

## Training and the Development of the Long Sprint Events

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“You need to be half crazy to run the long sprints, and some are over qualified”

- First and foremost, the sprint event requires people who can sprint!
- Do not neglect their speed development
- Know the difference between speed development and work
- 150 seconds and 2000-3000 meters
- Strength and power with or without a Wt. room

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## The Energy Systems

- Where does the sprinter live?
- How long does the event last (tells you how to coach)
- What % of the race is speed and endurance?
- What is the event's "critical zone?"
- Train the race pace and the win pace
- Train the overs and unders (Knudson)

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## Training the Energy Systems

Duration of Effort	Energy System	Power/Capacity	Training Effect
0.00 to 0.20	Nervous system	Reactive	Reaction
0.00 to 1.00	Atactic (stored ATP)	Power	Initial Thrust
1.00 to 2.00	Atactic (stored ATP/CP)	Power	Starts
2.00 to 5.00	Atactic (CP system)	Power	Acceleration
5.00 to 15.00	Atactic (CP system)	Power	Max Speed Runs (fly)
15.00 to 30.00	Extended CP	Power & Capacity	Speed Endurance - 95
30.00 to 45.00	Lactate	Power & Capacity	Energy w/o O2
45.00 to 90.00	Lactate	Capacity of Lactate	Above plus "Big
Ticker"			
90.00 to 300.00	Lactate w/ aer. Support	Aerobic Strength	Ability to use O2 to hold pace as lactate rises

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## Training the Energy Systems

- The base for sprinters is speed!!
- Why does the sprints need aerobic training? They do, but why?
- Speed is a skill and you cannot develop it by running less than skillful activities.
- Both speed and aerobic development can be developed without running.

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## Knudson's Over-Unders

■ Under-under	30m	50m	100m	200m
■ Under	50m	100m	200m	400m
■ <b>R.P.</b>	<b>100m</b>	<b>200m</b>	<b>400m</b>	<b>800m</b>
■ Over	200m	400m	800m	1500m
■ Over-over	400m	800m	1500m	3000m

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### Knudson's Over-Unders

	<u>50.00 Boy</u>	<u>59.00 Girl</u>
UUD	100m-11.11	100m-12.90
UD	200m-22.69	200m-26.82
RD	400m-50.00	400m-59.00
OD	800m-1:54.40	800m-2:15.00
OOD	1500m-3:53.60	1500m-4:41.41

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- ### Periodization
- How long does the season last?
  - Count back from the last meet
  - Speed is your base
  - Use tempo and aerobic training to recover
  - Incorporate strength endurance early (hills)
  - Use the meets to develop the systems
  - REST is not a four-letter word
  - Accumulative stressors (emotional vampires)
  - The best training for the 400m is?????????

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Week	M	T	W	TH	F	S	Sun	
14	H	E	H	M	E	H	R	(3)
13	H	E	M	C	E	H	R	(3)
12	H	E	M	C	E	H	R	(3)
11	H	E	M	C	E	C	R	(3)
10	H	E	M	C	E	H	R	(3)
9	H	E	E	C	E	R	R	(3)
8	H	M	E	C	E	H	R	(3)
7	H	M	E	C	E	C	R	(3)
6	H	M	E	C	E	E/R	R	(2)
5	H	M	E	C	E	C	R	(3)
4	H	E	M	E	C	C	R	(3)
3	H	E	M	E	E	C	R	(2)
2	H	E	M	E	E	C	R	(2)
1	H	E	E	E	C	C	R	(3)

■ H = Hard Day  
 ■ C = Competition/Hard Day  
 ■ E = Easy Day  
 ■ M = Medium Day  
 ■ R = Rest Day

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## Speed Development

- Unders and under-unders
- Fly runs and reps out to 60m
- "S-H" drills (Lyle)
- Short jump training
- Acceleration work and drills
- Race modeling
- Running up and downhill

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## Aerobic & Endurance Development

- Intensive tempo
- Extensive tempo
- Fartlek
- Short and long recoveries
- Speed endurance
- I do it, but understand why you do the aerobic training

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## The Nitty Gritty

- Don't fear the pain
- Quit time workouts as a reward
- Ins and outs
- 350-250 (the "widow maker")
- 150-250-350-450 reps
- Changing speed work to gut work (3x3x60m)

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## Heavy Duty Booty

- 6-2-2-2-2-2
- 1111's
- Split 200's
- 250-50-100-100-250-50-100
- Kosmin
- 20/20
- 350/250
- 133's
- Time trials
- 40-45-50 sec. runs

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## Mean Improvements in Racing times

■ Method	100m	400m
■ Long steady	0.10	2.60
■ Fartlek	0.15	2.05
■ Long sprints	0.20	3.90
■ Interval sprints	0.25	3.40
■ Interval series	0.20	2.95
■ Endurance intervals	0.10	1.95
■ Pace intervals	0.30	3.60
■ Uphill intervals	0.30	3.85
■ Interval combinations	0.25	3.30

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## The 3-Legged Pig

- 5x100
- 1x200, 3x100
- 1x300, 2x100
- 1x350, 2x100

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