



Example: 10.90-100m

	+6	+6	+5	+5	+4	+4	+3	+3	+2	+2	+2	+1	+1	+	+	+0	+0	+0	+0	+0	+0
3-5	3-11	4-5	4-10	5-3	5-7	5-11	6-2	6-5	6-7	6-9	6-11	7-0	7-1	7-2	7-2	7-2	7-2	7-2	7-2	7-2	7-2
3-5	7-4	11-9	16-7	21-10	27-5	33-4	39-6	45-11	52-6	59-3	66-2	73-2	83	87-5	94-8	101-10	109-2	116-5	123-8	130-11	138-2

Line 1-increase

Line 2-length from previous chalk line

Line 3-total distance from starting point

APPROPRIATE STRIDE LENGTHS FOR STICK DRILL

STEP #	1	2	3	4	5	6	7
BEG	2' 4"	5' 2"	8' 6"	12' 2"	16' 2"	20' 5"	24' 11"
INT	2' 6"	5' 7"	9' 3"	13' 4"	17' 10"	22' 8"	27' 9"
ADV	2' 8"	6' 0"	10' 0"	14' 6"	19' 5"	24' 10"	30' 7"
PRO	2' 10"	6' 5"	10' 9"	15' 7"	21' 1"	27' 0"	33' 5"

These distances represent the distance each stick should be from the starting point. Athletes must determine their own skill level.



PVC Stick Posture Drills

- Menards, Lowes for \$1 each
- Body Angle
 - Horizontal-Accels
 - Vertical-High Jump
- Emphasizes lower leg
- Ground Contact



3 factors of Sprinting

- Stride Length
- Stride Frequency
- Biomechanics



Stride Length

- Push/Pull/Power
- Ground Contact
- Optimal Flexibility/Mobility



Stride Frequency

- Speed
- Fast Twitch Chain Reaction Efficiency
- Ground Contact

Mechanics

- Good Cues
- Arms
 - Hip is the halfway point
 - *“Wild Wild West Pistol on the Hip”*
 - The Body Favors Long Levers. *“A Long Lever is a Good Lever”*
 - Subtract more *bad* than you add *good*. Don't mess the kid up aka Metacognition.



Are MRIs Reliable?

- 1 Patient
- 10 MRIs
- 10 different results
 - 49 different 'findings'
 - 16 were unique
 - 0 found across all 10
- Each Radiologists averaged 12 errors
- Don't rely on the scan, get an informed clinical opinion!



Elasticity & Equilibrium

- Muscles like a Rubber Band
- Muscular Balance
 - Major Muscles vs Minor Muscles
 - Limb Muscular Balance: Femur joint-hamstring and quad, shin and calf

Periodization

- Varying training over long periods of time, In-season & Out-of-Season
- “skillfully combine different training methods in order to yield better results than can be achieved through exclusive or disproportionate use of any one of them.”(Plisk & Stone, 2003)
- Started as an art rather than a science, and was initially based on the competitive calendar more so than biology and physiology. (Plisk & Stone, 2003; Verkoshansky, 1999).

Periodization

- Anaerobic and Aerobic needs are different for every athlete
- **100m** (95% pure speed/5% conditioning)
- **200m** (85% speed/15% conditioning)
- Marathon is easy to train its pure aerobic

Periodization (Dr. Jason Karp)

- Linear Periodization
 - Initially builds in volume before decreasing in volume and increasing in intensity
 - Historically used by distance runners
- Reverse Periodization
 - Begins with higher intensity and progresses to lower intensity and high volume
 - Speed first
- Non-Linear(Undulating) Periodization
 - Volume & intensity change from week to week or day to day throughout program



Hard on Hard Days, Easy on Easy Days

- Don't smash them everyday
- Don't Punish them
- “When I run slow everyone can run with me, When I run fast no one can run with me”
- Train with Polarity

High School Sprinters Meso-Micro cycle

- 3 hard days M/W/F(Friday could be the meet)
- 2 hard days once a month, Unload week
- 800m favors a miler rather than a 400m because requires high VO2 max
- 400m favors a 200m runner rather than an 800m; speed potential/speed reserve

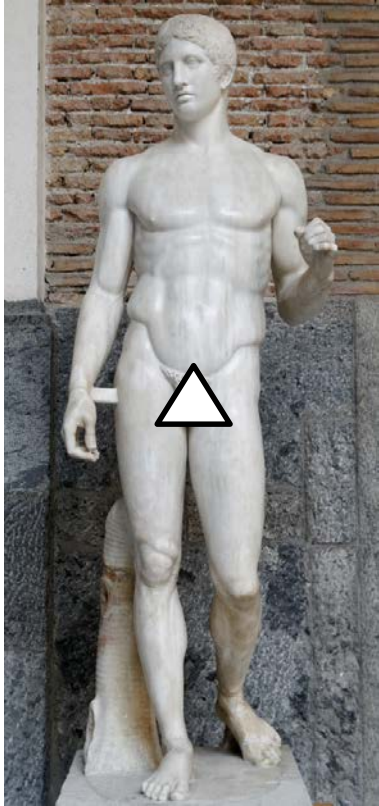
Day	Week 1	Week 2
M	<p>Accelerations</p> <p>Wickets: fast day, possibly spike up</p> <p>110m, 80m, 50m, 30m Rest: Full Recover(2-10min rest)</p> <p>Plyos: 3 x 20yards skipping for max height</p> <p>Med Ball Throws Distance</p>	<p>Drop-in Accelerations</p> <p>Wickets-fast</p> <p>110m, 80m, 50m, 30m Rest: Full Recover</p> <p>Plyos: 3 x 20yards skipping for max horizontal distance</p> <p>Med Ball Throws Height</p>
T	<p>Broken 400m</p> <p>(stride straight, jog curve)</p> <p>4-8 based on week</p>	<p>Wickets:easy</p> <p>400's with quartermilers</p> <p>(potential 4x4 runner)</p>
W	<p>Wickets</p> <p>Skipping & Bounding</p> <p>Circuits & Med Balls</p>	<p>Light/heavy Sled Pull or Pushes x3</p> <p>Easy/Hard Skipping & Bounding</p> <p>Circuits & Med Balls</p>
TH	<p>Strides(barefoot)</p> <p>Running Form Drills</p>	<p>Wickets:easy</p> <p>Pre Meet: 6x150m stride or 100m grass stride(no time)</p> <p>3 Starts</p> <p>Relay handoffs</p>
F	<p>Wickets, Short Hills,Flying 30's</p> <p>In's & Out's(sprint, float, sprint)</p>	<p>Meet</p>

Importance of the Feet

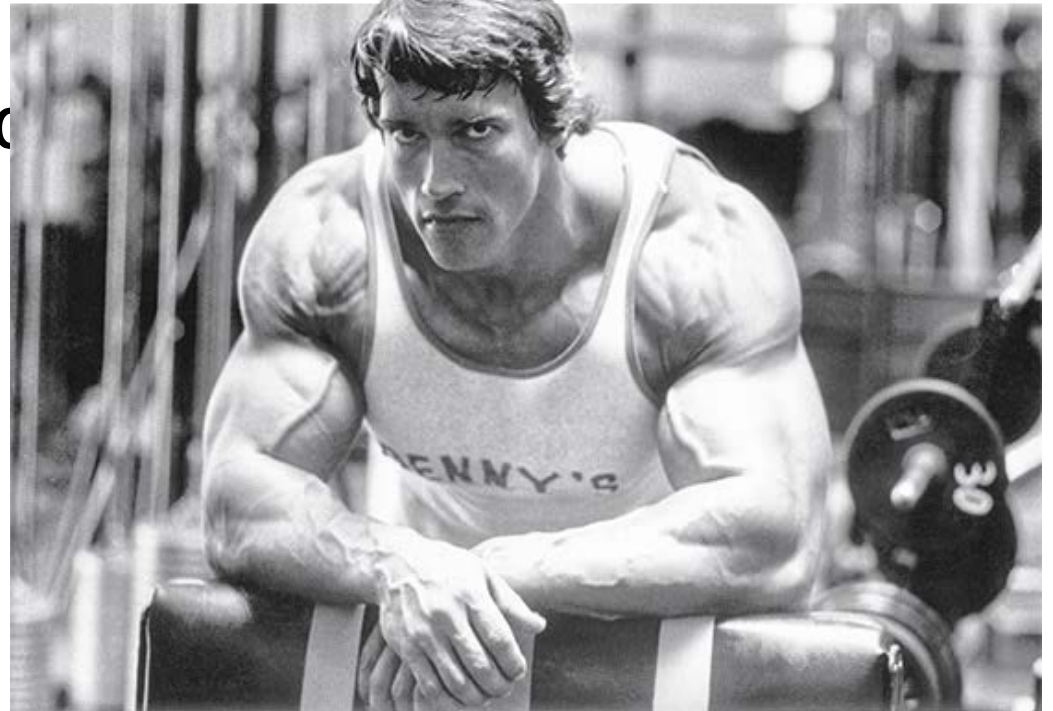


Methods & Modalities

- Footwork and proper care of the feet and toes; Barefoot Progression to easy strides barefoot
- Ballwork-develop Precision of Movement, Optimal Flexibility, Micro Muscle and Promote Proper Sequence of Patterns
- Pool work-fish have mainly white meat
- Mini hurdle work-coordination, footstrike, acceleration patterns
- Plyometrics-Soviet training; rapid ballistic



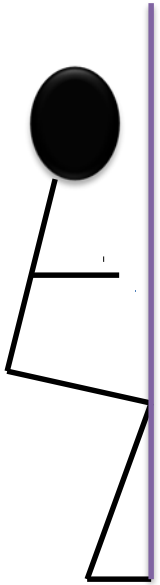
- “If the size of the muscle determined performance...”
- Conventional Weight Training inhibits speed production
- Hard Science from





Squat

- Movement screen-check for imbalances and keep knees from going inward
- Exercise
- Warm Up
- Not contralateral, still isn't the gait cycle



Lutheran High Dual						
Running Time	Warm Up Time	Event				
4:00	3:15	Discus	Piper	Berryman	Leger	Stelling
4:30	warm from Discus	Shot Put(boys 1st)	Piper	Berryman	Leger	Stelling
4:00	3:15	High Jump	Ehlers	Beller	Roefeldt	
4:00	3:15-3:30	Long Jump	Pieper	Kassmeier		
		Triple Jump	Rest for Plainview			
4:30	3:30-3:45	Pole Vault(boys 1st)	Schindler	Kalin		
	None	3200m relay				
5:15	4:30	100m Hurdles	Barnes	Steffen	Maguire	
5:25	4:40	100m Final	Beller	Kassmeier	Neal	Schindler
5:35	4:40	1600m	Aschoff			
5:45	4:45 Warm up work hand offs	400m Relay	Giltsdorf	Neal	Kalin	Hoff
5:50	5:00	400m	Giltsdorf	Lammers	Hauser	Roefeldt
6:05	During 1 mile	300m Hurdles	Barnes	Steffen	Kassmeier	
6:15	5:15	800m Run	Unger	Burroughs		
6:25	stay loose after 4x1	200m Final	Hoff	Maguire	Neal	Swanson(warm up during mil
		3200m run				
6:30	Warm after 300hurdles	1600m Relay	Pieper	Swanson	Giltsdorf	Hoff
			Aschoff	Hauser	Lammers	Unger



My Coaches

- Mom- Nicole Simon (quality)
- **Lincoln Pius X**- George O'Boyle (drink ya water, No carousing-stay off your feet, Sweatpants or go home)
- **Nebraska**- Mark Devenney(late)-MD/Hurdles
- Billy Maxwell-
Sprints/Hurdles/Relays(USTFCCA HOF) (piss & vinegar, elbows & assholes)
- Matt Martin



Other Great Coaches

- Dan Pfaff- Olympic Champs, NCAA champs; trains in AZ @ Altis
- Charlie Francis(late)- Canadian Sprints, Ben Johnson; *Speed Trap(1992)*
- Marv Marinovich- USC team captain, national champ, Oakland Raiders Strength Coach
- Nick Curson www.speedofsport.com
- Mike Maddox- Weighted Jump Rope, isokinetic jumping machines Pronetics
- Gavin Mcmillan- Sports Science Labs

Vern Gambetta Circuit

- Lunge with Twist x20
- Half Squats x20
- High Knee Toe Taps x40

5 minute Lunges Warm Up Circuit

- Front Lunge
- 1-2 o clock
- Lateral lunge/cossack squat
- 4-5 o clock
- Backwards 6 o clock
- Adams State Cross Country