

CHAPTER 15

Off-Season Strength and Conditioning for High School Football

By Richard Bell

There is a ton of information that exists regarding how to physically prepare football players for the grind of the game. Throughout my 16 years of coaching, I have always believed that it is not always about the X's and O's of a great program that is the sole contributor for one's success, but the coaches' ability to combine the science, their experience and intuition – that makes a program really go.

In the winter of 2011, I was finishing up a session with an athlete, when I was approached by a very concerned parent who wanted to know if I could work with her 17-year-old son Jonathan, who would be entering his senior year of high school Football that fall. Mrs. Harris calmly explained that despite numerous letters from major Universities, Jonathan's on-field performance in 2010 was well below his expectations.

I quickly scheduled a face-to-face meeting involving both parents and Jonathan, so we could put together an off-season football schedule that would not only have Jonathan crushing the competition on the field, but wowing the recruiters in the stands as well.

When I finally got the opportunity to meet Jonathan, I was quickly amazed at how tall he stood, 6'4" and with hands that would make a softball vanish if he held one. During our meeting I asked Jonathan to answer the following questions:

Questions:

1. What have you done in the past?
2. Why didn't work?
3. What are you willing to do differently this time?

Answers:

1. Lots of bodybuilding-type programs to add more size to my frame
2. Because even though I did add size to my frame, I became a much slower football player at my positions. (Linebacker and Left guard). I was dominated by opponents smaller and faster than myself, and my performance really suffered during the two-minute drills in close games.
3. This time I want to get the proper coaching and instruction that will allow me to be quicker and more explosive to the ball and opponents.

At the conclusion of our meeting we agreed that Jonathan would meet with me 3-4 times a week for the next 15 weeks – beginning with three days of physical testing. Jonathan had already set a goal to be in top physical shape for his visit to the University of Miami football camp coming up in June.

THE FOLLOWING TESTS WERE PERFORMED ON THREE SEPARATE DAYS

Day 1

Assessment Drills Performed: Lower Body

1. Stick overhead squat – To assess stiffness and range of motion in the hip, ankle and thoracic spine
2. Supine Faber – To assess stiffness of the muscles in the groin area
3. Supine Knee Flexion – To assess stiffness of the hip in flexion
4. Single leg squat – assess hip stability and gluteus maximus and medius strength

Assessment Drills Performed: Upper body

1. Seated thoracic Spine Rotation Range of Motion – To assess thoracic spine rotation left to right
2. Supine shoulder internal Rotation Range of Motion – To assess shoulder internal rotation range of motion
3. Supine shoulder external rotation – To assess shoulder external rotation range of motion
4. Standing scapula upward rotation – To assess scapular upward rotation, which is influenced by serratus anterior strength.

Day 2

1. Height: 6'4"
2. Weight: 205lb
3. Body Composition: 22.8%
4. Power Clean: (1rm) 185lb
5. Box squat (1rm) 250lb
6. Bench Press (1rm) 200lb

Day 3

1. Vertical Jump: 25'
2. Med Ball Overhead Toss: 20'
3. Standing Med Ball Chest Launch: 18'
4. T-test: 9.5 sec
5. 5-10-5: 5.8 sec
6. 300-yard shuttle: N/A

Note: Due to fatigue, Jonathan was not able to finish the 300-yard shuttle run.

PROGRAM DESIGN

Phase 1: Accumulation Program

Days per Week: 4

Length: 4 weeks

Introduction:

Football players love to train in the weight room, and this is great, but my ultimate goal through this journey is to make sure that Jonathan's newly developed size, strength and power will be functional. An accumulation phase is defined as a higher volume of workload aimed at basic abilities such as endurance, strength, and general patterns of movement technique (which depends on the sport – Issurin, 2008). Like all programs, each phase will build off the other, leading to what should be a bigger, stronger and faster football player.

The following program is designed for two upper body lifts per week and two lower body lifts per week.

OFF-SEASON STRENGTH AND CONDITIONING FOR HIGH SCHOOL FOOTBALL

MON	TUE	WED	THUR	FRI
Foam Rolling	Foam rolling	Off	Foam rolling	Foam rolling
Mobility work	Mobility work	Off	Mobility work	Mobility work
Lower body lifting	Upper body lifting	Off	Lower Body lifting	Upper body lifting
Conditioning work		Off	Conditioning work	

Monday

Foam Roll lower body

1. Quadriceps
2. Hamstrings
3. TFL
4. Calf's

Mobility Drills

1. Ankle Mobs 2x5
2. Squat to stand 2x5
3. High knee walk forward lunge 2x5
4. Kneeling rock backs 2x10

Exercise	Sets	Reps	Rest
A1 Low cable split squat	3-4	8-12	90
A2 Single leg RDL	3-4	8-10	90
B1 Db Step Up off-set grip	3-4	8-12	90
B2 Reverse Back Extension	3-4	8-10	90
C1 Db Reverse Lunge	3	8-10	75
C2 Low cable rope pull through	3	8-10	75

Conditioning Session:

D1. Sled backwards dragging	4	50 yards	100
D2. Sand Bag Carry	4	50 yards	100

Tuesday

Foam Roll upper body

1. Thoracic Extension 2x10
2. Lumbar Extension 2x10
3. Lats 2x10

Mobility Drills

1. Side lying thoracic extension 2x10
2. Side lying rotation extension 2x10
3. T-push up with extension 2x5
4. Scapula wall slides 2x10

Exercise	Sets	Reps	Rest
A1 Fat bar incline press (3' grip)	3-4	8-10	100
A2 Band assisted Chin Up (Heavy Band)	3-4	8-10	100
B1 Standing cable 1-arm press (Staggered foot stance)	3-4	10-12	90
B2 Seated face pulls	3-4	10-12	90
B3 Band pull apart – I put this in as a form of active recovery in between sets.			
C1 Bent over trap-3 lift	3	8-12	75
C2 Farmer walks	3	40 yards	75

Wednesday

Soft tissue work 30-45 minutes

After school

Thursday

Foam Roll lower body

1. Quadriceps 2x10
2. Hamstrings 2x10
3. TFL 2x10
4. Calfs 2x10

Mobility Drills

1. Ankle Mobs 2x10
2. Squat to stand with overhead extension 2x10
3. Elastic band Side step 2x10
4. Wall Hip flexor mobilization 2x10

Exercise	Sets	Reps	Rest
A1 Trap Bar Deadlift (Off 4'podium)	3-4	8-10	90
A2 Glute-ham-raise	3-4	8-10	90
B1 Barbell step up	3-4	8-10	90
B1 Swiss ball triple Threat (supine)	3-4	8-10	90

Conditioning session:

C1 Sled dragging	4	50 yards	100
C2 Kettlebell Overhead carry	4	50 yards	100

Friday

Foam Roll upper body

1. Thoracic Extension 2x10
2. Lumbar Extension 2x10
3. Lats 2x10

Mobility Drills

1. Side lying thoracic extension 2x10
2. Side lying rotation extension 2x10
3. T-push up with extension 2x5
4. Scapula wall slides 2x10

Exercise	Sets	Reps	Rest
A1 Overhead log press	3-4	8-10	100
A2 Db Farmer walk	3-4	40 yards	100
B1 1-arm standing Db Press (neutral grip)	3-4	8-10	90
B2 1-arm bent over Row	3-4	8-10	90
C1 60 degree Incline Db Superman	3	8-10	75
C2 Side lying Db External Rotation	3	8-10	75

Notes: At the conclusion of this Accumulation cycle, Jonathan reported having much better work capacity and had put on 3 ½ pounds of muscle. His body fat had dropped to 19.6% as well.

PHASE 2: INTENSIFICATION PROGRAM

Days per Week: 4

Length: 3 weeks

An intensification phase is focused on developing specific abilities – usually with a reduction in volume and an increase in intensity. An intensification phase would focus on those specific exercises that more closely resemble your sport. Goal for the next three weeks will be to move heavy loads in an explosive manner. This will teach the nervous system how to recruit the “high threshold motor units,” which are responsible for fast twitch muscle fiber recruitment.

Because the body adapts very quickly to a given rep range, frequent variation in repetition prescriptions is necessary to ensure optimal progression. The following is the repetition prescription we used during Jonathan’s phase 2 Intensification cycle.

Workouts: 1-2: 4-5 sets x 6-8 reps (focus is more on lower body)

Workouts: 3-4: 4 sets x 5-7 reps (focus is on upper and lower body)

Workouts: 5-6: 5 Sets x 4-6 reps (focus on upper body core lifts)

Note: Day 5 was an un-loading day and day 6 was used to re-test Jonathan’s weight room lifts to determine his new 1rm in the core lifts.

Monday

Foam rolling lower body: Mobility Drills:

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|---------------|-------------------------------------|
| 1. Quadriceps | 1. Ankle Mobs 2x5 |
| 2. Hamstrings | 2. Squat to stand 2x5 |
| 3. TFL | 3. High knee walk forward lunge 2x5 |
| 4. Calf's | 4. Kneeling rock backs 2x10 |

Exercise	Sets	Reps	Rest
A. Cambered bar box Squat	5	6-8	120
B1 Reverse Lunges off 4" block	4	6-8	100
B2 Single leg reverse Back extension	4	6-8 each leg	100
C1 Db Russian step up	2	8 each leg	90
C2 Swiss Ball hip Extension leg curl combo	2	8	90

Conditioning Session: Med ball complex

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|--|---------------|
| 1. Med ball chest pass against wall | 3x5 |
| 2. Med ball side tosses against wall | 3x5 each side |
| 3. Med ball slams into floor | 3x5 |
| 4. Med ball overhead toss against wall | 3x5 |

Rest Intervals:

Workouts: 1-2: 120 sec

Workouts: 3-4: 100 sec

Workouts: 5-6: 90 sec

Tuesday

Foam and lacrosse ball rolling upper body:

1. Pec rolling 2x10 (LB)
2. Lat role (FR)
3. Lumbar – thoracic extensions 2x10
4. Lumbar – thoracic rolling 2x10

Mobility Drills:

1. Elastic band pull apart 2x10
2. Elastic band pulls behind head 2x10
3. Prone hand walks outs 2x5

Exercise	Sets	Reps	Rest
A. Log push press	5	6-8	120
B1 Football bar incline Press	4	4-6	120
B2 T-bar rows	4	5-7	120
C1 Band push-ups Feet elevated	3	8	75
C2 Suit case farmer Walk (1-arm)	3	40 yards 2-3 trips per hand	75

Wednesday

Complete recovery

Thursday

Foam rolling lower body: Mobility Drills:

- | | |
|---------------|-------------------------------------|
| 1. Quadriceps | 1. Ankle Mobs 2x5 |
| 2. Hamstrings | 2. Squat to stand 2x5 |
| 3. TFL | 3. High knee walk forward lunge 2x5 |
| 4. Calfs | 4. Kneeling rock backs 2x10 |

Exercise	Sets	Reps	Rest
A. Rack deadlift bar Below knee off pins	5	5-7	120
B1 Db walking lunges	4	5-7 reps per leg	100
B2 Standing leg curl	4	5-7 reps per leg	100
C1 Prowler Push (180lb)	3	30 yards	100
C2 Sled backwards drag (250lb)	3	30 yards	100

Friday

**Foam and lacrosse ball
rolling upper body:**

1. Pec rolling 2x10 (LB)
2. Lat role (FR)
3. Lumbar – thoracic extensions 2x10
4. Lumbar – thoracic rolling 2x10

Mobility Drills:

1. Elastic band pull apart 2x10
2. Elastic band pulls behind head 2x10
3. Prone hand walks outs 2x5

Exercise	Sets	Reps	Rest
A. Medball explosive Chest pass against wall	5	5	5
B1. Db incline Alternating chest press	4	4-6	100
B2. Fat grip neutral grip Pull up (weighted)	4	4-6	100
C1. Kettlebell front Swings (2 hands)	3	6-8	75
C2. Prone 3 point row	3	6-8	75

PHASE 3: HIGH PERFORMANCE COMPLEX # 1**Days per Week:** 3**Length:** 6 weeks

High performance training can be a fun way to improve speed, power and strength endurance capabilities. In this phase we will begin utilizing Jonathan's new found strength by incorporating the Olympic lifts and Plyometrics that will transfer to 'on the field performance' improvement. This phase will involve training the whole body using circuits with minimal rest between exercises focusing on explosive-type movements.

Monday

Exercise	Sets	Reps	Rest
A1 Snatch Grip Deadlift	3-7	3-5	30
A2 Barbell overhead Snatch	3-7	3-5	30
A3 Broad jumps	3-7	8-10	30
A4 Barbell Jump squat @ 20% of body weight	3-7	8-10	30
A5 Sled Backwards Drag	3-7	2-3 trips @ 30 yards	90

Arm Specific Training: This would be performed after the main lifting session.

A1. Rope hammer curl 2x8-10

A2. 1-arm Barbell preacher curl 2x8-10

Rest 10 sec between exercises and 90 sec between stations

B1. Reverse cable curl 2x8-10

B2. Wide grip cable curl 2x8-10

B3. Close grip cable curl 2x8-10

Rest 10 sec between exercises and 90 sec between stations

Tuesday

Exercise	Sets	Reps	Rest
A1 Trap bar explosive Jumps	3-5	3-5	30
A2 Med ball overhead Toss (against wall)	3-5	3-5	30
A3 Box jumps	3-5	3-5	30
A4 Battle rope Whips	3-5	12-15	30
A5 Heavy Kettlebell Swings (2 hands)	3-5	12-15	90

Thursday

Exercise	Sets	Reps	Rest
A1 Power Clean	3-5	3-5	30
A2 Depth jumps For height	3-5	5	30
A3 Plyo push-ups	3-5	3-5	30
A4 Explosive Lateral Hops	3-5	8-10	30
A5 Prowler explosive Throws (in a crouch position behind the prowler, explosively push it away from you trying to create as much space as possible).	3-5	5	90

Agility Specific Training: This would be performed after the main lifting session.

1. 5-10-5 3x
2. 20 yard shuttle run 3x

FINAL TESTING RESULTS AFTER 15 WEEKS OF STRENGTH AND CONDITIONING

Day 1

1. Height: **6'4"**
2. Weight: **215lb**
3. Body Composition: **17.8%**
4. Power Clean: (1rm) **200lb**
5. Box squat (1rm) **285lb**
6. Bench Press (1rm) **225lb**

Day 2

1. Vertical Jump: **27"**
2. Med Ball Overhead Toss: **32'11"**
3. Standing Med Ball Chest Launch: **22'**
4. T-test: **8.23 sec**
5. 5-10-5: **4.6 sec**
6. 300 yard shuttle: **1:17 sec**

In conclusion, this chapter was written to give you (the coach) the best of practical experience and science. Jonathan was an average athlete who performed at a higher level his senior year because he worked harder at his physical preparation. That's what made him a better football player.

My goal in writing this chapter was to give you and your team the best training program possible – free of the fluff that does nothing but waste your time.



About Richard

Richard Bell, BS, CSCS, IYCA Certified High School Strength and Conditioning Coach is currently working as a High School Strength Coach in the Evergreen and Lakewood Colorado area. Richard is a highly sought after coach for athletes ages 13 and older from Junior High School to the College ranks. He also works with individuals — whether executives or stay-at-home moms — who want enhanced health and stamina, and to improve their physical appearance.

Bell's focus over the past 16 years has been to incorporate new techniques that ensure fast results, increased stamina and better performance — methods determined entirely by each athlete's personalized assessment.

Bell is a native of Boston, Massachusetts where he was a four-year starter on his high school basketball team and where he won two state championships. Rich attended the University of Maine at Farmington, where he also played Basketball and majored in Community Health Education with a concentration in Sports Conditioning. After graduating, Bell moved to the Evergreen, CO area with the vision of becoming one of the best in the strength and conditioning field.

From 2006-2009, Rich ran and operated Rich Barbell Fitness and Sports Conditioning, a performance enhancement facility located in Golden, Colorado. Rich is determined to improve the way athletes approach their strength and conditioning goals. He believes strongly in applying scientifically-proven techniques to enhance human performance on the playing field.

A large percentage of the last 10 years of Rich's life has been consumed by an overwhelming drive to better understand the true nature of improving human performance. In his early years as a Strength and Conditioning Coach, Rich worked as the Head Basketball Coach for Platte Canyon High in Bailey, Colorado. There he oversaw all his athletes' off-season weight training sessions, and this experience led him to pursue his passion for improved sports performance on a full-time basis.

Since those early days of coaching Basketball, Rich has trained over 300 athletes from various sports backgrounds and different levels.

(Rich would like to personally thank Wendy Schott of Wendy Schott Photography, for making time to work with him on his photo.)