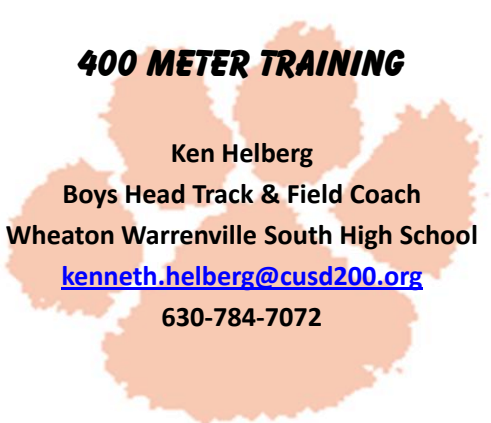


Slide 1



**400 METER TRAINING**

Ken Helberg  
Boys Head Track & Field Coach  
Wheaton Warrenville South High School  
[kenneth.helberg@cusd200.org](mailto:kenneth.helberg@cusd200.org)  
630-784-7072

---

---

---

---

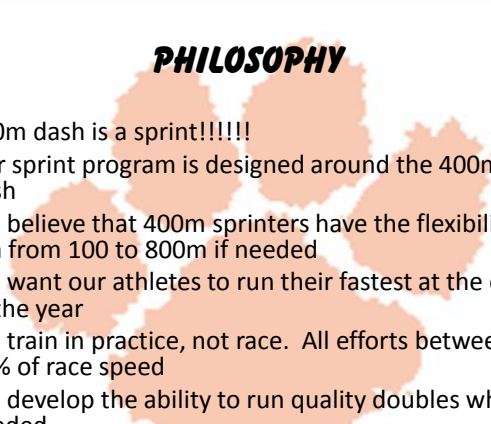
---

---

---

---

Slide 2



**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

---

---

---

---

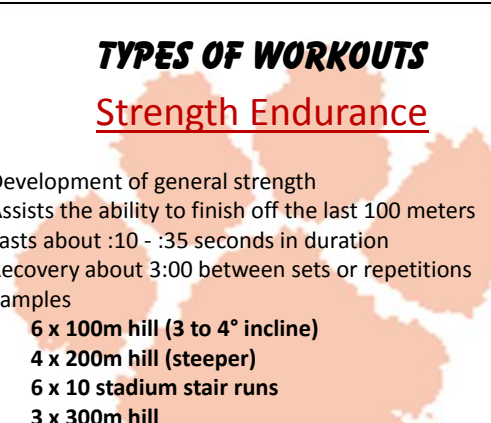
---

---

---

---

Slide 3



**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

---

---

---

---

---

---

---

---

Slide 4

**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**

---

---

---

---

---

---

---

---

Slide 5

**TYPES OF WORKOUTS**

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**

---

---

---

---

---

---

---

---

Slide 6

**TYPES OF WORKOUTS**

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**

---

---

---

---

---

---

---

---

Slide 7

**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)

---

---

---

---

---

---

---

---

Slide 8

**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**

---

---

---

---

---

---

---

---

Slide 9

**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

---

---

---

---

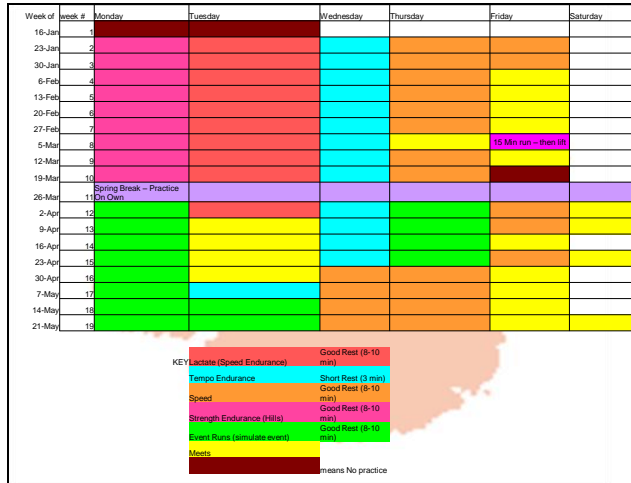
---

---

---

---

Slide 10



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.

Slide 12

## 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.

Slide 13

## **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.

Slide 14

## **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:**  $400m/50 \text{ sec} = 8 \text{ m/s}$ .  $8m/s * .9 = 7.2m/s$ .  
 $300m/7.2 \text{ m/s} = 41.7 \text{ sec}$  for 300m workout @ 90%

Slide 15

## **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

***CONTACT INFORMATION***

**Ken Helberg**  
**Boys Head Track & Field Coach**  
**Wheaton Warrenville South High School**  
[kenneth.helberg@cusd200.org](mailto:kenneth.helberg@cusd200.org)  
**630-784-7072**

---

---

---

---

---

---

---

---