STRENGTH PROGRAM DESIGN FOR THROWERS

By Carrie Lane, Sport Performance Coach

Authentic Performance Center

Denver, CO
WHAT TO DO
WHEN TO DO IT
MY PERSPECTIVE

Distance runner ➔
Distance coach ➔
Thrower ➔ college throws coach ➔
S and C course instructor ➔
Speed/power coach for high school and professional track and field athletes
DEFINITION OF “STRENGTH TRAINING”

More like “Speed/Power/Strength” Training

Not JUST in the weight room. Includes hurdle mobility, plyometrics, throwing, bodyweight work, and traditional “weight training” activities.
PURPOSES OF STRENGTH TRAINING FOR THROWERS

Skill reinforcement
“Skill” day
Throwing sessions
Power
Strength
Speed

Muscular balance
Tensegrity

Recovery/Adaptation
“General” day
Non-Throwing
Dry drills
Active rest
Circuits
PURPOSES OF STRENGTH TRAINING FOR THROWERS

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WEIGHT TRAINING ON “SKILL” DAYS
WEIGHT TRAINING ON “SKILL” DAYS: PROTOCOLS

EXERCISE SELECTION:

Multi jointed movements with lots of tissue under tension

Examples:
1. Olympic lifts and modifications (cleans, snatch, high pulls, DB cleans, DB jumps, etc)
2. Static lifts (squat, bench, incline, deadlift, RDL, pullovers, pullups)

*** With throwers, pay attention to ratio of push and pull movements. (1 push: 2 pulls)

SETS/REPS PROTOCOLS:

Technique is king!
50-95% of 1RM (or estimated 1RM)
Sets of 1-8 reps with complete or near-complete rest after each set
Typical session is: 1 Olympic lift, 1 upper body static and 1 lower body static
SPECIAL STRENGTH TRAINING ON “SKILL” DAYS: PROTOCOLS

EXERCISE SELECTION:
Multi jointed movements with emphasis on **power output**
Examples:
1. Multi throws (Backward OH, Forward UH, etc)
2. Multi jumps (in-place hops, standing long jump, short bounds, etc)
3. Short, intense sprints (10m stadium sprints, sled pulls/pushes, track sprints, etc)

*** With throwers, do more rotational exercises.

SET/REPS PROTOCOLS:
**Technique** is king!
Emphasis on acceleration of body, ball, etc.
Complete or near-complete rest after each rep
Multi throws: 10-40 reps
Multi jumps: 10-40 takeoffs, depending on intensity of the activity
Sprints: 5-10 reps of 10-40m. Beyond 40m is not throws-specific
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Muscular balance

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“General” day

Non-Throwing
Dry drills
Active rest
Circuits

Tensegrity
NOT EVERY DAY CAN BE “SKILLS”
STRENGTH TRAINING ON “GENERAL” DAYS: PROTOCOLS

EXERCISE SELECTION:
Simple movements with emphasis on variety of movement
   Examples:
   1. Bodyweight exercises
   2. “Regional” lifts (single jointed, non-technical lifting)
   3. “Core” (pedestal, med ball, etc)

SETS/REPS PROTOCOLS:
Effort level should pass “The knee test”
1. Bodyweight, core, MB circuits:
   8-10 minutes of total work
   Exercise; rest ratio is 1:1 or 2:1 (ex 30” work:30” rest)

2. “Regional” lift circuit of approx. 30 minutes. Approx 20 exercises (or 2 sets of 10 exercises). 10 reps per exercise, approx. 1 min rest between exercises.
“SKILL” DAYS: WHAT I USED TO DO

- Summer: Muscular Endurance
- Fall: Strength
- Winter: Power
- Spring: Speed
“SKILL” DAYS: WHAT I NOW DO

Muscular Endurance + Speed
Power + Speed
Absolute Strength + Speed
Reactive Strength + Speed
WHY IS THIS PROGRESSION BETTER?

Speed throughout ➔ More efficient muscle recruitment ➔
“Smart” muscles ➔ Gain absolute strength faster ➔
Spend less time lifting slow and heavy, where injuries occur.
# PLANNING YOUR TRAINING

Image adapted from USTFCCCA 310 SCC Course Academy Curriculum

<table>
<thead>
<tr>
<th>Periods</th>
<th>Nebraska Spring Track Season</th>
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<tbody>
<tr>
<td>Phases</td>
<td>Specific Prep</td>
</tr>
<tr>
<td>Month</td>
<td>March</td>
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<tr>
<td>Mesocycle Theme 1</td>
<td>Power</td>
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<tr>
<td>Mesocycle Theme 2</td>
<td>Speed</td>
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<tr>
<td>Mesocycle Theme 3</td>
<td>Technique</td>
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<td>Microcycles</td>
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<td>Volume (1-10)</td>
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<tr>
<td>Intensity (1-10)</td>
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### ORGANIZING YOUR STRENGTH TRAINING (SAMPLE EARLY SEASON)

<table>
<thead>
<tr>
<th></th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
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<tbody>
<tr>
<td><strong>THEME</strong></td>
<td>SKILL DAY</td>
<td>SKILL DAY</td>
<td>RECOVERY DAY</td>
<td>SKILL DAY</td>
<td>RECOVERY DAY</td>
</tr>
<tr>
<td><strong>WARMUP</strong></td>
<td>Skipping hurdle mobility</td>
<td>Lateral &amp; bkwd sprint dev drills</td>
<td>Dynamic stretches</td>
<td>Sprint dev drills + runouts</td>
<td>Walking hurdle mobility</td>
</tr>
<tr>
<td><strong>THROWING</strong></td>
<td>Power throws + drills</td>
<td>Full throws + Sp str throws</td>
<td>Dry turn drills</td>
<td>Repeat day 1 or 2</td>
<td>Repeat day 3</td>
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<tr>
<td><strong>STRENGTH TRAINING</strong></td>
<td>Stair sprints: 6 x 10 yds High pulls: 4x5 @ 50-70% Sq, Bench: 4x5 @ 50-70%</td>
<td>Multi Jumps: Standing LJ x 10 Multi throws: 4 exercises x 8 each</td>
<td>Bodyweight or Regional lifting circuit (DB curls, SL squats, weighted core, etc)</td>
<td>Repeat day 1 or 2</td>
<td>Repeat day 3</td>
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<td><strong>THEME</strong></td>
<td>skill day</td>
<td>skill day</td>
<td>recovery</td>
<td>skill day</td>
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<td>sprint dev drills + runouts</td>
<td>walking hurdle mobility</td>
</tr>
<tr>
<td><strong>throw</strong></td>
<td>“troubleshooting” drills and throws</td>
<td>full throws</td>
<td>dry turn drills</td>
<td>repeat day 1 or 2</td>
<td>light drills + throw</td>
</tr>
<tr>
<td><strong>STRENGTH TRAINING</strong></td>
<td>track sprints: 4 x 20 yds hang cleans 5 x 2 @ 80-95% split sq, db bench 4x5 @ 50-65%</td>
<td>db jumps 4 x 4 20% of bw incline 5 x 2 80-95% multi throws: 2 exercises x 4 each</td>
<td>bodyweight, core circuits or off</td>
<td>repeat day 1 or 2</td>
<td>bb split jumps: 4 x 2 15% of bw multi throw: 2-4 exercises x 4 each</td>
</tr>
</tbody>
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The weight room is too small for my team

We don’t have access to our weight room

My athlete lifts with another team or in weights class

We have to lift on the same days each week

We have to lift in the mornings

Theme matching is most important
REFERENCES/ SUGGESTED READING:


Haff, G and Nimphius, S. *Training Principles for Power*. NSCA, Dec 2012


Myers, T. *Anatomy Trains*. Churchill Livingstone. 3e.


THANK YOU!

www.ustfccca.org/track-and-field-academy
carrielane55@gmail.com
@coachcarrielane (FB, Insta, Twit)
www.authenticperformancecenter.com/events-and-education
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