Movement-Based Approach to Teaching the Clean

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PROGRAM / PHILOSOPHY

• philosophy- a.) a theory underlying or regarding a sphere of activity or thought. 2a.) the most general beliefs, concepts, and attitudes of an individual or group (Miriam-Webster)

• Research vs. Anecdotal Evidence

• Collective Experience

• What do you “hang your hat on”?
PROGRAM GOALS
PERFORMANCE ENHANCEMENT

- Total Body Strength (TBS) – the ability to transmit lower body pushing forces through the trunk to the upper extremity
  - Requires a coordinated effort from prime movers, synergists, and stabilizers
INJURY PREVENTION

• Tissue Strengthening

• Ground Reaction Forces
  – It is theorized that many injuries occur because of the body’s inability to absorb and transmit forces effectively.

  – The explosive nature of Olympic weightlifting—perceived as dangerous by some—is the very quality that conditions the body to resist injury.
RATIONALE FOR USING WEIGHTLIFTING MOVEMENTS

• High force, high velocity, movement-specific training exercises
  – Throwing, hitting, and tackling are all complex movements involving many muscle groups working together in a coordinated fashion EXPLOSIVELY

• A basic objective of training should be to improve the rate of force development (RFD)
  – The brief execution times of most athletic tasks require high RFD
  – Weightlifting improves motor development for greater RFD
RATIONALE FOR USING WEIGHTLIFTING MOVEMENTS

- POWER OUTPUT
- ACCELERATION
- DYNAMIC FLEXIBILITY
- TORSO STRENGTH
- ECONOMY OF TIME
- SAFETY
POWER OUTPUT

- Power output in Olympic-style weightlifting is the highest ever documented, and is comparable to the maximum theoretically possible for a human. (Garhammer, 1993)
Olympic Lifters spend little or no time on generalized or isolated stretching drills, but simply use the competitive lifts themselves in a progressively loaded manner.
TORSO STRENGTH

• All squatting, pulling, and overhead lifting simply cannot be performed without a strong, well-stabilized torso.

• Core vs. Peripheral Stability

  Making the muscles that define the core work in a fashion that compliments spinal stability and efficient energy transfer.
ECONOMY OF TIME

- Time efficiency
  - Classes, practice, meetings, study hall, etc.
  - Multi-joint, high muscle mass lifts = maximal training in minimal time
SAFETY

• Landing forces from a vertical jump can be up to 8 X’s bodyweight.

• Female athletes and ACL injuries – Inadequate absorption/dispersion of force.

• Overhead components? No greater occurrence of shoulder injuries in weightlifters… and that is all they do.

• When Youth athletes learn proper form and technique they learn how to perform maximally in the most efficient manner.
IS OVERHEAD LIFTING RISKY?

• If weightlifting was inherently dangerous, there would be a tremendous number of shoulder injuries in weightlifters… this is simply not the case.

• Periodization
  – This is not to say that these exercises are at all times appropriate for any sport.
  • Manipulate volume/intensity/exercise selection.
TEACHING THE CLEAN

• Movement-Based Approach

  – Avoid “paralysis by analysis”.

  – Get a “jump” start on training! Sport coaches want their kids strong yesterday… use progressive teaching techniques that put the athlete in a position to learn quickly.
STEP 1 – SPINAL KINESIOLOGY

• Rotation
• Lateral Flexion
• Flexion
• Extension
  – Flexion & Extension are the primary concerns
STEP 2 – SUPPORTED POWER POSITION

- Shoulders in front of bar, knees slightly bent (power triangle)
  - Attempt to “push” knees behind ankles without locking them

- Some may have trouble flexing at hip and extending spine (lifting the ribcage)
STEP 3 – UNSUPPORTED POWER POSITION

- What happens when the support is removed?
  - Tightness in hamstrings, low back
- Sometimes knees will shoot forward to rest trunk
STEP 4 – VERTICAL JUMP FROM POWER POSITION

• Learn to jump from this position
• Watch for unnecessary knee flexion (loading) prior to jump, and rotation.
• Add straight-armed shoulder shrug
• Emphasize maximum extension (finish the pull!)
STEP 5 – SQUAT LANDING

• Start with the full (squat) clean!

• Add simulated arm action
  – Leave elbows at top of jump
  – “Tack” thumbnails to shoulders
STEP 6 – GET A FEEL FOR THE BAR
STEP 7 – GRAB THE BAR!

- Only difference is that we have added a barbell!
- Novice lifters will have a tendency to “muscle it up”, bending the elbows and reverse curling the bar
- Don’t sweat the small stuff (hand/foot position) until proper movement pattern has been established
PRACTICE, PRACTICE, PRACTICE!

- Can utilize front squats, pausing at bottom, keeping chest and elbows up
- Arms are “ropes”, use only energy from jump and shrug to move the bar.
- Speed!
TRANSITION TO THE FLOOR

- Clean Deadlift
  - Begin from power position
  - Squat bar to mid shin
  - Bar moves backwards during ascension… starts over ball of foot, finishes over tongue of shoe
FROM THE FLOOR

• “Splice” the two together!
• Shoulders, hips, bar all rise together
• Torso angle does not change
• Emphasize slow to fast rhythm
...Look for technique flaws

- Many athletes start out this way because they do not understand how to operate their hips.
- BE patient, fix these problems to educate the nervous system properly.
Break the movement down and put the athlete in positions to help them understand how to get the most out of good form and technique.

Once the athlete understands the right position then you can start adding weight, and only as much as good form and technique will allow.
SUMMARY

• There is potential to improve an athlete’s performance capability and reduce the risk of injury through the use of weightlifting movements.
  – RFD, muscular strength, flexibility, etc.

• Movement-based approach to teaching the clean.
  – When taught and supervised properly, these lifts are far less injury-causing than participating in the sport of baseball.

• Coaching = manipulating variables to produce the greatest benefits without excessive risks.