Cycle

- Eccentric
- Isometric
- Concentric
- Reactive
Eccentric

- Loading phase
- Deceleration on the down movement
- Primary lifts are paired with plyometrics
- Day 3 lift features a hang clean complex (non-eccentric)
Isometric

- Increases static power
- 3 second pause at change of direction
- Plyometric pairing with emphasis on “sticking” the landing
- Day 3 lift features linear hang clean progression (NOT isometric)
Concentric

- Lifts completed with no tempo/restraints
- Plyometrics with emphasis on fast redirection of force
- Find new training numbers for athletes
Reactive

- Submaximal load
- High velocity movements
- Speed overload plyometrics (band assisted)
Preventative Maintenance
Main Problem Areas for Jumpers

- Hamstring
- Hip Flexor
- Knee
- Muscle Fatigue
What is Prehab?

- Preventative maintenance
- Completed before Injury
- Targets weak areas
- ‘Feeling good’ ≠ Healthy
Injury Avoidance

LESS IS MORE
NOTHING IS WRITTEN IN STONE
LISTEN TO YOUR ATHLETE
KNOW YOUR HORSE
Preventative Maintenance Examples
Nordic Hamstring Curls

- Challenging bodyweight exercise
- No special equipment needed
- Large eccentric load
- Can be done at different difficulties
- Bulletproof the hamstrings
Voodoo Floss Bands

- Used while performing slow, functional movement
- Compression, Tension, and Movement
- Promotes blood flow
- Warm up or Cool down
Reverse Sled

- Max blood flow to the knee
- Targets the VMO
- No eccentric load = no soreness
- Done daily or post-competition
- Helps with Jumpers Knee
Recovery

- Normatec
- Ice Tub
- Cryochamber
- Active Recovery
Performance Testing
Quadrathlon

- 30m Sprint
- Standing Long Jump
- Overhead Shot Put
- Triple bunny hop
### Scoring Table

<table>
<thead>
<tr>
<th>Event</th>
<th>Distance</th>
<th>Points</th>
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<tbody>
<tr>
<td>30 Sprint</td>
<td>3.55</td>
<td>81</td>
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<tr>
<td>SLJ</td>
<td>3.32 meters</td>
<td>86</td>
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<tr>
<td>OSP</td>
<td>18.11 meters</td>
<td>83</td>
</tr>
<tr>
<td>STJ</td>
<td>9.65 meters</td>
<td>83</td>
</tr>
</tbody>
</table>

**Total** 333

**Difference +/-** 22

**Percentage** 7%
Key Takeaways

- Drills opposed to full jumps
- Develop function strength
- Listen to your athlete
- Quantitative analysis is valuable
Questions?