Framework for 400m/ 400H Training Progressions

Cinco de Noviembre 2020
Organizing principle 1:

All tempo runs should look like the performance, with excellent posture. (Rehab and regeneration sessions excluded)

Minimal tempo for all runs = 400m PR + 4”
For 60.0 athlete = 64.0, 48.0, 32.0, 24.0, 16.0
Balanced trng week (meets count):

- 2x Acceleration Development
- 2x Speed Development
- 2x Intensive Tempo / Special Endurance
- Rest
- Competition (racing is very specific)
GENERAL PREP

A -- MONDAY
- ACCELERATION DEVELOPMENT
- LACTIC SHORT SPEED ENDURANCE [INTENSITY 80-90% Vmax] ex: 6-8 X 50-60M GRASS, 1-3' rest
- MULTI JUMPS
- STRENGTH TRAINING Power, intensive

B -- TUESDAY
- MAXIMAL SPEED DEVELOPMENT
- INTENSIVE TEMPO RUNS 1 (1200M MAXIMUM, INTENSITY 75-80% Vmax+ / 120-250M) GRASS ex: 3x (2x150) / 2'4'
- MULTI THROWS

C -- WEDNESDAY - VOLUNTARY
- ACTIVE RECOVERY – GENERAL STRENGTH, GRASS CIRCUITS, MULTI & T – LITTLE RUNNING
- POOL TRAINING AND OR STRENGTH TRAINING

A -- THURSDAY
- ACCELERATION DEVELOPMENT
- LACTIC SHORT SPEED ENDURANCE [INTENSITY 80-90% Vmax] ex: same as Mon or grass circuits w spr
- MULTI JUMPS
- STRENGTH TRAINING Power, intensive

B -- FRIDAY
- MAXIMAL SPEED DEVELOPMENT
- INTENSIVE 3 TEMPO RUNS 2 (1200M MAXIMUM, INTENSITY 75-80% Vmax+ / 120-300M) GRASS ex: 2x200, 3x150 / 5'
- MULTI THROWS

C -- SATURDAY
- GENERAL STRENGTH - MULTI THROWS / MULTI JUMPS / MOBILITY
- STRENGTH TRAIN – Circuits style possible

D -- SUNDAY – COMPLETE REST
COMPETITION PHASE

A -- MONDAY
- ACCELERATION DEVELOPMENT
- RELAY EXCHANGES (4x 100 OR 4X 400)
- MULTI JUMPS
- STRENGTH TRAINING Power, intensive

B -- TUESDAY
- MAXIMAL SPEED DEVELOPMENT
- INTENSIVE TEMPO OR Sp End 1 (1000M MAXIMUM, INTENSITY 80%-85 Vmax+ / ex: 320, 250, 150/ 10'-12', 6'-8' OR 5x 200/ 5' res [t: 2nd 200 gp]
- MULTI THROWS

A -- WEDNESDAY
- ACCELERATION DEVELOPMENT OR RACE MODELLING ex: 1-3 reps SPECIFICALLY PATTERNED EFFORTS
- RELAY EXCHANGES (4x 100 OR 4X 400) as needed
- STRENGTH TRAINING Power, intensive

C -- THURSDAY
- REGENERATION (MOBILITY, LOW NEURAL DEMAND, POOL, ETC)
- THERAPY

A -- FRIDAY
- DAY BEFORE COMPETITION W.U. = ACCEL DEVELOPMENT/ex: 2-3x 30, 2-3x 3h, 2x 50m, 2x st-H1-3
- ANYTHING WE NEED TO DO FOR PREPARATION (exchanges, etc)

D -- SATURDAY - COMPETE

E -- SUNDAY – COMPLETE REST
◊ TEXAS A&M UNIVERSITY Track & Field  wk 32.19  /WEEK:32 (Mar 31-Apr 6)//  Competition Phase/ train with Intent. Learn, adjust and improve posture.

◊ MONDAY, Apr 1/ 2:30 GROUP – [Basic W.U. barefoot (30m) + Movement Prep]
  ◊ 1x (20, 30, 40) fr relay stance, in zones
  ◊ 1x (40, 50) blocks straight
  ◊ 2-3x 4x100: Exchange 1& 3 - incoming from blocks
  ◊ wd grass : 8x 10-20m marching runs / 8 x 6h walkovers (8 lateral) /Strength Training / Abs

◊ TUESDAY, Apr 2 / 2:30 GROUP – Meet at track. [White Warm up (30m)]
  ◊ 6 x Vmax [M: 6’0” >>> / W: 5’7” >>>]
  ◊ G1: 180, 150, 120 / 6-7’ rest [M:11.0-11.5”/W: 12.5-13.0”]
  ◊ G2: 300, 200, 100 / 8-10’ rest [M:11.0-11.5”/33-34”/W: 12.5-13.5”/38-40”]
  ◊ 400H: 300 / 8’-10” rest [33-34”M/38”-40”W] / 1x (h5-8, 1xh6-9, 1x h8-fin/ walk back btwn reps
  ◊ wd grass: 4 x10m marching runs quick < contr w> 4x 20m marching runs / 8x 6h walkovers (4 sgl, 4 o/u)

◊ WEDNESDAY, Apr 3 / 2:30 GROUP – [Basic W.U. barefoot (30m)]
  ◊ G1: 2-3x 40-60 contrast solo w group / G2: 2x 115 OR 2x st-h3  race modelling – full recovery
  ◊ 2-3x 4x100: Exchange 2 - incoming from blocks
  ◊ wd grass : 8x 10-20m marching runs / 8 x 6h walkovers (8 lateral) /Strength Training / Abs
THURSDAY, Apr 4 / TRAVEL followed by shakeout OR 2:30 TEAM MTG – [Basic Warm up (20m)]
- Movement Prep – grass, barefoot
- Hurdle Mobility Circuit / Med Ball Circuit
- Wd: 8x 10 sand march quick/ 4x lateral lunge/ hur mobility x 8 (4 lateral, 4 sgl)

FRIDAY, Apr 5 / tba Day Before Competition Warm Up & wd (highly scripted)
- G1: 2-3x 30m blocks (str & curve combo)/Hur: 2-3x start-H3
- G2: 2-3x 50m curve curve / Hur: 2-3x start-h2-3
- Exchanges or individual needs as required

SATURDAY, Apr 6 / 9:00a MORNING SHAKEOUT (25”-30”)
- COMPETE – execute your race pattern

SUNDAY, Apr 7 / Travel / Rest
Acceleration emph. (meets count):

- 3x Acceleration Development
- 1x Speed Development
- 1-2x Intensive Tempo / Special Endurance
- Rest
- Competitive Variety
Speed Development emph. (meets count):

-1x Acceleration Development
-3x Speed Development
-1x Intensive Tempo/ Special Endurance
-Rest
-Competitive Variety
Tempo/Special Endurance emph (meets count):

- 1x Acceleration Development
- 1x Speed Development
- 2-3x Intensive Tempo/ Special Endurance
- Rest
- Perhaps no Competition
400 Meter and 400 Meter Hurdle Primer
(Know what we are planning for)
200 to 400 relationship

assume 200m is 45% of 400m

\[
60.00 \times 0.45 = 27.0
\]

\[
50.00 \times 0.45 = 22.5
\]
200 to 400 relationship

assume 400m is 2.223 x 200m

27.0 x 2.223 = 60.00

22.5 x 2.223 = 50.01
Correct 400m distribution:
1st 200 = 47.6\% of performance (+ - .2)
2nd 200 = 52.4\% of performance (+ - .2)

60.0 \times .476 = 28.6 / 31.4
50.0 \times .476 = 23.8 / 26.2
Correct Distribution:

400m and 400 Hurdles have same distribution

$60.0H \times .476 = 28.6 / 31.4$

$50.0H \times .476 = 23.8 / 26.2$
So, 400m training has 3 training zones

A  \[ \text{PR + 4” even pace/2nd 200m race tempo (x .524)} \]
\[ 60.0 = [31.4” - 32.0”] \quad 50.0 = [26.2” - 27.0”] \]

B  \[ \text{PR even pace/1st 200m race tempo (x .476)} \]
\[ 60.0 = [28.6” - 30.0”] \quad 50.0 = [23.8” - 25.0”] \]

C  \[ \text{Maximal (.45 x200mPR)/accel dev + speed dev} \]
\[ 60.0 = [27.0” - 28.5”] \quad 50.0 = [22.5” - 23.6”] \]
Organizing Principle 1: All tempo runs should look like the performance, with excellent posture.

Seek endurance **specific** to performance

60.00 400m athlete = tempos 64” and **faster** (16.0 per 100m)

50.00 400m athlete = tempos 54” and **faster** (13.5 per 100m)
Organizing Principle 2: Avoid short rest, slow tempo training. **Avoid non-specific** tempos (Rehab and regeneration sessions excluded)

Generic, non-specific endurance may have a **de-training** effect when densities are high
Training should look like the performance

Avoid non-specific tempos

60.00 athlete
avoid tempos equivalent to 66”, 68”, 70”, 72”, 74” and slower

50.00 athlete
avoid tempos equivalent to 56”, 58”, 60”, 62”, 64” and slower
Rest is important.
Balance recovery with the effort.
Required rest

A  PR + 4” even pace/2nd 200m race tempo (x .524)
   60.0 = [31.4” – 32.0”]
   50.0 = [26.2” – 27.0”]
   reps 100m-400m  require 2-3’ rest per 100m of effort

B  PR even pace/1st 200m race tempo (x .476)
   60.0 = [28.6” – 30.0”]
   50.0 = [23.8” – 25.0”]
   reps 100m-400m  require 3-4’ rest per 100m of effort

C  Maximal (.45 x200mPR)/accel dev + speed dev
   60.0 = [27.0” – 28.5”]
   50.0 = [22.5” – 23.6”]
   reps 10-150m  require 1-2’ per 10m of effort / full recovery
Setting training tempos

special endurance
intensive tempo
Speed development defined = 95%+ of max speed
Accel development defined = 95%+ of max intensity
Setting training tempos (minimal)

Start here, and progress from here

<table>
<thead>
<tr>
<th>Distance</th>
<th>Race Pace to RP +1”</th>
<th>60.0</th>
<th>50.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-100m</td>
<td>16.0</td>
<td></td>
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</tr>
<tr>
<td>150-200m</td>
<td>32.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>250-300m</td>
<td>48.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>350-400m</td>
<td>64.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Specific Framework for progress (Know how to plan)
Helpful estimate: athletes will improve 2-3% every 2-3 weeks

wk 1  5x 150 avg 24.0  (24.0 x .02 = .48)
wk 2
wk 3  5x 150 avg 23.5  (23.5 x .02 = .47)
wk 4
wk 5  5x 150 avg 23.1  .................... etc
Organizing principle 3:

Have a workout that provides a season long thread for your evaluation.

5x 150 / 5’ rest variations
5x 200 / 5’ rest variations
Helpful datum:

Maximal effort for 5x 200m/ 5’ rest = athlete can average their 2\textsuperscript{nd} 200m race tempo (or slightly better)

Example: Clora Williams 51.07 \quad 51.07 \times 0.524 = 26.7

5x 200 (3 assisted, 2 resisted) = 26.3 average in week 28-30
Progress template in a 38-42 week season:

- **Week 1-3**: 6-8x 150 at 85% intensive tempo
- **Week 4-6**: 6-8x 150 at 87% intensive tempo
- **Week 7**: 5x 200 at 85% intensive tempo / special endurance
- **Week 10**: 5x 200 at 87%
- **Week 15**: 5x 200 at 90% - Exams/Christmas follow
- **Week 18**: 5x 200 at 88%
- **Week 21**: 5x 200 at 91%
- **Week 23**: 5x 200 at 93%
- **Week 25**: 5x 200 at 95%
- **Week 27**: 5x 200 at 97%
- **Week 29**: 5x 200 at 99% - transition to 3-4x 200/ 6’ rest or short rest
GENERAL PREP

A -- MONDAY
- ACCELERATION DEVELOPMENT
- LACTIC SHORT SPEED ENDURANCE [INTENSITY 80-90% Vmax]  ex: 6-8 X 50-60M GRASS, 1-3’ rest
- MULTI JUMPS
- STRENGTH TRAINING Power, intensive

B -- TUESDAY
- MAXIMAL SPEED DEVELOPMENT
- INTENSIVE TEMPO RUNS 1 (1200M MAXIMUM, INTENSITY 75-80% Vmax+ / 120-250M) GRASS ex: 3x (2x150) / 2’4’
- MULTI THROWS

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- ACTIVE RECOVERY – GENERAL STRENGTH, GRASS CIRCUITS, MULTI J&T – LITTLE RUNNING
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- MULTI THROWS

C -- SATURDAY
- GENERAL STRENGTH - MULTI THROWS / MULTI JUMPS / MOBILITY
- STRENGTH TRAIN – Circuits style possible

D -- SUNDAY – COMPLETE REST
Example 1a

start here! Wk 1-4 early season / general prep
So: 5x 150 @ 85% / 4-5’
32.0 x .75 = 24.0
26.6 x .75 = 20.0

<table>
<thead>
<tr>
<th></th>
<th>200m</th>
<th>150m (0.75)</th>
<th>60.0</th>
<th>50.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>200m</td>
<td>32.0</td>
<td>26.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150m</td>
<td></td>
<td>24.0</td>
<td>20.0</td>
<td></td>
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</tbody>
</table>
Example 1b
Wk 3-6 early season / general prep
So: 5x 150 @ 87% / 4-5’
31.0 x .75 = 23.3
25.9 x .75 = 19.4

<table>
<thead>
<tr>
<th>200m</th>
<th>60.0</th>
<th>50.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>150m</td>
<td>(.75)</td>
<td>23.3</td>
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</tbody>
</table>
Example 2a
Wk 5-8 / general prep>specific prep

32.0 divided by 27.0 = 84.4%

So: 5x 200 @ 85% / 5’

22.5 divided by .85 = 26.6

<table>
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<th>200m</th>
<th>150m</th>
<th></th>
<th></th>
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<tbody>
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<td>Pace</td>
<td>race pace +2”</td>
<td>race pace +2”</td>
<td>60.0</td>
<td>50.0</td>
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<tr>
<td></td>
<td>(.50)</td>
<td>(.75)</td>
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<tr>
<td></td>
<td>32.0</td>
<td>24.0</td>
<td>26.6</td>
<td>20.0</td>
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</table>

60.0  50.0
Example 2b
Wk 7-10 specific prep
So: 5x 200 @ 87% / 5’
27.0 divided by .87 = 31.0
22.5 divided by .87 = 25.9

<table>
<thead>
<tr>
<th>Distance</th>
<th>Speed</th>
<th>60.0</th>
<th>50.0</th>
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<tbody>
<tr>
<td>200m</td>
<td>(.50)</td>
<td>31.0</td>
<td>25.9</td>
</tr>
<tr>
<td>150m</td>
<td>(.75)</td>
<td>23.3</td>
<td>19.4</td>
</tr>
</tbody>
</table>
### Example 3a

**Wk 7-10 specific prep**

350, 250, 150 / 9-13’, 7-9’ @ 94%

64.0 x .875 = 56.0

53.2 x .875 = 46.5

<table>
<thead>
<tr>
<th>Distance</th>
<th>Race Pace</th>
<th>Adjustment</th>
<th>Time (sec)</th>
<th>Rest (sec)</th>
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<tr>
<td>150</td>
<td>race pace +2”</td>
<td>(.428)</td>
<td>23.9</td>
<td>19.9</td>
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<tr>
<td>250</td>
<td>race pace +3”</td>
<td>(.714)</td>
<td>40.0</td>
<td>33.2</td>
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<tr>
<td>350</td>
<td>race pace +4”</td>
<td>(.875)</td>
<td>56.0</td>
<td>46.5</td>
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</table>
Example 3b
Wk 9-12 specific prep

<table>
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<tr>
<th>Distance</th>
<th>Race Pace +2”</th>
<th>(.428)</th>
<th>23.1</th>
<th>19.4</th>
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<tbody>
<tr>
<td>150</td>
<td>race pace</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>250</td>
<td>race pace</td>
<td>(.714)</td>
<td>38.6</td>
<td>32.3</td>
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<tr>
<td>350</td>
<td>race pace</td>
<td>(.875)</td>
<td>54.1</td>
<td>45.2</td>
</tr>
</tbody>
</table>

61.9 x .875 = 54.1
51.6 x .875 = 45.2
Example 4a
start here! WK 9-12 / specific prep > competitive phase 1
So: 5x 150 @ 89% / 4-5’
30.3 x .75 = 22.7
25.2 x .75 = 18.9

<table>
<thead>
<tr>
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<th>60.0</th>
<th>50.0</th>
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<tbody>
<tr>
<td>200m</td>
<td>30.3</td>
<td>25.2</td>
</tr>
<tr>
<td>150m (.75)</td>
<td>22.7</td>
<td>18.9</td>
</tr>
</tbody>
</table>
Example 4b

Wk 9-12 specific prep

60.0 divided by 64.0 = 93.75%

So: 400, 300, 200 @ 94% / 10-14’, 8-10’

50.0 divided by .94 = 53.2

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<th>400m</th>
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<tr>
<td>Race</td>
<td>race pace +2” (.50)</td>
<td>race pace +3” (.75)</td>
<td>race pace +4”</td>
</tr>
<tr>
<td>Time</td>
<td>32.0</td>
<td>48.0</td>
<td>64.0</td>
</tr>
<tr>
<td>Corr</td>
<td>26.6</td>
<td>39.9</td>
<td>53.2</td>
</tr>
</tbody>
</table>

60.0 50.0
Example A
Wk 11-14 specific prep/ pre-competitive
400, 300, 200 @ 97% / 10-14’, 8-10’
60.0 divided by .97 = 61.9
50.0 divided by .97 = 51.6

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>200m</td>
<td>race pace +2”</td>
<td>31.0</td>
</tr>
<tr>
<td>300m</td>
<td>race pace +3”</td>
<td>46.4</td>
</tr>
<tr>
<td>400m</td>
<td>race pace +2”</td>
<td>61.9</td>
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</tbody>
</table>
Have a wonderful 2021 season
Editorial positions

- By design, we try to cover much material (value)
- We try to balance pace with understanding
- Giving access to PPTS enables self study
- Answering questions fills gaps and enhances self-study
- We are learning to think analytically
- We challenge you to join us in analytic thought
# 400m WOMEN All-Time List -- SPEED RESERVE

<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
<th>Time</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Marita Koch</td>
<td>GDR</td>
<td>47.60</td>
<td>10/6/85</td>
</tr>
<tr>
<td>Jarmila Kratochvilova</td>
<td>CZE</td>
<td>47.99</td>
<td>8/10/83</td>
</tr>
<tr>
<td>Salwa Eid Nasser</td>
<td>BRN</td>
<td>48.14</td>
<td>10/3/19</td>
</tr>
<tr>
<td>Marie Jose' Perec</td>
<td>FRA</td>
<td>48.25</td>
<td>7/29/96</td>
</tr>
<tr>
<td>Olga Bryzgina</td>
<td>UKR</td>
<td>48.27</td>
<td>10/6/85</td>
</tr>
<tr>
<td>Shaunie Miller-Uibo</td>
<td>BAH</td>
<td>48.37</td>
<td>10/3/19</td>
</tr>
<tr>
<td>Tat'ana Slaninova (Kocembova)</td>
<td>CZE</td>
<td>48.59</td>
<td>8/10/83</td>
</tr>
<tr>
<td>Cathy Freeman</td>
<td>AUS</td>
<td>48.63</td>
<td>7/29/96</td>
</tr>
<tr>
<td>Sanya Richards-Ross</td>
<td>USA</td>
<td>48.70</td>
<td>9/16/06</td>
</tr>
<tr>
<td>Valerie Brisco</td>
<td>USA</td>
<td>48.83</td>
<td>8/6/84</td>
</tr>
<tr>
<td>Ana Guevara</td>
<td>MEX</td>
<td>48.89</td>
<td>8/27/03</td>
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<tr>
<td>Chandra Cheesborough</td>
<td>USA</td>
<td>49.05</td>
<td>8/6/84</td>
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</tbody>
</table>
## 400m WOMEN All-Time List -- SPEED RESERVE

<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
<th>200 PR</th>
<th>100 PR</th>
<th>Updated</th>
<th>Note</th>
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</thead>
<tbody>
<tr>
<td>Marita Koch</td>
<td>GDR</td>
<td>21.71 NR (0.3)</td>
<td>10.83 (1.7)</td>
<td>7/2/84</td>
<td></td>
</tr>
<tr>
<td>Jarmila Kratochvilova</td>
<td>CZE</td>
<td>21.97 NR (1.9)</td>
<td>11.09 (1.7)</td>
<td>6/6/81</td>
<td></td>
</tr>
<tr>
<td>Salwa Eid Nasser</td>
<td>BRN</td>
<td>22.51 NR (1.9)</td>
<td>11.24 (1.3)</td>
<td>6/30/19</td>
<td></td>
</tr>
<tr>
<td>Marie Jose' Perec</td>
<td>FRA</td>
<td>21.99 NR (1.1)</td>
<td>10.96 (1.2)</td>
<td>7/2/93</td>
<td></td>
</tr>
<tr>
<td>Olga Bryzgina</td>
<td>UKR</td>
<td>22.44 NR (1.3)</td>
<td>--</td>
<td>8/25/85</td>
<td></td>
</tr>
<tr>
<td>Shaunie Miller-Uibo</td>
<td>BAH</td>
<td>21.74 NR (-0.4)</td>
<td>11.19 (0.0)</td>
<td>8/29/19</td>
<td>4/30/16</td>
</tr>
<tr>
<td>Tat'ana Slaninova (Kocembova)</td>
<td>CZE</td>
<td>22.47 (0.2)</td>
<td>11.31 (0.7)</td>
<td>7/8/84</td>
<td>9/3/83</td>
</tr>
<tr>
<td>Cathy Freeman</td>
<td>AUS</td>
<td>22.53 (0.7)</td>
<td>11.24 (1.1)</td>
<td>9/28/00</td>
<td>2/5/94</td>
</tr>
<tr>
<td>Sanya Richards-Ross</td>
<td>USA</td>
<td>22.09 (-0.3)</td>
<td>10.97 (-0.7)</td>
<td>6/9/12</td>
<td>9/28/07</td>
</tr>
<tr>
<td>Valerie Brisco</td>
<td>USA</td>
<td>21.81 (-0.1)</td>
<td>10.99 (1.3)</td>
<td>8/9/84</td>
<td>5/17/86</td>
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<tr>
<td>Ana Guevara</td>
<td>MEX</td>
<td>23.78 (nw!?)</td>
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<td>5/15/98</td>
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<tr>
<td>Chandra Cheesborough</td>
<td>USA</td>
<td>21.99 (0.9)</td>
<td>11.13 (2.0)</td>
<td>7/19/83</td>
<td>6/21/76</td>
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21.71 - 22.53
6 below 22.00

10.83 - 11.31
4 below 11.00

*NR* = National Record *nw!* = Not world record
<table>
<thead>
<tr>
<th>Name</th>
<th>Nation</th>
<th>Time</th>
<th>Date</th>
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<tbody>
<tr>
<td>Wayde van Niekerk</td>
<td>RSA</td>
<td>43.03</td>
<td>8/14/16</td>
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<tr>
<td>Michael Johnson</td>
<td>USA</td>
<td>43.18</td>
<td>8/27/99</td>
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<td>Butch Reynolds</td>
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<td>43.29</td>
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<td>Jeremy Wariner</td>
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<td>USA</td>
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<td>Steven Gardiner</td>
<td>BAH</td>
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<td>10/4/19</td>
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<td>Quincy Watts</td>
<td>USA</td>
<td>43.50</td>
<td>8/5/92</td>
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<td>Fred Kerley</td>
<td>USA</td>
<td>43.64</td>
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<td>Isaac Makwala</td>
<td>BOT</td>
<td>43.72</td>
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<td>Kirani James</td>
<td>GRN</td>
<td>43.74</td>
<td>7/3/14</td>
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<td>Danny Everett</td>
<td>USA</td>
<td>43.81</td>
<td>6/6/92</td>
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<tr>
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<td>400m Men All-Time List -- SPEED RESERVE</td>
<td>Wayde van Niekerk RSA</td>
<td>19.84 NR (1.2)</td>
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<td>Michael Johnson USA</td>
<td>19.32 WR (0.4)</td>
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<td>Jeremy Wariner USA</td>
<td>20.19 (1.2)</td>
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<td>19.70 (0.7)</td>
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<td>19.75 (0.3)</td>
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<td>Quincy Watts USA</td>
<td>20.50A (-0.4)</td>
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<td>LaShawn Merritt USA</td>
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<td>Isaac Makwala BOT</td>
<td>19.77 NR (0.0)</td>
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<td>Kirani James GRN</td>
<td>20.41Anr, njr (0.1)</td>
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<td>Danny Everett USA</td>
<td>20.08 (0.3)</td>
<td>6/16/90</td>
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<tr>
<td>6 below 20.00</td>
<td>19.32 - 20.50A</td>
<td>9.94 - 10.49A</td>
<td>3 below 10.20A</td>
</tr>
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</table>
USATF (Nov 2019):
The 400m performance is roughly 65% anaerobic (35% aerobic) – individual variance

I will devote NO LESS than TWO THIRDS of my training time for speed/power training (anaerobic)

I will spend NO MORE than one third of our training on the 35% component
So, 400m training has 3 training zones for race pace training to race+4” [60-64” / 50-54”] 31.4 / 26.2 (reps 150m-400m) req 2.5-3” rest per 100m of effort

for efforts faster than race pace [56-60” / 46-50”] 28.6 / 23.8 (reps 300m and less) req 3-4” rest per 100m of effort

for acceleration dev and speed dev [Max Speed] 27.0 / 22.5 (reps 10-150m) req 1-2’ per 10m of effort / full recovery
So, 400m training has 3 training zones

for race pace training to race+4” [60-64” / 50-54”] 31.4 / 26.2
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