

Coach Clyde Hart Speed Development

I. Speed can be improved with proper training

- A. Genetic makeup determines an athlete's maximum potential, but improvement is possible....to what degree is largely up to the athlete and those persons who direct the training.
- B. The degree of improvement that the athlete will make is determined by his abilities, his choice of training, and his coach.

II. The coach must first identify sprint candidates

- A. Fast-twitch and slow-twitch fiber
- B. Flexibility
- C. Reaction Time
- D. Body Fat (restricts speed of movement)
- E. Physical make-up (size)
- F. The speed of muscle contraction (can be improved with proper training)

III. Explosive Power

- A. Speed in short distance running can be improved through strength/power training
- B. The speed of muscle contraction can be improved with proper training.

IV. Running Stride Length

- A. A key element in the speed equation
- B. If done improperly, it can be a disadvantage to the sprinter.

V. Stride rate (steps per second)

- A. Can be improved without hurting stride length
- B. Just like stride length, if the stride rate is not executed properly, it will be a major disadvantage to the sprinter.

VI. Relaxation and Technique

- A. This is the third element of the speed equation along with stride length and stride rate.
- B. Like the other two elements, if the athlete doesn't practice relaxation and proper technique, he will be at a disadvantage.

VII. Training the Sprinter

- A. Year-round program of training
- B. Use the pyramid approach to setting up the year's training program.
- C. Always go from quantity to quality
- D. If the athlete takes the time to reload, he will never peak too early.

VIII. Work to improve the key elements in good sprinting

- A. Overall conditioning and fitness
- B. Specific conditioning
- C. Stride length
- D. Stride rate
- E. Foot placement
- F. Air-time
- G. Recovery leg.

IX. Improving Stride Length

- A. Better sprinting form
- B. Legs and ankles must get stronger
- C. Work to improve both hip and ankle flexibility

X. Improving Stride Rate

- A. Proper warm-up can enable sprinter to have faster stride rate.
- B. Body fat can hinder stride rate if body-fat ratio is too high.
- C. Strength/power training (weight training and plyometrics) are a great benefit to development of stride rate.
- D. Spring-assisted training has some benefit, but the verdict is still out on how much it benefits
- E. Down-hill running
- F. Fast-action drills, such as the h-drill is helpful in developing stride rate.
- G. Pawing drill is great in developing the recovery leg.
- H. Ladder-on-the-ground drill requires fast action of the recovery leg.

XI. Speed-Maker drill

- A. Designed to incorporate all the elements in fast springing into one drill.
- B. This drill allows the coach to be in position to observe the runners as they run repeated short sprints of 60-70-80-90 meters.
- C. During this drill, the athlete is focused on proper sprint technique and can be corrected by the coach as he passes by during his recovery phase.

XII. Train slow/ Race fast

- A. Run full out in only a few of the training sessions.
- B. Starts, relay hand-offs, and drills that cover 60 to 90 meters are the only drills where full effort is required.
- C. Cuts down on injury possibilities.
- D. Slower runs allows the athlete to run more in training, while resting less.
- E. Strength and speed are synonymous.
- F. Strength is gained not only in the weight room but on the track. Design a training program to develop strength and endurance in sprinters.