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## CONVENTION

KANSAS CITY 2022

JANUARY 19-23

## Plyometric & Explosive Development for Soccer: Practical Tips and Programming on the Field

Staci Wilson, CSCS  
Fit for Her Football Inc

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@UNITEDCOACHES #UNITEDCV22



# Staci Wilson, OLY, CSCS, USAW-L1SP, C-ISSN

NSCAA All-American

NCAA National Champion / All-American

USWNT 1996 Olympics, Gold Medal

WUSA Champion, Carolina Courage

W-League Champion, Raleigh Wings

US Soccer B-License

NSCA Certified Strength and Conditioning Specialist

ISSN Certified Sports Nutritionist

USA Weightlifting Sports Performance Coach

AFAA Practical Pilates Certification

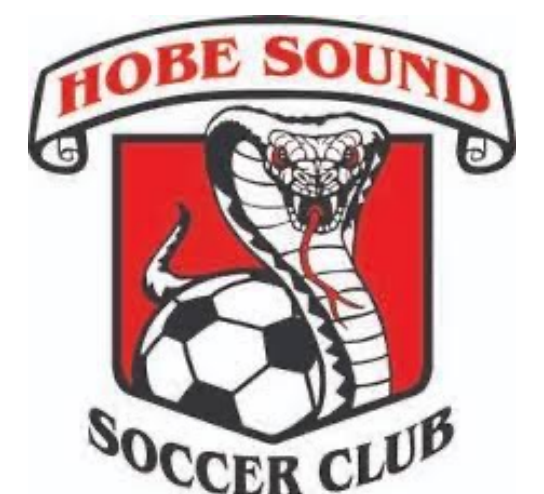
AFAA Practical Yoga Certification

United Soccer Coaches, DOC Diploma

US Soccer Foundation, National Training Team

US Soccer Federation, Grassroots Instructor

Founder of Fit for Her Football, Inc.



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international society of sports nutrition™



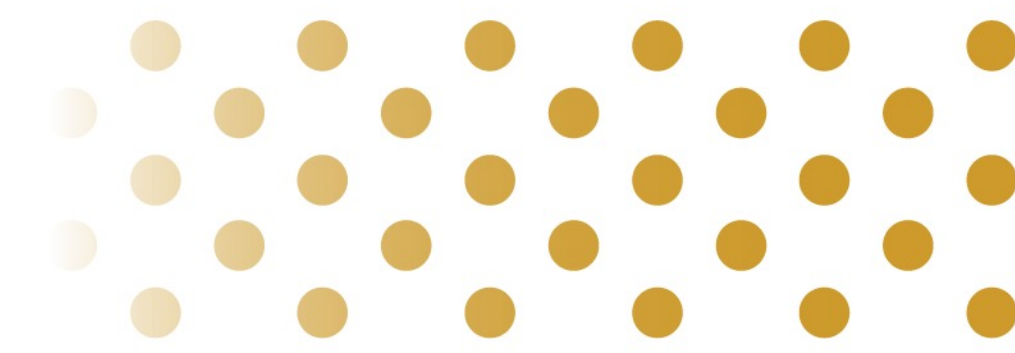
@StaciWilson



@StaciNWilson



# Plyometrics Progression



1. Lowering load & soft landings

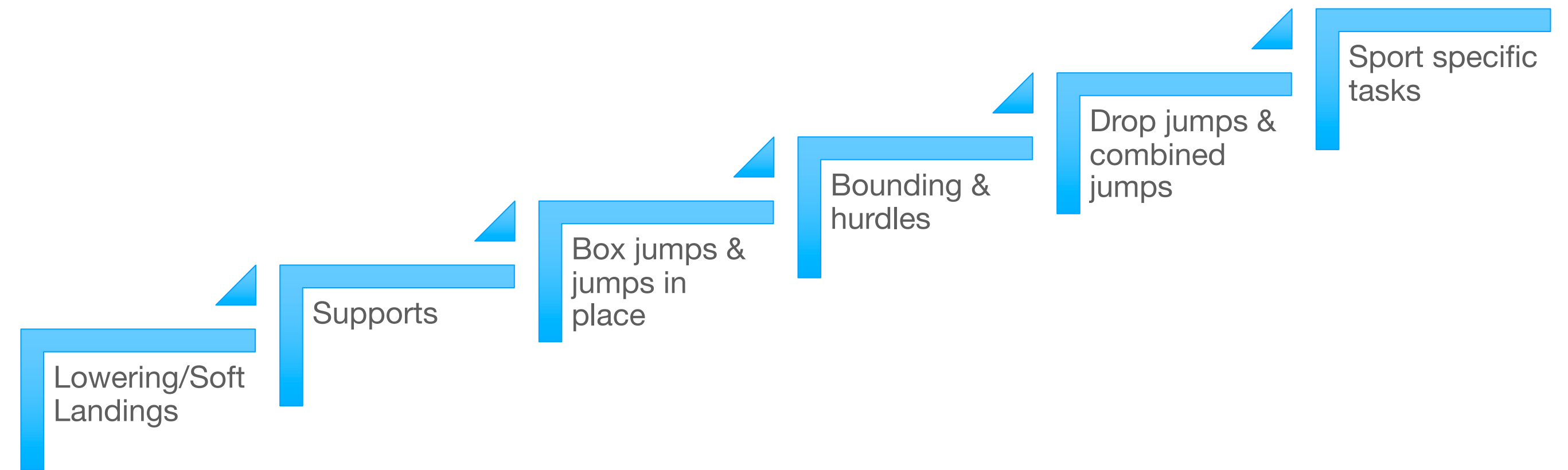
2. “Supports”

3. Box jumps and jumps in place

4. Bounding and hurdles

5. Drop jumps and combined jumps

6. Sport specific tasks



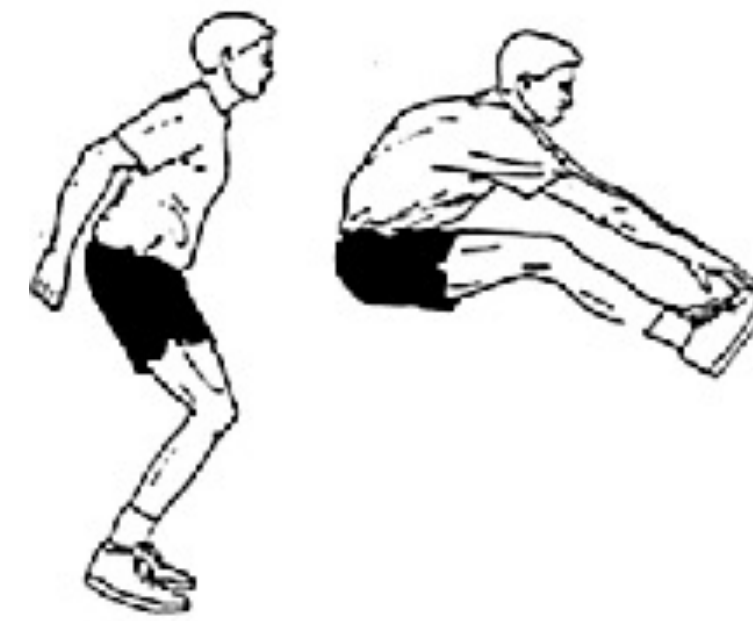
Fort-Vanmeerhaeghe, Azahara PhD<sup>1,2,3</sup>; Romero-Rodriguez, Daniel PhD<sup>1</sup>; Lloyd, Rhodri S. PhD, CSCS<sup>\*D4</sup>; Kushner, Adam BS, CSCS<sup>5</sup>; Myer, Gregory D. PhD, CSCS<sup>\*D5,6,7,8</sup> Integrative Neuromuscular Training in Youth Athletes. Part II: Strategies to Prevent Injuries and Improve Performance, Strength and Conditioning Journal: August 2016 - Volume 38 - Issue 4 - p 9-27





# Types of Jumps

- In Place
- Standing
- Box
- Multiple hops and jumps
- Bounding
- Depth jumps
- Sport specific drills



Pike jump



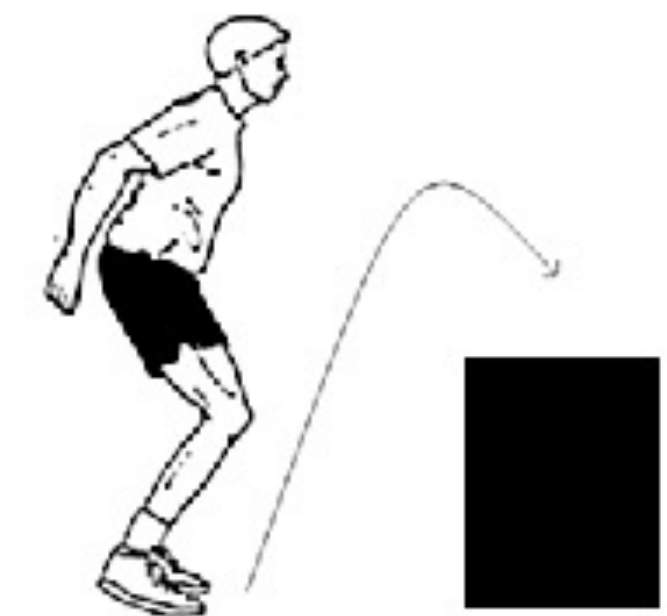
Squat jump



Tuck jump

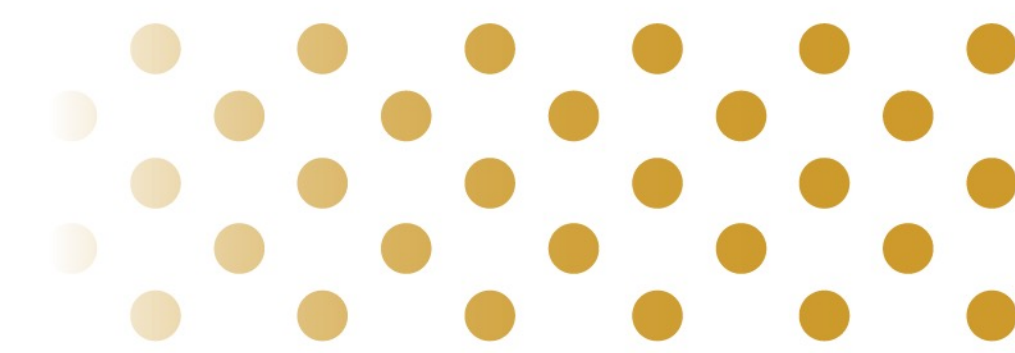


Depth jump (35 and 60 cm)



Box jump (35 and 60 cm)





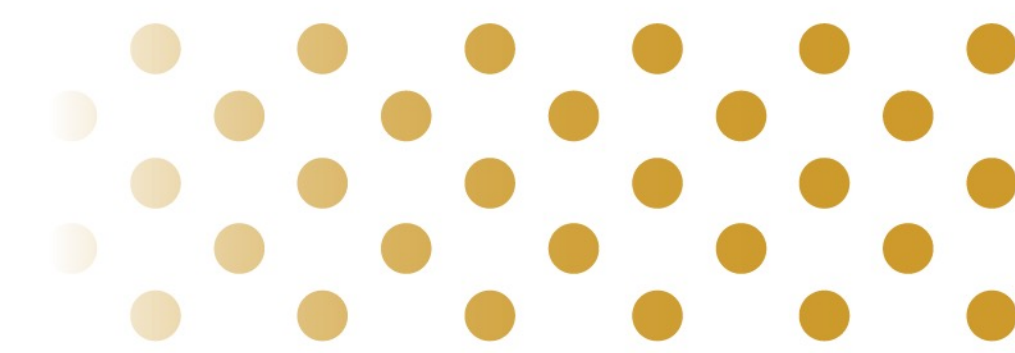
# Jump Landing Training Progression Model

Phase and Training Focus	Phase 1	Phase 2	Phase 3	Phase 4
	Technique and General Strength	Eccentric Strength, Stability and Alignment	Stretch-Shorten Cycle Propulsive Power and Landing Phase	Sport-Specific Jump-Landing
<b>Strength Training</b>	<b>Strength Endurance</b>  Assisted, bodyweight or resisted exercises e.g. squats, single leg squats, lunges  <b>Reps(≥12) Sets(2-3)</b> <b>Rest(≤30sec)</b>	<b>Eccentric Strength</b>  Resisted exercises, increased load and decrease stability e.g. barbell lunges and lateral crossover step ups  <b>Reps(6-12) Sets(3-6)</b> <b>Rest(30sec-1.5min)</b>	<b>Relative Strength</b>  Resisted exercises, increased load and speed of movement e.g. Deadlifts and hip thrusts  <b>Reps(≤6) Sets(3-5)</b> <b>Rest(2-5min)</b>	<b>Relative Strength and Muscular Power</b>  Resisted exercises, multidirectional, increased load, fast explosive exercises if strong enough e.g. Olympic lifts (Power Clean, Snatch)  <b>Reps(≤5) Sets(3-6)</b> <b>Rest(2-5min)</b>
<b>Balance Training</b>	<b>Proprioception</b>  Static balance drills, eye open/closed, stable/unstable surfaces e.g. single leg balance drills  <b>Duration(≤30sec)</b> <b>Reps(5-10) Sets(2-3)</b> <b>Rest(≤30sec)</b>	<b>Dynamically Static</b>  Static and dynamic drills in place e.g. single leg medicine ball catch and throw, swings on toes  <b>Duration(30-60sec)</b> <b>Reps(10-20) Sets(2-3)</b> <b>Rest(≤30sec)</b>	<b>Dynamic</b>  Dynamic drills in motion e.g. drills that step or jump onto unstable surfaces, jumping swings  <b>Duration(≤10sec)</b> <b>Reps(5-10) Sets(3-5)</b> <b>Rest(≤30sec)</b>	<b>Perturbed Dynamic</b>  Perturbed and dynamic drills e.g. jumping and catching medicine balls, travelling swings  <b>Duration(≤10sec)</b> <b>Reps(6-12) Sets(3-6)</b> <b>Rest(≤30sec)</b>
<b>Plyometric Training</b>	<b>Long Response</b>  Single jump-landings in place, single plane, bilateral e.g. vertical jumps, jumps onto box, stair jump exercises  <b>Duration(3-5sec)</b> <b>Reps(5-10) Sets(2-3)</b> <b>Rest(≤30sec)</b>	<b>Eccentric Response</b>  Drop-landings, multiple plane, bilateral/unilateral drop and stick exercises, using progressive heights and distances  <b>Duration(3-5sec)</b> <b>Reps(6-12) Sets(2-4)</b> <b>Rest(30sec-1.5min)</b>	<b>Short Response</b>  Multiple jump-landings, take-off and landing focus, bilateral/unilateral e.g. continual hop, bound and stick exercises  <b>Duration(1-5sec)</b> <b>Reps(≤6) Sets(3-5)</b> <b>Rest(2-5min)</b>	<b>Sports Specific</b>  Multiple jump-landings, multidirectional, unanticipated and perturbed landing focus e.g. reaction cutting, 3 step jump-landing with turn during flight  <b>Duration(1-5sec)</b> <b>Reps(≤5) Sets(3-6)</b> <b>Rest(2-5min)</b>
<b>Phase Duration and Frequency</b>	<b>6-12 weeks</b> <b>2-3 sessions a week</b>	<b>6-12 weeks</b> <b>2-3 sessions a week</b>	<b>5-10 weeks</b> <b>1-3 sessions a week</b>	<b>5-10 weeks</b> <b>1-2 sessions a week</b>

Mothersole, Guy MSpEx1; Cronin, John B. PhD1,2; Harris, Nigel K. PhD1 Jump-Landing Program for Females, Strength and Conditioning Journal: August 2014 - Volume 36 - Issue 4 - p 52-64







Weeks	Exercises	Sets/ Repetitions	Comments
1–2	Forward/backward hops	–2 × 8	Can increase sets and repetitions as needed 1 exercise at a time
	Lateral hops	–2 × 8	
	Power skips	–3 × 8	
3–4	Forward hops over 6-inch cone	–2 × 8	Easily introduce cone- and stress-controlled quality over quantity
	Lateral hops	–3 × 12	
	Single leg hops (both legs)	–2 × 10	
5–6	On and off box jumps (12-inch)	–2 × 10	Box height is a suggestion, may need different heights for different athletes
	Lateral hops over 10-inch hurdles	–3 × 6	
	Power skips	–4 × 8	
7–8	Toe taps on soccer ball	–2 × 12	Progressions should be individualized based on quality and quantity of performance
	On and off box jumps (12 and 18 inch)	–2 × 12	
	Box drop jumps for height	–3 × 10	
	Single leg hops over agility cone (both legs)	–2 × 8	
	High knees over 10-inch hurdles	–4 × 10	

**Plyometric  
training program  
example based on  
current research  
recommendations**



**Training protocol of balance, SAQ, and jump rope drills lasting ~30 min.**

**The duration of these elements was ~8 min each with a 2 min of rest in between.**

Formenti D, Rossi A, Bongiovanni T, Campa F, Cavaggioni L, Alberti G, Longo S, Trecroci A. Effects of Non-Sport-Specific Versus Sport-Specific Training on Physical Performance and Perceptual Response in Young Football Players. Int J Environ Res Public Health. 2021 Feb 18;18(4):1962.

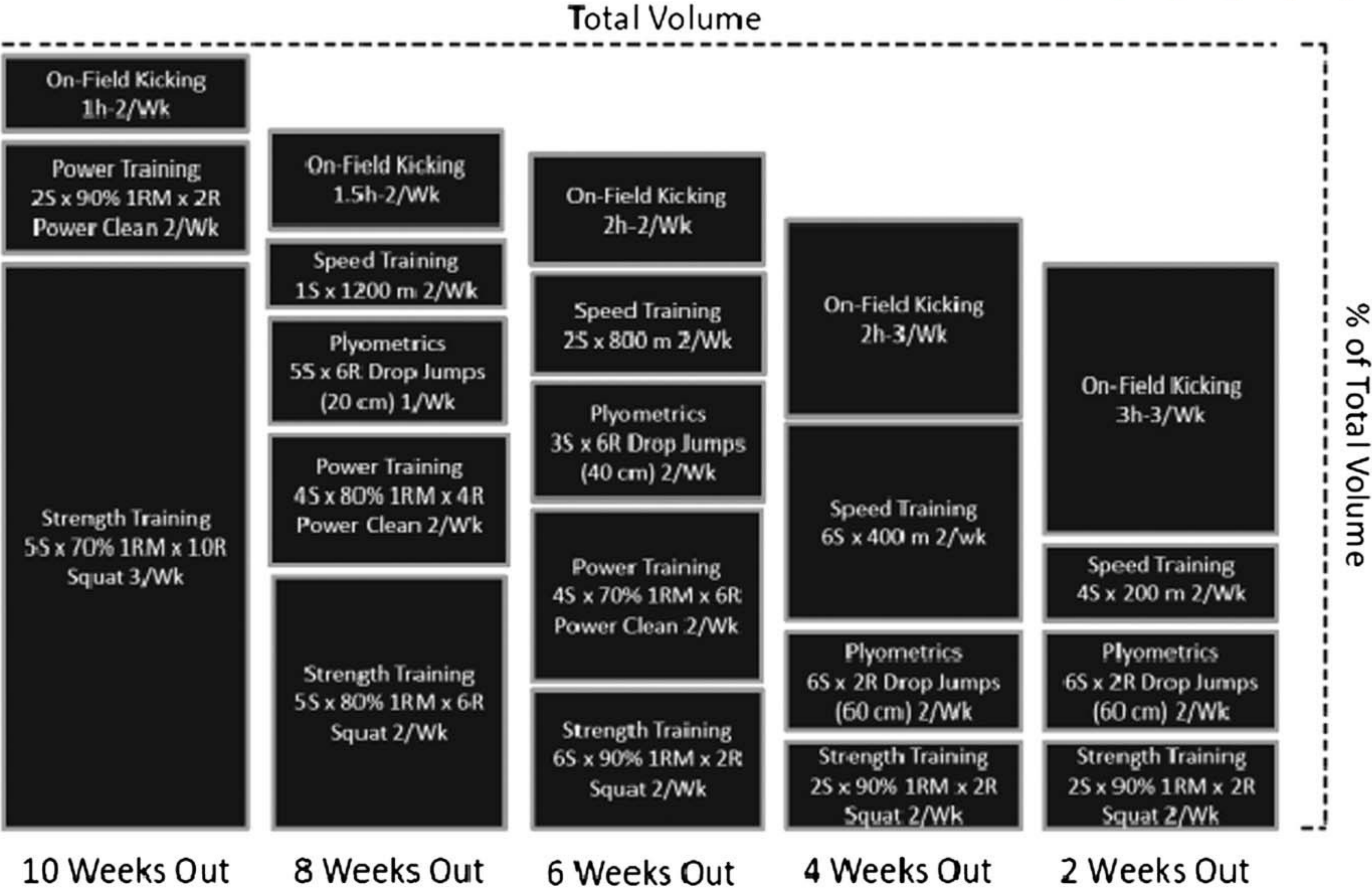
Weeks	Balance Drills	SAQ Drills	Jump Rope Drills
Week 1 to 2	One-leg standing on unstable surfaces (i.e., trampoline and wobble board) while moving the upper body with and without eyes open.	Basic footwork exercises (split-steps, line drills, lateral line, and multiple hops) with no equipment followed by brief linear sprints over 5 m	Basic bounce steps Double basic bounce steps
Week 3 to 4	From an unstable surface: (a) short jumps with a 90° body rotation and landing on a single stance; (b) short jumps with a 180° body rotation and landing on single-leg stance	Basic footwork exercises (skipping, hopscotch, in&out drills) over the speed-ladder followed by brief sprints with 1–3 change of directions at 30° and 45° over 10 m	Double basic bounce steps Alternate bounce steps
Week 5 to 6	Stepping forward and backward with and without assistance on the slackline	Advanced footwork exercises (foot exchange, icky shuffle, hip twist) over the speed-ladder followed by brief sprints with 3–5 change of directions at 30°, 45°, and 90° over 10 m	Alternate bounce steps Scissors steps
Week 7 to 8	Walking forward and backward with and without assistance on the slackline	Combination of basic and advanced footwork exercises with basic agility drills in response to stimuli (brief acceleration and deceleration)	Scissors steps Double under steps
Week 9 to 10	Low-limb swinging while standing on a single leg stance with and without assistance on the slackline	Combination of basic and advanced footwork exercises with advanced agility drills in response to stimuli (chasing runs and mirror drills)	Double under steps



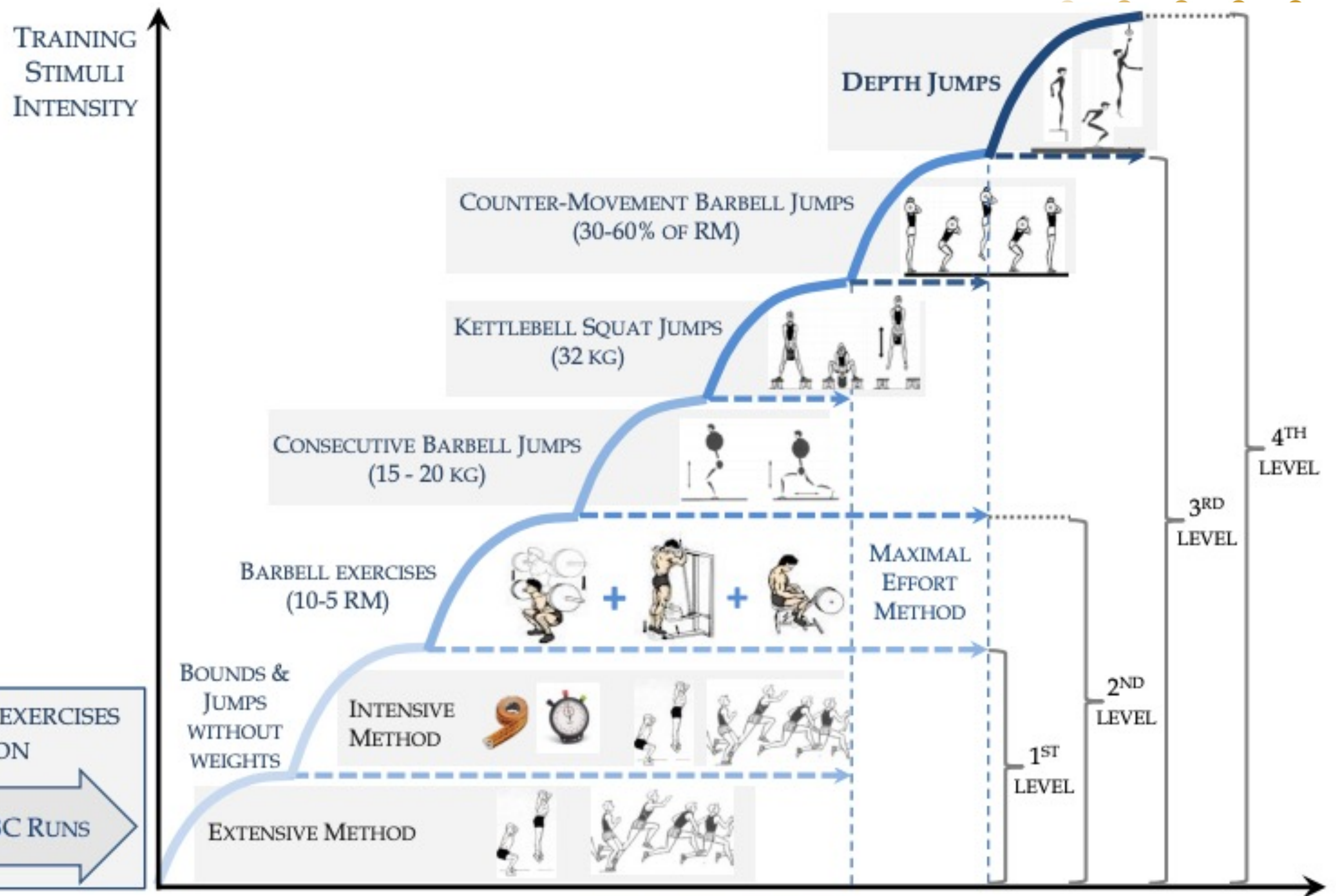
# Plyometrics and Kicking Power

A preseason program

Haines, Tracie L. MS; Erickson, Travis M. MS; McBride, Jeffrey M. PhD Kicking Power, Strength and Conditioning Journal: December 2012 - Volume 34 - Issue 6 - p 52-56



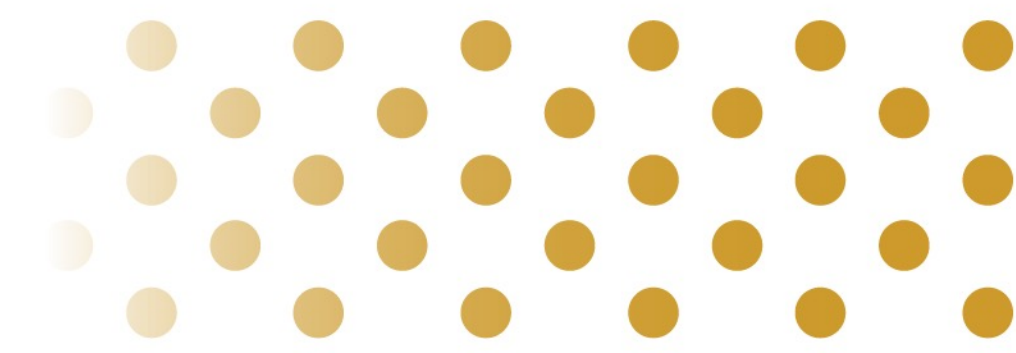




Conjugate-sequence  
system for jump  
exercise progressions



# Jump Training Recommendations



## Training Load, Repetitions, Volume, Rest

### Low level - Ankle height

- Beginner
- 50-75 jumps / session
- ~150 jumps / week

### Mid Level- Knee height

- Experienced players
- ~100 jumps / session
- ~50% of session in mid height range





## Plyometric Circuit 1

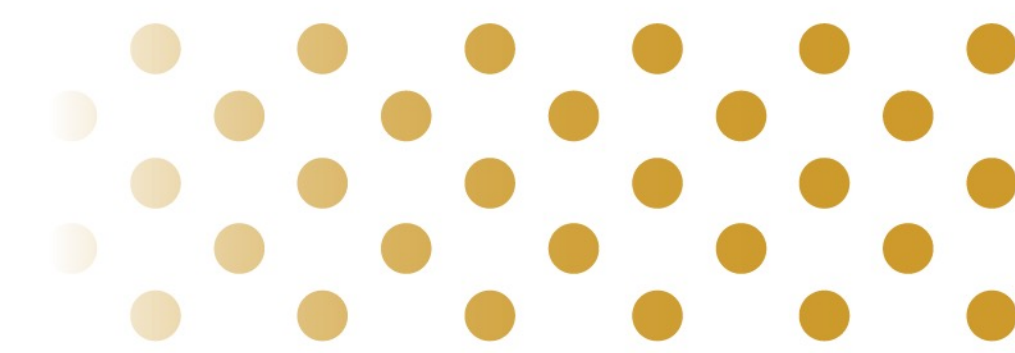
## Plyometric Circuit 2



SL MB throw x5 / leg	Jump rope x30 seconds
Kneeling medicine ball chest pass x8	Jump and single-leg stick x 5 / leg
Kneeling overhead medicine ball pass x8	Hop and single-leg stick x 5 / leg
Split stance single-arm medicine ball chest pass x8 / arm	Tuck jump x5 / leg
Split stance overhead throw x5 / leg	One step forward and jump x 10 steps
Broad jump x10	Squat Jump x20
Max velocity jumps x10	
Power skip x10 per leg	Do 2-4 rounds. Allow full rest between exercises.





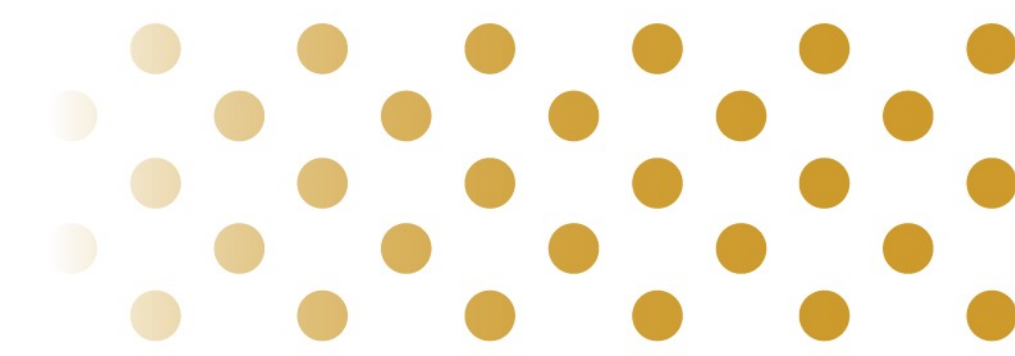


# Medicine Ball Plyometrics

## Wall / Partner Circuit

Exercise	Reps
Squat - Chest Pass	8 - 12
Single Leg Squat - Chest Pass	8 - 12
Standing Lateral - Hip	8 - 12
Standing Linear - Hip	8 - 12 / side
Around the Back - Hip	8 - 12 / side





# Upper Body Plyometrics

- Pushups - depth, clapping, medicine ball variations
- Seated, kneeling, ½ kneeling, or standing medicine ball throws
- Linear or lateral wall throws - OH, shoulder, chest, hip
- Medicine ball slams - linear, rotational
- Overhead elbow extension medicine ball wall slams - single arm
- Plyo pull-ups



# Advanced Level - Power Endurance Circuits

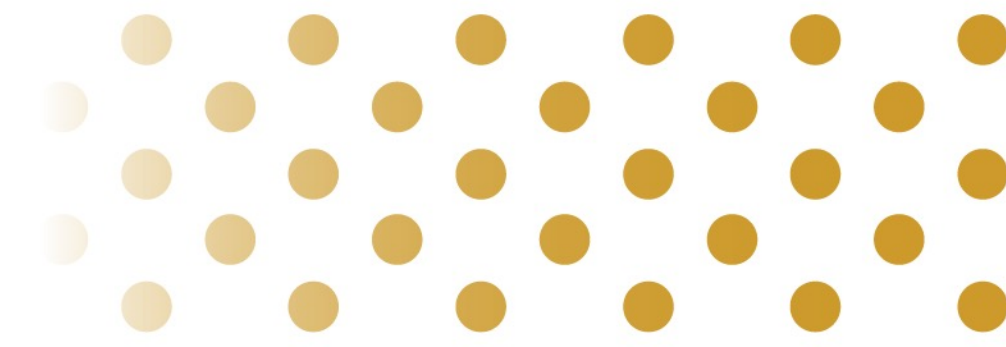
Power Endurance Complex #1			
Medicine Ball Exercises	Sets x Reps	Bodyweight Exercises	Sets x Reps
MB Snatch	3 x 8	Split Cycle Jump	3 x 10 / leg
MB Squat	3 x 8	Pullup / Flexed-arm Hang	3 x 10
MB Good Morning	3 x 8	Lateral Alternating Power Step-ups	3 x 10 / leg
MB OH Linear Slam	3 x 8	T-Stabilization Push-up	3 x 10 / arm
MB Push Jerk	3 x 8	SL Max Velocity Bound	3 x 10 / leg

Power Endurance Complex #2			
Medicine Ball Exercises	Sets x Reps	Bodyweight Exercises	Sets x Reps
MB Jump Slam	3 x 10	Split Cycle Jump	3 x 10 / leg
MB Front Lunge	3 x 10	Pullup / Flexed-arm Hang	3 x 12
MB Hip Bridge	3 x 10	Lateral Box (or 2-mini hurdle) Step-overs	3 x 10 / side
MB Rotation Slam	3 x 10 / side	T-Stabilization Push-up	3 x 10 / arm
MB Floor Chest Press	3 x 10	SL Max Velocity Bound	3 x 10 / leg



# United Soccer Coaches

## Online Sports Performance Diploma



### Module 1

- Topic 1 - **Physiological Demands of the Game**
- Topic 2 - **Long Term Athlete Development**
- Topic 3 - **Soccer Periodization**

### Module 2

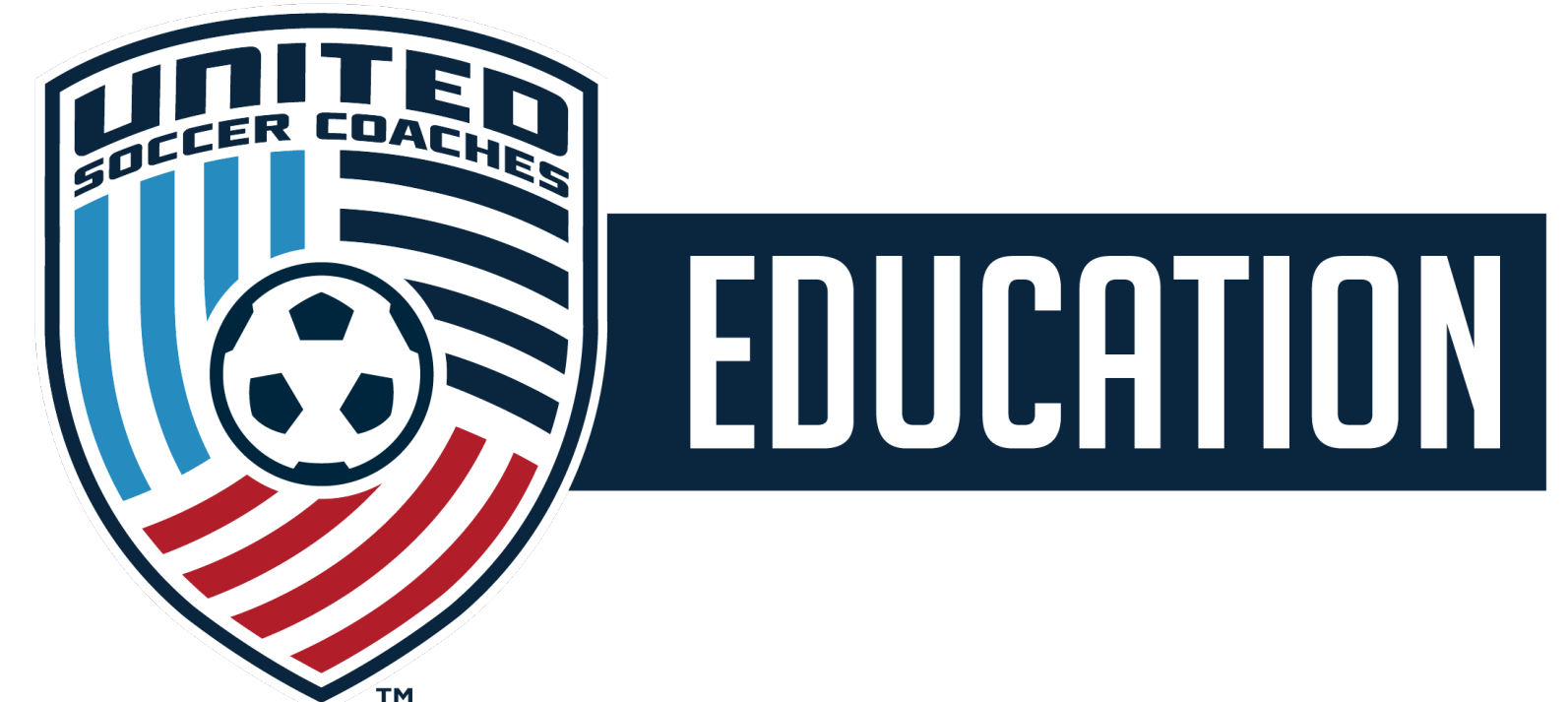
- Topic 4 - **Energy System Development in Soccer**
- Topic 5 - **Speed Development in Soccer**
- Topic 6 - **Speed Endurance Development in Soccer**

### Module 3

- Topic 7 - **Technology in Soccer**
- Topic 8 - **Field and Laboratory Testing**
- Topic 9 - **Monitoring Tools in Soccer**

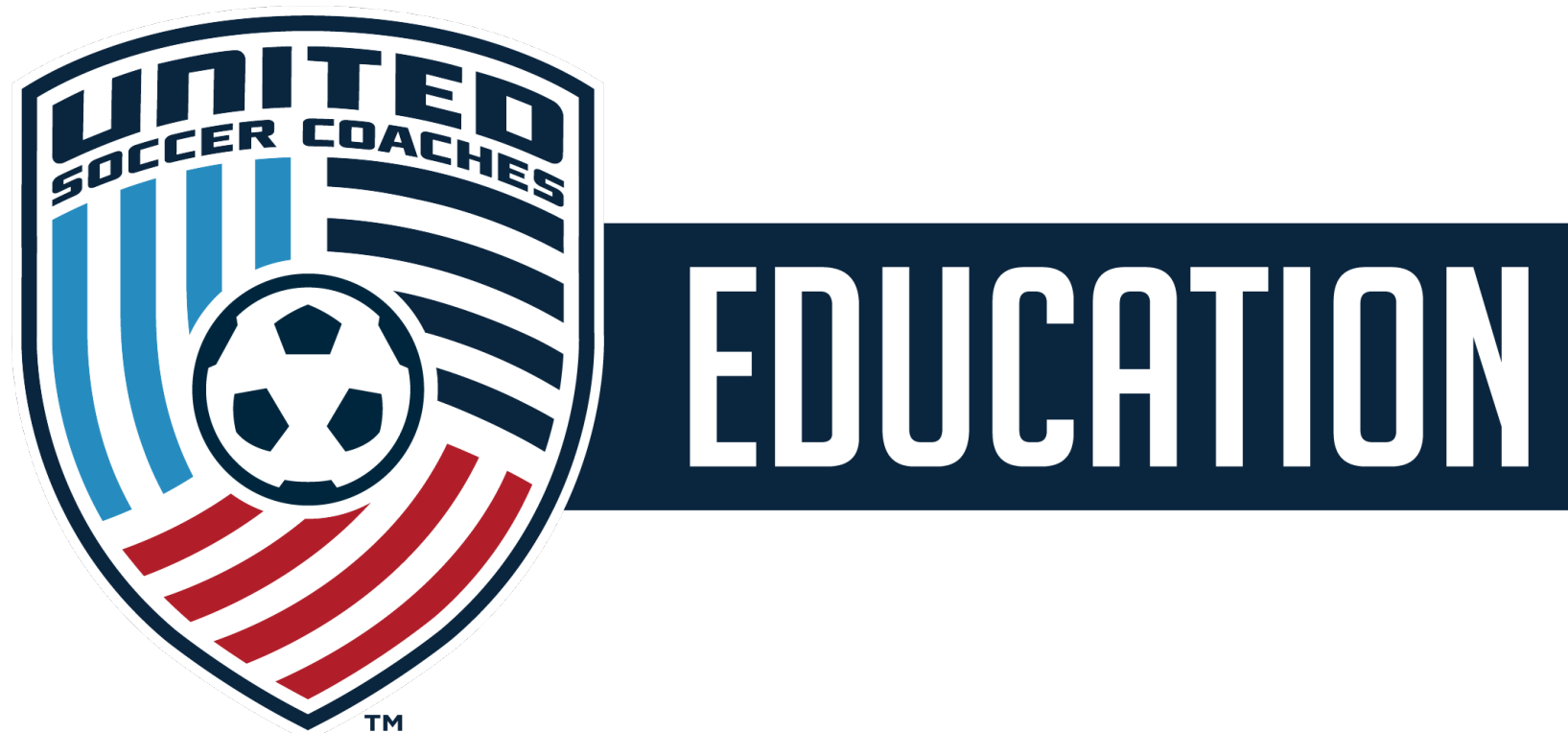
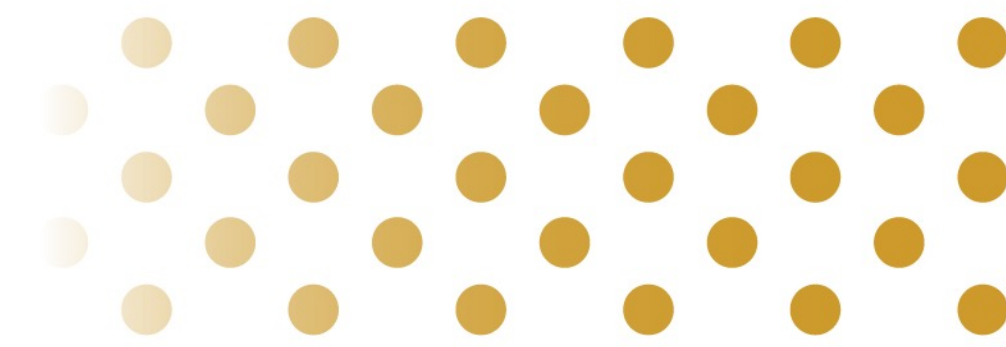
### Module 4

- Topic 10 - **Strength Training On and Off the Field**
- Topic 11 - **Power Training for Soccer Players**
- Topic 12 - **Nutrition**





# THANK YOU!







# CONVENTION

***JANUARY 11-15, 2023***

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