





PAUDIE ROCHE

Arsenal Football Club




**In-Season Strength and Power Development
for Team Sport Athletes**



Arsenal Paudie Roche

Content

- Barriers that hinder the development of In-Season Strength and Power
- Athlete Profiling
- Sample Weekly Plan / Micro – Cycle
- Sample Session Plan
- Practical Application and Progressions




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Barriers

- **TIME !!!!!**
- S&C Schedule
- Demands of Technical Training
(E.G Soccer 40-50 KM Total Distance Per Week)
- Fixture Demands
- Buy In from Players and Technical Staff

Variation



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Athlete Profiling

Lower Body Power

- Countermovement Jump (cm)
- Squat Jump (cm)
- *Then Calculate Elastic Index*

Acceleration / Top Speed

- 0 - 10m Acceleration (secs)
- 0 - 30m Max Speed (secs)


• Speed Strength Diagnostics



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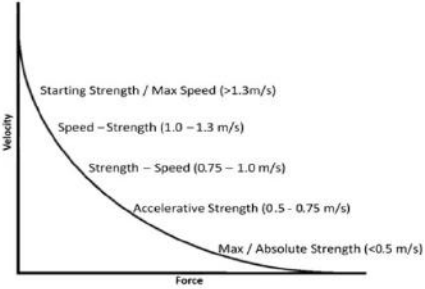
We must then ask ourselves?

- What is our goal form the training plan?
- What are the physiological demands of the sport / competition ?
- Which of these physiological demands are most important In-Season ?



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Move the Curve !



Velocity

Force


Starting Strength / Max Speed (>1.3m/s)

Speed - Strength (1.0 - 1.3 m/s)

Strength - Speed (0.75 - 1.0 m/s)

Accelerative Strength (0.5 - 0.75 m/s)

Max / Absolute Strength (<0.5 m/s)



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Sample Week Plan (Soccer)

Mon	Tue	Wed	Thu	Fri	Sat	Sun
MD-2	MD-3	MD-3	MD-2	MD-1	MD	MD-1
Monday 08:00	Monday 08:00	Monday 08:00	Monday 08:00	Monday 08:00	Monday 08:00	Monday 08:00
Priority: Power / Max 09:00	Priority: Power / Speed 09:00	Priority: Power / Speed 09:00	Priority: Power / Speed 09:00	Priority: Power / Speed 09:00	Priority: Power / Speed 09:00	Priority: Power / Speed 09:00
Speed / Strength 10:00	Speed / Strength 10:00	Speed / Strength 10:00	Speed / Strength 10:00	Speed / Strength 10:00	Speed / Strength 10:00	Speed / Strength 10:00
11:00-12:00	11:00-12:00	11:00-12:00	11:00-12:00	11:00-12:00	11:00-12:00	11:00-12:00
13:00	13:00	13:00	13:00	13:00	13:00	13:00
14:00-15:00	14:00-15:00	14:00-15:00	14:00-15:00	14:00-15:00	14:00-15:00	14:00-15:00
16:00-17:00	16:00-17:00	16:00-17:00	16:00-17:00	16:00-17:00	16:00-17:00	16:00-17:00
18:00-19:00	18:00-19:00	18:00-19:00	18:00-19:00	18:00-19:00	18:00-19:00	18:00-19:00



Sample Weekly Breakdown

- **Monday P.M** Upper Body – Strength or Hypertrophy
- **Tuesday A.M** Power / Acceleration & Max Speed (Pre-Training)
- **Tuesday P.M** Lower Body Strength – Bi Lateral


- **Thursday A.M** Power / Multi-Directional Speed (Pre-Training)
- **Thursday P.M** Lower Body Strength – Uni Lateral

Note: Additional Upper Body work may be performed on Thursday P.M



Tuesday Session – Power / Acceleration / Max Speed / Bi-Lateral Strength

A.M Pre-Training (1) Gym Based	A.M Pre-Training (2) Pitch Based	P.M (3) Gym Based
(A) Foam Roll / Stretch + Individual Correctives Exercise Plan	(A) Acceleration Work focusing on different Start Positions i.e Falling Start, Rolling Start, Kneeling Start etc. 5-6 Reps x 10-15 M	(A) Back Squat or Hex Bar Deadlift 4-5 Sets x 3-5 Reps
(B) Power Clean or Hang Power Clean or Concumbic Squat Variation 4-5 Sets x 3 Reps	(B) Max Speed Work 4-6 Reps x 30-40 M	(B) RDL or Other Posterior Chain Exercise 4-5 Sets x 4-6 Reps
(C) Resisted Sprint Work with Partner or External Resistance Device 4-5 Reps x 10-15 M		(C) Lateral Lunge or Slide Board Lateral Lunge 3-4 Sets x 6-8 Reps Each Side
(D) Linear Plyometrics Hurdle Hop or Box Jump or Repeat CMI 4-5 Sets x 6-8 Reps		(D) Bicep / Anti-Rotate / Rotate Core Work



Thursday Session – Power / Agility / Uni-Lateral Strength		
A.M Pre-Training (1) Gym Based	A.M Pre-Training (2) Pitch Based	P.M (3) Gym Based
(A) Foam Roll / Stretch + Individual Correctives Exercise Plan	(A) General Agility Work 5-6 Reps x 10-15 M	(A) Split Leg Squat or Lunge Variation 4-5 Sets x 6 Reps Each Side
(B) Power Snatch or Hang Power Snatch or Loaded Squat Jump Variation 4-5 Sets x 3 Reps	(B) Position Specific Agility Work 5-6 Reps x 10-15 M	(B) Single Leg RDL or Other Hinge Variation 4-5 Sets x 6 Reps Each Side
(C) Resisted Sprint Work with Partner or External Resistance Device 4-5 Reps x 10-15 M		(C) Groin or Hip Work 3-4 Sets x 6-8 Reps Each Side
(D) Multi-Directional Plyometrics Hurdle Hop or Box Jump or Repeat CMI 4-5 Sets x 6-8 Reps		(D) Upper Body Extras
		(E) Brace / Anti-Rotate / Rotate Core Work

Inter Session Variations

- Use VBT protocols or prescribed bar speeds / power output instead of %1RM load to motivate players.
- Add Pre-Training Exercises together to form Complexes and Contrast Variables.
Eg. (A.1) Power Clean (A.2) Resisted Run (A.3) Hurdle Hops
- Utilize Accommodating Resistance Methodologies to develop power and strength while minimizing fatigue associated with the eccentric portion of a lift.
- Utilize Accommodating Resistance Methodologies to evoke pre-pitch training PAP !


Accommodating Resistance

Strength bands and chains can aid the development of speed, acceleration and absolute strength by altering kinematic / kinetic properties of compound lifts. They can contribute to increases in peak force / peak power and may illicit a post activation potentiation effect.

Research suggest that performing 3-5 Reps @ 80-90% 1RM comprising of 20% chain or band resistance can enhance or develop maximal strength and provoke a potentiation effect. Additionally performing 2-3 Reps @ 50-60% 1RM comprising of 20-35% band or chain resistance can have a positive effect on Maximal Power. Mina et al (2016), Ojeda et al (2016).

Suggested Loading Patterns for Bands & Chains

	Max Strength			Max Power			PAP		
	Load	Set/Reps	Rest	Load	Set/Reps	Rest	Load	Set/Reps	Rest
New	50-70% 1RM	3-5 Sets x 5-8 Reps	2-3 Min	50-70% 1RM	3-5 Sets x 3-5 Reps	1-2 Min	80-90% 1RM	3-5 Sets x 3-5 Reps	None
	20-30% 1RM	10-15 Sets x 10-15 Reps	30-60 Sec	80-90% 1RM	3-5 Sets x 3-5 Reps	1-2 Min	80-90% 1RM	4-6 Sets x 3-5 Reps	30-60 Sec
Old	50-70% 1RM	3-5 Sets x 5-8 Reps	2-3 Min	50-70% 1RM	3-5 Sets x 3-5 Reps	1-2 Min	80-90% 1RM	3-5 Sets x 3-5 Reps	None
	20-30% 1RM	10-15 Sets x 10-15 Reps	30-60 Sec	80-90% 1RM	3-5 Sets x 3-5 Reps	1-2 Min	80-90% 1RM	4-6 Sets x 3-5 Reps	30-60 Sec




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