**400 METER TRAINING**

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**PHILOSOPHY**

- 400m dash is a sprint!!!!!!
- Our sprint program is designed around the 400m dash
- We believe that 400m sprinters have the flexibility to run from 100 to 800m if needed
- We want our athletes to run their fastest at the end of the year
- We train in practice, not race. All efforts between 80-95% of race speed
- We develop the ability to run quality doubles when needed

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**TYPES OF WORKOUTS**

**Strength Endurance**

- Development of general strength
- Assists the ability to finish off the last 100 meters
- Lasts about :10 - .35 seconds in duration
- Recovery about 3:00 between sets or repetitions
- Samples
  - 6 x 100m hill (3 to 4° incline)
  - 4 x 200m hill (steeper)
  - 6 x 10 stadium stair runs
  - 3 x 300m hill
**Types of Workouts**

**Power Speed**
- Emphasizes speed of muscle contraction
- 10 repetitions or less
- Duration no more than :10 to :12 seconds
- Recovery about 3:00
- Samples
  - 60 meter hill
  - 10 x 30 meter harness runs
  - Plyometric workout

**Speed Endurance**
- Vital to good 400 meter running
- Incur high Oxygen debt
- Distances run – 100 to 600 meters
- Total distance not to exceed 1200 meters
- Recovery about 8:00 to 10:00 between repetitions
- Samples
  - 10 x 100
  - 6 x 150
  - 5 x 200
  - 4 x 300
  - 2 sets of (2 x 300 w/ 60 sec RI) 8 min/sets RI

**Tempo Endurance**
- Aerobic work – increases Oxygen uptake
- Important to phosphate energy sources
- Runs at slower paces – teaches rhythm
- Emphasis on quantity NOT quality (75-80 % effort)
- Recovery is 2:00 to 3:00
- Samples
  - 8 x 200
  - 6 x 300
  - 1 x 50, 100, 150, 200, 250, 300, 350
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**Types of Workouts**

**Event Running**

- Distances up to 450 meters
- Teaches racing concepts and strategies
- Recovery 5:00 to 10:00 depending on distance
- Total distance run between 1200-1500 meters
- Samples
  - 3 x 300 (50 all out, 150 “float,” 100 sprint)
  - 1 x 350 (early season add :08; late season add :06.5 to :07)

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**Types of Workouts**

**Speed**

- Distances vary from 30 to 150 meters
- Runs are at full speed, both straight and turns
- Full recovery – need quality performances
- Relay hand-off practice counts
- Samples
  - 6 x 40 meter starts on curve
  - 6 x 60 meter flying starts on curve
  - 6 x sprint relay hand-offs

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**Planning Workouts**

- Develop a plan for the year
- Decide what type of workout is to be done on each day
- Pick the workout that you like best to work on that energy system for that day
- Use colors to show each day and type of workout
### Slide 10

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**Key**
- Lactate (Speed Endurance)
- Good Rest (8-10 min)
- Tempo Endurance
- Short Rest (3 min)
- Speed
- Good Rest (8-10 min)
- Strength Endurance (Hills)
- Good Rest (8-10 min)
- Event Runs (simulate event)
- Good Rest (8-10 min)
- Meets means No practice

### Slide 11

**Sample Weekly Workouts**

**Early Season**
- Monday – Center Street Hills – 3 sets of 2 short one long (Power Speed/Strength Endurance)
- Tuesday – 2 x 500, then 2 x 200 (Speed Endurance/Lactate)
- Wednesday – 8 x 300 @ 80% (Tempo)
- Thursday – 2 sets of 10 x 40m sprints with 20 sec RI, 8 min RI between sets (Power Speed)
- Friday – Pre-meet workout or Meet – starts and handoffs (Speed Workouts)
- Saturday and Sunday – off, but athletes should do a 15 min. run over the weekend.

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**Sample Weekly Workouts**

**Mid Season**
- Monday – Center Street Hills – 2 sets of 2 long, 1 short, and 1 set of 1 short, 1 long (Strength Endurance)
- Tuesday – 2 sets of 2 x 300 with 60 sec. RI; 8 min RI between sets (Speed Endurance/Lactate)
- Wednesday – 4 x 300 @ 90% (Tempo)
- Thursday – Pre-meet workout (Speed Workouts)
- Friday – Meet
- Saturday and Sunday - off, but athletes should do a 15 min. run over the weekend.
**SAMPLE WEEKLY WORKOUTS**

**Late Season**

- **Monday** – 3 x 200 at race pace of 400m, 4 x 150m @ 75% (Event Running)
- **Tuesday** – Meet. We have sprinters do 100, 200, and 400’s during the meet. One week the athletes will run the 4 x 100 relay, 400, 200; the next week 100, 4 x 200 relay, 4 x 400 relay
- **Wednesday** – 4 x 300 @ 90% (Tempo)
- **Thursday** – Pre-meet workout (Speed Workouts)
- **Friday** – Meet
- **Saturday and Sunday** - off, but athletes should do a 15 min. run over the weekend.

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**HOW TO DETERMINE TIME BY %**

- Take race distance and divide by goal time or PR time
- This gives you the avg. speed (m/s) for that race
- Take this speed and multiply by the % effort
- This will give you the new speed at that percentage
- Take workout distance divided by the new speed
- This will give you the target time for the workout
- **Example**: 400m/50 sec = 8 m/s. 8m/s * .9 = 7.2 m/s. 300m/7.2 m/s = 41.7 sec for 300m workout @ 90%

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**ACKNOWLEDGEMENTS**

- These workouts were developed over many years with the help from articles/clinics by the following people.
  - Owen Anderson, Ph.D.
  - Clyde Hart – Baylor University
  - Mark Guthrie – University of Wisconsin
  - Many others from clinics and conversations at meets
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