

# **STRENGTH PROGRAM DESIGN FOR THROWERS**

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**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.**



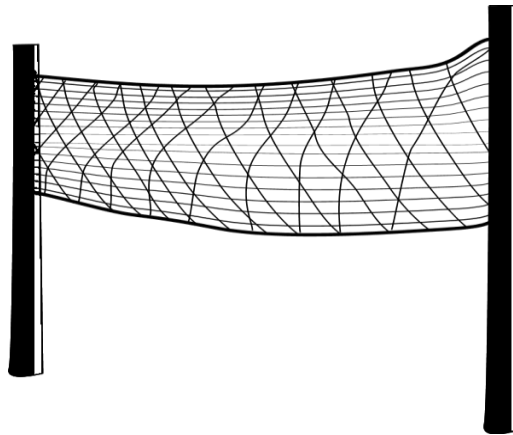
# **PURPOSES OF STRENGTH TRAINING FOR THROWERS**

**Skill  
reinforcement**

**“Skill” day**

**Throwing sessions  
Power  
Strength  
Speed**

**Muscular  
balance**



**Tensegrity**

**Recovery/  
Adaptation**

**“General” day**

**Non-Throwing  
Dry drills  
Active rest  
Circuits**

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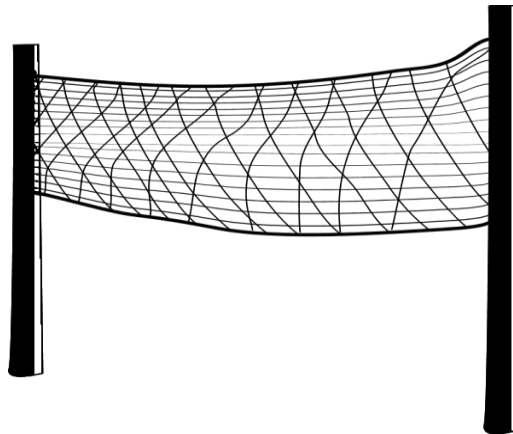
**“Skill” day**

**Throwing sessions**

**Power**

**Strength**

**Speed**



**Tensegrity**

# ***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)

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## **SETS/REPS PROTOCOLS:**

**Technique** is king!

50-95% of IRM (or estimated IRM)

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***



# **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.

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## **SETS/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

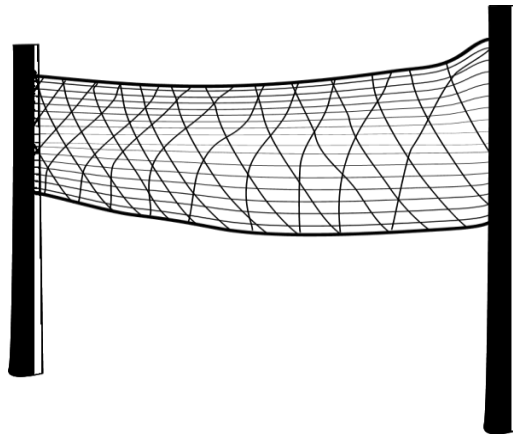
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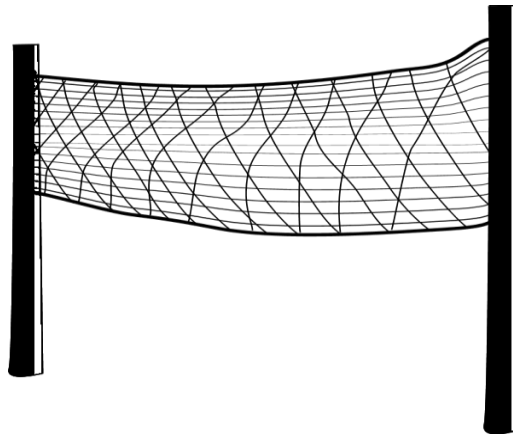
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# **PURPOSES OF STRENGTH TRAINING FOR THROWERS**

**Muscular  
balance**



**Tensegrity**

**Recovery/  
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Circuits**

***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)
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## ***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.

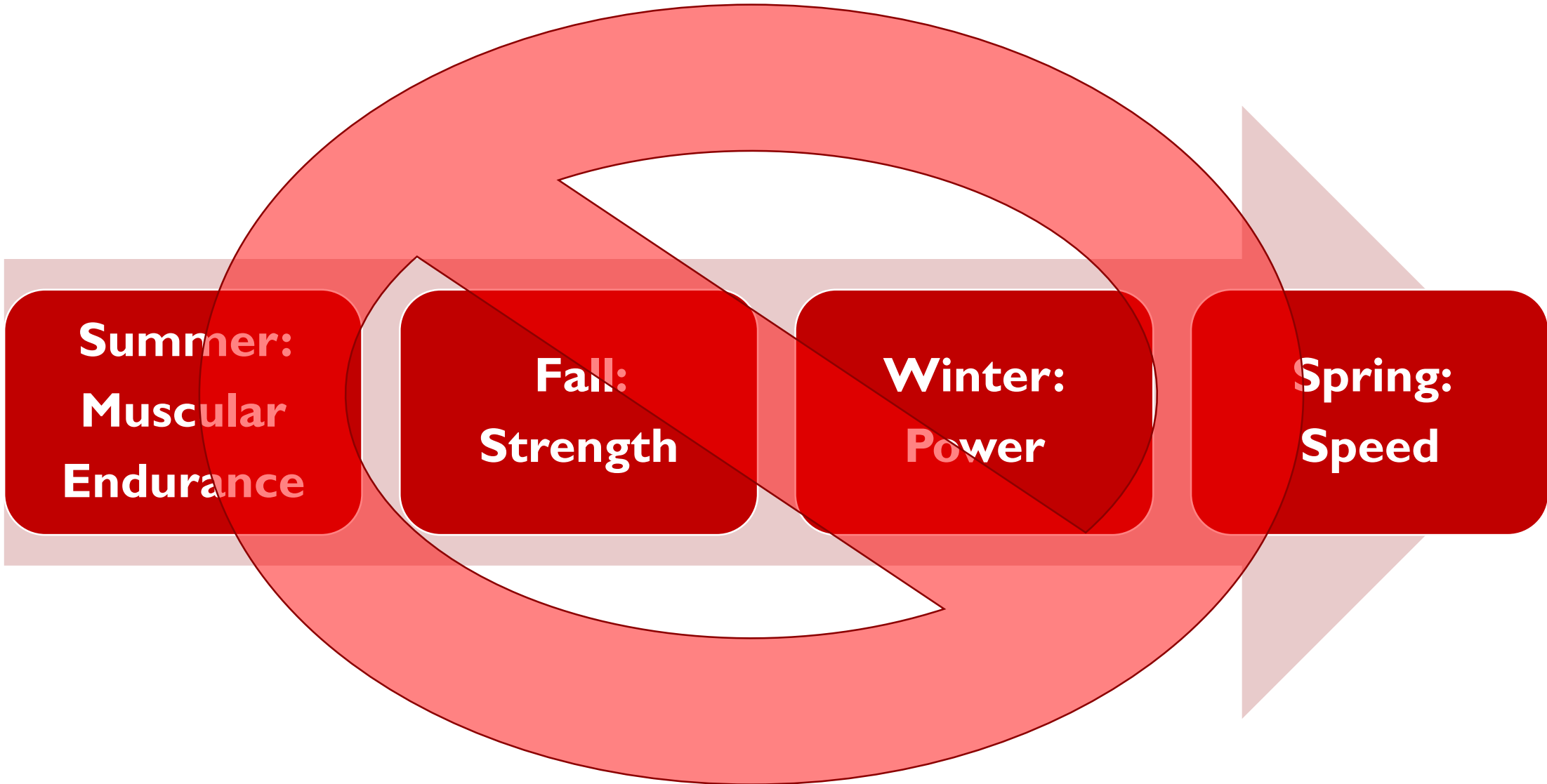
# ***“SKILL” DAYS: WHAT I USED TO DO***

**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***

Periods	Nebraska Spring Track Season										
Phases	Specific Prep				Pre Comp				Competition		
Month	March				April				May		
Mesocycle Theme 1	Power				Absolute Strength				Reactive Strength		
Mesocycle Theme 2	Speed				Technique				Speed		
Mesocycle Theme 3	Technique				Speed				Technique		
Microcycles	1	2	3	4	5	6	7	8	9	10	11
Volume (1-10)	6	7	7	5	4	4	3	2	2	1	1
Intensity (1-10)	3	3	3	4	7	7	8	3	8	9	10

*Image adapted from USTFCCCA 310 SCC Course Academy Curriculum*

## **ORGANIZING YOUR STRENGTH TRAINING (SAMPLE EARLY SEASON)**

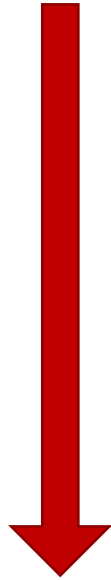
	Mon	Tues	Wed	Thur	Fri
<b>THEME</b>	<b>SKILL DAY</b>	<b>SKILL DAY</b>	<b>RECOVERY DAY</b>	<b>SKILL DAY (or COMP)</b>	<b>RECOVERY DAY</b>
<b>WARMUP</b>	Skipping hurdle mobility	Lateral & bkwd sprint dev drills	Dynamic stretches	Sprint dev drills + runouts	Walking hurdle mobility
<b>THROWING</b>	Power throws + drills	Full throws + Sp str throws	Dry turn drills	Repeat day 1 or 2	Repeat day 3
<b>STRENGTH TRAINING</b>	Stair sprints: 6 x 10 yds High pulls: 4x5 @ 50-70% Sq, Bench: 4x5 @ 50-70%	Multi Jumps: Standing LJ x 10 Multi throws: 4 exercises x 8 each	Bodyweight or Regional lifting circuit (DB curls, SL squats, weighted core, etc)	Repeat day 1 or 2	Repeat day 3

## ORGANIZING YOUR STRENGTH TRAINING (SAMPLE LATE SEASON)

	Mon	Tues	Wed	Thur	Fri
<i><b>THEME</b></i>	<b>SKILL DAY</b>	<b>SKILL DAY</b>	<b>RECOVERY DAY</b>	<b>SKILL DAY (or COMP)</b>	<b>PRE MEET</b>
<i><b>WARMUP</b></i>	Skipping hurdle mobility	Lateral & bkwd sprint dev drills	Dynamic stretches	Sprint dev drills + runouts	Walking hurdle mobility
<i><b>THROWING</b></i>	“Troubleshooting” drills and throws	Full throws	Dry turn drills	Repeat day 1 or 2	Light drills + throw
<i><b>STRENGTH TRAINING</b></i>	Track sprints: 4 x 20 yds Hang cleans 5 x 2 @ 80-95% Split Sq, DB Bench 4x5 @ 50-65%	DB jumps 4 x 4 20% of BW Incline 5 x 2 80-95% Multi throws: 2 exercises x 4 each	Bodyweight, core circuits or off	Repeat day 1 or 2	BB Split jumps: 4 x 2 15% of BW  Multi throw: 2-4 exercises x 4 each

# ***TROUBLE SHOOT***

**Theme matching is most important**



**The weight room is too small for my team**

**We don't have access to our weight room**

**We have to lift in the mornings**

**My athlete lifts with another team or in weights class**

**We have to lift on the same days each week**

# **REFERENCES/ SUGGESTED READING:**

Bosch, Frans. Strength Training and Coordination:An Integrative Approach. 2010 Uitgevers. 2015

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

Kawamori, N and Haff, G. The optimal training load for the development of muscular power. *J Strength Cond Res*. 2004 Aug 18 (3): 675-84.

Komi, P., ed. Strength and Power in Sport. Blackwell Scientific Publications. 1992.

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

Radcliffe, J and Farentinos, R. High-Powered Plyometrics. Human Kinetics. 2e.

Sale D. Neural adaptation to resistance training. *Med Sci Sports Exerc*. 1988. 20 pp s135-145. 1988.

Schexnayder, B, et al. TRACK AND FIELD ACADEMY SCC CURRICULUM. 2013. [www.ustfccca.org/track-and-field-academy](http://www.ustfccca.org/track-and-field-academy)

***THANK YOU!***

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