

Speed Development Methods

New concepts from the USA

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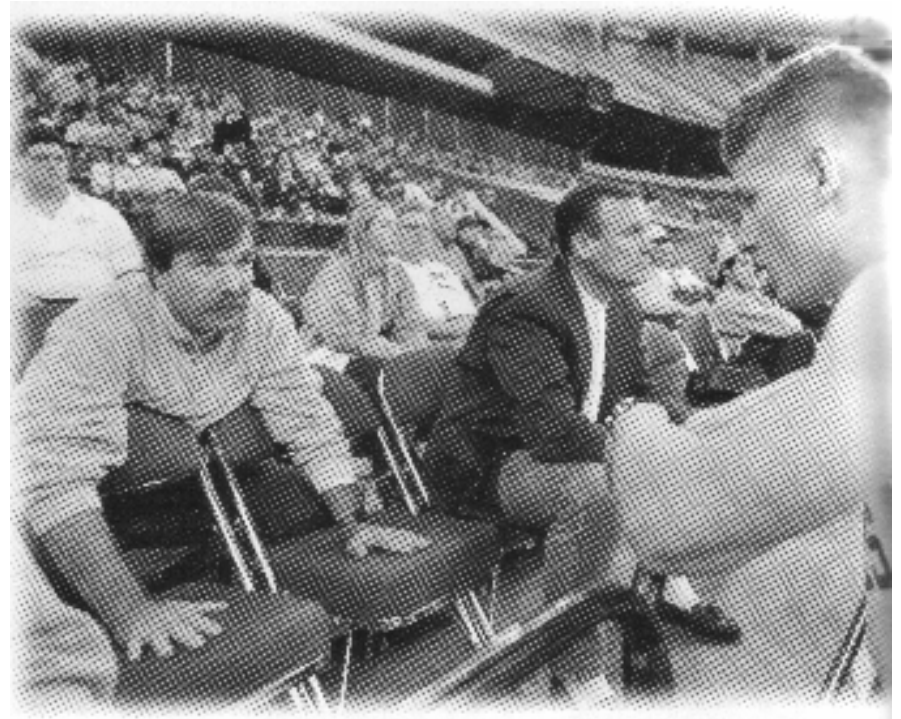
Speed & Conditioning Consultant

US Coaches Observed

◆ Dan Pfaff

■ Coach of

- Donovan Bailey (9.84)
- Bruny Surin (9.84)
- Obadele Thompson (9.87)
- Kareem Street Thompson (9.95)
- Donovan Powell (9.96)
- Rowan Griffith (19.94)
- 14 athletes at the 1999 World Athletics Championships



Donovan Bailey

- ◆ 1995 World Champion
- ◆ 1996 Olympic Champion
- ◆ 1997 2nd World Championships
- ◆ 1998-1999 Achilles rupture
- ◆ 2000 10.00w & 10.03w (May 2000)



US Coaches Observed

◆ John Smith

■ Coach of

- Maurice Greene (9.79)
- Ato Boldon (9.86)
- Jon Drummond (9.92)
- Brian Howard (9.94)
- Inger Miller (10.79/21.77)

■ Previously

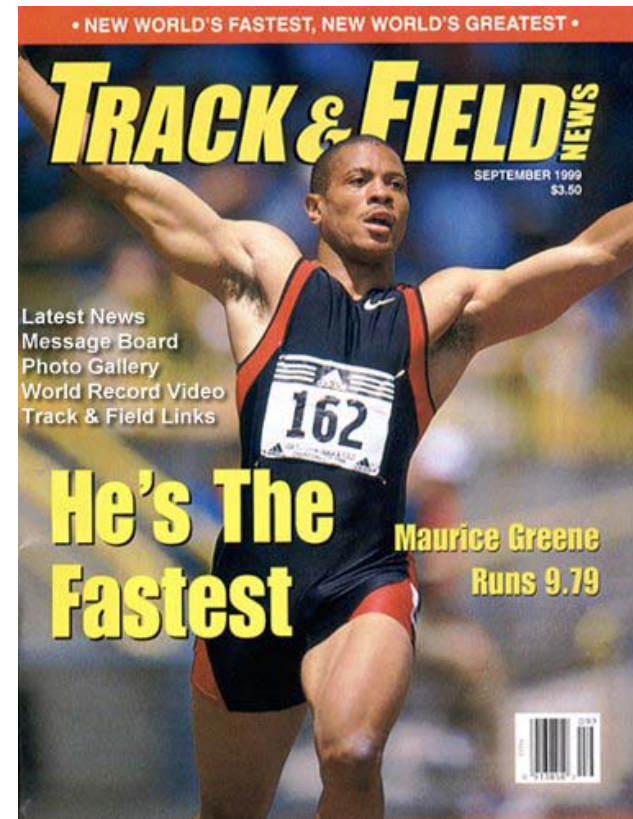
- Steve Lewis (1988 400m Olympic Champion)
- Quincy Watts (1992 400m Olympic Champion)
- Kevin Young (1992 400mH Olympic Champion)



Maurice Greene

- ◆ 1997 World Champion
- ◆ 1999 World Champion
- ◆ 1999 World Record Holder (9.79).
- ◆ 2000 9.91 (-0.2w)
- ◆ GOAL for 2000

9.69e



US Coaches Observed

◆ Bob Kersee

■ Coach of

- Gail Devers (10.82 – Dual Olympic 100m Champion)
- Kenny Harrison (18.29 Triple Jump – Olympic Champion)

■ Previously

- Flo Jo (Current 100m & 200m World Record Holder)
- Jackie Joyner-Kersey (Heptathlon World Record Holder)

Flo-Jo

- ◆ 1987
 - 100m 10.99
 - 200m 21.97
- ◆ 1988
 - 100m 10.49
 - 200m 21.34
 - 400m Relay 48.1
- ◆ 150kg Lunge!!



Sprint Technique

- ◆ Rhythm & technique is what allows an athlete to improve their maximal running velocity and overall sprint times.
- ◆ Conditioning is closely linked to technique
- ◆ Strength Application (Most Important)



Female Sprint Technique



Female Sprint Technique

- ◆ Lack of knee lift & horizontal force production are the two major faults in female sprinting.
- ◆ The best female sprinters (Devers, Miller, Jones) all have well developed Front-side Mechanics & Vertical force production



Female Sprint Technique

- ◆ Lack of strength results in horizontal force production rather than vertical force production
- ◆ Typical lower limb positions with female sprinters are either obtuse or acute tibia angles with the ground.

Technique to make you Fly



Starting Technique

- ◆ Very active arm action
 - First 5-8 strides
- ◆ Drive knees to chest
- ◆ Head stays down for as long as possible
- ◆ Piston action with legs
 - (Pfaff)
- ◆ Cycle action with legs
 - (Smith)



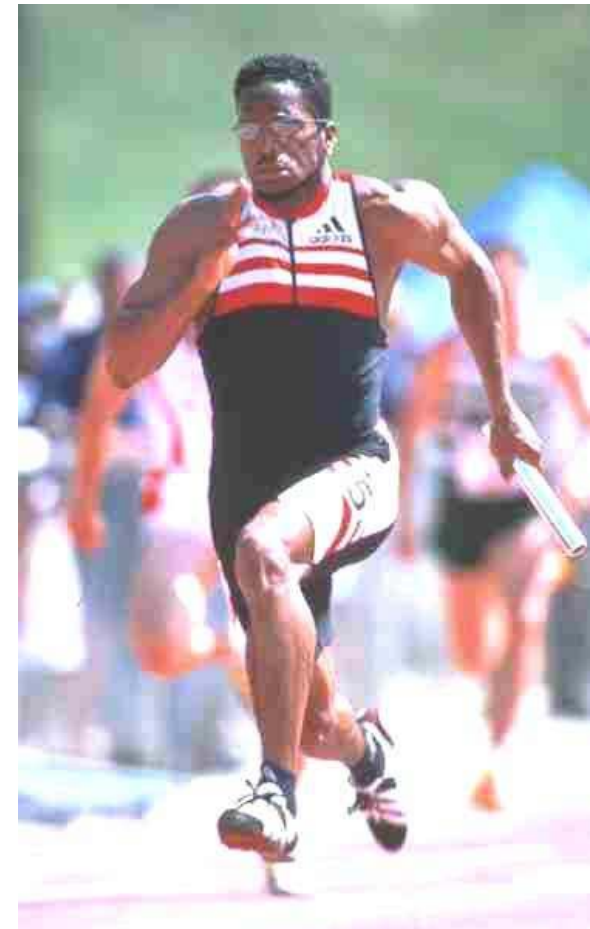
Sprint Technique 1

- ◆ Elbows in front of body
 - If not in front, limits full knee lift position, increases rear side mechanics
- ◆ Slight forward body lean
- ◆ Chin down



Sprint Technique 2

- ◆ Lower leg mechanics cues
 - “Riding the Bike”,
 - “Running over Mini Hurdles”,
 - “Stepping over the long grass”
- ◆ Powerful Vertical Force Production into track
 - Only after knee lift motor pattern has been established.



Sprint Technique 3

- ◆ Maximal Dorsi-Flexion at ground contact
- ◆ Do not try to fully extend thigh with each ground contact
 - Thigh passes only 20° past alignment with upper body)



Periodization – General Preparation Phase

◆ Dan Pfaff

- Mon
Accelerations/Rud/Weights
- Tue
Technique/Mobility/Cond
- Wed
Special endurance /Weights
- Thu
Technique/Gen Strength (GS)
- Fri
Blocks to 40m/Rud/Weights
- Sat
Spec End/Mob/GS
- Sun
REST

◆ John Smith

- Mon
Upper Weights/Spec End
- Tue
Low Weights/Tempo runs
- Wed
Drills/medball-sprints
- Thu
Upper Weights/Spec End
- Fri
Low Weights/Accelerations
- Sat
REST
- Sun
REST

Periodization – Competition Phase

◆ Dan Pfaff

- 3 Day rotation.
- Day 1.
 - Acceleration – Power
- Day 2
 - Top-End Speed
- Day 3
 - Speed Endurance

◆ Rotates these sessions.

◆ John Smith

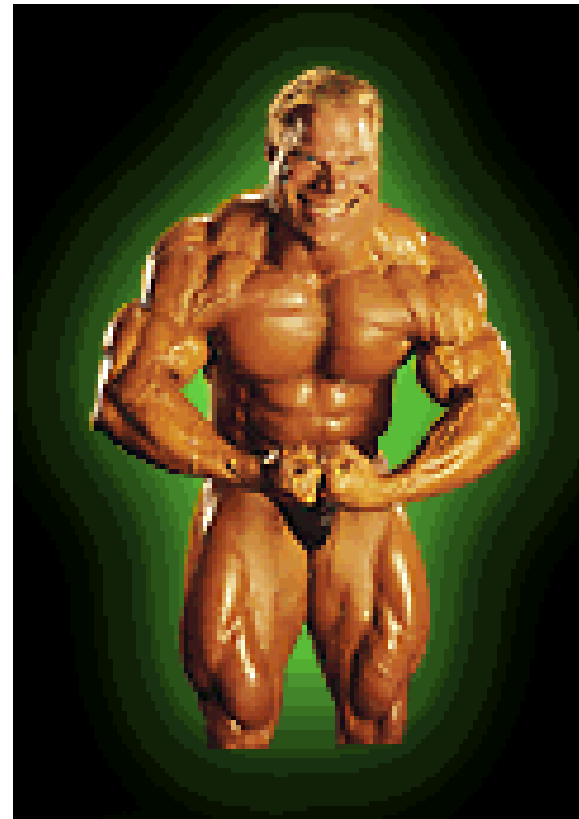
- Mon
 - 400m 300m 200m(49,36,23)
- Tue
 - Blocks 10-50m
- Wed
 - Accelerations to 80m
- Thu
 - Starts over 20-30m.
- Fri
 - Rest (warmup)
- Sat
 - Competition
- Sun
REST

Recovery/Peaking Cycles

- ◆ During any lightening off week, only modify one of the following factors:
 - Volume
 - Intensity
 - Density
- ◆ Speed/power athletes only need 7-10 days to “Peak” for top performance.

Strength Training

- ◆ Maximal Strength is not a priority for either camps.
- ◆ Speed Strength (power) emphasis.
 - Combo Squats,
 - Power Cleans,
 - Jump Squats,
 - Split Jumps
 - Eccentric Calves (Pfaff)



Rudiment

- ◆ Pfaff believes in What he calls Rudiment 2-3 times per week all year round.
- ◆ Consists of:
 - low intensity plyometrics
 - Medball work
 - Sandpit jumps
 - Muscular Endurance

