Speed Development Methods

New concepts from the USA

Adrian Faccioni
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 – Duel Olympic 100m Champion)
    - Kenny Harrison (18.29 Triple Jump – Olympic Champion)
  - Previously
    - Flo Jo (Current 100m & 200m World Record Holder)
    - Jackie Joyner-Kersee (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)
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