



TEXAS A&M TRACK & FIELD



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General Preparation & skill acquisition

The biggest shortcoming of the sprint coaching community is that we fail to prepare our sprinters for the physical demands of speed performance.

Speed (sprinting) is a complex skill

Complex skills must be trained, not avoided

- Skill = pattern of movement installed through repetition (neutral)
- Speed must be actively rehearsed (trained) if athletes are to achieve highest skill levels (best possible result in performance)
- It is delusional to think that skill can develop without specific skill training. Teaching time and learning time must be considered.

Speed (sprinting) is a complex skill

Complex skills must be trained, not avoided

- Consider another complex skill scenario: tackling.
Teams that NEVER tackle in practice are unable to tackle in games (Mumme).
- For the best coaches: Tackling is planned as part of the earliest training.
Tackling is not scheduled EVERY day in practice, but it is planned frequently.
It is unwise to approach tackling in an unplanned way or to tackle heavily the day before a game (fatigue).
- This logic applies to free throws, batting practice, or playing a concerto

Physiology

- Achieve speed goals first, then add endurance to “seal” speed levels
- Repeat: Speed first, endurance later
- There is ZERO aerobic component to 100m, 200m / very little for 400m
- Speed CREATES endurance, not vice-versa. Speed reserve is required.
- Endurance does NOT create speed
- MJ wr 400 $21.23 / 21.96 = 43.18$ was the result of his 19.32 pr at 200m
- Endurance makes permanent
- Endurance retards coordination
- 15 x 200m @ 29.5 w 2-4 min rest, will not produce an elite 400m result.
It will retard speed acquisition and specific coordination for 400m performance

Aerobic component of 400m performance??

- Australian study: 18 athletes (eight 400m, ten 800m athletes)
- Conclusion 40-45% aerobic
- Agenda?
- Winckler / Schexnayder opinion
- 40% = published studies of 800m aerobic component

Aerobic component of 400m?

research suggests athlete physiol varies

- Aerobic component is minimal to small
 - Kamaria Brown 22.15w (52.10, 50.2 r) 15% my estimate
 - Jessica Beard 22.95 (50.56, 49.3r) 20% my estimate
 - Clora Williams 23.65 (51.06, 49.8r) 30% my estimate
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- Even for athletes like Clora, aerobic system accounts < 1/3 of performance
 - Why spend 100% of training time on system that accounts for 30% of performance?
 - Logic: spend 70% training the 70% that matters, and not let the minority 30% drive the training plan.

Especially, 400m athletes are sprinters

Sprinters need:

- Speed
- Power
- Coordination (agility)
- Specific endurance (race tempo and faster)
- Effective posture at all times
- General endurance

[illegible]

General Preparation: What we want

- Develop skills; acceleration, maximal speed, coordination at max intensities
- Develop Power as measured in a standing long jump or overhead back SP
- Develop coordination and range of motion (move well)
- Develop RAPID movement patterns through RANGE OF MOTION
- Develop righteous posture and mechanics / Run tall
- Develop race specific pacing (tempo) and faster
- Reject “strides” or “striding” / eliminate the word from training vocabulary
- Seek specific, rather than general fitness
- Explosive: Football, volleyball, basketball

General Preparation:

What we DO NOT want

- Volume-based training plans, that delay acceleration development and speed development (skill acquisition)
- Volume-based emphasis on endurance
- “conditioning” without power and posture
- ”building an endurance base” mentality
- Develop SLOW patterns of movement through SMALL RANGE of MOTION
- Cross-Country or slow training tempos[W35”-45”/200] [M29”-39”/ 200]

General Preparation phase is not so “general”

- Basically, we do the same thing all year
- We train everyone for the 200 and 4x100
- Almost everyone runs the 4x100
- Think “proportional” [$39 = 6\text{-}7 \text{ week general prep} / 18 \text{ week} = 3 \text{ week GP}$]

Intensity = % of maximal speed

- Speed training has a strict definition. Speed defined by intensity only
- Speed training is training done at 95% of MAXIMAL speed, as measured in a 100m performance
- Example: For an 11.50 sprinter $11.50 / .95 = 12.10$
- For a 22.0 200m guy, running 200's in 24.0 is not speed work / running 1-2 x 150m in 16.0 IS
- Compare: The 400m dash is performed at 82-85% of MAXIMAL speed

Time is not on your side

- It takes time to acquire skill (neutral). So, get right to it.
- It takes even MORE time to stabilize skill (call it up on cue). So start early
- If we are not training skilled movement patterns we are training poor movement patterns
- It takes time to reverse movement patterns and even more time to reverse a stabilized movement pattern
- It takes 10-12 weeks of SPEED DEVELOPMENT training, plus 6-7 competitions, to sharpen a sprinter to into top form.
- 10 weeks + 7 weeks (7 competitions) = 17 weeks [some overlap]
- January 11, 2014 to May 10, 2014 = 16 weeks
- Start speed development activity from the first day of practice.
- Do not wait to begin speed development training

The high school season is short

- Understand the time limitations you are working with.
 - Do not waste time on slow, ugly running. If it looks bad it is bad. Training should look like the performance.
 - “Slow, ugly running detrains sprinters like no other activity”. The shorter the season, the more this statement applies
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|-----------------------------|---------------------|
| • District / Conference | 12 weeks / 35 weeks |
| • Regional / NCAA Round 1&2 | 14 weeks / 37 weeks |
| • State / NCAA Round 3&4 | 16 weeks / 39 weeks |

If we avoid peaking “too early”, we will not peak AT ALL

- Reject the “don’t peak too soon” philosophy, which robs us from teaching our athletes, and gets us BEAT.
- The problem: In our city, our state, our nation, too few athletes run fast. We do not realize our potential often enough. [State meet, 5 finalists at conference (?), international medalists(?)]
- Sprinters run too fast, too soon: HAS NEVER BEEN the problem.
- Assess quality depth on your team. Measure your progress within your group. 2013 ex: 100m depth = 5 @ 11.44 w 4 prs.
- Seek pr’s early, you’ll be amazed what you get
- Encourage fast sprinting. Teach every athlete in your charge
- Challenge every athlete to be a student of sprinting
- Do not discourage speed development and fast sprinting

We never know what a peak is bc spend so much time avoiding it

- What are our athletes really capable of? Much more, I think
- If you want your athlete to have a great season, open them up AT or NEAR pr levels. Then you will really see what your athlete can do
- In the USA, athletes are over-conditioned and thus, under-skilled
- Quit blaming the wrong thing: Acceleration versus conditioning. Lack of acceleration skill is the problem. Fitness, conditioning or “being in shape” is not the problem.

Plan to run fast before the target competition

- If your athlete sets a personal best April 1st, they will be running even faster on May 15.
- The idea is to perform at championship levels (sprint fast) 4-6 weeks BEFORE the target competition (state) so that the athlete is repeating a previous pattern, rather than continuing to install a pattern at the target championship.

Sprinting does not cause injury

Injury is caused by:

- Lack of hydration
- Poor mechanics (overstriding, “reaching”)
- Improper or insufficient warm up
- Premature return from previous injury (not enough rehab)
- Overuse / imbalanced training (too much of anything)
- Lack of rest
- Insufficient fuel (diet)
- Combination of the above

- **A -- MONDAY**
 - ACCELERATION DEVELOPMENT
 - 6-8 X 50M GRASS
 - MULTI JUMPS
 - STRENGTH TRAINING
- **B --TUESDAY**
 - MAXIMAL SPEED DEVELOPMENT
 - TEMPO RUNS 1 (1200M MAXIMUM, INTENSITY 75-80% + / 80-250M) GRASS
 - MULTI THROWS
- **C --WEDNESDAY - VOLUNTARY**
 - ACTIVE RECOVERY
 - POOL TRAINING AND OR STRENGTH THRAINING
- **A --THURSDAY**
 - ACCELERATION DEVELOPMENT
 - CIRCUIT OR GRASS SPRINTS
 - MULTI JUMPS
- **B --FRIDAY**
 - MAXIMAL SPEED DEVELOPMENT
 - TEMPO RUNS 2 (1200M MAXIMUM, INTENSITY 75-80% + / 120-300M) GRASS
 - MULTI THROWS
- **C --SATURDAY**
 - GENERAL STRENGTH
 - MULTI THROWS / MULTI JUMPS
- **D --SUNDAY – COMPLETE REST**

- **TEXAS A&M UNIVERSITY Track & Field wk 04.14 /WEEK:04** (Sep 15 - 21, 2013) // General Preparation 1 / Try outs conclude / train with Intent. Learn, adjust and improve posture.
- G2: Beard, Beckles, Bellille, Brown, Ekpone', Flemings, Laseak, Little, Mayungbe / G1: everyone else
- SUNDAY, Sept 15 / Rest
- MONDAY, Sept 16 / 2:50 GROUP – Meet at track. [Maroon Warm up barefoot (30m) + Movement Prep]
 - Jumps: 3 x SLJ, 3xL, 3xR (~~measure last 3~~) / 5 x STJ in sand pit
 - Basic Wall Drill: Acceleration sequence: low heels, no negative recovery
 - 6 x 16 str acceleration ladder (M: 3'5" >>> /W: 3'3">>)
 - 8 x 50m (in pairs) [90% intensity] ~~hold breath on reps 6 & 8~~
 - wd grass : 4 x slalom run grass barefoot contrast with 4 x marching runs / 8 x 6h walkovers (8 lateral)
 - Strength Training / Abs
- TUESDAY, Sept 17 / 2:30 GROUP – Meet at track. [White Warm up (30m)]
 - Intro: Pedestal strength 2 x 6 + 2 x 6 push ups
 - <Footstrike Sequence:. Toe up. 2 x10 dbl. 1 x 10 L, 1x10R>
 - Basic Marching Sequence. Run Tall. Basic Posture -- arms alone, whole body
 - 6 x Vmax [M: 5'10"(2) >>> / W: 5'4" (2) >>>] Videotape
 - 8 x 150m on grass in pairs / w 2' rest btwn reps, 4' btwn pairs [M:13.5-14.5" / 20.5-21.75" // W: 15-16" / 23-24"]
 - Multi Throws : med ball / 8 x ohb , 8 x bkf
 - wd grass: 4 x10m marching runs quick contrast w 4 x 20m marching runs / 8x 6h walkovers (4 sgl, 4 o/u)
- WEDNESDAY, Sept 18 / 2:50 GROUP -- VOLUNTARY Meet at pool. Pool training. ****

- THURSDAY, Sept 19 / 2:30 TEAM MEETING – men's locker room [White Warm up (30m)]
 - 6 x 16 str acceleration ladder -- 2 track, 2 grass , 2 curve (M: 3'4" +.5>>> /W: 3'2">>)
 - 2-3 x VMax
 - Base test: 2 x 150m (flats) / 12'-15' btwn trials Videotape
 - Multi Throws : med ball /8 x ohb , 8 x bkf
 - wd grass: 4 x20m marching runs contrast w 4 x 10m backward runs / (4 lateral, 4 sgl)
 - Strength Training
- FRIDAY, Sept 20 / 2:50 GROUP – Meet at track. [Basic warm up barefoot (30m) + Movement Prep]
 - <Footstrike Sequence: Toe up. 2 x10 dbl. 1 x 10 L, 1x10R>
 - Basic Marching Sequence. Run Tall. Basic Posture -- arms alone, whole body
 - 6 x Vmax [M: 5'9"(2) >>> / W: 5'3" (2) >>>]
 - 3 x (150 + 50) on grass (150 grass , turn around 50 hard) / 5' rest btwn each /2 x (100 + 50), 100 [M: 13.0/19.5 // W:14.0 / 21.0]
 - 8' rest btwn sets / 50's full effort // G1: same as G2
 - wd grass: walk 1 interior lap / 4x10m marching runs contrast w 4 x 20m marching runs / 8 x 6h walkovers (4 single, 4 o/u)
- SATURDAY, Sept 21 / 9:00a GROUP – Meet at track [2x20m Warm up]
 - Pedestal strength 2 x 8 + 2 x 6 push ups
 - Hurdle Mobility : 6 x 6h sgl w med ball. / 4 x o/u with med ball
 - 1 x 8 stadiums (Run tall, vertical displacement)
 - Emphasis : Multi Throws /Base test: 4 x ohb, 4 x bkf w mb. Go to sector: 2 x w.u. , 2 x ohb, 2 x bkf w shot
 - Strength Training / Abs
- SUNDAY, Sept 22 / Rest

Think of it this way

- It takes a long time to improve, even a little
- If a sprinter runs 10.45 on March 27, it will be virtually impossible to run 10.05 on June 10. You can't move that far in such a short time (10-11 weeks)
- If running fast late were advantageous, then the NCAA champion would emerge from the LAST athletes to run fast.
- In NCAA competition, the NCAA champion nearly always comes from the FIRST three athletes who run fast. If a sprinter can run 10.15 in March, he has a chance to run 10.05 in June.

Or think of it this way

- Track practice (BAD)/ endurance only
- Basketball practice (BAD) / free throws only (no skills)
- Football practice (BAD) / never tackle
- Football practice (GOOD) / scrimmage 3 or 4 days before FRI (45', 30', 30')

Testing

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|--|----------------------------|
| • Body Comp (and as needed) | wk -1, wk 14, wk 17, wk 39 |
| • SLJ, STJ | wk 1, 6, 12* |
| • Overhead back shot, Between knees fwd shot | wk 2, 7, 12* |
| • 150m | wk 2 (2x), wk 12 (1x) |
| • 45/35 second run | wk 10 |
| • Fly 30 | wk 7-11, wk 13-14 |

Practice Acceleration Ladder



Practice Acceleration Ladder



Practice Grass 50s



Practice Grass 50s



Maximal Speed Dev (Wickets)



Max Speed Dev (Wickets) day 2



Multi Jumps



Standing Long Jump



Standing Triple Jump



Between Legs Forward Throws



Overhead Back Throws



Practice 150 Base Test



Practice 150 Base Test



Acceleration



Acceleration



Acceleration - Half Starts



Acceleration - Half Starts

