The Development of Speed & Power in an Vertically Integrated/Concurrent Programming Model for Rugby

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Crusaders
My role as a strength and conditioning coach is to get the players bigger, stronger, faster so the head coach can teach them how to play
– Rusty Jones, Buffalo Bills

Whatever you do not train you lose
If the only tool you have is a hammer then everything becomes a nail
Everything works, but nothing works for ever!
– Louie Simmons, Westside Barbell
Definitions

**Conjugate Periodisation** is aimed at developing multiple qualities at once in a given training "block" meaning that a specific quality is focused on while other bio-motor abilities are maintained in a given training phase.

**Vertical Integration** - everything is trained in order to maintain it - but whatever quality needs improving (as determined by the training phase) is emphasised. So strength, speed, general fitness are all developed simultaneously in a training week.
Individual Training Needs

Neural - speed, power, Olympic lifting focus, plyometrics

Mechanical - size, strength, technique, power lifting/ bodybuilding focus

Metabolic - aerobic, anaerobic, run/ cross training focus, circuits, GPP
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<th>Emphasis</th>
<th>Exercises</th>
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<td>Starting Strength 0m - 8m -</td>
<td>Mostly Forwards Emphasis</td>
<td>Weights&lt;br&gt;Medicine Ball Throws (for max effort)&lt;br&gt;Single Jumps (Horizontal)</td>
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<td>Acceleration Power 8m - 18m -</td>
<td>Mostly Forwards Emphasis</td>
<td>Weights&lt;br&gt;Box Jumps (Up)&lt;br&gt;Medicine Ball Throws (for max effort)&lt;br&gt;Multi-Jumps</td>
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<tr>
<td>Speed 18m - 28m - Power Speed</td>
<td>Mostly Forwards Emphasis</td>
<td>Box Jumps (Up &amp; Down)&lt;br&gt;Medicine Ball Throws (with Bounds &amp; Hops and short Accelerations)</td>
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<td>28m - 68m - Speed/ Elastic Power</td>
<td>Occasional Backs Emphasis</td>
<td>Box Jumps Down&lt;br&gt;Hurdle Hops&lt;br&gt; Bounds&lt;br&gt;Medicine Ball Throws&lt;br&gt;Sprints &lt;8 Seconds &amp; Maximum Recovery&lt;br&gt;Maximum Volume &lt; 700m&lt;br&gt;Maximum Distance 60 m</td>
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Speed / Weights Combo

F1. Dynamic Movement Warm up
Micro Fastfoot Ladders and Quicken Micro and Mini hurdle sequences

F2. Medicine Ball throws and acceleration sprints over 10 – 15 metres

G1. Depth or Box Jumps in gym

F3. Assisted sprints utilizing short (mini slingshot overspeed trainers) and/or long (slingshot overspeed trainers)

G2. Power Snatch from blocks set at knee height, Block Cleans or Jump Squats (6 sets of 3 reps at 30 – 40%)
F4. Maximal velocity work over 30 – 60 metres

G3. Clean or Snatch Pulls from the floor or Band Box Squats (6 sets of 3 reps at 60 – 80%)

F5. Resisted speed efforts utilizing either pro power speed resistors, power speed chutes, power speed sleds, these are often performed with a contrast sprint after the loaded sprint

G4. Trap Bar Dead lifts or Front or Back Squats (6 sets of 3 reps at > 90% 1RM loading)
Aerobic:  
1 x Anaerobic Games  
1 x Hill Repeats  
1 x Cross Country  
1 x Repeated Speed  
1 x Speed

Anaerobic:  
1 x Anaerobic Games  
1 x Hill Repeats  
1 x Repeated Speed  
2 x Speed

Speed:  
1 x Anaerobic Games  
1 x Hill Repeats or Repeated Speed  
3 x Speed
Weight Training Options

**Size:**
- 1 x Lower Body Strength/Power (Monday)
- 1 x Full Body Power (Wednesday)
- 2 x Upper Body (Tuesday & Friday)

**Metabolic:**
- 1 x Beastly Circuit + Body Blitz (Friday)
- 1 x Upper Body Size (Thursday)
- 1 x Power Circuit (Wednesday)
- 1 x Lower Body Strength/Upper Body Size (Monday)

**Strength:**
- 2 x Full Body Strength (Monday & Friday)
- 1 x Full Body Power (Wednesday)

**Power:**
- 2 x Full Body Power (Monday & Friday)
- 1 x Full Body Strength (Wednesday)
Methods chart of possible training styles used in off season
- see handout sheets
Lower Body Strength

Select exercises from each of the following categories, use the same exercise for 3 weeks then change the exercise and repeat the 3 week progression

Week 1 - 4 x 6
Week 2 - 2 x 5, 3 x 3
Week 3 - 5,4,3,2,1

2 x Full Body exercise
1 x Squat or Single Leg
1 x Hamstring/Lower Back
Full Body Power

Choose one (1) exercise from each category:
Wk 1 - 3 sets x 5 reps @ 60%/Contrasts 3 sets x 10 reps
Wk 2 - 4 sets x 4 reps @ 70%/Contrasts 4 sets x 8 reps
Wk 3 - 5 sets x 3 reps @ 80%/Contrasts 5 sets x 6 reps

(1a) Power Snatch or Power Clean
(1b) Repeat Hurdle Jumps or Knees to feet Jumps or Box Jump ups or Band Jump outs

(2a) ¼ Explosive Squat or Band Box Squat or Jump Squat
(2b) Repeat Hurdle Jumps or Knees to feet Jumps or Box Jump ups or Band Jump Outs

(3a) Push Press or Band Bench or Split Jerk
(3b) Clap Push ups or Plyo Rebounds or MB Cross-Over Push ups
Full body Strength

Select exercises from each of the following categories, use the same exercise for 3 weeks then change the exercise and repeat the 3 week progression

3 sets each exercises with the following reps:
- Week 1 - 6,5,4
- Week 2 - 5,4,3
- Week 3 - 4,3,2

1 x Squat or Single Leg exercise
1 x Hamstring/Lower Back
2 x Upper Body Push super set with Upper Body Pull
Workout 1 (upper body size/ strength)

Horizontal Push super set Horizontal Pull (4 x 6 Marsh protocol)
Bench Press s/s Bent Over Row

Horizontal Push super set Horizontal Pull (Rule of 24)
Incline DB Bench Press s/s DB One Arm Row

Horizontal Push super set Horizontal Pull
(BW blitz – progressive max out)
Fat Man’s Chins s/s Hindu Push ups

Core/ Neck/ Grip/ Arms (as per white board weekly variety)
Workout 2 (upper body size/ strength)

Vertical Push super set Vertical Pull (4 x 6 Marsh protocol)
Military Press s/ s Weighted Chins

Vertical Push super set Vertical Pull (Rule of 24)
Seated DB Shoulder Press s/ s Hammer High Row

Vertical Push super set Vertical Pull
(BW blitz - progressive max out)
Rope Chins s/ s Hand Stand Push ups

Core/ Neck/ Grip/ Arms (as per white board weekly variety)
Core Training

After each workout out, select from the following options and do a core circuit, for 10 minutes total time:

Suit case Dead Lifts
Rollouts
Swiss Ball Leg Raises
Turkish Get Ups
Full Body Twist
Bicycle
Sprinter’s Sit Up
Boxer’s Sit Up
Rainbows
Swiss Ball Sit Up & Throw Med Ball
Russian Twist on Back Extension
Cable Wood Chops
Beastly Circuit + Body Weight Blitz

Dead Lift/Power Clean from Hang/Front Squat/Push Press/
High Pull from Hang/Bent Over Row / Romanian Dead Lift

6 reps on each exercise, do not put the bar down for the entire 42 reps
then do a hard 3 minutes on a bike, repeat for 6 times through, then:

Chins/Dips/Fast Step Ups (20)/Fat Man’s Chins/Hindu Push Ups/
BW Jump Squat (20)/Push Ups/Lunges (20 each leg)

All upper body movements go to failure then move to next exercise in sequence,
keep working through until you have finished 30 minutes
Beastly Circuit Number 2

Power Snatch from floor/Overhead Squat/Push Jerk Behind Head
/Combo Good Morning/Jump Squat/Power Clean from Hang
/Rope Jumping 3 minutes

6 reps each exercise, 6 times through each circuit
BW Blitz Number 2

Grasshopper x 20
Prisoner Jump Squats x 20
Clap Push Ups x 10
Side to Side Jumps x 20
Staggered Push ups 10 each arm
Mountain Climber x 20
No Momentum Sit Ups x 20
Hindu Push Ups x 10

3 times through
Cosgrove Complexes

**Number 1:**
Deadlift/Romanian deadlift/Bent over row/Power clean/Front squat/
Push press/Back squat/Good morning

**Number 2:**
Snatch grip deadlift/Snatch pull/Upright row/Power snatch/Reverse lunge/
Push jerk/Jump squat
Full Body Power Circuit

DB Snatch/Jump/Quarter Explosive Squat/Jump/Split Jerk/UBP/Power Tackler
UBP/Bench Press with bands/UBP + 500 metres on rowing machine
5 reps on each exercise then 500 metres row on each circuit, repeat for 5 times.

Jump Options:

Knees to feet jump, Jump onto Box, Depth Jump (advanced),
Repeat Hurdle Jumps, Band Jump outs, Tuck Jumps, Side to Side Box jumps

Upper Body Plyos (UBP):

Clap Chest Push Ups, Clap Push Ups, Jump Ups onto a box,
Med Ball Drop & Push away,
Cross Over Push Ups, Med Ball Throw against a Wall, Wheelbarrow Arm Hops
Full Body Power Circuit Number 2

Hang Clean + Push Press 3 reps
Jump Option 6 reps
Band Squat 3 reps
Jump Option 6 reps
Band Bench Press 3 reps
Upper Body Plyos 6 reps
Cable Pull Throughs
Low to High Cable Pulls
300 metre Row

6 times through full circuit
Speed

Full Movement Warm up 10 minutes
Ladders - forward series
Hurdles - 2 x march, 2 x skip, 2 x run + 10m accelerate

Plyos
G - MB throw + sprint
U - Double leg jumps 5 x 5 + 10m sprint
F - Repeat hurdle jumps 5 x 5 + 10m sprint

Alactate Power
G - 2 x 8 x 5m build + 10m fly
U - 2 x 6 x 10m build + 20m fly
F - 2 x 4 x 20m build + 30m fly
Speed

Full Movement Warm up 10 minutes
Ladders - lateral series
Hurdles - lateral series
Harnesses - lateral series + release

Plyos
G - double leg jumps 5 x 5 + sprint
U - low hurdle jumps 5 x 5 + sprint
F - Power Skip 5 x 40m, 4 x 50m Bound

Max. Velocity
G - 6 x 30m
U - 6 x 40m
F - 6 x 50m
Repeated Speed

Session 1:
20 x 40secs on 20secs rest distance based on 110% of VO2 max from 2,400m time trial range 150m to 220m

Session 2:
5 minute continuous run then 5 x 10 x 50m every 30 seconds with a 2.5 minute walk recovery between sets, then 5 minute continuous run

Session 3:
30 x 100 m every 60 seconds

Session 4:
20 x 78m every 45 seconds, 10 x 50m every 30 seconds, 20 x 22m every 15 seconds (2 minute walk between sets)
Repeated Speed cont.

Session 5:

5 minute continuous run then;

10 x ½ Gasser every 60 seconds – start lying face down on the sideline get up and sprint to far side of the field get down to ground face down then get up and sprint back to start.

3 x set of 6 Malcolm Drill (1:1) - start lying face down on half way line get up back pedal to 10m line go down on chest get up and run through to opposite 10m line go down on chest get up and back pedal to half way line and go down, that is one rep.

6 x Coat Hangers – competitive - 2 groups either side of half way line on sideline, sprint down around goal posts then the length of the field around the goal post and finish at the sideline half way line junction.
Hill Repeats

Session 1:
1 x 5 min, 5 x 3 min, 5 x 1min (1:0.5 walk back recovery)

Session 2:
15 x 60secs/30secs (1:0.5 walk back recovery)

Session 3:
10 x 60secs/45secs/30secs/15secs (1:1 walk back recovery)

Session 4:
15 x 30secs/15secs/45secs (1:1 walk back recovery)
Anaerobic/ Conditioning Games

Decision making

Fun

Ball in hand

Spatial awareness/Visual Acuity

Going from offence to defense rapidly

Agility, acceleration
Other sport games

i) the development of a broad focus of physical skills from a variety of sports to supplement the specific skills they get from the main sport, a very much former Soviet approach where athletes are exposed to as many sports as possible the developmental phases of their training;

ii) Exposure to a variety of activities will introduce players to possibilities for post career that they may wish to take up that otherwise they may have never had an opportunity or interest in.
Weekly off-season plan - refer handout