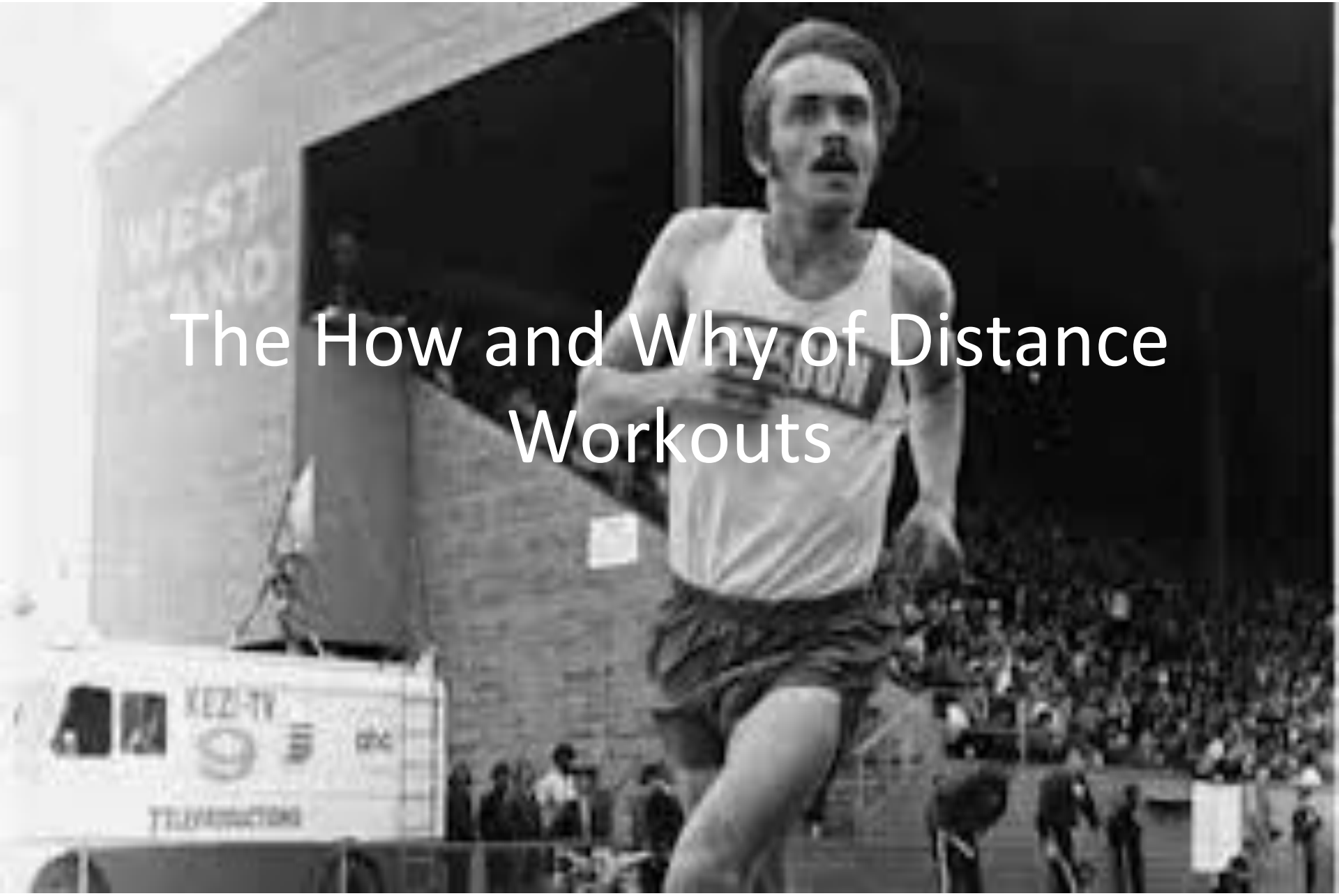


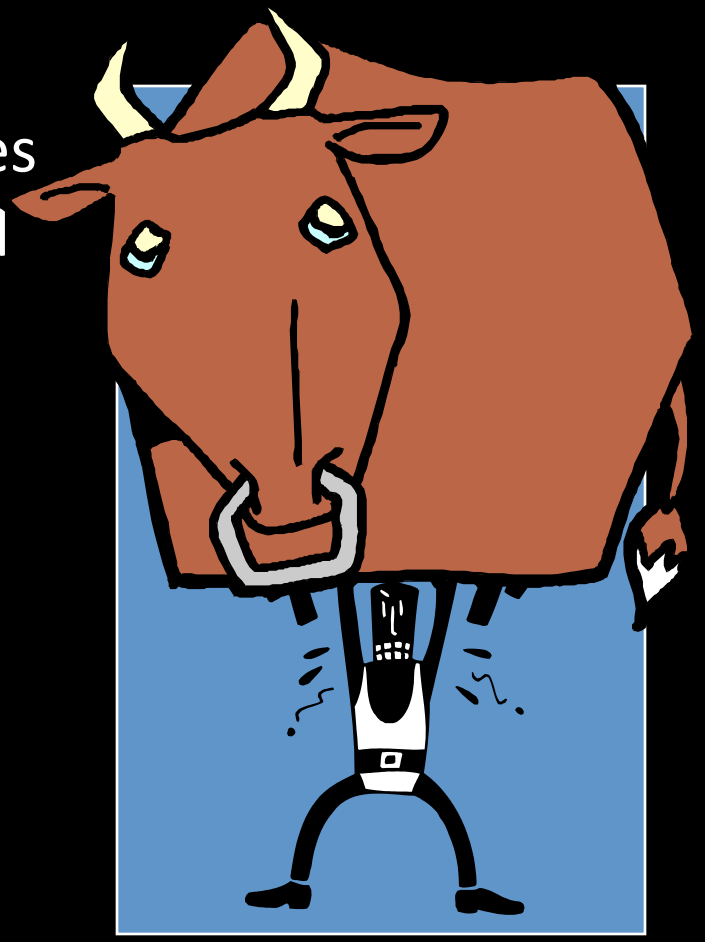

# The How and Why of Distance Workouts

# Basic Principles of training

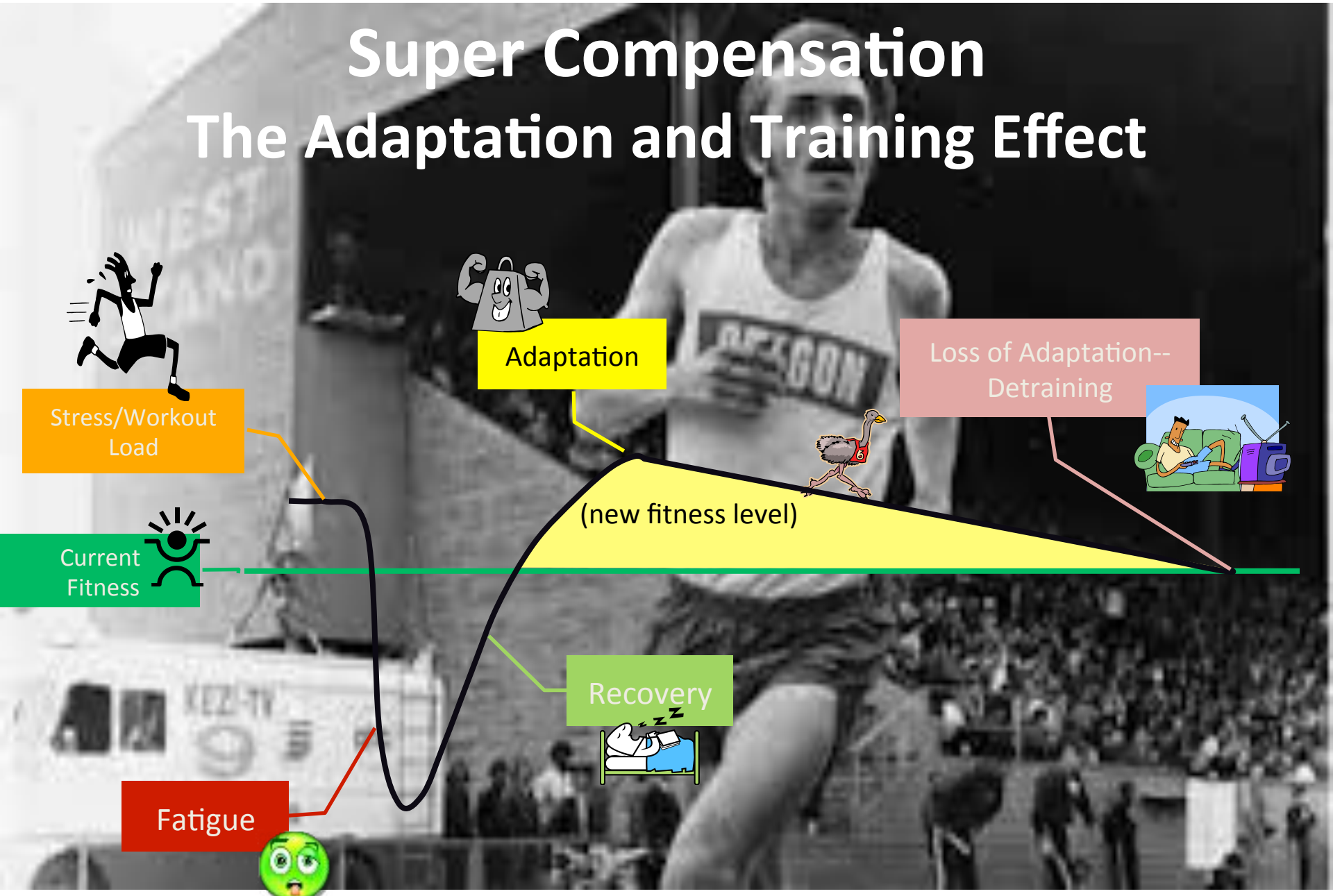
- Overload
- Accumulation
- SAID
- Adaption
- Rest and Recovery
- Individually

# The "Overload" Principle

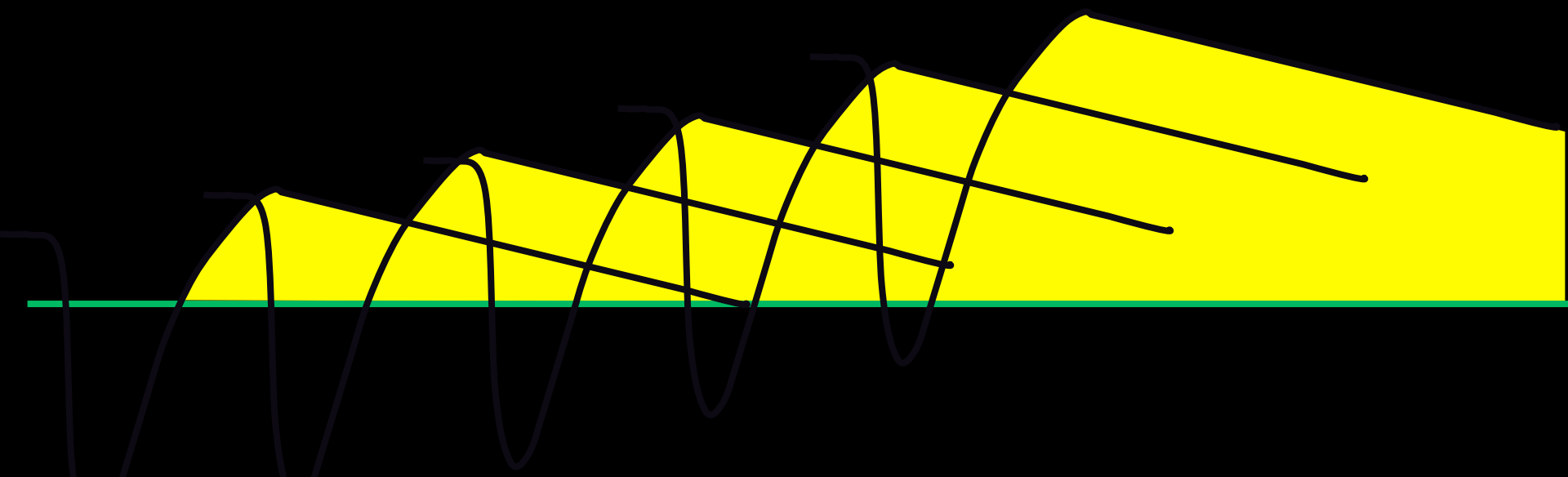
- The 'Ultimate' principle to apply to all facets of training in most sports.
- Gradual increase in workout stresses create a physiological/psychological adaptation over time.
- Athletes enhance athletic performance by increasing the capacity for work over time.



# Super Compensation
# The Adaptation and Training Effect



# The Law of Accumulation



- Effect of training can be cumulative.
- Over the course of weeks, months, seasons, and years the body adapts to the demands put on it.

# Principle of Training: S.A.I.D.

- Specific Adaptationss to Imposed Demands.
- Train the skill or systems you will use in competition.
- Mimic the Demands of Competition in workouts.
- The body adapts to the demands placed on it.

# Adaptation to Workouts and Recovery

- **Body will adapt to a specific workout, but then will have a lesser training response.**
  - **Once a workout is no longer demanding there is little further physiological change.**
  - **When the body is not challenged by a specific workout, it is time to give it a different challenge.**
- **Physiological gains are made during recovery.**
  - **Body requires time to make the adaptations to stress.**
  - **If not enough time is provided then chronic problems begin to occur.**
    - **Stress fractures, tendonitis, anemia, chronic fatigue, "burn out", etc… .**

# Rest & Recovery

- Purpose of a recovery run
- Length of a recovery run
- Cross Training
- Recovery weeks
- Rest and recovery is not an absence of training, it is part of training
- “Forced” Recovery Days (smog, fires, wind, weather)
- Recovery for each individual
- Rest between seasons
- Purpose of complete rest

# Individuality

- Each training program has a different effect on an individual
- Tailor programs to individual needs
- Training age
- Chronological age
- Fast twitch/slow twitch
- Gender
- Body type

# Types of Workouts/Runs What are the demands of competition?

- Long Runs
- Race Pace work
- Speed play
- Race Callusing and Simulation
- Warm up and cool down

# Training for the specific race

- Alactic System
- Aerobic versus anaerobic
- Tactics of the race
- Level of competition

# USE IT OR LOSE IT – ALACTIC SYSTEM

- **Use the energy (CP) stored at the muscular level to get out fast the first 6 – 10 seconds of a race.**
- **Assume they will have it available also for the last sprint of the race to the finish.**

Source: Training For Youth Distance Runners, page 36

**Anaerobic**

- 100 Meters: 92%
- 200 Meters: 86%
- 400 Meters: 70%
- 800 Meters: 43%
- 1600 Meter: 24%
- 3200 Meter: 12%
- 5000 Meter: 07%

**Aerobic**

- 100 Meters: 08%
- 200 Meters: 14%
- 400 Meters: 30%
- 800 Meters: 57%
- 1600 Meter: 76%
- 3200 Meter: 88%
- 5000 Meter: 93%

# Long and Steady Aerobic Runs

- Increase Aerobic Capacity
  - Heart Volume
  - RBC Count
  - Perfusion
- Callus athletes for longer workouts
- Increase muscular fitness
- 20%-25% of weekly mileage
- Key workout in most pre-season training schedules.
- Aerobic (with oxygen) 65 – 85% of HR
- Length depends on the needs of the race

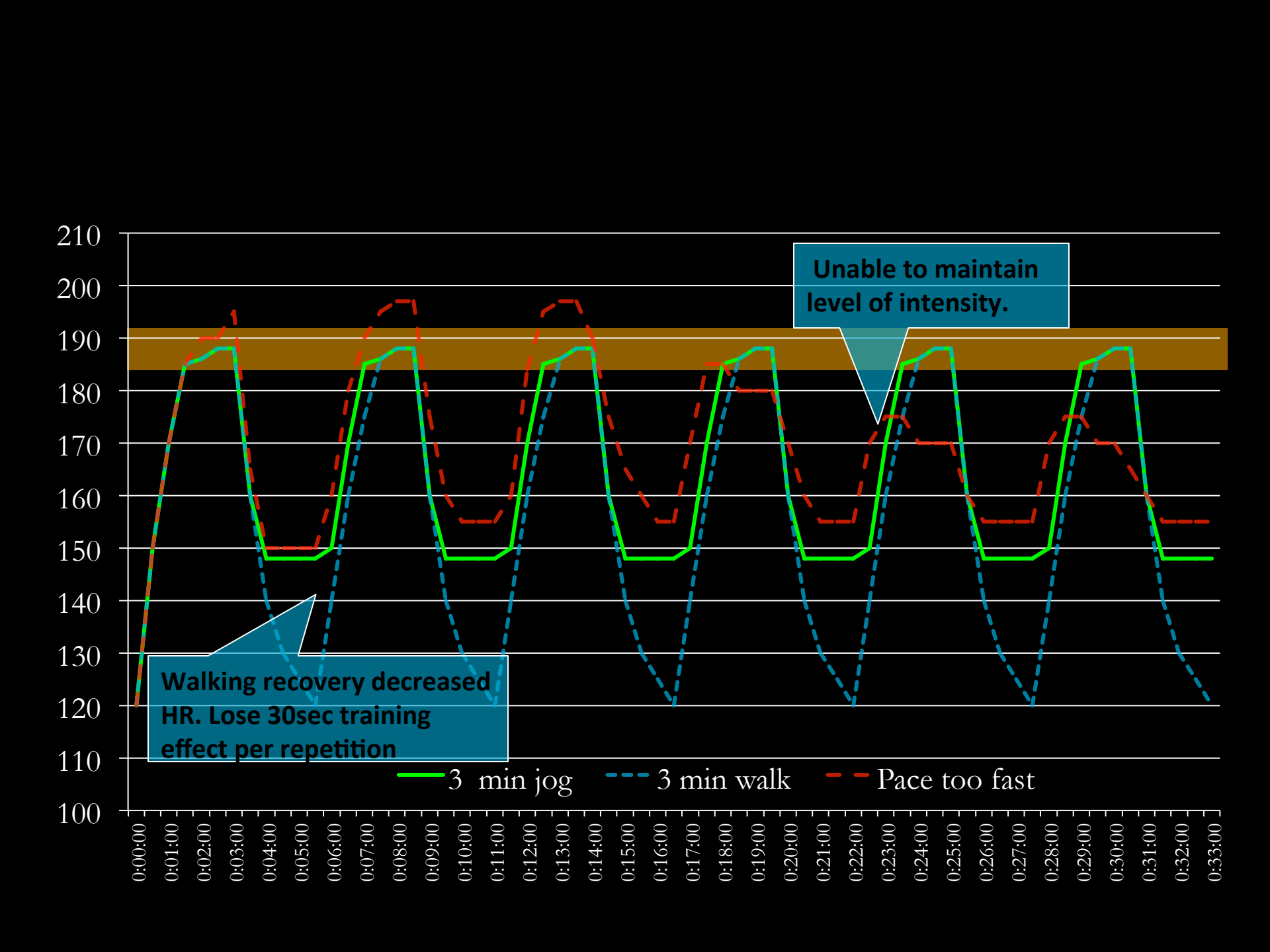
# Pace Work

- Length depends on distance event
- Race pace (Includes race start/finish pace)
- Max VO2 reached after about 60 – 90 sec in each rep.
- Taught workout
  - Beginners need to succeed right away
- Aspects of Pace Workout
  - Variables –"Mimic Demands of Competition" & use to stimulate "overcompensation" when body is adapted.
    - Length
    - Intensity
    - Recovery
  - Running recovery
  - Run past the actual distance

# Threshold "Tempo" Runs

- Used to raise the athletes ability to postpone and tolerate running anaerobically.
  - Might be toughest to teach
- Anaerobic Threshold (AT) & Lactate Threshold (LT)
- Negative Split Run (4 – 8 miles)
  - Gradually move paces from warm up to EP to AT to last ½ mile can be LT.
- AT Pace Runs (miles or minutes)
  - 1 – 2 miles warm up running, 1 – 4 miles at AT pace, 1 – 2 miles cool down running

Tempo 1000s


210
200
190
180
170
160
150
140
130
120
110
100
Unable to maintain level of intensity.
Walking recovery decreased HR. Lose 30sec training effect per repetition
3 min jog
3 min walk
Pace too fast
0:00:00
0:01:00
0:02:00
0:03:00
0:04:00
0:05:00
0:06:00
0:07:00
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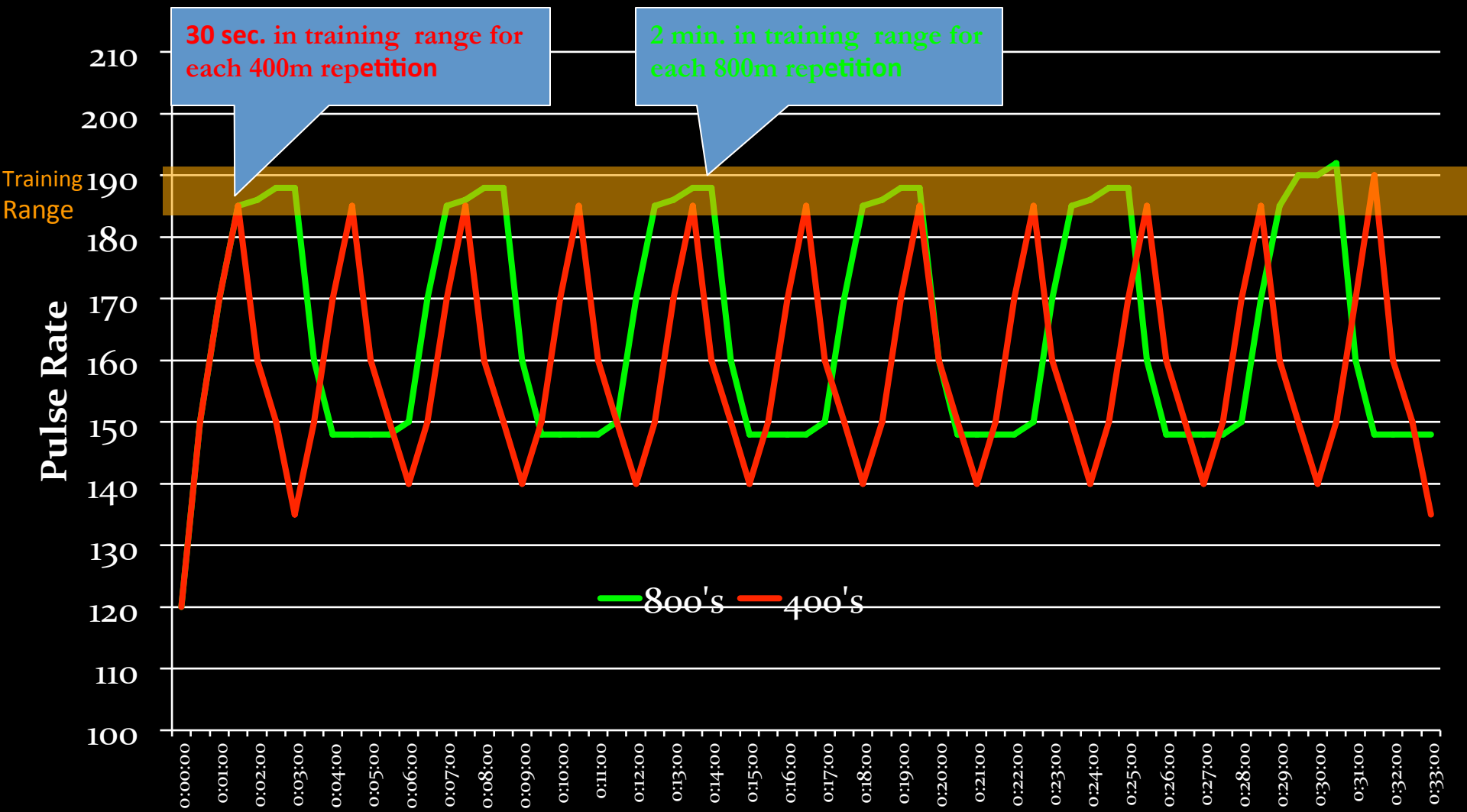
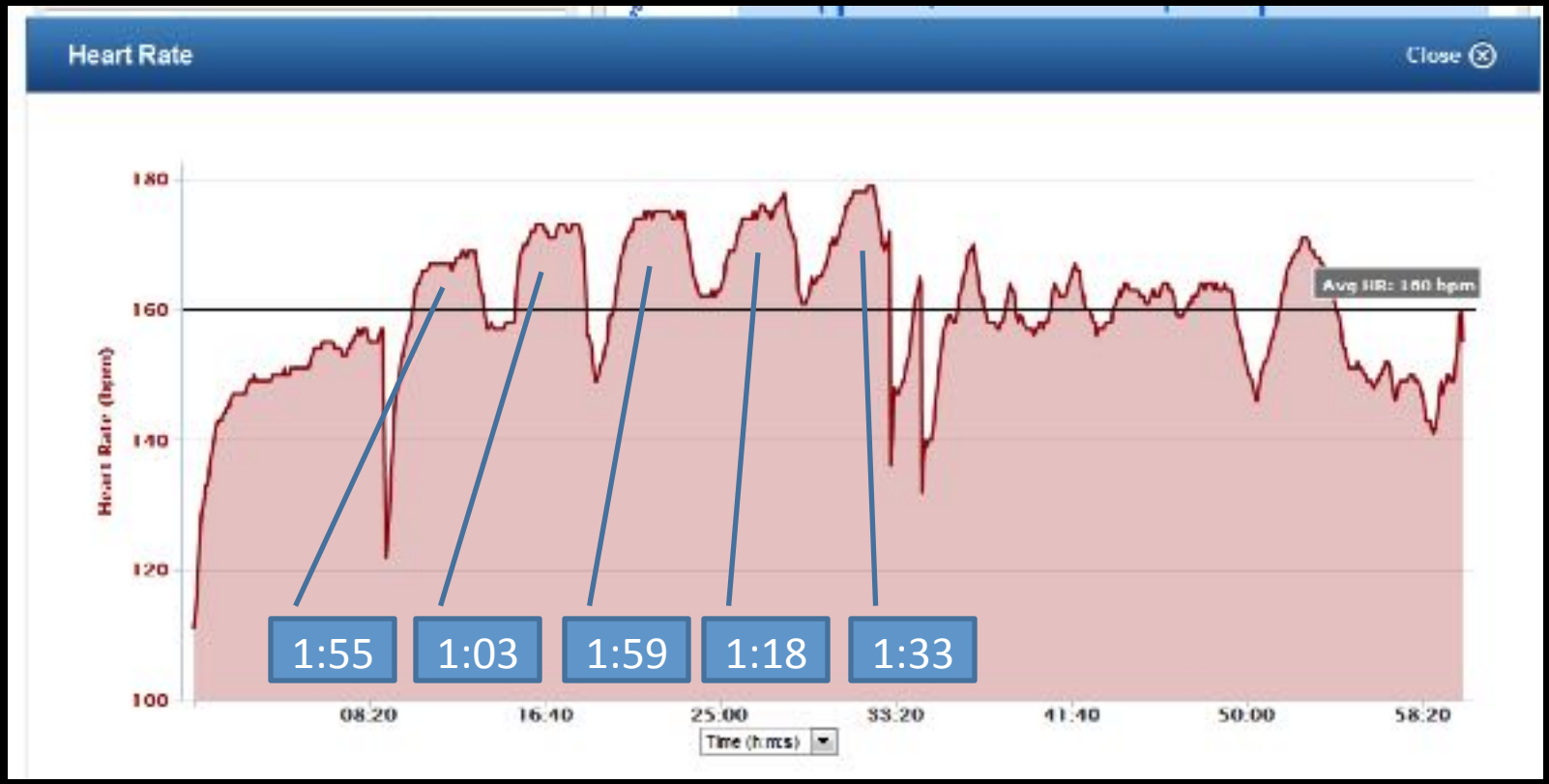
# Pace Work 800's vs 400's



# Sample from H.R. Monitor (uphill surges)



# Speed play/Surges

- Native American Files
- Catch the Rabbit
- **Pyramid or Ladder Surges**
  - **1 min on, 1 min off, 2 min on, 2 min off, 3 min on, 2 min off, 2 min on, 1 min off, 1 min on.**
- **Secret Surges**
  - **Each individual in group run a surge of their choice distance, and recovery.**
- **Telephone Pole Surges, Block Surges, Tree Surges…**
- **Triangles**

# Speed-play Setup Triangles


[Triangles One Group]

[Triangles Three Pace Groups]

[Triangles Multiple groups]

[Triangles Handout]

# Why Warm Up?

- Pulse Rate
  - Prepare the body to rapidly increase the heart rate when race, or intense running is to begin. (cardiovascular)
- Circulation
  - Opens up all the “valves” to capillaries and micro blood vessels serving to perfuse the muscles with oxygenated blood and to remove CO2 & anaerobic byproducts (cardiovascular)
- Range of Motion
  - Lubricate joint spaces, increase core temperature, prepare muscles to contract and relax (neuromuscular and muscular)
- Ph Buffers
  - Add acid buffers to the bloodstream in preparation of neutralizing acid byproducts of anaerobic processes.

# Sample Warm ups

- Organized Workouts
  - 10 – 20 minutes of gradual buildup running.
  - Drills
  - Form Strides
- Road or Recovery Runs from home
  - Start with gradual build to pace over the first 5 – 10 minutes.
- Meet Days and some Pace Workout Days
- 5 – 10 min jog on arrival.
- 10 min. warm up (gradual warm up run to EP)
  - 6 drills once each (linear)
  - 5 – 6 minutes “cut down” run from EP to LT pace
  - 4 – 6 Long Strides (100 – 120m)
  - Short stay warm jogs, & strides (30  to 50 m)

# Train All components

- Speed
- Endurance
- Strength
- At the beginning of the season, train to eliminate weaknesses.  End of the season, train to utilize strengths.  Goal is to make speed, endurance and strength all strengths

# Drills

- Neuromuscular Fitness
  - 6 – 8 low impact form drills done daily
  - Rotate in another 4 – 6 daily to the routine drills
  - Work on
    - Foot speed
    - Mechanics
  - Must be taught regularly, re-enforced regularly and supervised.
  - Plyometrics
    - Must be limited and progressed
    - Would begin in off season, not mid season.

# Specific Drills

**Daily Drills (20 – 30 m) 2x each.**

- Shin Toe & Heel Walks
- Cool Guy Walk*
- Cool Guy Hop*
- A – Skip*
- B – Skip*
- High Knee/High Heel*
- Quick Leg Through (fast claw)*
- Cariocas (2)
- Walking Lunges w/quick leg through

*Pre Race Warmup Drills, one each.

**Rotated into Daily Routine**

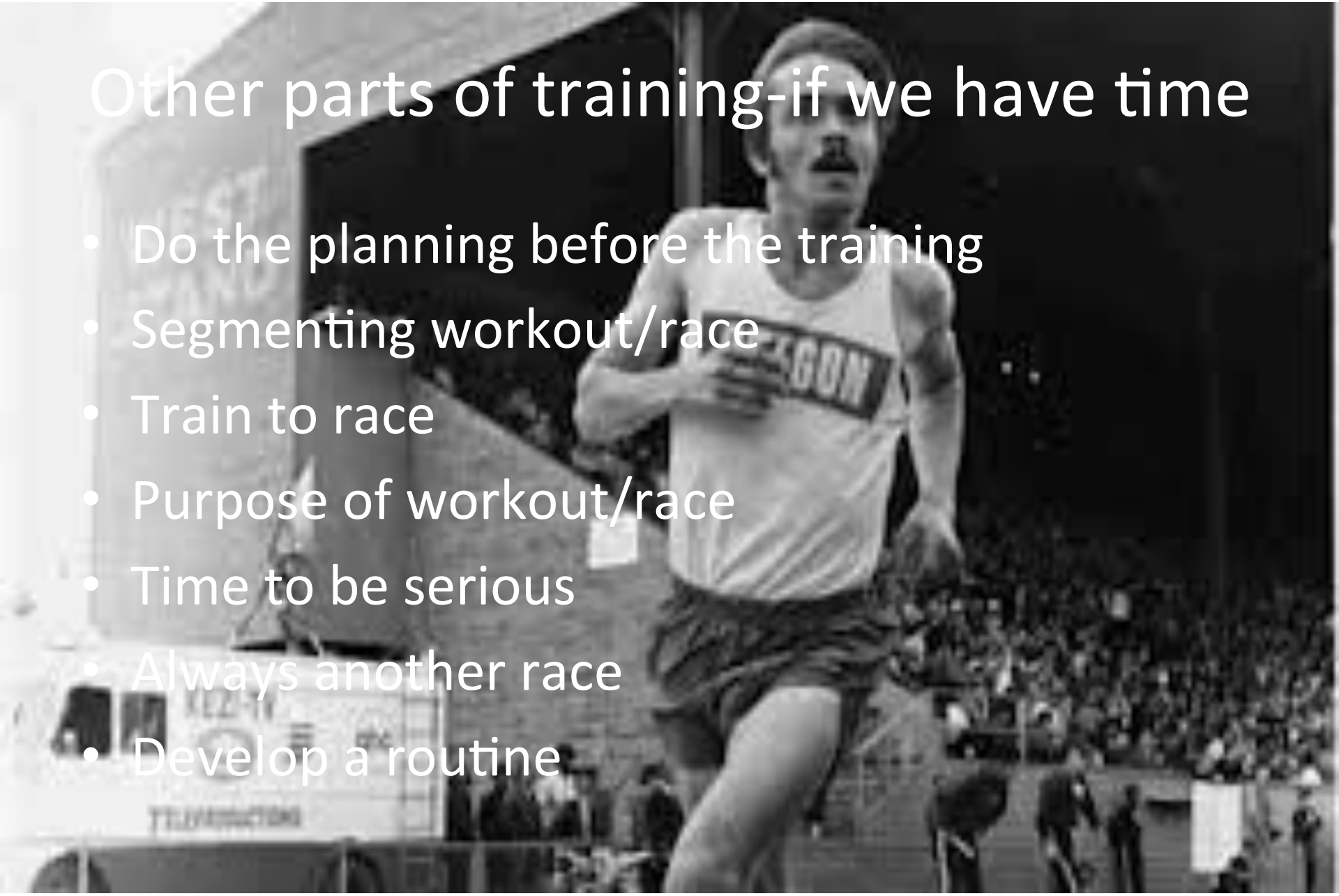
- Cariocas with knee over
- Speed Skip
- Power Skip Knee Up
- Power Skip Bound
- Speed Walk
- Backward Skip
- Cross the Line
- Honda Strides
- Egg Crushers
- Blind Babies
- Backward Walk – Backward run

# Work to improve form daily

- Drills
- Strides
  - A. Foot placement
  - B. Arms
  - C. Breathe against the cheeks
  - D. Focal point
- Finish Line

# Cool Down

- Purpose
- Advantages
- When
- How long
- After cool down
  - Body Weight Exercises
  - Nutrition/Hydration
  - Stretching
  - Injury Rehab/Prevention Exercises
  - Check Out



# Other parts of training-if we have time

- Do the planning before the training
- Segmenting workout/race
- Train to race
- Purpose of workout/race
- Time to be serious
- Always another race
- Develop a routine

# Periodize your training

- “In preparing for battle I have always found that plans are useless, but planning is indispensable.”
- — Dwight D. Eisenhower
- **Need**
  - **Pencil**
  - **Calendar**
  - **Some knowledge**
  - **Eraser**

# Hydration

- 60 – 90 oz. of water depending on level of activity & climate.
- 1 cup is 8 oz.
- Asked to have 2 cups before breakfast!
- Drink 1 – 2 cups per period during school. (bathroom pass letter)
- Must eat breakfast, nutrition & lunch or add an electrolyte drink.
  - Prevent electrolytes from being leeched out of the body.
  - Electrolyte sources include regular diet over the long term, and in the short term include vegetable juice, electrolyte drinks, electrolyte products.

- Expectation of all Athletes.
- Able to do main section of workout without hydrating (unless unusually hot).

# Segment the Race or Workout

- **Break the race or workout into sections.**
- **Segmenting depends on the race**
  - **Most races into three segments**
    - **300-200-300**
    - **600-400-600**
    - **1200-800-1200**
- **Simulate physically, or through visualization the different sections during workouts.**

# *Train to race*

- Race pace or faster
- Simulate the race in practice
- Practice starts
- Practice tactics

Practice finishes

Last dominate thought

Segment, segment, segment

First and last match

# Purpose for every workout/race

- Planning
  - Plan out races prior to the start of the season
- What's important now (win)
- Goal for practice daily
- Groups
- Individualization

# Time to be serious, Time to have fun, Time for Serious fun

- Serious
- Fun
- Serious fun
- Bus rides
- Team functions
- Races

# There is always another race

- Successes and failures
- 10 minute rule
- Prerace planning
- Post race evaluation
- Life goes on

# THE ROUTINE

- Daily practice
- When you get to a meet
  - Locate these four places
  - Short run
- Warm up ritual
- Cool down routine
- Bus ride home


That’s It!