Strength Training for Distance Runners

Presentation Breakdown:

- About YHS Cross Country
  - Team background
  - Philosophy, history and workout plans
- Routines
  - Importance of routines
  - Lifting & Non-Lifting Days
- Strength Training
  - Warmups, Muscle Activation, Hip Mobility, Core, Main Lifts & Prehab
- What we've learned
  - How we came to apply strength training for distance runners at YHS
- Secrets to success

YHS CC Coaching Staff

<table>
<thead>
<tr>
<th>Lauren Bales</th>
<th>Chris Muth</th>
<th>Ben Draper</th>
<th>Ryan Chatman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asst. CC Coach</td>
<td>Head CC Coach</td>
<td>Asst. CC Coach</td>
<td>YHS Strength Coach</td>
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<tr>
<td>2nd year</td>
<td>9th year</td>
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<td>3rd year</td>
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[Image of YHS CC Coaching Staff]
Team Background

- Coed Program - Everyone is the same
- Started with 13 total athletes in 2005 (3 girls, 10 boys)
- Since 2005:
  - 7 Conference titles
  - 12 Regional titles
  - 6 Sectional titles
  - 13 trips to State (7 straight for boys, 6 for girls)
  - 1 State 3rd Place
  - 2 State Runners-up
  - 4 State Titles

Coaching Mindset/Philosophy

Maximizing the potential of student athletes

Coaching Mindset/Philosophy

Find kids who want to run and be a part of the team

Give those kids opportunities:
- Running
- Weight Room
- Recovery
- Community Service
- Education
Coaching Mindset/Philosophy

Every season we try to one-up the previous season (coed)

- 2005: no summer running
- 2006: two days/week
- 2007: 4 days/week
- 2008: 350 miles
- 2009: 450 miles
- 2010: Summer, lifting twice/week
- 2011: Summer, lifting, eating habits
- 2012: Summer, lifting w/Chatman, eating habits, long run (12 miles)
- 2013: Summer, lifting, eating, long run, swimming

SUMMER:
June 1 - First Day of Season (10 weeks)
- Base Miles @ 70% Pace
  • Top Boys: 6:30-7:10/mile  Weekly Miles: 40-60
  • Top Girls: 6:55-7:40/mile  Start: 6:15am

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<th>MON</th>
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<tbody>
<tr>
<td>Base Running</td>
<td>Captains Practice: Base Run &amp; Smoothies</td>
<td>Base Run</td>
<td>Captains Practice: LT/Fartlek &amp; Smoothies</td>
<td>Base Run</td>
<td>Long Run</td>
<td>Off</td>
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<tr>
<td>7:00-8:00 base Run</td>
<td>Lifting 8-9a</td>
<td>Lifting 8-9a</td>
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Early Season:
Start of season to First to the Finish Invite (4.5 weeks)
Weekly Miles: 45-55
No meets until FTTF

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</table>
| Recovery Run | HARD DAY 1 600m Repeats | Recovery Miles | HARD DAY 82-90% Tempo | Recovery Miles | Long Run* 8-12 miles @ Medium Effort | *Every other week
| Lifting | Ice Baths | Lifting | | Recovery Miles | | |

**Midseason:**  
**FttF - Regionals (6.5 weeks)**  
Weekly Miles: 45-55  
Heart of meet schedule

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<tbody>
<tr>
<td>Recovery Run</td>
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<tr>
<td>HARD DAY Short Rest Repeats (1600, 1200, 800) Lifting</td>
<td>Recovery Miles Ice Baths</td>
<td>MED./DAY 76-82% Tempo/LT/ Crazy 800’s Hills Lifting</td>
<td>Recovery Miles</td>
<td>MEET</td>
<td>Long Run* 12 miles @ Medium Effort</td>
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<tr>
<td>*Every other week</td>
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**Late Season:**  
**Sectionals & State (2 weeks)**  
Weekly Miles: 28-38  
No Lifting; one medium day, one hard day.

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</thead>
<tbody>
<tr>
<td>Harder finishing workout (short but fast)</td>
<td>Recovery Miles</td>
<td>Tempo 75-85% w/min bursts</td>
<td>Recovery Miles Ice Baths</td>
<td>Recovery Miles</td>
<td>MEET</td>
<td>OFF</td>
</tr>
</tbody>
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**Off Season:**  
10 Days off  
10 days cross training (swimming, biking, elliptical)
Time Management

• Every moment is accounted for and has a purpose at our practice
• Pre- and post-practice responsibilities rely on individuals and captain leadership
• Outside of practice time, we want to emphasize the building of relationships, virtues, values and culture of the team

OUR DAILY ROUTINE: 3-5 p.m.
Non-lifting days
Pre-Workout

• Soft tissue work: foam roll & lacrosse ball

Pre-Run
Trigger Point

Great App:
Muscle Trigger Points
by Real Bodywork

• Foam Roller
• Lacrosse Ball
• PVC Pipe
• The Stick
Trigger Point: PSOAS

Trigger Point: PSOAS

Trigger Point: Piriformis
**Trigger Point:**

**Hip Flexor**

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**Pre-Run Movement Prep**

*Hydrant Series*

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**Hydrant Series:**

**Abduction**

- Shoulders over hands
- Hips over knees
- Lower back flat
- Chin tucked in
- Neutral Spine

**Coaching Cues:**

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Hydrant Series:
Clockwise Circles

Coaching Cues:
- Shoulders over hands
- Hips over knees
- Lower back flat
- Chin tucked in
- Neutral Spine

Hydrant Series:
Counter-Clockwise

Coaching Cues:
- Shoulders over hands
- Hips over knees
- Lower back flat
- Chin tucked in
- Neutral Spine

Hydrant Series:
Scorpion

Coaching Cues:
- Shoulders over hands
- Hips over knees
- Lower back flat
- Chin tucked in
- Neutral Spine
Hydrant Series:  
Lateral Reach

Coaching Cues:
- Shoulders over hands
- Hips over knees
- Lower back flat
- Chin tucked in
- Neutral Spine

Pre-Run Movement Prep
Hip Activation Series

Hip Activation Series:  
Hip Flexion

Coaching Cues:
- Off leg bent
- Lower back tight to ground
- Abs engaged
**Hip Activation Series: Abduction**

Coaching Cues:
- Body in straight line
- Lift ankle to ceiling

**Hip Activation Series: Adduction**

Coaching Cues:
- Body in straight line
- Lift ankle to ceiling

**Hip Activation Series: Back Flexion**

Coaching Cues:
- Eyes down
- Chin tucked in
- Lift opp. arm/leg
- Don't alternate
OUR DAILY ROUTINE: 3-5 p.m.
Non-lifting days
Pre-Workout

- Warm up: 800m on track
- Coaches instruction: 5 minutes
  - Workout instructions
  - Where we are going
  - Paces/Breaks
  - Expectations & reasoning
  - Important workouts and dates coming up

OUR DAILY ROUTINE: 3-5 p.m.
Non-lifting days
Workout

- Main Workouts*
  - Recovery Miles
  - Lactic Threshold
  - Tempo
  - Long Runs
  - Hill Workouts
  - Fartlek
  - Repeats (1600, 1200, 800, 400)
  - Crazy 800’s

*All workouts vary in distance, pace and breaks depending on what time of the season it is and athlete ability.

OUR DAILY ROUTINE: 3-5 p.m.
Non-lifting days
Post-Workout

- Striders (~100m) or 250m’s
  - Done on track or football field
  - Activate fast-twitch muscle fibers
  - Both have same concept:
    - Build to top speed
    - Hold top speed
    - Decelerate efficiently
- Core work: 10 mins
- Recovery
  - Foam Roller, The Stick, lacrosse ball, static stretch
OUR DAILY ROUTINE:

3-5:30 p.m.

Lifting Days

- Same routine except:
  - after Main Workout, report to weight room by 4:30 p.m.
  - Usually 10 mins to report
  - Lift 4:30-5:30 p.m.

Strength & Distance

- A common theme HS distance runners is they are scared of the weight room.
- Once they are educated and put into a routine-based schedule, they flourish and even enjoy that part of the workout
- This has been a struggle, BUT as they get more experience & confidence, they have this as extra strength and motivation in the final stages of a race.

Does strength training make distance runners too bulky?
Strength & Distance

- Routines in weight room mirror our routines outside
- Development of strength base is extremely important in injury prevention
- Strength training is directly correlated with increased speed & power output

Pre-Lift Nutrition

- On-the-go
  - 10-15 between running workout and weight room
- Carbohydrate + Protein

Realistic Teenage Options:
- Fruits
- Almonds
- Protein Shake
- Protein Bar (Zone, Aldi, Clif, Balance)
- Greek Yogurt
- Granola
- Peanut Butter

In-Season Microcycle:
2-3 days per week (including Plyometrics)

Weekly Running Miles: 40-50
Focus: Day 1
Breakdown of Day 1 Routine

Pre-Lift Warmup
Hip Mobility Circuit:

**Inchworm**

- Short steps
- Lengthen hamstring
- Keep knees fully extended

Coaching Cues:

Hip Mobility Circuit:

**Split Stretch**

- Rock hips back/forth
- Lengthening hip flexor & quad

Coaching Cues:

Hip Mobility Circuit:

**TFL/Hip Rotator**

- Internally rotate both hips
- Rock hips back/forth

Coaching Cues:
Hip Mobility Circuit:
Spiderman

Coaching Cues:
• Start in pillar position
• Place foot outside hand
• Circles with forward knee

Hip Mobility Circuit:
Pigeon

Coaching Cues:
• Rock hips back/forth, side/side

Hip Mobility Circuit:
Split Adductor Rocks

Coaching Cues:
• Rock hips forward
• Squeeze glutes
Weight room warm up:

**Plank March**

- Shoulders over hands
- Very controlled: 2 sec. up/down
- Opp. arm, opp. leg

**Coaching Cues:**

Weight room warm up:

**Reverse Crunches**

- Keep heels to butt
- Lower back tight to ground
- Roll one vertebrae at a time

**Coaching Cues:**

Weight room warm up:

**Body Squats**

- Shoulders back, chest up
- Tight core
- Sit butt back
- Knees over ankles
- Hips down to knee height

**Coaching Cues:**
Weight room warm up:

**Double Lounges**

- Hands on hips
- Chest up, back straight
- Tight core
- Walk a "tight rope"

**Coaching Cues:**

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**Explosive Movement**

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**Medicine Balls:**

**Kneeling Slam**

- Pull down w/core
- Try to break the ball
- Keep hips forward
Medicine Balls:

Alternating Side Slam

Coaching Cues:
- Pull down w/core
- Try to break the ball
- Keep hips forward

Medicine Balls:

Split Squat Chop

Coaching Cues:
- Balance in split squat
- Belly button straight forward
- Don't rotate core

Main Lift/Movement

<table>
<thead>
<tr>
<th>Main Movement</th>
<th>RFESS</th>
<th>3x6EA</th>
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<tbody>
<tr>
<td>RFE JUMPS</td>
<td>3x3EA</td>
<td></td>
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</tbody>
</table>
Main Lift: Rear Foot Elevated Split Squats

Main Lift: Rear Foot Elevated Jumps

Super Set No. 1

| SUPER SET 1 | A.1 Romanian Dead Lift | 3x8 |
| A.2 Chest Supported Row | 3x12 |
Super Set No. 1:
Romanian Dead Lift

Super Set No. 1:
Chest Supported Row

Super Set No. 2

<table>
<thead>
<tr>
<th>Super Set 2</th>
<th>6.1 Slide Lunges</th>
<th>3x6 ea</th>
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<tbody>
<tr>
<td></td>
<td>6.2 Pull Ups</td>
<td>3x8</td>
</tr>
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</table>
Super Set No. 2:
Slide Lunges

Super Set No. 2:
Pull Ups

Single Leg
Swiss Ball Curl
Conditioning
Ropes

Core/Prehab

<table>
<thead>
<tr>
<th>Core/Prehab</th>
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<tbody>
<tr>
<td>Roll Out to Pike</td>
<td>2x10ea</td>
</tr>
<tr>
<td>Back Extension</td>
<td>2x10</td>
</tr>
<tr>
<td>Dard</td>
<td>2x25</td>
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Core/Prehab:
Roll Out to Pike
Core/Prehab: Back Extension

Core/Prehab: DARD

Cool Down
Static Stretch
Foam Roll
Things we’ve learned

- Modify workouts to keep injured athletes progressing
- Lift on hard days instead of recovery
- LISTEN to them: There is a fine line between burning the athletes out and keeping them hungry
- Keep practice on strict routine & focused

Useful equipment

- GPS Watches
- iPad
- Lacrosse Balls
- Foam Rollers
- Therabands
- Power Bands
- The Stick
- Stretching Ropes
- Big ice baths

Secrets to success

Activities outside training

- Canoe Trip
- Laser Tag
- Scavenger Hunt
- Weekly Spaghetti Dinners
- Ultimate Frisbee
- Prison Ball
Secrets to success
Volunteering

- Half Madness Half Marathon
- Chicago Marathon
- Community outreach
  - Food Pantry
  - Raking leaves
  - P.A.D.S.
  - Operation Santa

Secrets to success
Building Relationships With Athletes

- Working alongside the athletes as a peer
- Showing up ready to go everyday with enthusiasm
- Be the calming influence to their drama-filled teenage life

Questions?
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