

Optimizing Intensity Balance

How to Maximize Training Results
 with the 80/20 Principle

Overview

- What is the most effective way to train?
- The 80/20 Rule
- Guidelines for 80/20 Training
- The Counterargument
- Questions



What is the most effective way to train?



3 Major Variables:

Specificity

Volume

Intensity

How the Pros Train (Runners)

- Billat et al, 2001: Portuguese and French runners, 78% of training below marathon race pace
- Karp et al, 2005: American runners, 74% of training slower than marathon pace
- Billat et al, 2003: Kenyan runners, 85% of training below lactate threshold
- Stellingwerf, 2012: Canadian runners, 74% of training at low intensity

How the Pros Train (Other Endurance Athletes)

- Mujika et al, 1995: French swimmers, 77% of training at low intensity
- Zapico et al, 2007: Spanish cyclists, 74% of training at low intensity
- Seiler et al, 2006: Norwegian rowers, 88% of training at low intensity
- Mujika, 2012: Spanish triathlete, 83% of training below lactate threshold

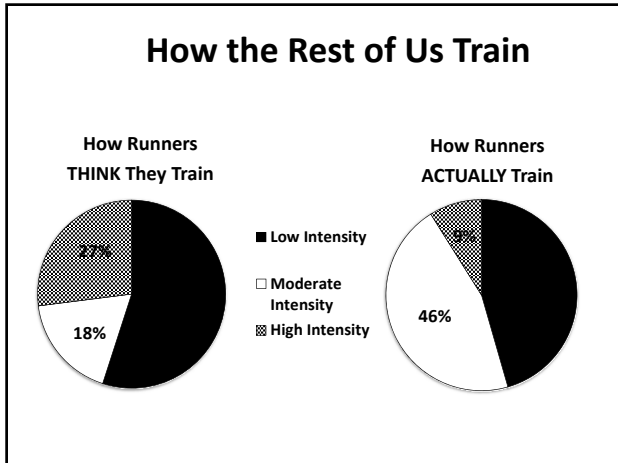
How the Pros USED to Train

Emil Zátopek



March 7-14, 1955

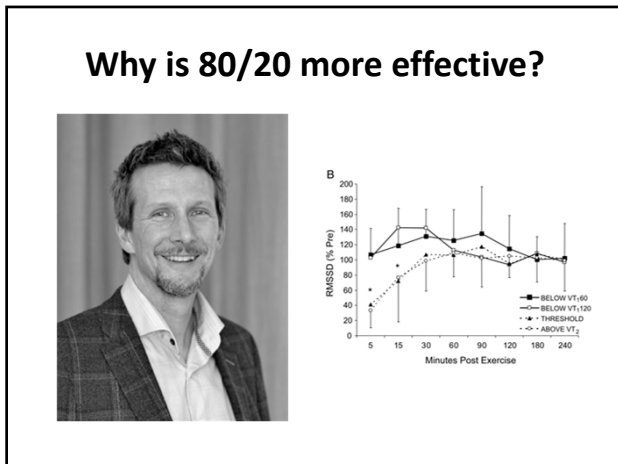
Monday
 40 x 400m, 40 x 400m
 Tuesday
 50 x 400m, 40 x 400m
 Wednesday
 50 x 400m, 40 x 400m
 Thursday
 40 x 400m, 40 x 400m
 Friday
 40 x 400m, 40 x 400m
 Saturday
 30 x 400m, 1:00 jog
 Sunday
 2:00 jog



What happens when the rest of us train like the pros?

Effect on 10K Race Performance of 10 Weeks of Training with Different Intensity Distributions

32% Low 53% Moderate 15% High	47% Low 37% Moderate 16% High	73% Low 13% Moderate 14% High	78% Low 11% Moderate 11% High
+1.6%	+3.6%	+5%	+7%

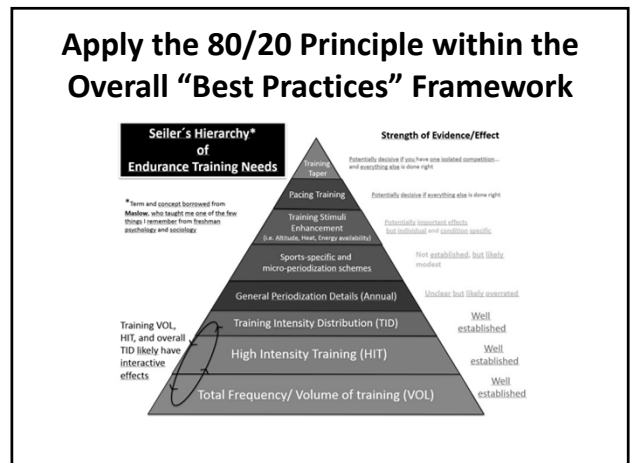


And now the fine print . . .

GUIDELINES FOR 80/20 TRAINING

Define Low, Moderate, and High Intensity

CURRENT TIMES			GOAL TIMES		
DISTANCE	TIME	PACE	DISTANCE	TIME	PACE
100m	13.8	3:41	100m	13.8	3:41
200m	27.6	3:41	200m	27.6	3:41
400m	57.6	3:51	400m	57.6	3:51
500m	1:15.2	4:01	500m	1:15.2	4:01
600m	1:32.3	4:07	600m	1:32.3	4:07
800m	2:06.5	4:14	800m	2:06.5	4:14
1000m	2:46.4	4:27	1000m	2:46.4	4:27
1500m	4:20.6	4:39	1500m	4:20.6	4:39
1600m	4:40.0	4:41	1600m	4:40.0	4:41
Mile	4:41.9	4:41	Mile	4:41.9	4:41
2000m	6:57.9	4:48	2000m	6:57.9	4:48



Treat Each Runner Individually

Factors to Consider:

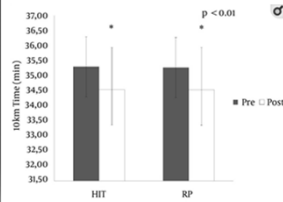
- Specialization
- Experience
- Age
- Strengths
- Weaknesses



Plan, Monitor, Adjust

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Easy Run 45:00	Tempo Run 48:00 w/ 28:00 @ LT	Easy Run 45:00	Easy Run 45:00	Interval Run 39:00 w/ 3 x 5:00 @ 5K pace	Easy Run 45:00	Fartlek Run 12 miles w/ 10 x 400m @ LT

Keep in Mind There's More Than One Way to Skin a Cat



Use Low-Intensity Training to Modulate Workload



“The fitter I get, the slower my easy runs are.”

—Aaron Braun
 27:41 10,000m runner

Yeah, But I Know a Guy Who...



TABLE 3. Changes in $\dot{V}O_{2max}$ ($\text{mL}\cdot\text{min}^{-1}\cdot\text{kg}^{-1}$) after the 6-wk training protocol.

Intensity Group	Initial $\dot{V}O_{2max}$	Final $\dot{V}O_{2max}$
Moderate	35.3 ± 7.9	38.7 ± 9.1
Vigorous	33.6 ± 9.0*	38.4 ± 10.7
Near-maximal	35.7 ± 6.2	42.9 ± 7.3
Control	37.7 ± 8.7	38.4 ± 10.7

* Significantly lower than control at baseline using two-way ANOVA ($P < 0.05$).
 † Significant increase versus baseline using two-way ANOVA ($P < 0.05$).
 ‡ Significantly greater increase than control group using two-way ANOVA ($P < 0.05$).
 § Significantly greater increase than moderate group using two-way ANOVA ($P < 0.05$).

Questions?



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8020endurance.com