

# PVBM Healthfirst

presents

## SPEED DEVELOPMENT

No matter what methods you use - YOU MUST ALWAYS TRY TO INCREASE YOUR SPEED & POWER. With that in mind, here is some food for thought. At the bottom you will find a section on suggested uses for sprinters, but please review the outline first, as it will answer some of the questions you may have later.

### I. Speed Enhancement

- A. Speed = Stride Length X Stride Frequency
- B. All speed increases come from increase in one or both variables.
- C. It is much easier to increase stride length than stride frequency
- D. Frequency gains are best achieved through Speed Assisted Training.

### II. Speed Assisted Training

#### A. Methods

- 1. Running with the wind.
- 2. Downhill running.
- 3. Tow-training
  - a. Using a pulling vehicle with a release mechanism.
  - b. Using elastic tubing (tow-training)

#### B. Important Considerations

- 1. Safety of Athlete.
- 2. Maintenance of proper sprint mechanics.
- 3. Understanding and monitoring of training loads and intensity.

### III. Proper Use of a Tow-Trainer

- A. May be used with a stationary object.
- B. May harness two runners together.
  - 1. Consistent/controlled tow effect.
  - 2. Lengthens duration at "overspeed".
- C. Integrating tow-training into your workouts.
  - 1. Usually between 4-6 reps per session.
  - 2. 50-100m at overspeed.
  - 3. Use minimum of once weekly, maximum twice weekly.
- D. Coaching Points
  - 1. Towed runner must go with the pull - don't brake.
  - 2. Maintenance of proper sprint mechanics is essential.
  - 3. Adequate recovery important - use early in the week.
  - 4. Don't overstretch the cord - if 25', stretch only to 75'.
  - 5. Try to maintain overspeed for 6-8 strides after cord slackens.
  - 6. Pair up athletes with similar weights and abilities.
  - 7. Use consistently throughout the season - not as a gimmick.

## IV. Using the Tow-Trainer for the Pole Vault

### A. Practicing approach runs.

1. Provides more reps per session.
2. Allows for concentration on technique rather than speed.

### Tow-Training for Plyometrics

A. Enhances the training effect of speed plyos, and speed rhythm drills.

### Advanced Combinations

#### A. Stride measured cone runs.

We play many running games with a measured stride length marker. Our roll of nylon rope was purchased at Home Depot and measures up to 20 full strides (or lefts) with a different painted color code for each stride length. We call them "Cone Runs" because we place a cone at each stride / left marker.

NOW REMEMBER - These are NATURAL stride lengths. However, we learned from the Eastern Bloc countries that all bounding or jumping drills will produce faster results if there is a goal involved. Therefore we regularly make passes at stride lengths we could not possibly make on our own in order to "teach" the body what it takes to run more powerfully.

#### B. Resist, Assist, Accelerate, Flat

The possible combinations of uses of cone runs with a rubber-towing device are endless, but here is one series we have found that is most effective. As a general rule, unless we are in a conditioning phase, we run eight lefts without a pole and six with:

Resist - Have a teammate stand at the first cone and pull the tow trainer out of the way as you pass by. The assistant then stands right behind you and holds the tow trainer tightly. The closer you get to the end of the cone run, the more resistance, thus the need for increased power.

Assist - Once again with your teammate at the first cone, walk backward between 30-50m. As you begin to run you will be assisted to the point that you can barely stay upright. It is important to just go with the speed and try not to brake. This allows you to run at about 20% faster than you could on your own thus requiring your body to learn speed.

Accelerate - This can be done with or without a pole or the tow trainer. Simply take a standing start at the first cone and do everything you can to catch up to the upcoming cones. This is very difficult to do without bounding; an important part of the pole vault run - ask the super dynamic Pat Manson.

Flat - After all of these speed games, it is good to return the body mechanics to normal by 3-5 passes with no assistance or other challenges. Carrying a pole IS acceptable.

#### C. Injury prevention and rehab.

How can running at 120% help injury prevention and rehab? This is the question I posed to our physical therapy and medical staff. Here is the answer. Sprinting at high speeds requires a very dynamic push off followed by an immediate and equally explosive recovery phase. When you are pulled by the tow trainer, you don't have to push off so all effort is on the recovery. At first this may produce very sore hamstrings, but in the long run the entire running mechanics are more sound and the legs are more prepared for the increased demand of GETTING FASTER.