

I

① Timeline

- I H.S., undergrad; track + cc; 800m, mid distance
"dead feeling" in legs
- II grad school; bare foot; stop @ qualifying exams
- III nothing
- IV This experiment
 - (A) Last fall - interest, go run in grass near apt, look up drills
 - (B) winter - form drills, read up on sprinting
 - (C) Spring - begin training
- injuries (achilles) (don't listen to body)
- meets (2x)
 - (D) vacations - break off
 - (E) Return to training then stop

② Sprinting vs Distance trait

	sprint	Dist
key success	<ul style="list-style-type: none"> • max force generation • fastest speed possible • highest acceleration 	<ul style="list-style-type: none"> • efficient use of oxygen • avoid overuse injuries • low exertion rate at high speed
injury	<ul style="list-style-type: none"> - pulled muscle - not ready to handle force - poor form = effect career length "pop" 	<ul style="list-style-type: none"> - tendonitis, shin splint - poor form (leads to repetitive use injuries) - build mileage too fast ^{shins not ready} "pounding"
Physical Type	<ul style="list-style-type: none"> - bigger muscles - fast twitch muscles 	<ul style="list-style-type: none"> - small body - mix of fast + slow twitch
Training	<p>get enough recovery to work @ max effort</p>	<ul style="list-style-type: none"> - keep in oxygen debt most of time so muscles get used to it

- ③ Sources
 - World Speed Summit - Tyfone Edge
 - Charlie Francis books
 - o Charlie Francis Training System (1x)
 - o Speed Trap (2x)

④ People / Groups

- Tyfone Edge - w.s.s.
- Charlie Francis - #5 in world 100m
 - retires → injuries, lack of funding, Canadian
- Ben Johnson - C.F.'s top runner
 - beats Carl Lewis, set WR, win Olympics
 - caught w/ drugs ~~several~~ several times
- Optimist ~~Club~~ Track Club - Toronto, Francis a coach, Johnson an athlete
- Carl Lewis - B.J.'s rival

⑤ Training

- ① Approaches
 - o short to long (me)
 - o long to short
- ② workout parts
 - o acceleration + 10-35m acceleration, dragged sled
 - + 1 min rest per 10m
 - + max force into ground, long foot contact, push hard as possible
 - o top speed + 60-120m run
 - + 1 min rest per 10m
 - + smooth form, float, no acceleration
 - o speed not endurance → full recovery
- ③ Lifting high load, low volume → gymnastics works
 - olympic power lifting
- ④ Form drills
 - skipping
 - bounding
 - get up from lying
 - high knee/butt kick

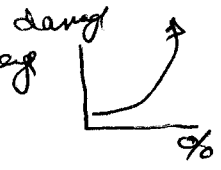
} as many as you would like
arms source of power
- ⑤ Recovery
 - 48 hours from hard workout
 - accelerate it
 - o contrast bath
 - o massage
 - o good diet
 - never get way out of shape
 - training capacity grows with time

Charlie Francis's Rules for coaching success

- ① let runners run - form problems will take care of themselves
- ② hands on observation - must adjust to athlete not use a canned routine
- ③ reinforce the positive - very little negative feedback, lots of positive feedback
- ④ low density coaching - give info in digestible amounts, pick 1 thing at a time to improve
- ⑤ patience - add drills & movements slowly, athlete should stay relaxed, take your time

⑥ Central Nervous System fatigue

- Role of coach is to put brakes on athlete (they will work selves too hard)
- When C.F. was athlete most sprinters were over trained
- CNS - conduit where brain communicates with body
- CNS fatigue dysfunction in brain, brain stem, spinal cord
(muscles may be all right)
- all stress in life contributes (food, exercise, relationships)
- Cause
 - ① high intensity work too frequently
 - ② too much high intensity in single session
 - ③ introduce high intensity too rapidly in program
- Examples of high CNS training
 - sprint @ max speed 30-120m
 - heavy weights 2-5 reps max
 - explosive jumping
- high intensity is cause
 - 60-80% of max - little CNS damage
 - 95% of max - 48 hr recovery
 - 100% of max - 10 day recovery



IV

• CNS fatigue syndromes

- ① decreased performance
- ② increased resting heart rate
- ③ slowed reflexes
- ④ irritability
- ⑤ loss of motivation
- ⑥ decreased sex drive
- ⑦ mental sluggishness
- ⑧ trouble sleeping