

How to Plan Workouts

Tony Veney
USATF Level I-II-III Instructor

EVERYONE WANTS TO
BE SUCCESSFUL
UNTIL THEY SEE
WHAT IT ACTUALLY
TAKES



Systematic Coaching

- A systematic approach to sprint training is based on dropping 50 kids in a funnel and when 4 excel and win the state 4x4, you're the 400 meter guru.

Systematic Coaching

- But what about the 46 kids that are left sick, injured, or disillusioned about track and either wallow in mediocrity or quit?

Philosophical Training

- Establish a battery of tests and measures that will allow you determine the sprinters' strength and weaknesses.

Philosophical Training

- The funnel system is replaced by the "elevator shaft" approach:
 - 50 go in the top and 50 come out the bottom. They all won't achieve the same level of success, but they will achieve their best.

Speed Development

- In order to plan great workouts for your sprinters, you must first answer these questions:

Speed Development

- How long does the event last?

Speed Development

- What is the dominant energy system fueling the run?

Speed Development

- What are the strength and weaknesses of your sprinters?

Speed Development

- What do I lose or gain with change?

How do you get Faster?

- You must have the speed you need before you can build the endurance to survive it.
- Speed is 25x more difficult to develop than endurance

And this is where most coaches go wrong!

How do you get Faster?

- Endurance is an expandable value and is tied to the level of fitness the sprinter can achieve. Your endurance will improved after only a week of running warm up and warm down routines.

How do you get Faster?

- However, speed is a determinant value and can only be developed in very small amounts. But a 2% improvement at 100 meters takes you from 11.00 to 10.78!

Endurance Training

- Produces rapid changes in the athlete's fitness.

Endurance Training

- Injuries are kept at a minimum because it's slow.

Endurance Training

- Does not require any training imagination or time investment by the coach.

Endurance Training

- Allows large numbers to train together regardless of ability or skill level.
- "Donkeys" and "Thoroughbreds" can play well together

Endurance Training

- But does not give you the endurance to endure at the speed of your chosen event.

Endurance Training

- What kind of Endurance/Base do sprinters need?

Base Training

- We all would agree that the base, or foundation for a distance runner lies in their ability to increase their tolerate and sustain fatiguing efforts for long periods of time.

Base Training

- So why do sprinters need to run for 20 – 30 minutes, or run cross country when their event lasts for less than 70 seconds?

Base Training

- The base for a sprinter is ***SPEED!***

Know the Systems

- There is only some much juice in the tank for each race or effort.
- But if you don't know what the demands of the race are, how can you train it?

Training the Energy Systems

<u>Duration of Session</u>	<u>Energy System</u>	<u>Power/Capacity</u>	<u>Training Effect</u>
0 to 0.2 sec.	Nervous System	Reaction
0 to 0.2 sec.	Alactic	Power (Stored muscular ATP)	Initial Thrust
0 to 1.0	Alactic (CP system)	Power	Single leg thrust at top speed
1 to 2.0 sec.	Alactic (nervous + stored ATP + CP)	Power	Starts
2 to 5.0 sec.	Alactic (CP system)	Power	Acceleration
5 to 15.0 sec.	Alactic (CP system)	Power	Maximum speed (Fly runs)

Training the Energy Systems

<u>Duration of Session</u>	<u>Energy System</u>	<u>Power/Capacity</u>	<u>Training Effect</u>
15 to 30.0 sec.	Alactic (Extended CP System)	Capacity	Speed endurance (Ability to hold > 95%)
30 to 45.0 sec.	Lactate	Power	Ability to produce energy without O2 or CP
45 to 90.0 sec.	Lactate	Capacity	As above, plus ability to tolerate lactic acid
90 to 300.0 sec.	Lactate with aerobic support	Aerobic Power Lactate Capacity	Ability to use O2 to hold up pace as lactate builds up
5 to 10.0 min.	Aerobic with minor lactate	Aerobic power	Max O2 rates
10 to 12.0 min.	Aerobic	Power capacity	Raise anaerobic threshold
20 to 60 min.	Fuel: glycogen	Capacity	Ability to maintain steady pace

Knudson Overs and Unders

- Dr. Lyle Knudson has developed a system called “Speed Based Training” which allows the coach to touch on all the systems needed to properly develop a runners abilities.
- Knudson’s over and under training satisfies the sprint and distance coach in all of us and allows the sprinter hit all the systems required to run big.

Training Distance

- The race you have chosen:
 - 100
 - 200
 - 400
 - Long and/or Short Hurdles
 The best training for the 100 meters is running the 100 meters because all the systems are “on call” at once.

Unders & Under-Unders

- This is the pace you would run that is two distances under the chosen event. The under allows you to operate at a speed faster than the race pace.

Unders & Under-Unders

- The more you can operate at speed faster than the demands of the race, the more comfortable the race pace becomes. Also allowing you to operate at that pace for longer periods of time.

Overs & Over-Overs

- This is the pace you would run that is slower than your event speed, but still places physical demands on your body.

Overs & Over-Overs

- The efforts are taxing and provide only limited recovery as compared to the Training Distance, Overs, and Over-Overs.

Putting it all Together

- Over a period of two to three weeks, the coach can touch on all of the five paces so the sprinter has the speed, speed endurance, and toughness so vital in running fast and doing it over and over again.

Over and Under Plan

- | | | | | |
|---------------|------|------|-------|-------|
| • Under-under | 30m | 50m | 100m | 200m |
| • Under | 50m | 100m | 200m | 400m |
| • TD | 100m | 200m | 400m | 800m |
| • Over | 200m | 400m | 800m | 1500m |
| • Over-over | 400m | 800m | 1500m | 3000m |

400m Over/Under

- | | <u>50.00 400m Boy</u> | <u>59.00 400m 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 |

Following the Over/Under Plan

- It's unlikely the 50.00 boy will be able to run 3:53 for 1500 meters (31-46-62-77-93 seconds for 200-300-400-500-600 meters), but he could run repeat 200's in 31 with short recovery, or a 1:33 600 followed by some 300's with jogging recovery (he's completed the requirements of the Over workout).

Following the Over/Under Plan

- Your 59.00 400 girl may not be able to run a 12.90 100 meters, but she can run 3 x 3 x flying 30m runs with 4-6 minutes between the reps and 10 minutes between the sets. This may seem like a long recovery, but you must ensure that the energy needed to run that fast has had time to replenish itself to ensure the quality of the workout from start to finish.

Compatibility

- Now that you know *why* and *what to do*, let's make sure you know *how to do it*.
- There are training rules you should follow when attempting to get the most out of your sprinters.
- Rules can be bent and even broken, but you'd better know what they are before you proceed.

Compatible Sprint Training

- Endurance runs (general, strength, specific) with strength endurance exercises that help to develop general strength endurance.

Compatible Sprint Training

- Speed development runs with speed strength development exercises (jumping and bounding complexes – but do the strength development exercises first).

Compatible Sprint Training

- Speed development runs and exercises with explosive dynamic strength development exercises (short jumps).

Compatible Sprint Training

- Speed development runs with movement coordination development exercises (starts, finishing drills, specific sprinting drills).

Non-Compatible Sprint Training

- Speed development with any type of endurance runs over 80 meters.

Non-Compatible Sprint Training

- Speed development with strength endurance development exercises.

Non-Compatible Sprint Training

- Speed development with strength development exercises.

Non-Compatible Sprint Training

- Strength development (maximal strength method) with any type of endurance runs.

Non-Compatible Sprint Training

- Exercise complexes for the development of coordination with strength development exercises.

Talent Pool

- X Iron
- Y Aluminum
- Z Tin
- OO Fine China

Talent Pool

- Power Pups

Talent Pool

Workouts

- Gold Medal
- Silver Medal
- Bronze Medal

Lets see some Workouts

- Starts - ATP
- Fly runs – Phosphate
- Speed Endurance runs – Ext. Phosphate
- Lactate Runs – Special Endurance 1 & 2
- Hills/stairs/sand

Lets see some Workouts

- 1111's (one of my favorites)
- 20/20's
- Ladders
- Breakdowns
- Raw Dogs (call Children's Services)



Good Hunting!

- 310-488-8534
- trakcoach08@gmail.com