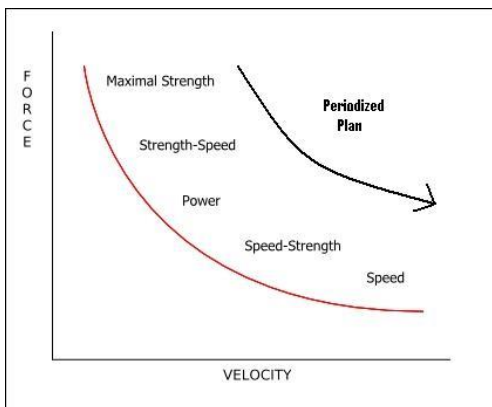




Field: Strength, Power & Speed

Scott Danberg, MS, USATF Level II



Are Athletes the Same Inside and Out?



Cathy Sassin
Adventure Racing
5' 6" 138 lbs.

Tegla Loroupe
Long-Distance Running
4' 11" 82 lbs.

Aimee Mullins
Sprint & Long Jump
5' 8" 105 lbs.

Deena Drossin
Long-Distance Running
5' 4" 105 lbs.

LeShundra Nathan
Heptathlon
5' 11" 175 lbs.



Adam Setliff
Discus
6' 4" 270 lbs.

Dawn Ellerbe
Hammer Throw
6' 2" 240 lbs.

Breaux Greer
Javelin
6' 2" 225 lbs.

Connie Price-Smith
Shot Put
6' 3" 210 lbs.

Adam Nelson
Shot Put
6' 0" 255 lbs.

Sport Biomotor Analysis

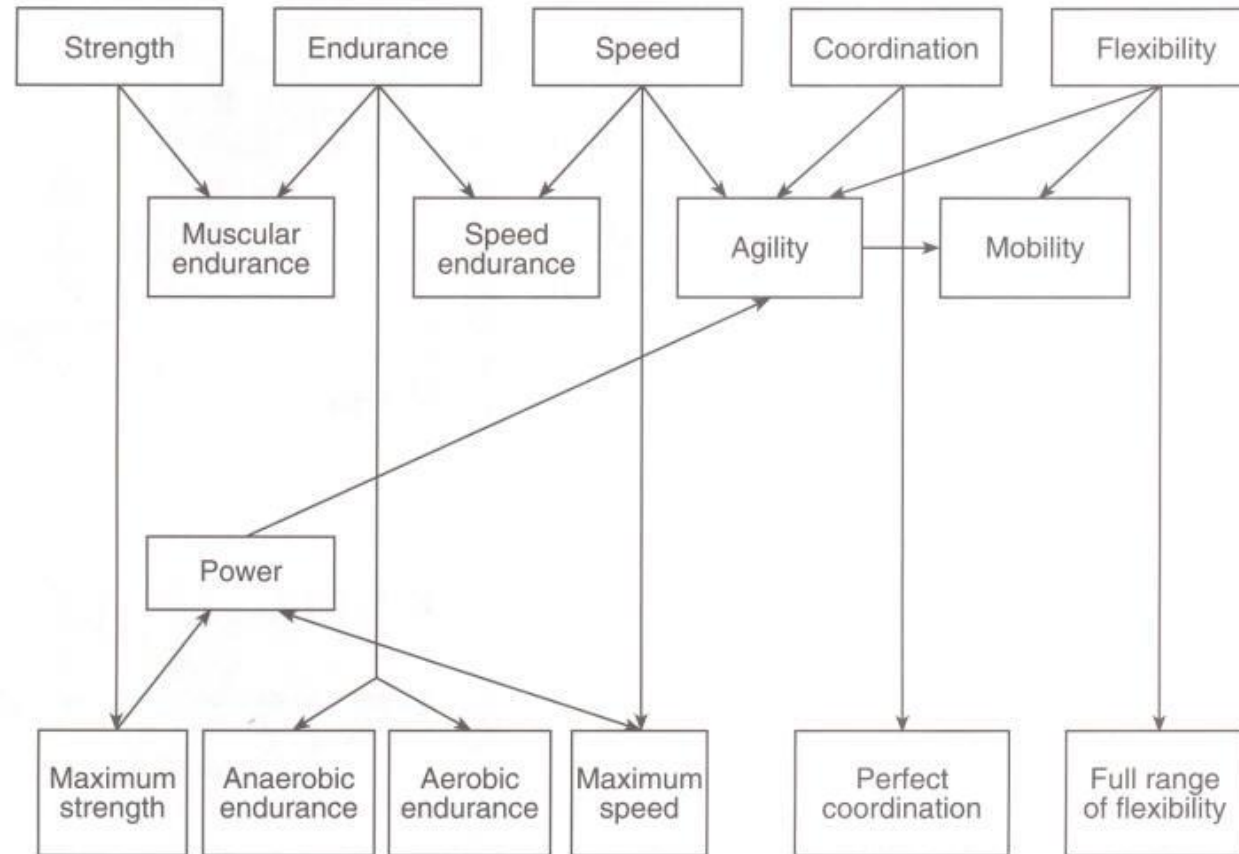


Figure 1.1 Interdependence among the biomotor abilities.

Sport Biomotor Analysis

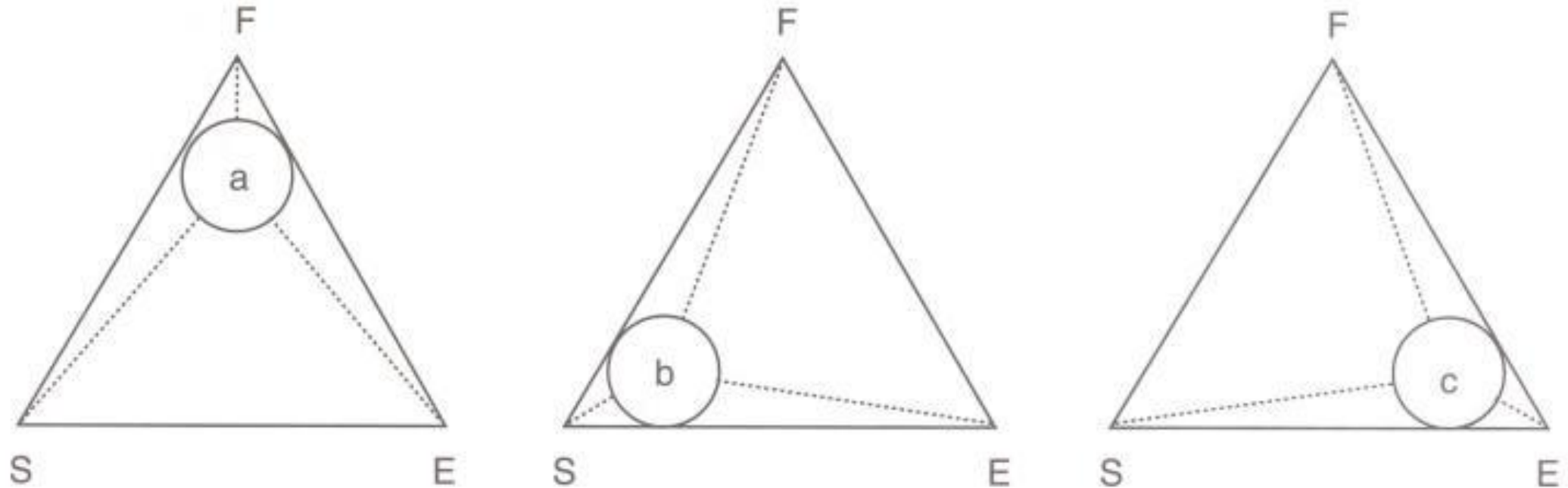


Figure 1.2 Relationships among the main biomotor abilities, where strength (*a*), speed (*b*), and endurance (*c*) are dominant.

Sport Biomotor Analysis

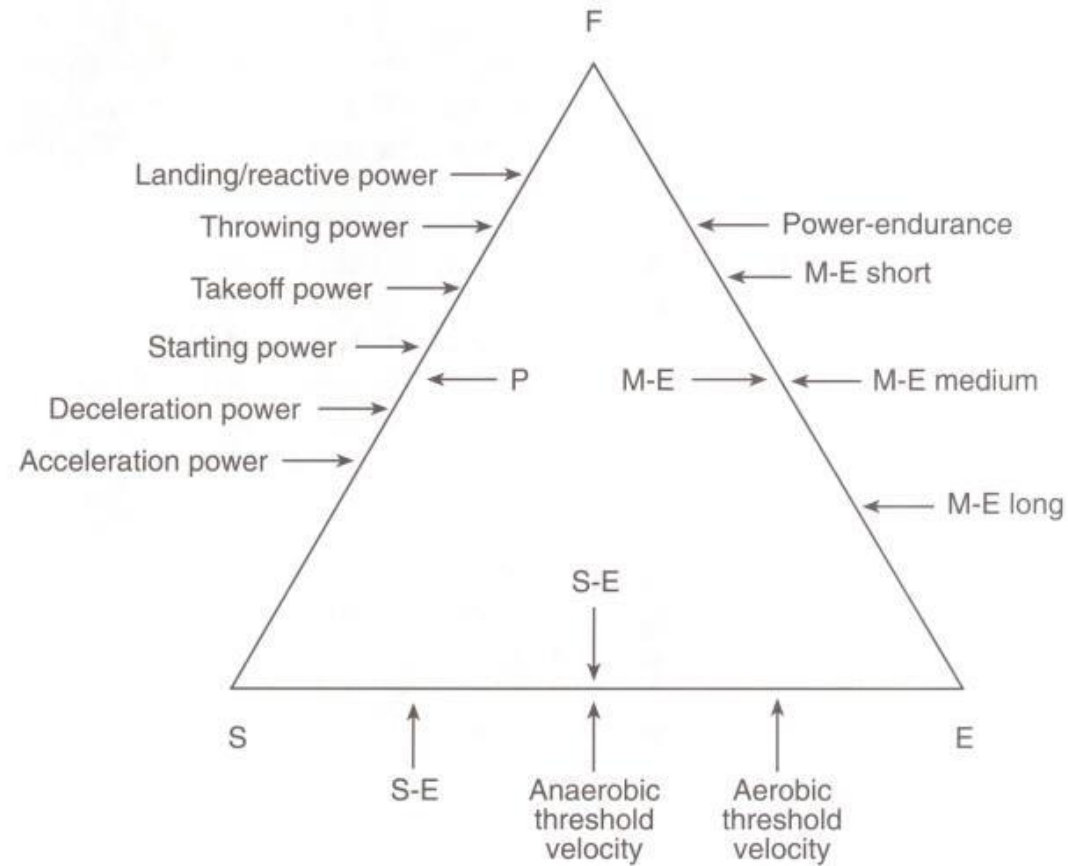


Figure 1.5 Sport-specific combinations among the dominant biomotor abilities.

Sport-Specific Biomotor Analysis

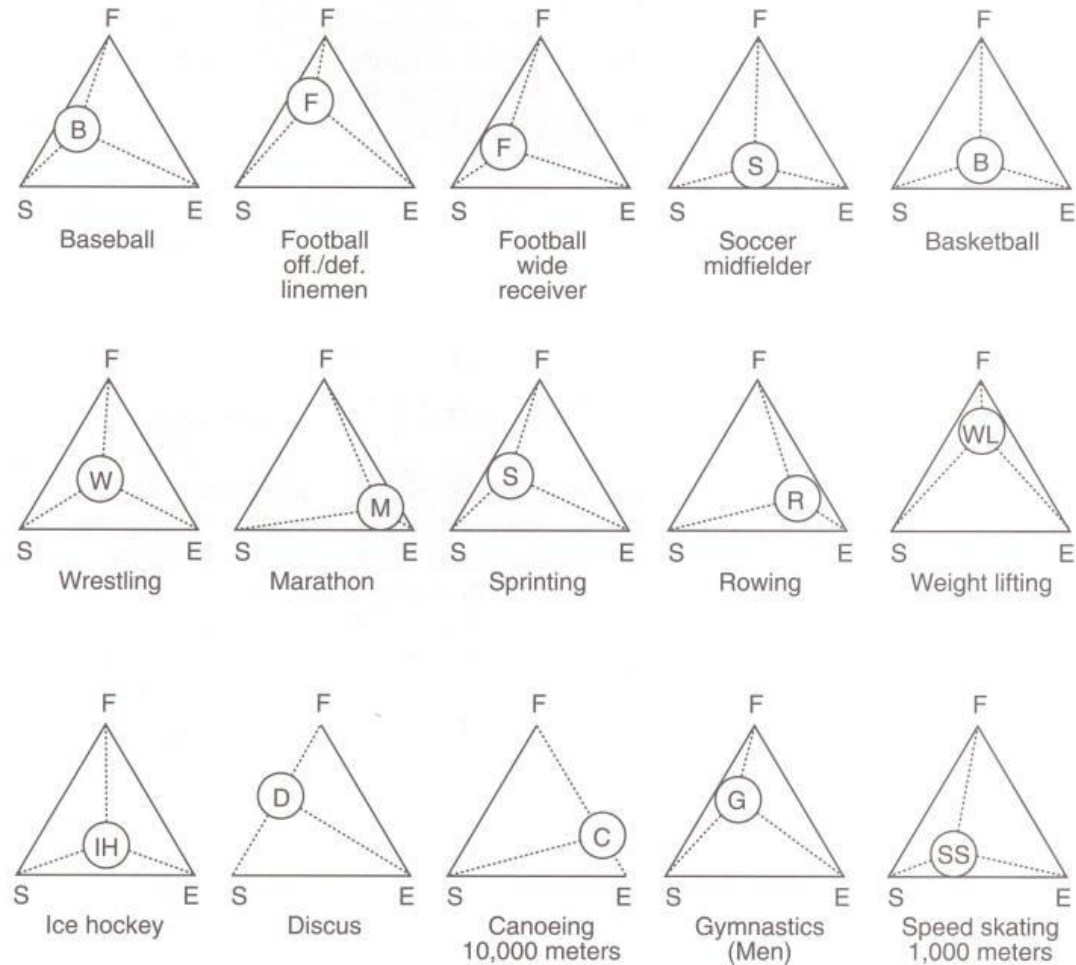
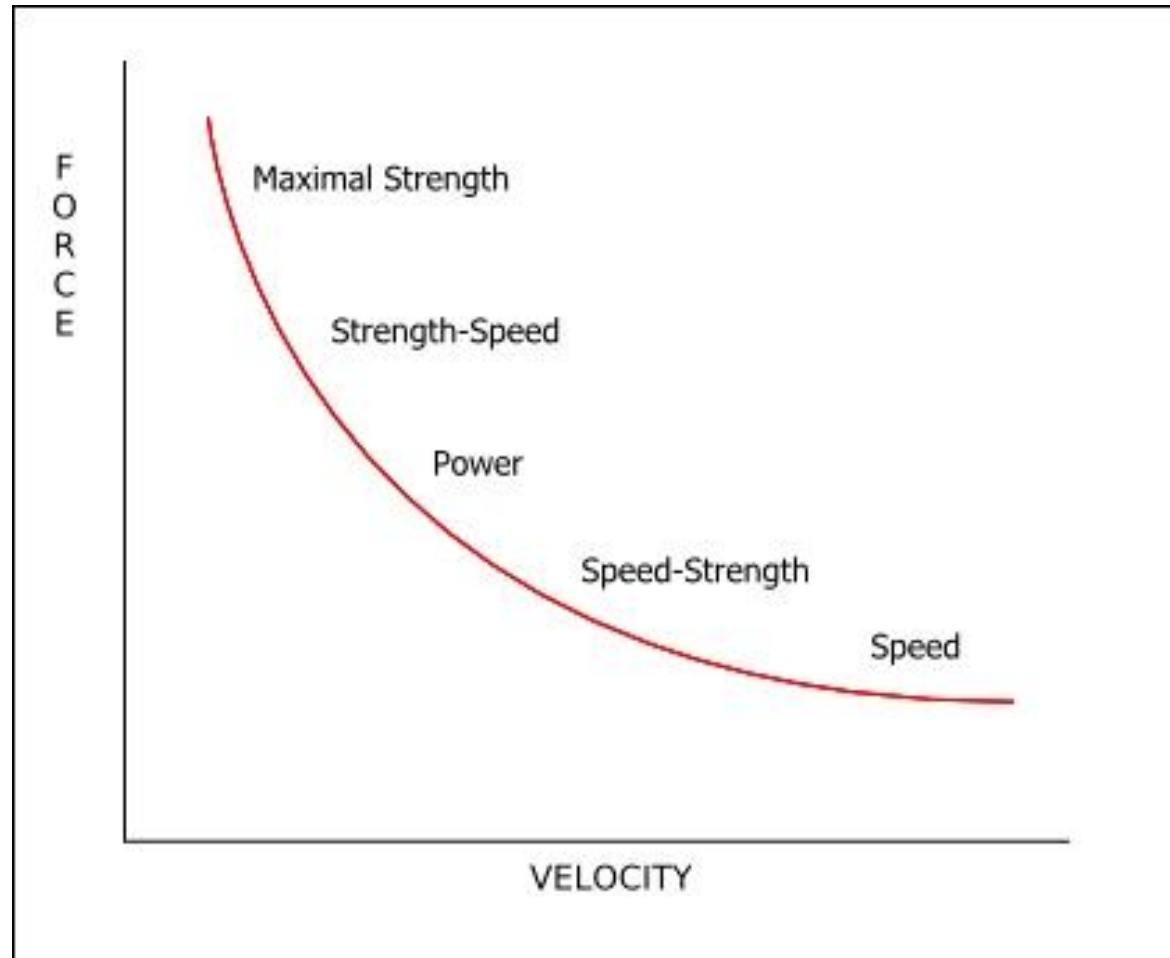
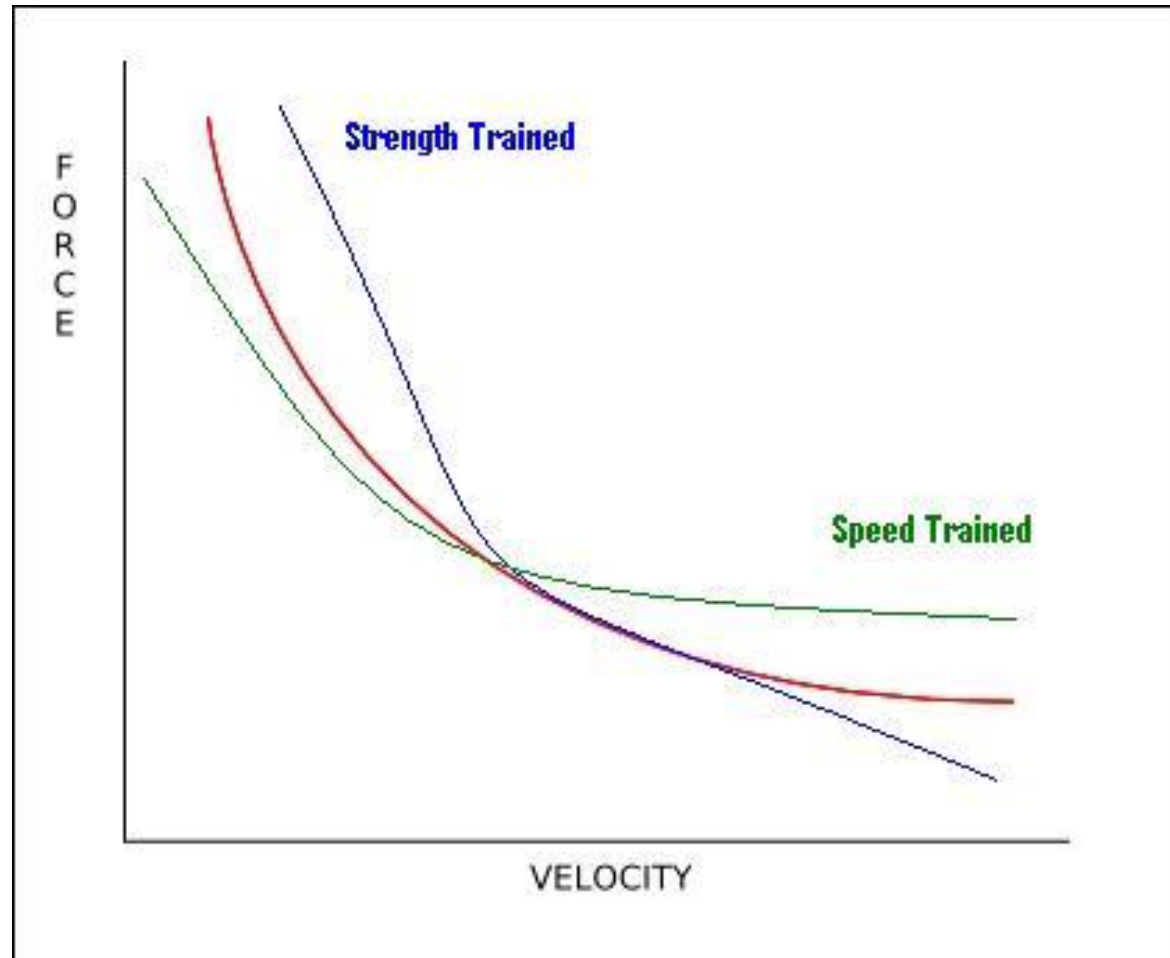


Figure 1.3 Dominant composition among the biomotor abilities for various sports.

Force-Velocity Curve



Force-Velocity Curve

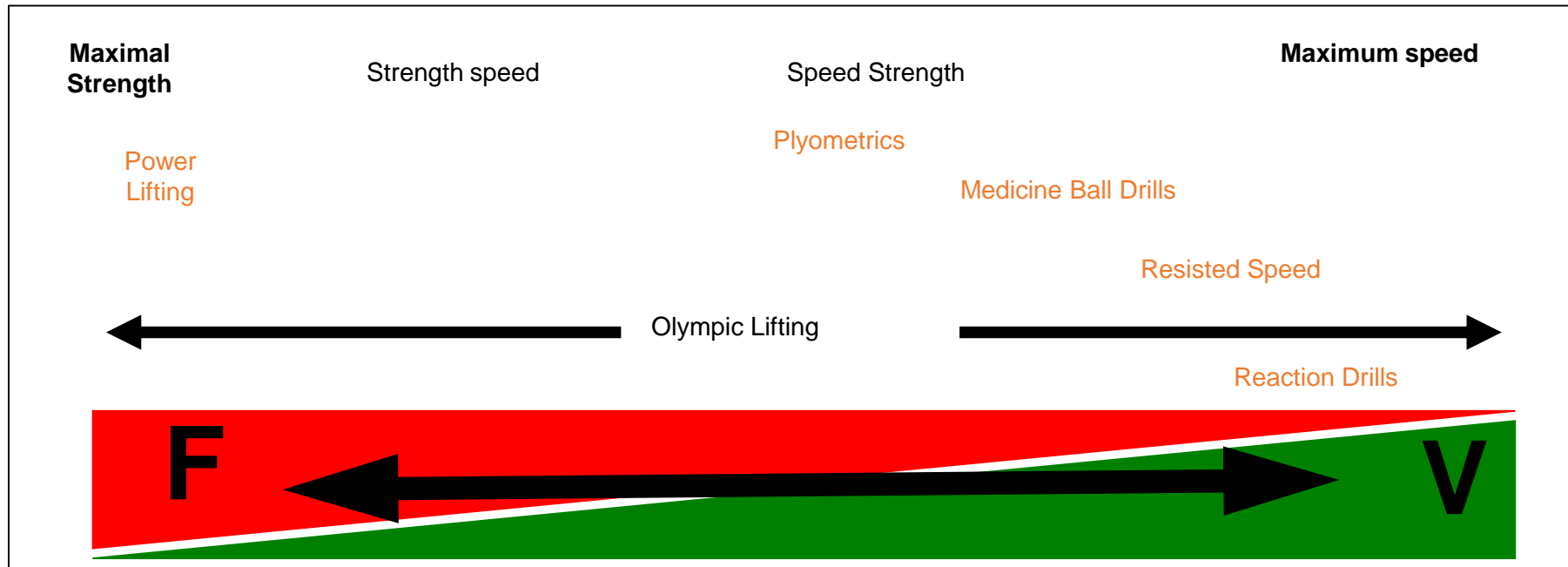


$$\text{POWER} = \text{FORCE (F)} \times \text{VELOCITY (V)}$$

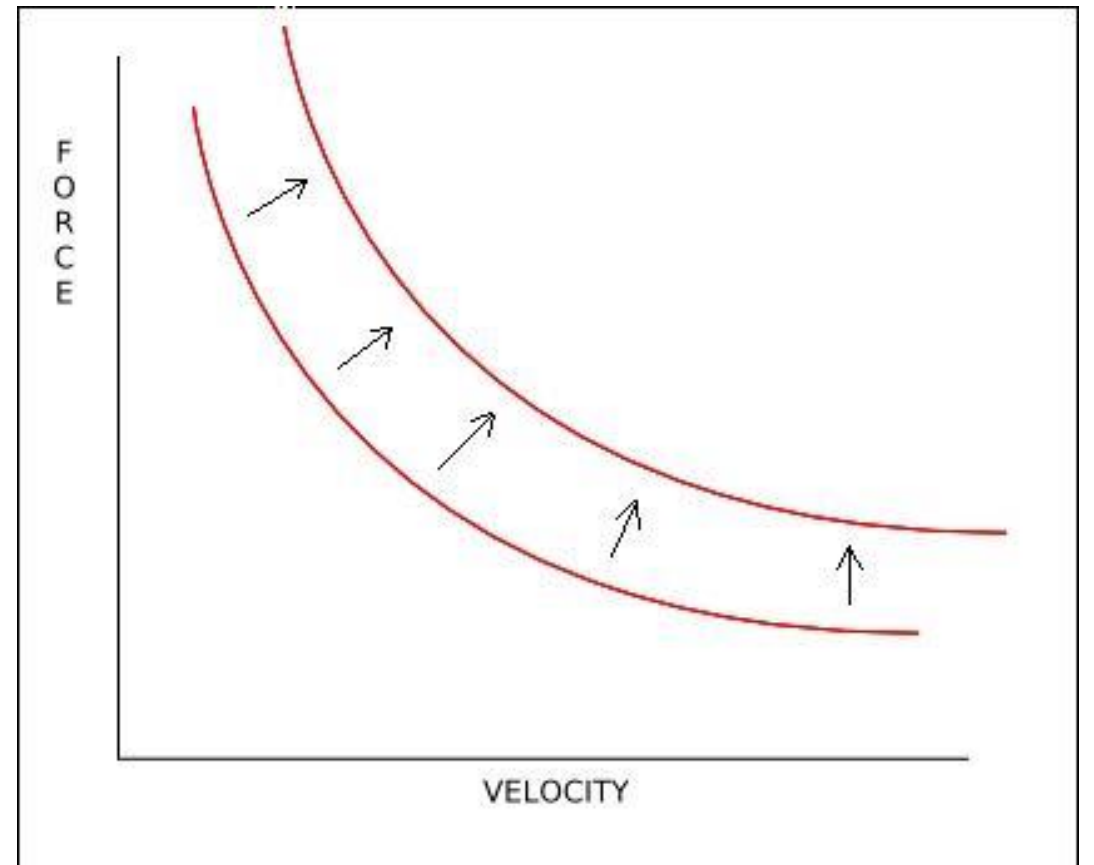
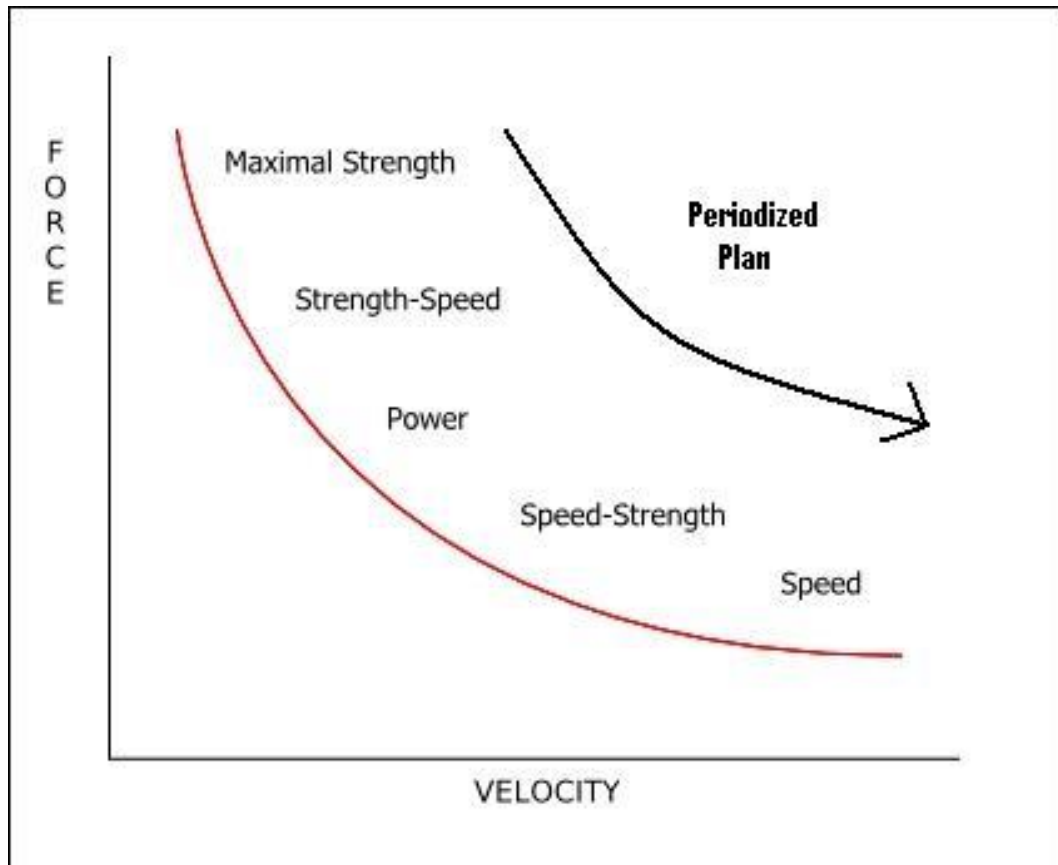
Force – that which can cause an object with mass to change its velocity ($F=ma$)

Velocity – how fast and in what direction an object is moving

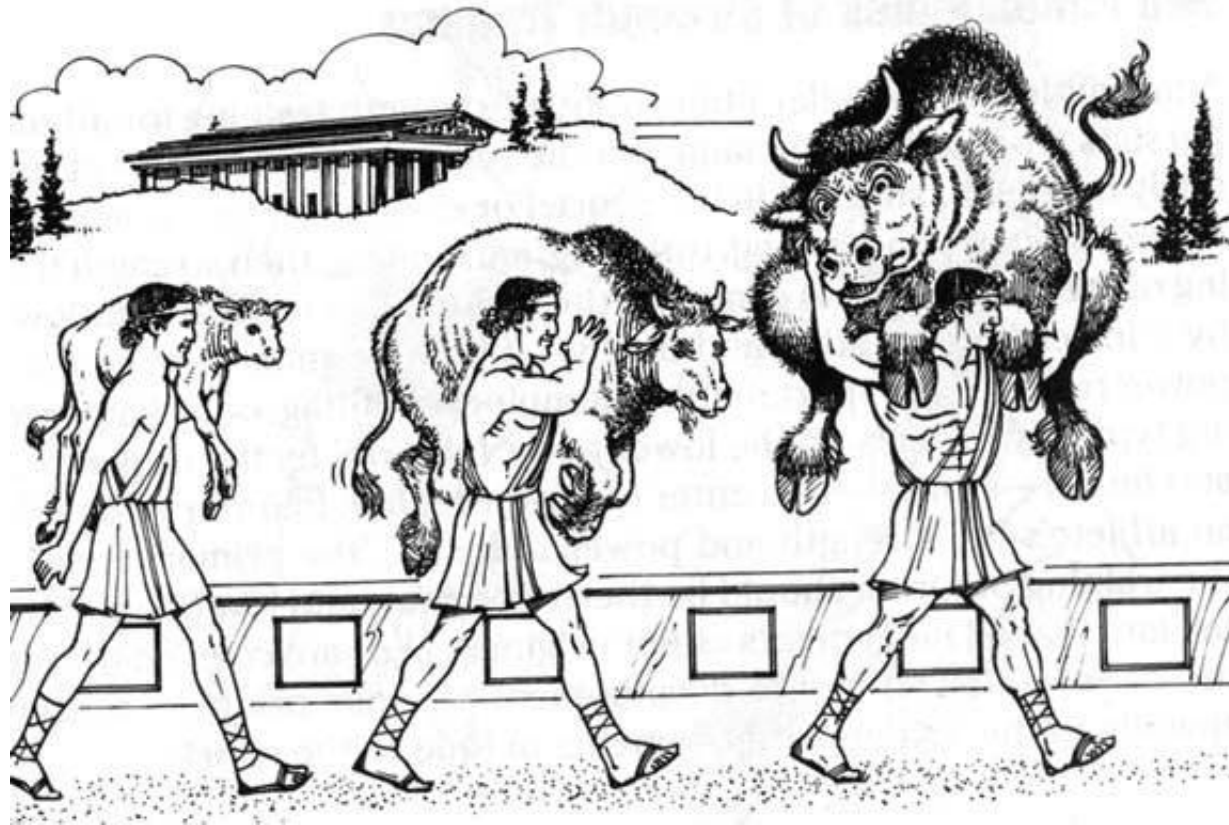
Power is defined as the amount of work performed per unit of time. Power is an element of skill-related fitness that is needed to excel in athletic performance. Increased strength does not always translate into increased power. For example, a strong upper body lifts a high amount of weight. However, a strong upper body does not always have the ability to throw a shot putt very far if speed cannot be generated.



Periodized to “Ski” the Curve



Milo and the Calf



Strength and Power Linear Periodization

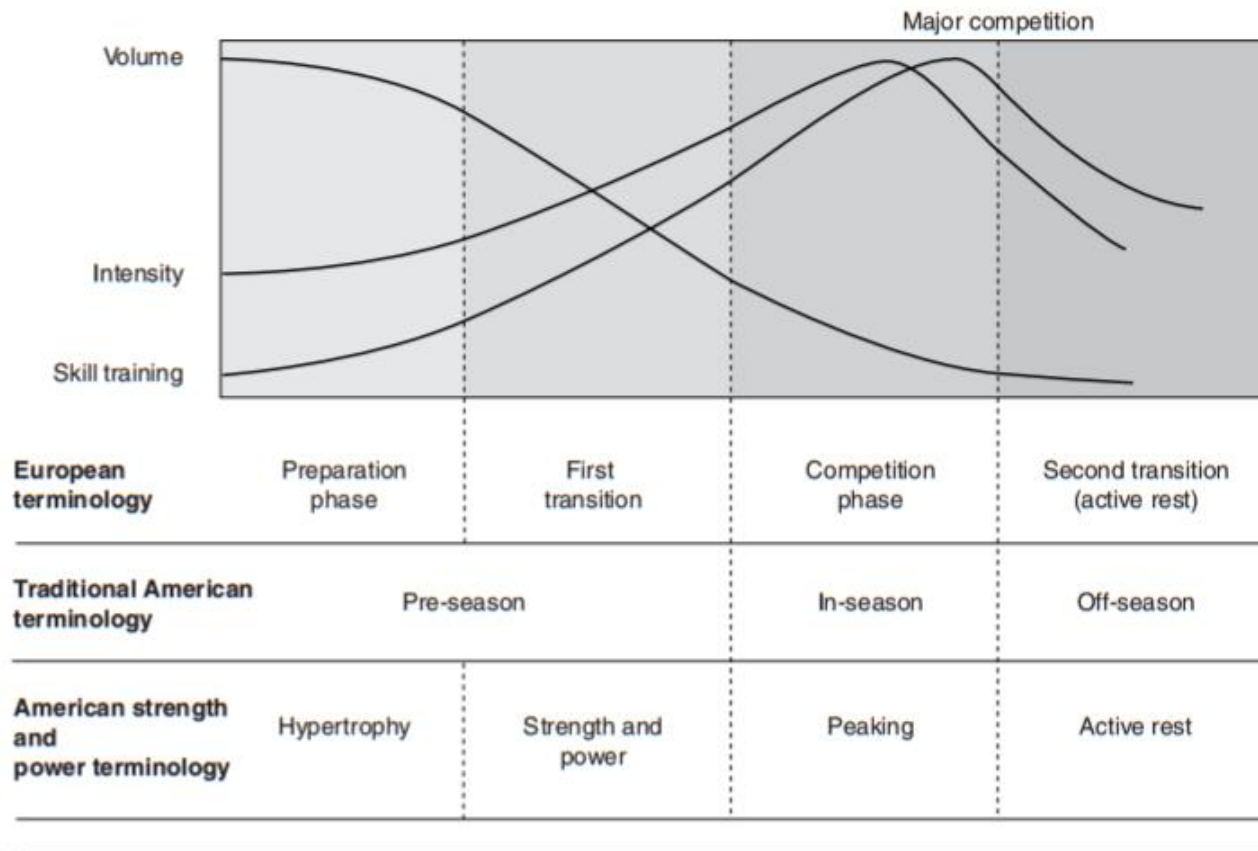


Figure 1.1 Training intensity and volume pattern with strength and power periodization.

Kramer and Fleck, *Optimizing Strength Training*, 2007

Table 1.1 Classic Strength and Power Periodization Model

Training phase		Hypertrophy	Strength	Power	Peaking	Active recovery
Workout variables	Sets	3-5	3-5	3-5	1-3	Light physical activity
	Repetitions/set	8-12	2-6	2-3	1-3	
	Intensity	Low	Moderate	High	Very high	
	Volume	Very high	High	Moderate	Low	

SAMPLE PROTOCOL	
Classic Linear Periodization Program	
<p>Microcycle 1 3 to 5 sets of 10- to 12RM</p> <p>Microcycle 2 4 or 5 sets of 8- to 10RM</p> <p>Microcycle 3 3 or 4 sets of 4- to 6RM</p>	<p>Microcycle 4 3 to 5 sets of 1- to 3RM</p> <p>Active Rest Cycle 2 to 4 weeks</p>

Strength and Power Nonlinear Periodization

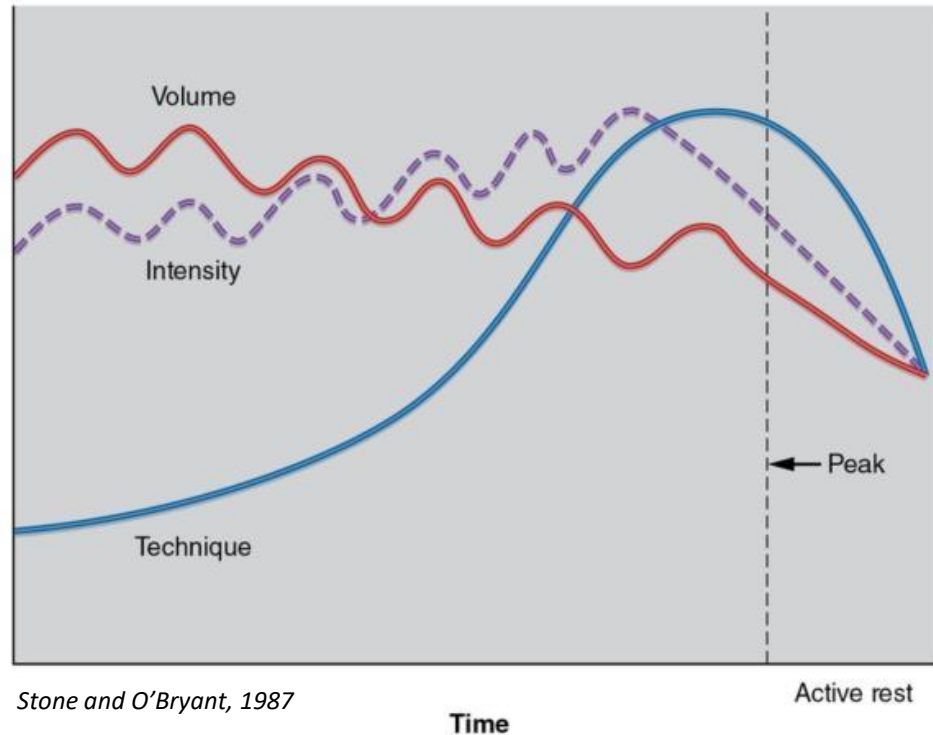
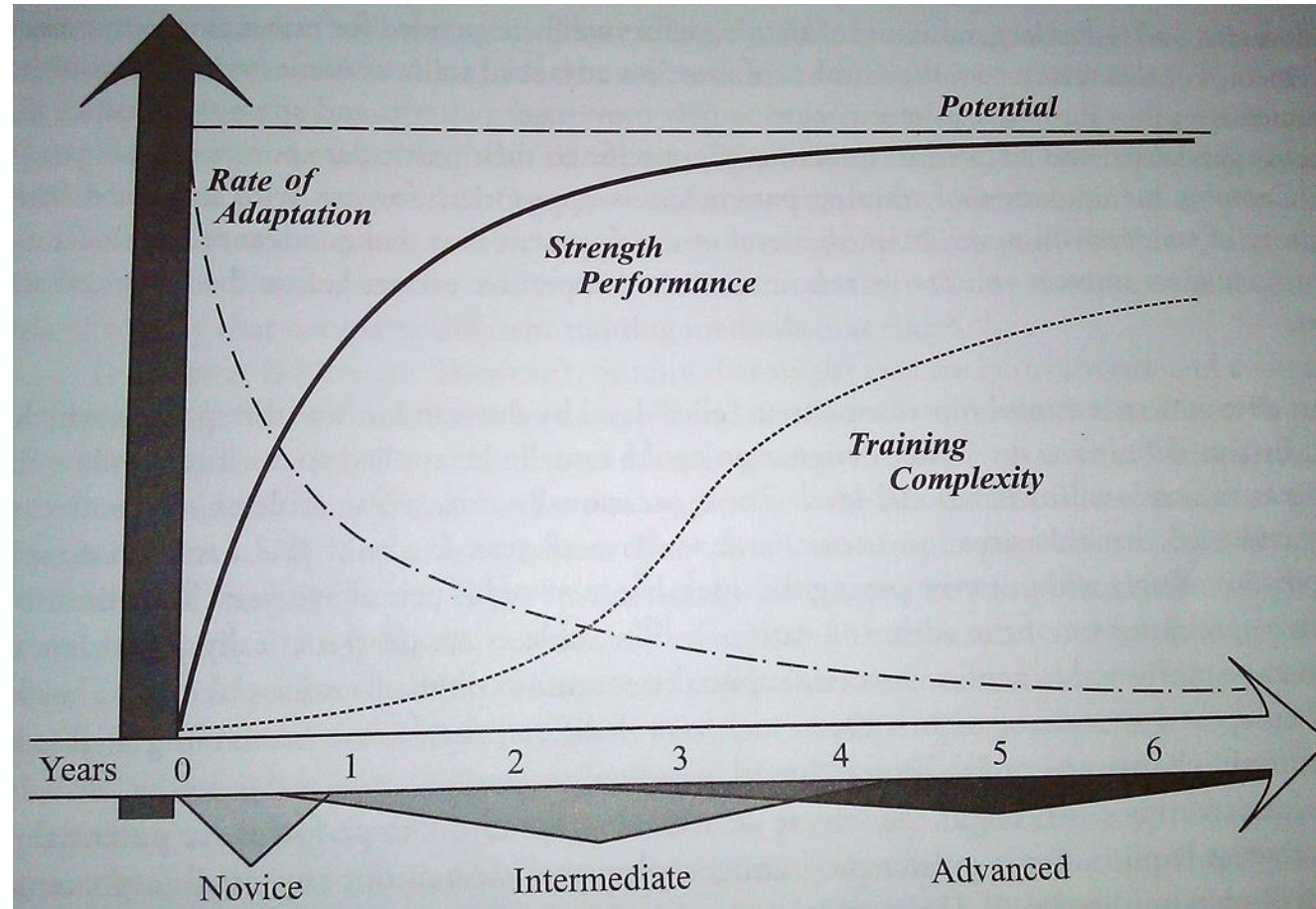


Table 1. Sample protocol of Undulating Periodization in a 16-week mesocycle (Kraemer & Fleck, 2007)

The protocol uses a 6-day rotation	
Monday	Monday
4 sets of 12 to 15RM	4 or 5 sets of 1 to 3RM
Wednesday	Wednesday
4 sets of 8 to 10RM	Power day
Friday	Friday
3 or 4 sets of 4 to 6RM	2 sets of 12 to 15RM
Active rest	
For 2 to 3 weeks after the 16-week mesocycle is completed	

Kramer and Fleck, *Optimizing Strength Training*, 2007

Rate of Adaptation vs. Training Complexity



Nonlinear Periodization - Novice Trainee

COMPLEX-PARALLEL TRAINING

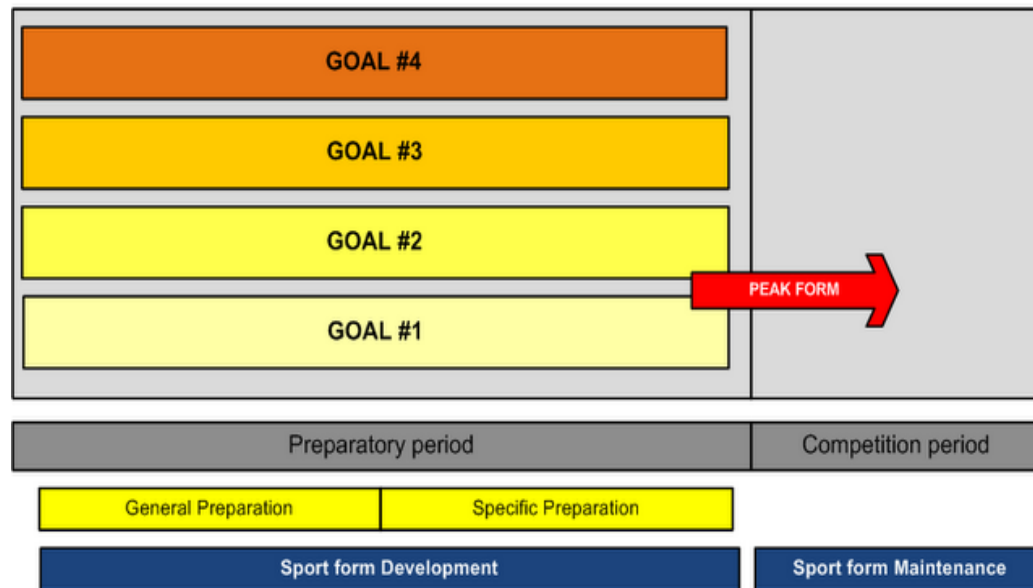
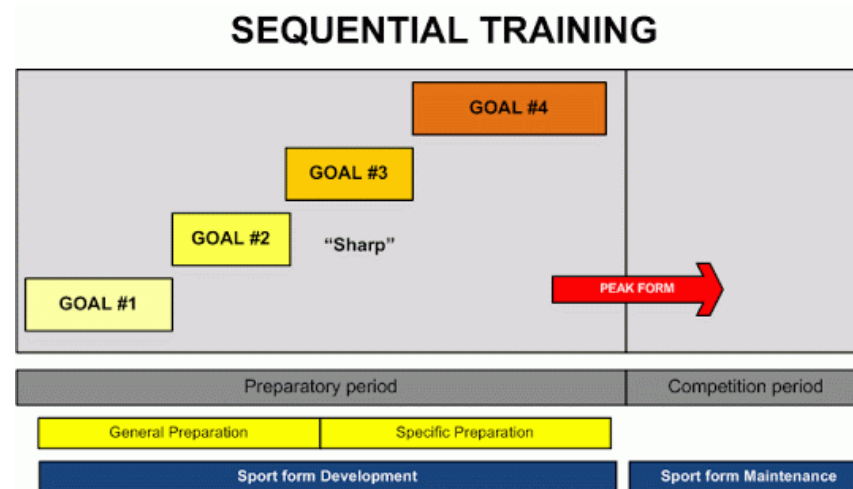


Table 1. Sample protocol of Undulating Periodization in a 16-week mesocycle (Kraemer & Fleck, 2007)

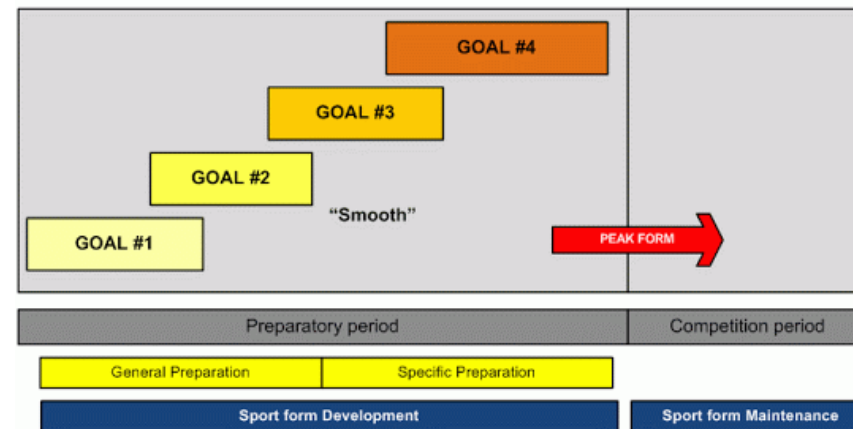
The protocol uses a 6-day rotation	
Monday	Monday
4 sets of 12 to 15RM	4 or 5 sets of 1 to 3RM
Wednesday	Wednesday
4 sets of 8 to 10RM	Power day
Friday	Friday
3 or 4 sets of 4 to 6RM	2 sets of 12 to 15RM
Active rest	
For 2 to 3 weeks after the 16-week mesocycle is completed	

Block Periodization - Intermediate/Advance Trainee

Sharp



Smooth



Nonlinear Periodization - Emphasized Blocks

Table 4.4 Sample Mesocycle With Emphasis on Endurance and General Preparation

Week	1	2	3	4	5	6	7	8	9	10	11	12
Day 1	L	L	M	VL	M	L	VL	H	L	M	L	VL
Day 2	M	VL	H	H	M	M	M	VL	L	M	M	H
Day 3	L	H	L	L	L	H	L	M	VH	VL	VL	L

VL = Very light intensity workout. H = Heavy intensity workout.
 L = Light intensity workout. VH = Very heavy intensity workout.
 M = Moderate intensity workout. P = Power workout.
 An active rest day can be used for any workout if needed.



Table 4.3 Sample Mesocycle With Emphasis on Hypertrophy and Strength

Week	1	2	3	4	5	6	7	8	9	10	11	12
Day 1	H	L	M	M	M	L	H	L	H	M	L	M
Day 2	M	M	H	H	H	M	M	L	L	M	M	M
Day 3	M	H	L	L	VH	H	VL	M	VH	H	VH	L

VL = Very light intensity workout. H = Heavy intensity workout.
 L = Light intensity workout. VH = Very heavy intensity workout.
 M = Moderate intensity workout. P = Power workout.
 An active rest day can be used for any workout if needed.



Table 4.1 Sample Mesocycle With Emphasis on Power

Week	1	2	3	4	5	6	7	8	9	10	11	12
Day 1	H	L	H	H	P	P	P	L	P	H	P	P
Day 2	P	P	P	P	H	VH	P	P	P	P	H	P
Day 3	VH	P	P	H	VL	L	VL	H	L	L	P	VH

VL = Very light intensity workout. H = Heavy intensity workout.
 L = Light intensity workout. VH = Very heavy intensity workout.
 M = Moderate intensity workout. P = Power workout.
 An active rest day can be used for any workout if needed.



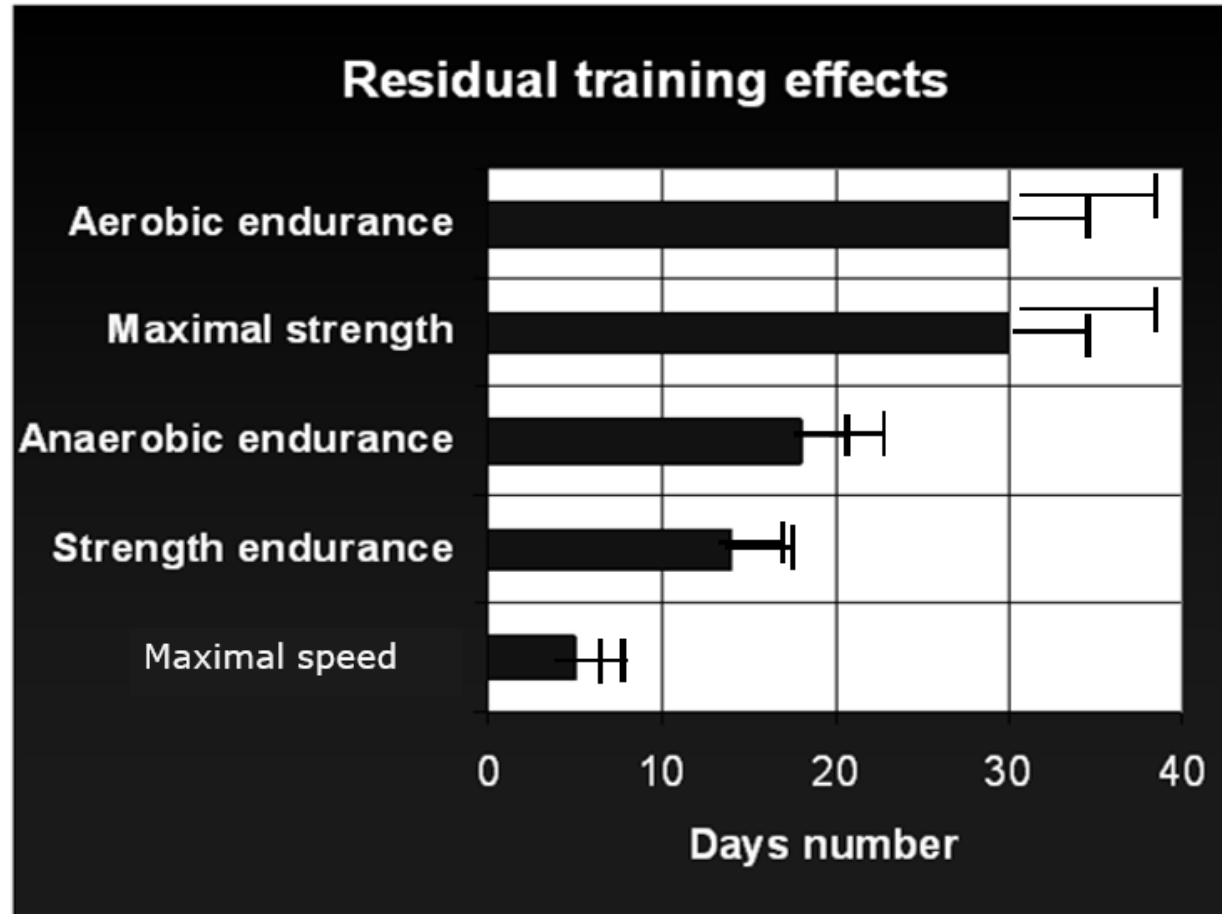
Table 4.2 Sample Mesocycle With Emphasis on Strength

Week	1	2	3	4	5	6	7	8	9	10	11	12
Day 1	H	L	H	H	L	P	P	L	H	H	L	H
Day 2	L	VH	M	P	H	VH	H	VH	H	VH	H	L
Day 3	VH	M	M	H	VL	L	VL	H	L	L	P	VH

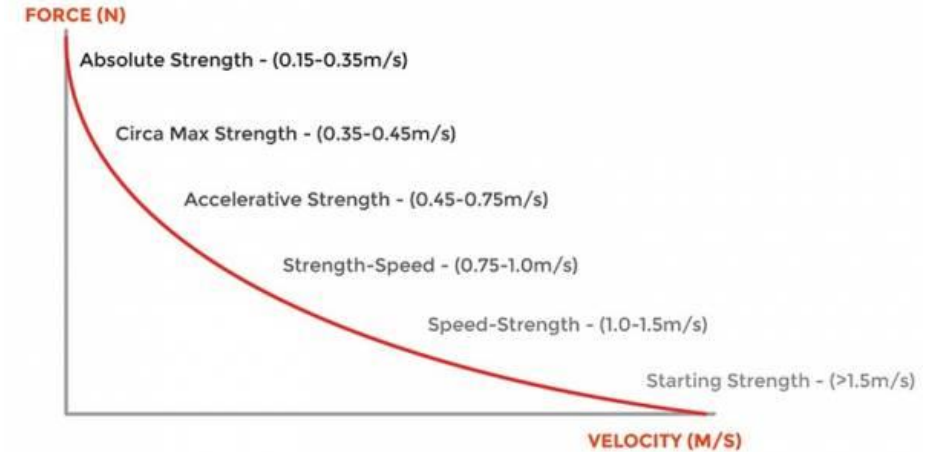
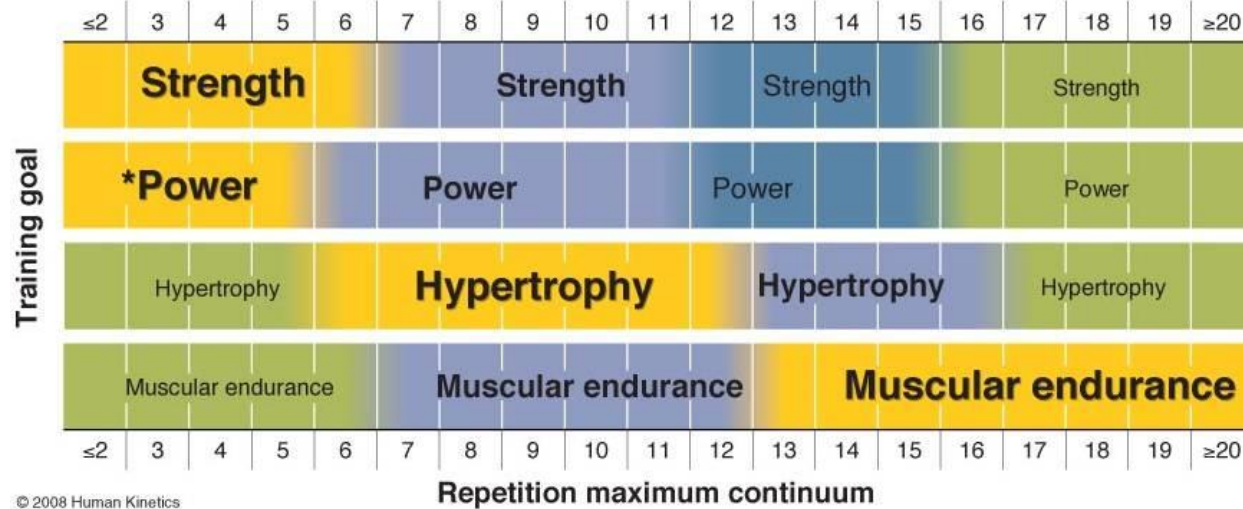
VL = Very light intensity workout. H = Heavy intensity workout.
 L = Light intensity workout. VH = Very heavy intensity workout.
 M = Moderate intensity workout. P = Power workout.
 An active rest day can be used for any workout if needed.

VL = Very Light (40-55%)	H = Heavy (90-95%)
L = Light (50-60%)	VH = Very Heavy (95-100%)
M = Hypertrophy (75-85%)	P = Power (30-70%)

Residual Training Effects

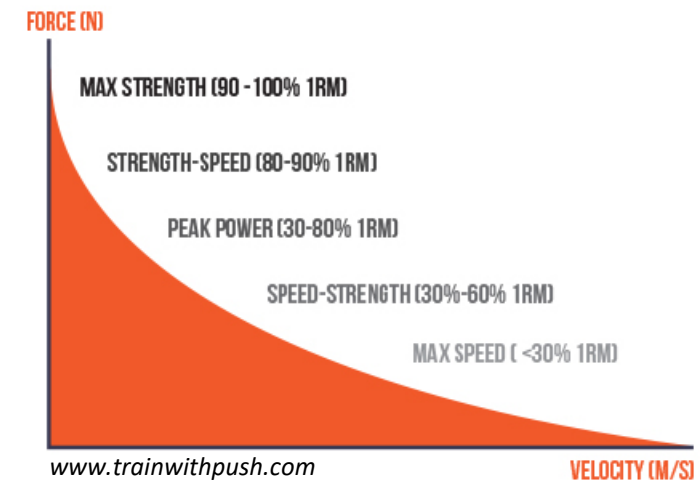


Force-Velocity Curve - Exercise Prescription



% 1 RM	Repetitions
60-70%	~12
65-75%	~10
70-80%	~8
75-85%	5-6
80-90%	4-5
85-95%	2-3
90-100%	1-2

USATF Level II



Peak Power

- Maximizing Peak Power

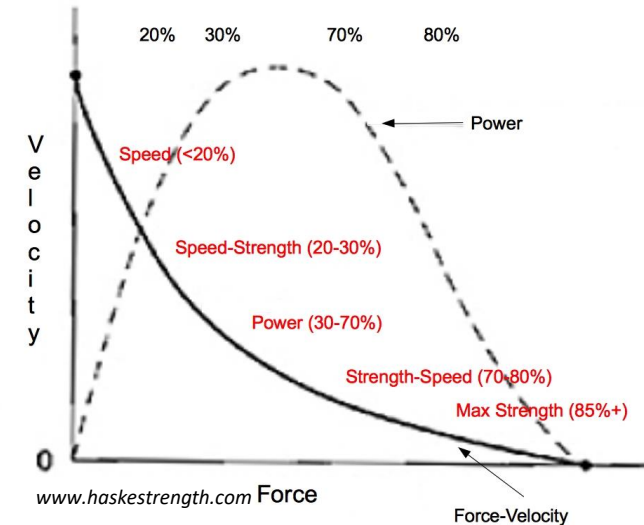
- Each athlete has a different power profile

- One athlete may elicit peak power values at ~70% of 1RM while another at ~30% of 1RM

- Training experience of the athlete

- Training phase of the athlete during the yearly plan

- The nature of the exercise → upper body vs. lower body, single-joint vs. multi-joint, traditional vs. explosive



Weight Training for Strength

Week 1 - Day 1				
Warm Up/Prehab	Sets/Reps			
Dynamic Warm Up	2-3 Minutes			
Piston Squat	3 sets of 5 per leg			
Overhead Squat	3 sets of 5 with empty bar			
Strength Exercises	% 1RM	Reps Per Set	Rest After Set	Information
Back Squat	65.0	5	1:30	Warm Up Sets
	75.0	3	1:30	
	85.0	1	1:30	
	70.0	3	3:00	
Perform each highlighted set of this exercise with a set of each exercise below	70.0	3	3:00	Feel free to add Chains or Bands to sets of Back Squat
	70.0	3		
	70.0	3		
	70.0	3		
Weighted Squat Jump	45.0	4	Rest only after you finish one set of each highlighted exercise	
	45.0	4		
	45.0	4		
	45.0	4		
Squat Jump	No Load	4		
	No Load	4		
	No Load	4		
	No Load	4		
RDL	80.0	5	2:00	
	80.0	5	2:00	
	80.0	5	2:00	
	80.0	5	2:00	
Overhead Sit Up	Choose	10	2:00	
	Choose	10	2:00	
	Choose	10	2:00	
	Choose	10	2:00	
Back Extension	Choose	10	2:00	
	Choose	10	2:00	
	Choose	10	2:00	
Recovery	Sets/Reps			
Isometric Split	2 sets of 30 seconds per leg			
Lying Wall Shakes	2 sets of 30 seconds			
Foam Roller	Quads and I-Band			

XLathlete.com

Week 1 - Day 2				
Warm Up/Prehab	Sets/Reps			
Dynamic Warm Up	2-3 Minutes			
Cuban Press With Figure 8	3 sets of 5			
Internal External Shoulder Shock	3 sets of 10 per arm			
Strength Exercises	% 1RM	Reps Per Set	Rest After Set	Information
Bench Press	65.0	5	1:30	Warm Up Sets
	75.0	3	1:30	
	85.0	1	1:30	
	70.0	3	3:00	
Perform each highlighted set of this exercise with a set of each exercise below	70.0	3	3:00	Feel free to add Chains or Bands to the sets of Bench Press
	70.0	3		
	70.0	3		
	70.0	3		
Med Ball Pass	10 to 15 lbs	4	Rest only after you finish one set of each highlighted exercise	
	10 to 15 lbs	4		
	10 to 15 lbs	4		
	10 to 15 lbs	4		
Clap Push Up	No Load	4		
	No Load	4		
	No Load	4		
	No Load	4		
Dynamic Lat Pull Down	75.0	8	2:00	Make EXPLOSIVE
	75.0	8	2:00	
	75.0	8	2:00	
	75.0	8	2:00	
Overhead Lateral Raise	10.0	10	2:00	
	10.0	10	2:00	
	10.0	10	2:00	
	10.0	10	2:00	
Band Tricep Extension	Band	8	2:00	Make EXPLOSIVE
	Band	8	2:00	
	Band	8	2:00	
Bicep Curl Shock	45.0	8	2:00	Make EXPLOSIVE
	45.0	8	2:00	
	45.0	8	2:00	
Recovery	Sets/Reps			
Isometric Chest Hold	2 sets of 30 seconds			
Partner Stretching	2 sets of 30 seconds each			
Laying Relaxation	2:00			



Youth Weight Training for Strength and Power

Day 1	MONTH 1			
	Week 1	Week 2	Week 3	Week 4
Dynamic Warm-Up	ACL Prevention Warm Up Cone Drill 1	Complete Dynamic Warm Up 1 Cone Drill 2	ACL Prevention Warm Up Cone Drill 3	Complete Dynamic Warm Up 2 Cone Drill 4
Walking Overhead Plate Lunge PAIR W/	2 Setsx 5 Reps Each Leg	2 Setsx 5 Reps Each Leg	2 Setsx 5 Reps Each Leg	2 Setsx 5 Reps Each Leg
3 Way Ham Touch Med Ball	2 Setsx 6 Reps Each Leg	2 Setsx 6 Reps Each Leg	2 Setsx 6 Reps Each Leg	2 Setsx 6 Reps Each Leg
Dumbbell Squat PAIR W/	2 Setsx 8 Reps	2 Setsx 8 Reps	2 Setsx 8 Reps	2 Setsx 8 Reps
Infraspinatus PAIR W/	2 Setsx 5 Reps	2 Setsx 5 Reps	2 Setsx 5 Reps	2 Setsx 5 Reps
RDL DB Shrug	2 Setsx 6 Reps	2 Setsx 6 Reps	2 Setsx 6 Reps	2 Setsx 6 Reps
DB Bench Press PAIR W/	2 Setsx 8 Reps	2 Setsx 8 Reps	2 Setsx 8 Reps	2 Setsx 8 Reps
Med Ball Pass PAIR W/	2 Setsx 5 Reps	2 Setsx 5 Reps	2 Setsx 5 Reps	2 Setsx 5 Reps
Squat Lat Row	2 Setsx 8 Reps	2 Setsx 8 Reps	2 Setsx 8 Reps	2 Setsx 8 Reps
Cuban Press PAIR W/	2 Setsx 6 Reps 2 Setsx 8 Reps	2 Setsx 6 Reps 2 Setsx 8 Reps	2 Setsx 6 Reps 2 Setsx 8 Reps	2 Setsx 6 Reps 2 Setsx 8 Reps
Thors Hammer	Each Way	Each Way	Each Way	Each Way
Sit Up With Twist PAIR W/	2 Setsx 8 Reps Each way	2 Setsx 8 Reps Each way	2 Setsx 8 Reps Each way	2 Setsx 8 Reps Each way
Gopher U Abs	2 Setsx 6 Reps	2 Setsx 6 Reps	2 Setsx 6 Reps	2 Setsx 6 Reps
Sport Prehab	Hip Flexor	Groin	Hip Flexor	Groin
Recovery	3-5 min	3-5 min	3-5 min	3-5 min

Day 2	MONTH 1			
	Week 1	Week 2	Week 3	Week 4
Dynamic Warm-Up	Complete Dynamic Warm Up 3 Ladder Drill 1	ACL Prevention Warm Up Ladder Drill 2	Complete Dynamic Warm Up 3 Ladder Drill 3	ACL Prevention Warm Up Ladder Drill 4
Hindu Squats PAIR W/	2 Setsx 5 Reps Each Leg	2 Setsx 5 Reps Each Leg	2 Setsx 5 Reps Each Leg	2 Setsx 5 Reps Each Leg
4-Way Ankle Kicks	2 Setsx 6 Reps Each Way	2 Setsx 6 Reps Each Way	2 Setsx 6 Reps Each Way	2 Setsx 6 Reps Each Way
Cross-Over Step Up PAIR W/	2 Setsx 6 Reps Each Leg	2 Setsx 6 Reps Each Leg	2 Setsx 6 Reps Each Leg	2 Setsx 6 Reps Each Leg
Supraspinatus PAIR W/	2 Setsx 5 Reps	2 Setsx 5 Reps	2 Setsx 5 Reps	2 Setsx 5 Reps
Ball Leg Curls	2 Setsx 6 Reps	2 Setsx 6 Reps	2 Setsx 6 Reps	2 Setsx 6 Reps
DB Incline Press PAIR W/	2 Setsx 8 Reps	2 Setsx 8 Reps	2 Setsx 8 Reps	2 Setsx 8 Reps
Med Ball Pass PAIR W/	2 Setsx 5 Reps 2 Setsx 8 Reps	2 Setsx 5 Reps 2 Setsx 8 Reps	2 Setsx 5 Reps 2 Setsx 8 Reps	2 Setsx 5 Reps 2 Setsx 8 Reps
Standing Swinging Lat Pull Down				
Front Deltoid Raise PAIR W/	2 Setsx 6 Reps 2 Setsx 8 Reps	2 Setsx 6 Reps 2 Setsx 8 Reps	2 Setsx 6 Reps 2 Setsx 8 Reps	2 Setsx 6 Reps 2 Setsx 8 Reps
Tea Cup				
Supine Leg Circles PAIR W/	2 Setsx 4 Reps Each way	2 Setsx 4 Reps Each way	2 Setsx 4 Reps Each way	2 Setsx 4 Reps Each way
Supine Straight Leg Rotation	2 Setsx 6 Reps	2 Setsx 6 Reps	2 Setsx 6 Reps	2 Setsx 6 Reps
Sport Prehab	Shoulder	Shoulder	Shoulder	Shoulder
Recovery	3-5 min	3-5 min	3-5 min	3-5 min



Olympic Lifts for Power

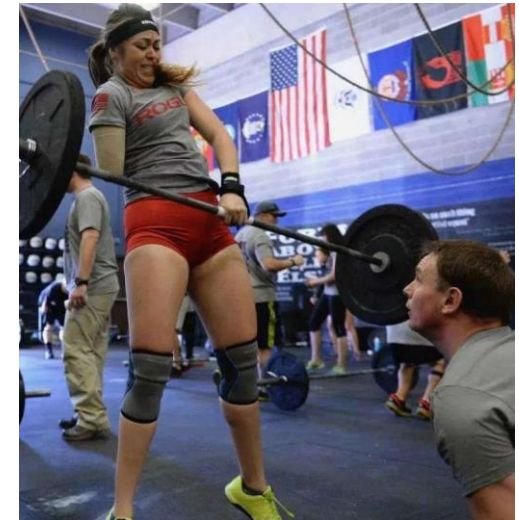


Name				
Week 1 - Workout 1				
Warm Up/Prehab	Sets/Reps	Clean Grip RDL Shrug	5	
Dynamic Warm Up	2-3 Minutes	Front Squat	5	
		Hang Power Clean W/ Front Squat	3	
Clean and Jerk Warm Up	Use empty bar and follow instructions to the right	Clean From Hang Below Knee	3	
		Push Press	5	
		Split Jerk	3	
Power Clean w/ Front Squat				
Warm Up	% 1RM	Reps Per Set	Rest After Set	Information
	70.0	1 Rep	1:30	Use cluster sets
	72.0	3 Reps	2:00	(1+1+1)
	72.0	3 Reps	2:00	15 sec of rest between clusters
	75.0	3 Reps	2:00	
	75.0	3 Reps	2:00	Maximize Speed

Week 2 - Workout 1				
Warm Up/Prehab	Sets/Reps	Clean Grip RDL Shrug	5	
Dynamic Warm Up	2-3 Minutes	Front Squat	5	
		Hang Power Clean W/ Front Squat	3	
Clean and Jerk Warm Up	Use empty bar and follow instructions to the right	Clean From Hang Below Knee	3	
		Push Press	5	
		Split Jerk	3	
Power Clean w/ Front Squat				
Warm Up	% 1RM	Reps Per Set	Rest After Set	Information
	72.0	1 Rep	1:30	Use cluster sets
	75.0	3 Reps	2:00	(1+1+1)
	75.0	3 Reps	2:00	15 sec of rest between clusters
	77.0	3 Reps	2:00	
	77.0	3 Reps	2:00	Maximize Speed

Week 1 - Workout 2				
Warm Up/Prehab	Sets/Reps	Snatch Grip RDL Shrug	5	
Dynamic Warm Up	2-3 Minutes	Overhead Squat	5	
		Pressing Overhead Squat	3	
Snatch Warm Up	Use empty bar and follow instructions to the right	Drop Snatch	3	
		Hang Power Snatch W/ OH Squat	3	
		Snatch From Hang Below Knee	3	
Power Snatch w/ Overhead Squat				
Warm Up	% 1RM	Reps Per Set	Rest After Set	Information
	70.0	1 Rep	1:30	Use cluster sets
	72.0	4 Reps	2:00	(2+2)
	72.0	4 Reps	2:00	15 sec of rest between clusters
	72.0	4 Reps	2:00	
	72.0	4 Reps	2:00	Maximize Speed

Week 2 - Workout 2				
Warm Up/Prehab	Sets/Reps	Snatch Grip RDL Shrug	5	
Dynamic Warm Up	2-3 Minutes	Overhead Squat	5	
		Pressing Overhead Squat	3	
Snatch Warm Up	Use empty bar and follow instructions to the right	Drop Snatch	3	
		Hang Power Snatch W/ OH Squat	3	
		Snatch From Hang Below Knee	3	
Power Snatch w/ Overhead Squat				
Warm Up	% 1RM	Reps Per Set	Rest After Set	Information
	72.0	1 Rep	1:30	Use cluster sets
	75.0	3 Reps	2:00	(1+1+1)
	75.0	3 Reps	2:00	15 sec of rest between clusters
	75.0	3 Reps	2:00	
	75.0	3 Reps	2:00	Maximize Speed



Plyometrics for Power

Prior to starting this plyometric program it is recommended that you warm up using a [Complete Dynamic Warm Up](#) or [Complete Hurdle Warm Up](#)

Choose Your Level	
Level 1	Level 2
2 Sets of 3 Reps	2 Sets of 5 Reps

1) [Squat Jump Pause](#)

20 – 30 Seconds Rest Between Sets

2) [Tuck Jump](#)

20 – 30 Seconds Rest Between Sets

3) [Power Step Up](#)

20 – 30 Seconds Rest Between Sets

4) [Relaxed Box Jump](#)

20 – 30 Seconds Rest Between Sets

5) [Speed Skater For Distance](#)

20 – 30 Seconds Rest Between Sets

*These can be performed with or without the boxes (on the ground)

Prior to starting this plyometric program it is recommended that you warm up using a [Complete Dynamic Warm Up](#) or [Complete Hurdle Warm Up](#)

Choose Your Level	
Level 1	Level 2
2 Sets of 3 Reps	2 Sets of 5 Reps

1) [Squat Jump Pause](#)

20 – 30 Seconds Rest Between Sets

2) [Pike Jump](#)

20 – 30 Seconds Rest Between Sets

3) [Power Step Up](#)

20 – 30 Seconds Rest Between Sets

4) [Iso Release Box Jumps](#)

20 – 30 Seconds Rest Between Sets

5) [1/2 Squat jump](#)

20 – 30 Seconds Rest Between Sets



Medicine Ball Throws for Power

Complete each exercise for the required amount of reps as chosen from the chart on the right. When you complete all of the exercises, start over at the beginning following the two minute rest interval. ONE FULL CIRCUIT EQUALS ONE SET. Complete the required amount of sets as chosen from the chart on the right.

1. [Med Ball Pass](#)
- Rest 1:00 Minute-
2. [Standing Partner Med Ball Side Toss](#)
(5 Reps Each Way)
- Rest 1:00 Minute-
3. [Med Ball Reverse Over Head Toss](#)
- Rest 1:00 Minute-
4. [Between Legs Med Ball Forward Toss](#)
- Rest 1:00 Minute-
5. [Med Ball Step and Over Head Toss](#)
- Rest 1:00 Minute-
6. [Med Ball Twist](#)
(5 Reps Each Way)
- Rest 1:00 Minute-
7. [Partner Over Head Sit Up Toss](#)

- Rest 2:00 Minutes-

Select the Level of Difficulty			
Level 1	Level 2	Level 3	Level 4
2 Sets	3 Sets	4 Sets	5 Sets
3 Reps	3 Reps	3 Reps	3 Reps
Level 5	Level 6	Level 7	Level 8
2 Sets	3 Sets	4 Sets	5 Sets
5 Reps	5 Reps	5 Reps	5 Reps
Level 9	Level 10	Level 11	Level 12
2 Sets	3 Sets	4 Sets	5 Sets
8 Reps	8 Reps	8 Reps	8 Reps



Off-Weight Implements for Power and Speed

Phase	Frequency	Prescription	Implement Weight
General Preparation Phase	2-3 x's week	30% Throws / 70% Drills; ~25 Throws per session	Weighted
Specific Preparation Phase (early)	3-4 x's week	50% Throws / 50% Drills; ~25 Throws per session	Weighted > Competition
Specific Preparation Phase (late)	4-5 x's week	70% Throws / 30% Drills; ~20 Throws per session	Competition > Weighted > Light
Competition Phase	4-5 x's week	90% Throws / 10% Drills; ~20 Throws per session	Competition > Weighted = Light

Example - Specific Preparation Phase (early)	
Shot Put	Discus
6 kg x 5 stand	1.5 kg x 5 stand
5 kg x 5 full	1.25 kg x 5 full
4 kg x 5 full (comp)	1 kg x 5 full (comp)
5 kg x 5 full	1.25 x 5 full
4 kg x 5 full (comp)	1 kg x 5 full (comp)

Example - Competition Phase	
Shot Put	Discus
5 kg x 5 stand	1.25 kg x 5 stand
4 kg x 5 full (comp)	1 kg x 5 full (comp)
3 kg x 5 full	.75 kg x 5 full
4 kg x 5 full (comp)	1 kg x 5 full (comp)

Sprints and Reaction Drills for Speed

Complete with 60% effort Level 1; 80% effort Level 2; 100% effort Level 3



Set 1

Sprint 5 yards – back and forth 3 times

Rest 20 Seconds

Carioca 20 yards – back and forth 2 times

Rest 20 Seconds

Backward Shuffle 25 yards

Sprint back to Goal Line

Backward Shuffle 25 yards

Sprint back to Goal Line

Rest 20 Seconds

Sprint forward 5 yards and backpedal 5 yards
back and forth 3 times

Rest 1:30

Set 2

Shuffle 5 yards – back and forth 3 times

Rest 20 Seconds

5 tuck jumps

Sprint 20 yards

Sprint back to Goal Line

Rest 20 Seconds

Carioca same leg in front 25 yards back and
forth 2 times

Rest 20 Seconds

Sprint forward 5 yards and backpedal 5 yards
back and forth 4 times

Rest 1:30

Set 3

Sprint forward 5 yards and backpedal 5 yards
back and forth 3 times

Rest 20 Seconds

5 squat jumps

Sprint 25 yards

Sprint back to Goal Line

Rest 20 Seconds

Carioca same leg behind 20 yards back and
forth 2 times

Rest 20 Seconds

Sprint forward 5 yards and backpedal 5 yards
back and forth 4 times

Rest 1:30



Bodyweight Workout for Throwers

- Day One – Lower Body Force Development:
 - Exercise 1 – Bodyweight Squats / 4 sets of 15 reps
 - Exercise 2 – Hanging Knee Raises / 4 sets of 15 reps
 - Exercise 3 – Jumping Lunges / 4 sets of 4 reps per leg
 - Exercise 4 – Lying Leg Raises / 4 sets of 15 reps
 - Exercise 5 – Short Sprints / 4 sets x 40 yds.
 - Exercise 6 – Explosive Shot Put Behind the Head Toss / 4 sets x 5 throws

Bodyweight Workout for Throwers

- Day Two – Upper Body Force Development:
 - Exercise 1 – Push Ups / 4 sets of 15 reps
 - Exercise 2 – Recline Row (aka Inverted Push Up) / 4 sets of 15 reps
 - Exercise 3 – Hand Walking with Feet in the Swings / 4 sets of :45 seconds
 - Exercise 4 – Low Planks / 4 sets of :45 seconds
 - Exercise 5 – Short Hill Sprints / 4 sets
 - Exercise 6 – Shot Put Chest Passes / 4 sets x 5 throws

Resources - Exercise Examples

- Jackie Christiansen Shotput Training
 - <https://www.youtube.com/watch?v=6XcAr1tz69c>
- Préparation Physique : Werner Gunthor partie 1
 - <https://www.youtube.com/watch?v=d4e5cuyqjqw>
- Préparation Physique : Werner Gunthor partie 2
 - <https://www.youtube.com/watch?v=zJImRx3rpW0>
- Préparation Physique : Werner Gunthor partie 3
 - <https://www.youtube.com/watch?v=YqFP9gySw34>
- Jurgen Schult Discus Thrower Medicine Ball Training
 - <https://www.youtube.com/watch?v=EeXiCufzcEI>
- German Discus Javelin Throws Training Camp Halle 1991 Part 1 of 2
 - <https://www.youtube.com/watch?v=Ru5kkVfrGOk>
- DISCUS SPECIFIC STRENGTH SPEED SESSION by Didier POPPE
 - <https://www.youtube.com/watch?v=mRcixKLlIMY>
- THROWS Conditioning Stabilization drills by Didier POPPE
 - <https://www.youtube.com/watch?v=nBhc6linBig>

Throw Far!

