Designing Effective Hammer Programs

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Acknowledgements

• Mentors
• Successful Teams
• Successful Colleagues
• Very dedicated Athletes

[Logos of SUU, Texas State, and NAU]
Hammer Autobiography

- **Athlete:**
  - 02-04: (51.74m) Darren Dahlin, NDSU Grad, 10,000 Turns approach
  - 04-07: (61.39m) Youri Sedykh Clinics
  - 07-09: (62.74m) Dr. Bondarchuk

- **Coach:**
  - 08-14: Southern Utah
    - Kayla Kovar(Jr)-66.06m, Kristi Koplin-60.30m, Ashley Morrison-58.08m
    - Greg Watson-65.98, Tyler Anderson(Fr)-56.34m
  - 13-14: Texas State
    - Talore Kelly(So)-58m
    - Darian Brown(Jr)-60.51m, Jordan Huckaby(So)-59.94m
  - 14-18: Northern Arizona
    - Brooke Andersen-74.20m, Tiana Hatler-59.85m
    - Adam Keenan-72.72m (70.18m in NCAA)
  - 18+: Kansas State:
    - Helene Ingvaldsen-63.09m (Training Fall 18)
Coaching Hats

- Program Designer
- Recruiter
- Motivational Speaker
- Strength Coach
- Technician
- Psychologist
- Sport Psychologist
- Cultivator
- Dietician
- Record Keeper
- Construction/Maintenance
- Storage Specialist
- Supervisor
Objectives

• Provide the Guide Book
• Define “Effective Hammer Training”
• Encourage Use of the Scientific Method
• Encourage Cataloging Applicable Records/Results
• Define “Hammer Skills”
• Detail Training Goals/Considerations
• Define Training Stimuli
• Detail Application
• Show Results
Effective Hammer Training

- Enforcing Significant Improvement in one or more Hammer Skills and/or Considerations.
- Being able to prove progress over time
- Build Confidence in both the athlete’s prowess and the coach’s ability to ensure positive results.
- Do the above without causing chronic injury
Ott’s Scientific Method of Hammering

- Evaluate Athlete over a series of trials/sessions
  - Rank Skills
  - Research
    - Personal Records
    - Athlete Perception/Opinion
- Determine Most important area(s) to develop.
- Design and implement daily-to-weekly test
  - Throw/power/skill/Coach evaluation
  - Record
- Craft Program to enforce development in area(s)
  - Decide how much to disclose to the athlete
- 2 weeks
  - Expedient adjustments needed?
  - Major considerations-Injury and Mentality
- Proceed through Infradian Rhythm
- Switch Program when Test exceeds original high point on 2 occasions.
Sample Tests

- Training Distances/Practice Comps
- Body Awareness Questionnaire
- Video and Coach Evaluation
- Power-Vertical Jump or Overhead back
- 1RM lifts
- Special Strength Test
Recording

• Measuring and Recording Daily/Weekly/Meso is Absolutely Critical to the process.

• How else will you know when you’ve arrived?

• No “Hunting Stories”
Hammer Skills

• Implement Velocity
  – Push
  – Drag
  – Pull
• Orbit/Radius
• Double Support
• Low Point (High Point)
• Catch
• Connection-Hammer and Ground
• Special Strength
Implement Velocity “Engines”
Implement Velocity Pros and Cons

- **Push**
  - **Pros**
    - Max efficiency of velocity and radius while encouraging ideal biomechanical positions
  - **Cons**
    - Connection is established only by centripetal force
    - Advanced Skill-not suited to most athletes

- **Drag**
  - **Pros**
    - Good velocity
    - Most athletes can grasp it but sacrifices some radius and position potential
  - **Cons**
    - Connection is established at the handle, so radius suffers
    - Catching well becomes extremely difficult

- **Pull**
  - **Pros**
    - Great velocity and easiest way to feel connection
    - Surest way to 50m
  - **Cons**
    - Radius is severely compromised and so many advanced concepts are unattainable
Program Design Considerations

• Technique development
  – Efficiently applying force to the implement
• Physical Development
  – Increase the force potential
• Improve Psychology
  – State of high self esteem
• Health/Injury Prevention
• Training Ability
Training Stimuli

- Competition Weight
- Heavy Weight
- Super Heavy Weight
- Light
- Super Light
- Wire Lengths
- Weight Throw
- Special Strength
- General Strength
- Number of Implements
- Heavy to Light/Light to Heavy
- Parts Program
- Micro-Meso Cycle Structure
Implement Observations

• Competition Weight
  – Benchmark implement
  – More effort investiture (good or bad?)
  – Athletes always measure their progress more significantly by how the competition weight is going
  – Can cause stagnation
  – Not always a useful training implement
Implement Observations

• Heavy
  – Pros
    • Usually easiest to establish hammer connection
    • Builds Special Strength
    • Promotes feel-Can’t execute some skills without focus
  – Cons
    • Overall velocity is harder to develop
    • Higher instance of chronic injury

• Super Heavy
  – All the above, just accentuated.
  – Might change the throw too much if done too often
Implement Observations

• Light
  – Pros
    • Easy way to teach velocity and faster timing
    • Low Injury risk
    • Enjoyable (for most) to throw
  – Cons
    • Challenges connection, often requiring additional focus
    • Can make the comp implement feel “too heavy”

• Super Light
  – All the above, just accentuated
Implement Observations

• Long Wire
  – Pros
    • Encourages patience
  – Cons
    • Can’t get an acceptable release angle

• Short Wire
  – Pros
    • Encourages quick body timing
    • Easy for most athletes to feel a drag/pull connection
    • Good bridge to weight throw
  – Cons
    • Very different feel to a normal wire.
Implement Observations

• Weight Throw (of all varieties)
  – Pros
    • Great way to build Special Strength
  – Cons
    • Doesn’t encourage hammer skills
    • Increased risk of injury
    • Success in hammer doesn’t always translate to weight.
Hammer Strength

• Special Strength
  – “Chunking” parts of the throw and overloading it
  – Mimic the throwing motion as much as possible

• General Strength
  – Squats, Deadlifts, Olympics, Core
Session Structures

• Number of Implements
  – Usually 2 minimum to 5 maximum

• Heavy to Light/Light to Heavy
  – Usually Heavy to Light
  – Light to Heavy Encourages Patience

• Parts Program
  – Fantastic way to “Smooth out” Technique
  – Throws then specials, repeat 2-6 sets
  – Typically 3 total parts
    • 6 throws
    • 15 sets of light special strength exercises
Micro-Meso Cycle Structures

- Block: Same Throws and load each day
- Step Block: Block with progressive Load
- Single Session: 1 Daily Session
- Double Session: 2 Daily Sessions, 5 hours apart
- Single Program (A)
- 2 Programs (A&B)
- 3 Programs (A,B,&C)
- Interwoven (ex. A,A,B,A,A,C)
- Random
Structure Observations

• Block
  – Pros
    • Allows Infradian Rhythms (IR) to be observed
    • Ability to establish a “Control Group”
    • Comfortability with all applicable stimulus
  – Cons
    • Strength levels decrease in unused areas
    • Athletes often stagnate mentally

• Step Block
  – Similar to block but accelerates fatigue (lower Valley part of IR)
Structure Observations

• Single Session
  – Fatigue can fully set in with 20 throws, making establishing volume difficult
  – 1 practice time is usually easiest on the athlete’s time

• Double Session
  – 2 shorter sessions allows for higher intensity over a greater volume of throws (ex. 12 throw session, twice daily)
  – Can cause harder “valley”
  – Usually harder on the athlete’s time
Thrower Infradian Rhythms

- Natural human hormone*/performance cycles
- Greatly influenced by training stimuli structures
- Typically 4 weeks/20 sessions/400 throws per program stimulus
- Multiple programs exponentially increases timeline
Total Volume and Frequency

• Benchmark of 6,000-8,000m with competition weight per week.
  – 60m x 25 throws x 5 sessions = 7,500m

• Super weights quarter distance + or -.
  – 20lb hammer
    • ~48m x 25 throws x 5 sessions = 6,000m
    • 6,000m x 1.25 = 7,500m
Be Fluid

- My observations are just that: what I’ve seen over time. It doesn’t mean that it is true for every athlete at any moment.
- Go with your gut. Your gut is usually right when it comes to programming.
- Learn your athletes. How they respond is what is important.
Brooke Andersen 2016-17

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Brooke 2016
Brooke 2018
Questions?