Training the 800m runner
Coach Barry Haworth

Context:
Assumption High School is an all-girls Catholic school in the suburbs of Louisville
Typical students are upper-middle class and above
Most of our athletes have access to crosstraining equipment (elliptical, stationary bike)
Lots of variation with training/history and racing background

We use the following progression with the majority of our athletes
  Freshmen: 800, 1600 if able
  Sophomores: 800, 1600, targeted 3200 if able
  Juniors: 800, 1600, targeted 3200
  Seniors: 800, 1600, targeted 3200

All of our Varsity athletes run at least a few 400s/4 x 400s, and 200s

We impose volume limits on training – typically based on grade level

How the 800 fits within the goals of our program:
(1) We use the 800 as a teaching tool, a condensed version of every race
   First 1/4: get out
   Second 1/4: settle in
   Third 1/4: big decisions (don’t fall asleep)
   Last 1/4: close

(2) We seek to develop racing range with as many of our Varsity athletes as possible, and seek not to peg athletes into longer races
   • Typical race progression over time is shorter to longer
   • Easier to add strength/endurance to speed than speed to strength/endurance

Types of runners we get in the 800:
   • Long Sprinters who step up (400/800)
   • ✓ Distance runners who step down (800/1600/3200)

Other points of emphasis:
   • Recognize that the typical race involves positive splits
   • Understand how to compete with people, not focusing on time/splits
   • Ability to respond/adapt quickly is critical in the 800
Training format

A standard periodization approach is as follows:
General Preparation phase – introduction of aerobic training
Specific Preparation phase – introduction of anaerobic work
Pre-Competition phase – continued application of all elements of training
Competition phase – transition to higher quality workouts with longer rest

Some terminology:
**Macrocycle**: season-long training plan
e.g. Cross Country season training plan

**Mesocycle**: training block with a specific developmental goal
e.g. General Prep

**Microcycle**: period of training that contains the elements you use to achieve a developmental goal (e.g. if the developmental goal is developing anaerobic ability, the microcycle may include anaerobic workouts at various paces, recovery runs, sprint work). These elements are then effectively repeated in a way that helps us achieve the developmental goal of a particular phase.

### Aerobic training

<table>
<thead>
<tr>
<th>Training:</th>
<th>Pace</th>
<th>Workout Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovery run</td>
<td>60-65% of VO2 max pace</td>
<td>30-50 min</td>
</tr>
<tr>
<td>Long runs</td>
<td>70% of VO2 max pace</td>
<td>50 min - 2 hrs</td>
</tr>
<tr>
<td>Tempo runs</td>
<td>80-88% of VO2 max pace</td>
<td>20-30 min</td>
</tr>
<tr>
<td>VO2 max runs</td>
<td>97-101% of VO2 max pace</td>
<td>600-3200m</td>
</tr>
</tbody>
</table>

### Speed training

<table>
<thead>
<tr>
<th>Training:</th>
<th>Pace</th>
<th>Workout Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Speed</td>
<td>~114% of 400m race pace</td>
<td>30-70m (6-10 sec)</td>
</tr>
<tr>
<td>Speed Endurance</td>
<td>~105% of 400m race pace</td>
<td>60-150m (10-25 sec)</td>
</tr>
<tr>
<td>Special Endurance 1</td>
<td>95-100% of 400m race pace</td>
<td>150-300m (25-50 sec)</td>
</tr>
<tr>
<td>Special Endurance 2</td>
<td>95-100% of 800m race pace</td>
<td>300-600m (45 sec - 2 min)</td>
</tr>
</tbody>
</table>

### Energy system contributions by race distance

<table>
<thead>
<tr>
<th>Race distance</th>
<th>% VO2 max</th>
<th>% Aerobic</th>
<th>% Anaerobic</th>
</tr>
</thead>
<tbody>
<tr>
<td>400m</td>
<td>130-140%</td>
<td>40-45</td>
<td>55-60</td>
</tr>
<tr>
<td>800m</td>
<td>115-130%</td>
<td>60-70</td>
<td>30-40</td>
</tr>
<tr>
<td>1500m</td>
<td>105-115%</td>
<td>80-85</td>
<td>15-20</td>
</tr>
<tr>
<td>3000m</td>
<td>~100%</td>
<td>85-90</td>
<td>10-15</td>
</tr>
<tr>
<td>5000m</td>
<td>~97%</td>
<td>90-95</td>
<td>5-19</td>
</tr>
</tbody>
</table>
General Prep phase
6-7 week training period, consists of 6-7 x 7 day microcycles
Primary emphasis: aerobic development
Secondary emphasis: prepare for transition to anaerobic work
*Training modalities:* hills, tempo runs, VO2 max pace workouts, max speed

Specific Prep phase
6-7 week training period, consists of 4 x 12 day microcycles
Primary emphasis: anaerobic development
Secondary emphasis: introduction of racing and developing long sprinting ability
*Training modalities:*
- Continue with: hills, VO2 max pace workouts, max speed
  - De-emphasize tempo-paced running
- New stuff: Special Endurance 2, Special Endurance 1, Speed Endurance
  - Interval training w/ incomplete rest
  - SE-1 & Speed Endurance: run as both interval training and fast reps
- Races: indoor meets

Pre-Competition phase
5 week training period, consists of 3 x 12 day microcycles
Primary emphasis: balancing the various facets of training
Secondary emphasis: feeling confident at fast reps, developing a competitive race mentality
*Training modalities:*
- Continue with: VO2 max pace workouts, max speed, SE-1, SE-2, Speed Endurance
  - Eliminate hills, low emphasis on tempo-paced running
  - Interval training w/ incomplete rest
  - SE-1 & Speed Endurance: run as both interval training and fast reps
- Races: increasingly important outdoor meets (e.g. Eastern Relays, Sundown)

Competition phase
3 week training period, consists of 2 x 12 day microcycles
Primary emphasis: maintaining quality with more complete recovery
Secondary emphasis: preparation for big races
*Training modalities:*
- Continue with: VO2 max pace workouts, max speed, SE-1, SE-2, Speed Endurance
  - Eliminate tempo-paced running
  - Interval training emphasis shifts to faster pace w/ more complete rest
- Races: most important outdoor meets (e.g. Regional, State)
**Training concerns**

Overall training plans are determined by where your 800m athletes are coming from, and in understanding their various strengths and weaknesses. Training age may also determine volume of the workout.

**Long sprinters**

Training expectations:
- lower distance expectation
- split time with the sprinters and distance runners

Race distances: 200, 400, 800

Concerns:
- problems with speed reserve on the high end (vVO2 max)
- long sprinters will struggle more with SE-2, VO2 max
  **consider shorter reps w/ similar volume (see below)**

**Example 1:** 8 x 400m workout at 95% of 800m race pace (200m jog rest)

**Adapted versions:**
- 2 x 4 x 400m workout @ same pace, 200m jog between reps, 400m jog between sets
- 16 x 200m workout @ same pace, 100m jog between reps
- 2 x 8 x 200m workout @ same pace, 100m jog between reps, 400m jog between sets

**Example 2:** 6 x 800m workout at VO2 max pace (3 min rest)

**Adapted versions:**
- 2 x 3 x 800m workout @ same pace, 3 min rest between reps, 6 min rest between sets
- 12 x 400m workout @ same pace, 90 sec rest between reps

**Middle distance runners**

Training expectations:
- higher distance expectation
  General Prep w/ distance runners
  start separating into their own group in Specific Prep

Race distances: 800, 1600 (occasional 4 x 400, possible 3200)

Concerns:
- problems with speed reserve on the low end (slow max speed)
  understanding the importance of fast reps
  **timing all fast reps and reporting results**
### Speed Training

Some workout examples from our practices

<table>
<thead>
<tr>
<th>Speed Training</th>
<th>Examples</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>*<em>Speed</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fast 40s</td>
<td>2 x 40m @ 100%</td>
<td>slow walk back to start</td>
</tr>
<tr>
<td>60m sprints</td>
<td>2 x 60m @ 95-100%</td>
<td>slow walk back to start</td>
</tr>
<tr>
<td><strong>Speed Endurance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90m sprints</td>
<td>1 x 90m @ 95-100%</td>
<td>8-10 minutes</td>
</tr>
<tr>
<td>Fast 150s</td>
<td>2 x 150m @ 100%</td>
<td>10-12 minutes</td>
</tr>
<tr>
<td>150m reps</td>
<td>6 x 150m @ 95%</td>
<td>3-4 minutes</td>
</tr>
<tr>
<td><strong>Special Endurance I</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fast 200s</td>
<td>2 x 200m @ 100%</td>
<td>12-15 minutes</td>
</tr>
<tr>
<td>300m reps</td>
<td>5-6 x 300m @ 90-95%</td>
<td>3-4 minutes</td>
</tr>
<tr>
<td>Fast 300s</td>
<td>1-3 x 300m @ 100%</td>
<td>12-15 minutes</td>
</tr>
<tr>
<td>Split 400s (200/200)</td>
<td>1-2 split 400s @ 100%</td>
<td>4 minutes/10 minutes</td>
</tr>
<tr>
<td><strong>Special Endurance II</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pairs of 300s</td>
<td>2-3 x 2 x 300 @ goal 800 pace</td>
<td>1 minute/10-15 minutes</td>
</tr>
<tr>
<td>400m reps</td>
<td>8 x 400 @ 95% of 800m pace</td>
<td>2-3 minutes</td>
</tr>
</tbody>
</table>

* not a stand-alone workout
**Race specific training**

Training designed to prepare athletes for the specific demands of an important race

**Example 1:** 3-4 x 2 x 300
This workout is run as pairs of 300s, designed to replicate the demands of a typical 800m race. The basic race format is 1 min rest between reps, with fuller recovery between sets (6-10 min)

Variations on this workout:
- 300 #1: faster than race pace
- 300 #2: hang on for dear life
- 300 #1: average race pace
- 300 #2: below race pace

**Example 2:** 2-3 x 300-300-200
This workout is run as race-pace 300s, followed by a finishing 200 at below race pace
The basic race format is 90 sec rest between reps, with fuller recovery between sets (6-10 min)

**Example 3:** 200m buildups
This workout is broken down into segments: first 50m, second 50m, final 100m
Group runners as slower runners in front of faster runners
Runners run increasingly faster over each segment and use the segments to replicate positioning in the final 200m of a race