

# Strength Training for the Track & Field Athlete



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# About me



**AMERICAN COLLEGE  
of SPORTS MEDICINE®**  
LEADING THE WAY



**NSCA®**  
NATIONAL STRENGTH AND  
CONDITIONING ASSOCIATION



# Shifting to Sport-Specific Strength Training

“A coach who simply seeks to make his athletes exhausted during each and every practice is a coach lacking all understanding of human physiology and of the nature of sport itself.”

-Cal Dietz (U of Minn.)



# Why Strength Training is Important for Track & Field

- Enhanced coordination: Being athletic!
- Reinforces muscle actions/movements used in the sport
- Taper assistance: Improves athlete's ability to peak at the right time
- Injury prevention

# Agenda for Today



1. Foundations of Strength and Conditioning



2. Full-Season Cycle



3. Weekly Breakdown



4. Building an Individual Workout Session

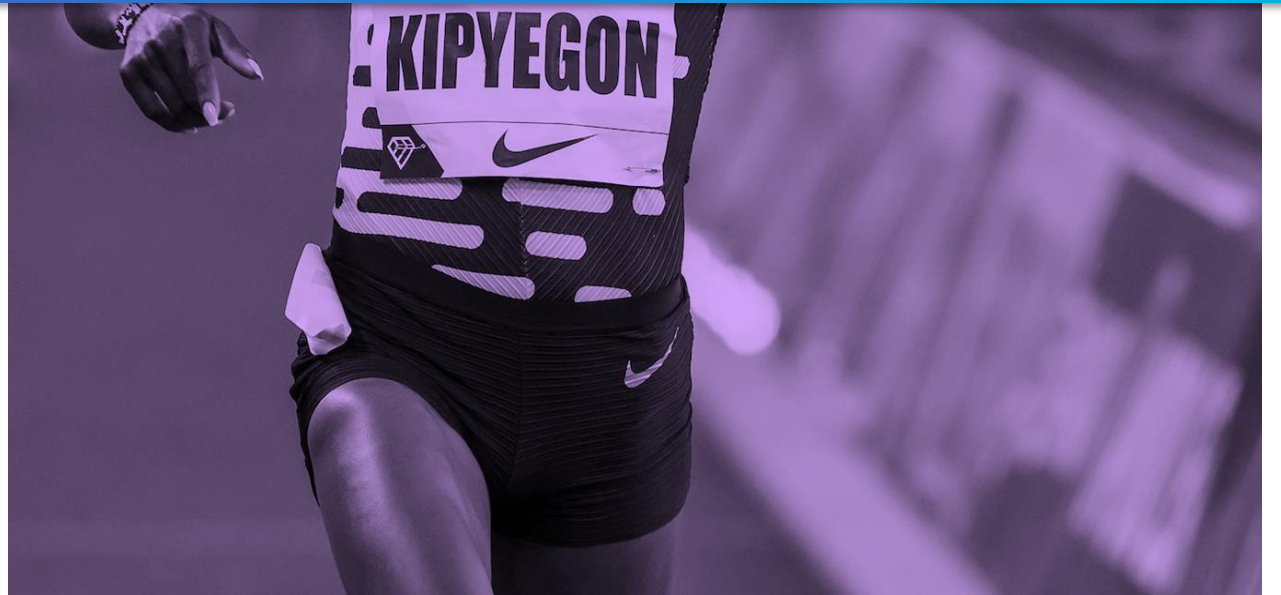


5. Sample Programming





# Foundations of Strength and Conditioning



# Foundations of Strength Training

Strength  
Endurance

General Strength  
(Hypertrophy & Max  
Strength)

Power

# Foundations of Strength Training

Strength  
Endurance

Light weight, high  
reps

General Strength  
(Hypertrophy & Max  
Strength)

Heavy weight, slow  
movement, medium reps

Power

Light weight, quick  
movement, low reps



# Foundations of Strength Training

## Strength Endurance

Light weight, high  
reps

Sets: 3-4  
Reps: 12+  
~50-60% Effort

## General Strength (Hypertrophy & Max Strength)

Heavy weight, slow  
movement, medium reps

Sets: 3-4  
Reps: 6-10  
~70-80% Effort

## Power

Light weight, quick  
movement, low reps

Sets: 2-3	Plyos:
Reps: 3-5	low: 80-100
~30-50%	med: 100-120
Effort	adv: 120-140

# Foundations of Strength Training: Progression (Sprints, Jumps, Hurdles)

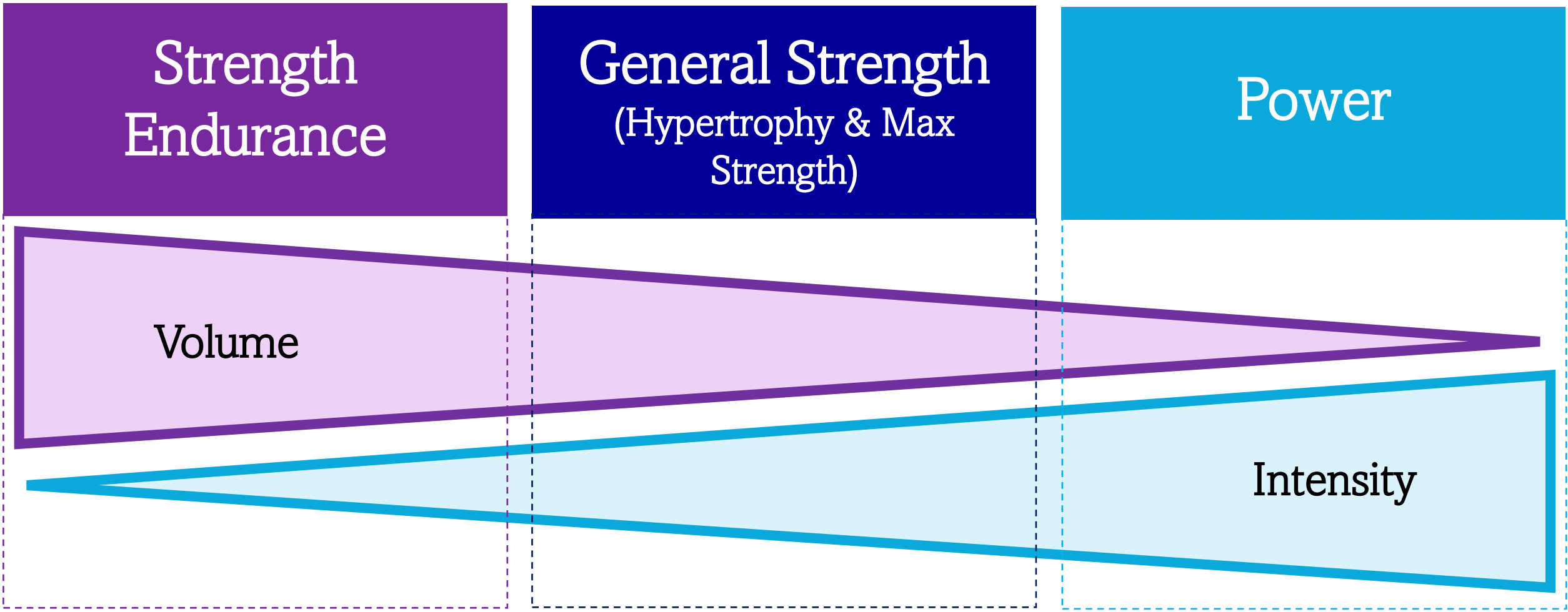
Strength  
Endurance

General Strength  
(Hypertrophy & Max  
Strength)

Power

Volume

Intensity





# Full-Season Cycle



# Season Structure

Beginning of Season  End of Season

Strength  
Endurance

General Strength

Power

# Season Structure

Beginning of Season



End of Season

**Strength  
Endurance**

Learn movements &  
build fitness baseline

**General Strength**

Lower reps, increase weight,  
& introduce power

**Power**

Split focus between maintaining  
strength and developing power



# Season Structure

Beginning of Season



End of Season

Strength  
Endurance

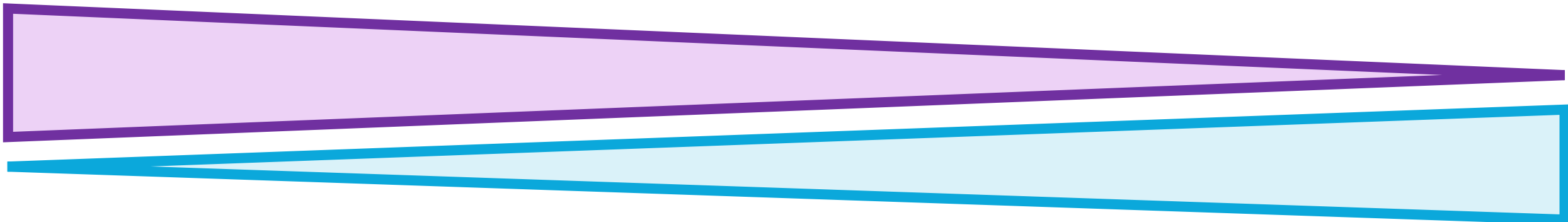
Learn movements &  
build fitness baseline

General Strength

Lower reps, increase weight,  
& introduce power

Power

Split focus between maintaining  
strength and developing power



# Periodization: Sprints, Hurdles, Jumps, Throws

## Season Cycle

Off Season  
(Fall-December)

Pre-Season  
(January-March)

In-Season  
(March-May)

End of Season (Pre-  
Conference, State)

Block:

Strength Endurance

General Strength

General Strength and  
Power Development

Peaking & Tapering

Purpose:

Learn movements &  
build fitness baseline

Lower reps, increase  
weight, & introduce  
power

Split focus between  
maintaining strength and  
developing power

Focus on mobility and  
'feel good' movements.  
Power limited to event  
practice.

Example:

6-8 strength exercises  
3-4 sets, 12+ reps

6-8 strength exercises  
3-4 sets, 8-10 reps.  
Introduce plyometrics

6-8 strength exercises  
2-3 sets, 6-8 reps.  
Increase plyos & event-  
specific power

No strength exercises.  
Event-specific power

# Periodization: Distance (XC)

Season Cycle				
	Off Season (Summer)	Pre-Season (August)	In-Season (September -October)	End of Season (Post XC, Pre-Track)
Block:	Strength Endurance	Strength Endurance & General Strength	General Strength & Injury Prevention	<b>Mobility &amp; Stability</b>
Purpose:	Learn movements & build fitness baseline	Increase weight used in Block 1 while maintaining strength endurance	Maintain strength gains & prevent overuse injuries	Rest & recovery
Example:	6-8 strength exercises 3-4 sets, 12+ reps	6-8 strength exercises 3-4 sets, 10-12 reps.	6-8 strength exercises 3-4 sets, 10-12 reps.	8-10 mobility & stability exercises. 1-2 sets, 10-20 reps each

# Mobility & Stability? Mobility & Stability!

## Athletes need mobility and stability!!

- Mobility and flexibility aren't the same
  - ❖ Flexibility is passive, mobility is active.
- Stability: Slow and controlled
  - ❖ Minimize unnecessary movement, aimed at reinforcing proper positioning.
  - ❖ Would fall into the bucket of strength endurance
  - ❖ Build it into your lifting
- Mobility and stability are **KEY** for injury prevention



# Breaking it Down: Weekly Cycle





# Sample Weekly Calendar: Pre-Season Jumper

Week 1

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Lift (30 min)  
Track Workout

Mobility

Plyos  
(100 touches)  
Lift (30 min)

Track Workout

Plyos  
(120 touches)

Mobility & Rest



# Sample Weekly Calendar: In-Season Hurdler

## Week 1

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Lift (30 min)  
Track workout

Hurdles

Lift (30 min)  
Starts

Pre-Meet

Meet Day

Rest

## Week 2

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Pre-Meet

Meet Day

Stability (15 min)  
Track workout

Hurdles

Pre-Meet

Meet Day

# Things to keep in mind when planning...

- How does the lift or plyo session fit into what the athlete's event workout is for the day?
  - ❖ E.g., Factor in a triple/long jumper's jump days into their strength training plan
- No one can train at 100% every day.
  - ❖ Building programs that require 100% effort every day will limit progress and increase likelihood of injury.
- Build in rest and recovery days
  - ❖ Recovery can be mobility and/or low intensity stability.
  - ❖ Rest days should be **completely** off.



# Breaking it Down: Individual Workout Session



# How to Structure a Session

1

What's my training goal?

2

What's the skill level of my athlete(s)?

3

How much time do I have?

4

What equipment do I have?

**Block: Off-Season**

**Training Goal:**

1: Strength Endurance

2: Mobility/ Movement Quality

**Exercise:**

**Sets x Reps**

**Load**

**Warm Up:** Barbell Complex

x 5 each

Barbell

**1A:** Goblet Squats

3 x 15

Hug Dumbbell

**1B:** Box Jumps

3 x 8

18 in. Box

**2A:** Bent Over 1-Arm Row

3 x 12 each arm

Dumbbells

**2B:** Split Squats

3 x 10 each side

DBs

**3A:** Single Leg Glute Bridge Holds

3 x 20 seconds each

X

**3B:** Wall I-Y-T

3 x 12

X

**4A:** Calf Raises 3-Directions (toes in, out, straight)

3 x 8 each

X

**4B:** Deadbug

3 x 10 each side

X



# How to Structure a Session

1

Most challenging exercises  
Most brain power/focus required

Big muscles & muscle groups at center  
of body

2

Least challenging (safest)  
Least “brain power” required

Smaller muscles & extremities

Block: Off-Season		
<b>Training Goal:</b>		
1: Strength Endurance		
2: Mobility/ Movement Quality		
Exercise:	Sets x Reps	Load
<b>Warm Up:</b> Barbell Complex	x 5 each	Barbell
<b>1A:</b> Goblet Squats	3 x 15	Hug Dumbbell
<b>1B:</b> Box Jumps	3 x 8	18 in. Box
<b>2A:</b> Bent Over 1-Arm Row	3 x 12 each arm	Dumbbells
<b>2B:</b> Split Squats	3 x 10 each side	DBs
<b>3A:</b> Single Leg Glute Bridge Holds	3 x 20 seconds each	X
<b>3B:</b> Wall I-Y-T	3 x 12	X
<b>4A:</b> Calf Raises 3-Directions (toes in, out, straight)	3 x 8 each	X
<b>4B:</b> Deadbug	3 x 10 each side	X

# How to Pick an Exercise

Let these three things guide the exercises you choose:

## 1 Time of Year

What part of the season are we in?

What phase of training are we in?

Do foundational movements early, perfect them before 'fancy' movements.

## 2 Event Specifics

Who am I training?

What movements do I want them to be proficient in?

Moving heavy things slow doesn't always translate to sport performance.

## 3 Injury Prevention

Prepare athletes' bodies to handle the long season and perform at their best at the right time.

Reinforce the proper mechanics.

Give them movements they can do safely!

# How to Pick an Exercise

## 1 Time of Year

In-season → General Strength and Power Development → Lower reps, higher weight or intensity

## 2 Event Specifics

Reinforces power without doing too much. Jumpers will be doing lots of jump event practices—these touches count towards their total jumps!

## 3 Injury Prevention

Prepare for pounding. Prevent shin/ankle pain, reinforce single leg & arm strength

Jumps		
<b>Block: In-Season</b>		
<b>Training Goal:</b> 1: General Strength 2: Power Development		
Exercise:	Sets x Reps	Load
<b>Warm Up:</b> Dynamic Warm Up		
<b>1A:</b> Back Squat	3 x 8	Barbell
<b>1B:</b> Weighted Squat Jumps	3 x 6	Dumbbells
<b>2A:</b> Single Arm Snatch	3 x 5 each	Dumbbell
<b>2B:</b> Weighted Step Ups	3 x 6 each side	Dumbbells
<b>3A:</b> Alternating Bench Press	3 x 6 each arm	Dumbbells
<b>3B:</b> Face Down I-Y-T	3 x 6	X
<b>4A:</b> Single Leg Calf Raises	3 x 10 each	X
<b>4B:</b> Plank	3 x 60 seconds	X

# Sample Workouts

Body Weight Strength: Distance Runner	
Block: In-Season	
Training Goal: 1: General Strength 2: Stability	
Exercise:	Sets x Reps
<b>Warm Up: Mobility Circuit</b>	
<b>1A:</b> Lunge Wheel (Forward, Side, Backwards)	3 x 5 each way, each side
<b>1B:</b> High Plank	3 x 30 seconds
<b>2A:</b> Split Squats	3 x 10 each side
<b>2B:</b> Face Down I-Y-T	3 x 5 each
<b>3A:</b> Single Leg Glute Bridge	3 x 12 each side
<b>3B:</b> Single Leg Hops (4-Directions)	2 x 10 each side



Mobility Circuit	
<b>1:</b> 90/90 Shin Boxes	x 10 each
<b>2:</b> Runner's Lunge (Rock Forward and Back)	x 10 each
<b>3:</b> Side Lying Open Books	x 10 each
<b>4:</b> Shoulder Swimmers	x 10 each
<b>5:</b> Scorpions	x 10 each

# Sample Workouts

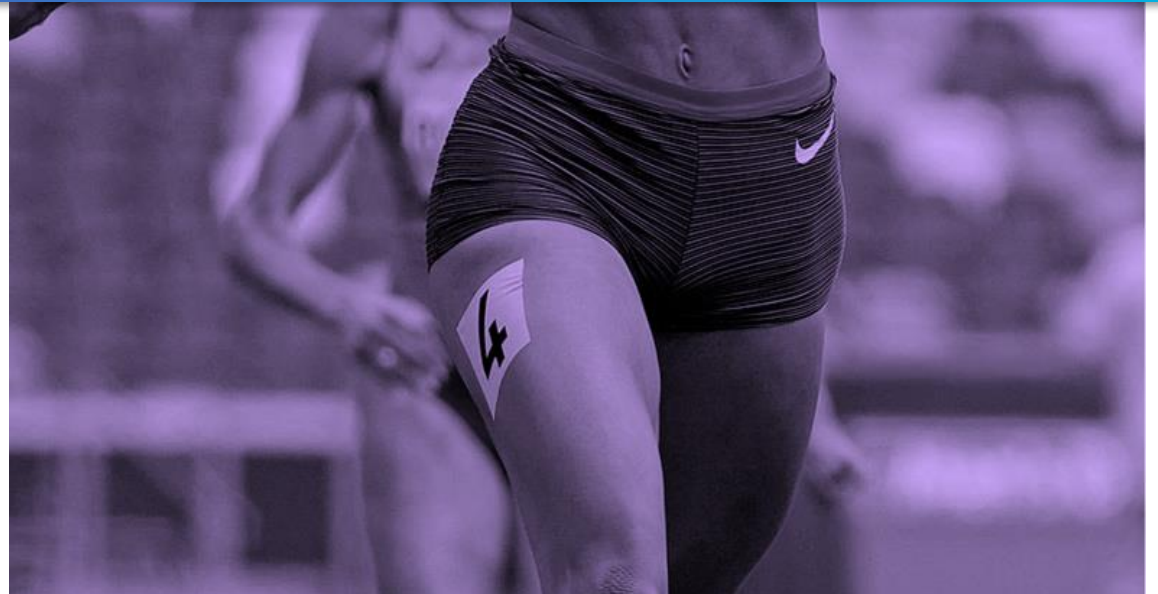
## Throws

- Their whole practice might be lifting
- More emphasis on max strength development
- Don't neglect mobility and movement quality

Throwers		
<b>Block: Pre-Season</b>		
<b>Training Goal:</b> 1: General Strength 2: Power Development		
Exercise:	Sets x Reps	Load
<b>Warm Up:</b> Dynamic Warm Up + Hurdle Walk Over Mobility		
<b>Medball Circuit:</b>		
<b>1A:</b> Overhead Slams	4 x 5	Medball
<b>1B:</b> Chest Throw (to partner)		
<b>1C:</b> Rotational Throw (to partner)		
<b>General Strength:</b>		
<b>2:</b> Deadlift	3 x 8	Barbell
<b>3:</b> Bench Press	3 x 8	Barbell
<b>4A:</b> Front Squat	3 x 10	Barbell
<b>4B:</b> Bent Over Row	3 x 8	Barbell
<b>5A:</b> Deadbug	3 x 10 each	X
<b>5B:</b> Plank Shoulder Taps	3 x 10 each	X



# Overall Takeaways



# Overall Takeaways

- Goal = make athletes better at their sport
- Don't need to be fancy → keep it simple and understand the needs of your athletes
- Have a '**do no harm**' mentality
  - ❖ Focus on keeping athletes healthy
- Be creative!
- Be patient



# Questions?

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