Chapter Six

Preparing for Middle-Distance Events

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Middle-distance events are usually defined as races spanning 800 meters to 1,500 meters or the classic mile. These race distances demand performance from the body of about 50%–70% aerobic and 50%–30% anaerobic as relates to the body's energy-producing systems. Your runners who participate in these events need to train for both aerobic and anaerobic fitness.

Training Techniques for Middle-Distance Runners

As with any other set distance on the track, the middle-distance runner's objective is to maximize speed over the 800- to 1500-meter distance by using all available energy and the most efficient running technique. Conditioning the body's energy systems is covered in Chapter 4 of this Sourcebook. The technique element and how to train for it is emphasized here.

Technique is an exercise in maximizing economy of moving parts. All individuals have an optimum combination of stride length and frequency thatis dependent on the athlete's leg length, mobility, muscular strength and neuromuscular coordination (or lack of any or all of the above). These are all primarily a result of the runner's "choice" of parents, but a great deal can be done with anyone's raw materials. Many teams draw their strength as much from committed employees who are willing to train and develop their technique as from naturally gifted athletes.

Compared to sprinting, the leg drive in middle-distance work is less intensive, decreasing considerably as the distance reaches 1500 meters. Following the less explosive driving action, the recovery leg swings forward more slowly, the heel of the recovery foot remains lower, and less knee lift occurs at the end of the supporting phase. The less intensive leg drive and stride frequency reduce (eccentric) thrust, permitting the trunk to absorb more of the twisting momentum generated by speed, without the vigorous balancing assistance of the arms required in sprinting.

The objective of training for these events is specificity, to enhance the development of the technique required for faster times. There is general agreement that the following types of middle-distance training should be employed:

- sprints, starts, accelerations
- continuous slow running
- continuous fast running
- interval training
- tempo running
- fartlek
- hill running.

All of these components are treated in Chapter 4 of this Sourcebook. Event-specific comments appear below concerning the interval, tempo, and hill components of training.

Interval Schedules

An example of an interval schedule based upon the expected date of competition (regional or national event) would be the following pattern, although there can be a wide range of ability and tolerance for speed work:

8–12 weeks before: longer intervals (500–600–800), at 3 to 5 sec slower per 400 meters than goal pace

4–7 weeks before: shorter intervals (300–400) at goal pace or slightly faster (2 sec per 400 faster than goal pace)

2–3 weeks before: intervals decrease further (100–200) at 4 sec per 400 faster than goal pace, with shorter recovery between intervals, and complete recovery between sets.

Interval training needs to start at a pace slow enough on the first workout to be able to complete the workout comfortably. This allows the body to respond to the stress of speed work without risking injury. Marty Liquori, an outstanding middle-distance runner, makes the rest of us feel better by saying what we all experience. Most importantly he reminds us that even athletes with his talent experience the same thing in returning to interval work-

Checklist — Do's and Don'ts

DO

- □ Build a base of strength with weight training in the off season
- □ Build miles gradually
- □ Stay RELAXED during speed work; 95% IS full speed!
- □ Do speed and overdistance workouts with others (but don't compete)
- □ Listen to your body; take a day off if necessary
- □ Save a workout - cut back speed\reps if necessary
- □ Vary workouts to avoid staleness
- □ Keep a training diary
- □ Employ relaxation techniques\visualization to prepare for a race
- □ Have fun!

DO NOT

- □ Overload on speed or hill training
- □ Try to "win" a workout, or train with someone who does
- □ Quit a workout unless injured (save it - see above)
- □ Do intervals or hills coming off injuries
- □ Do more than two sessions of speed or hills per week
- □ Set an unrealistic goal
- □ Fail to adjust your training schedule for injury
- □ Worry about nerves or "butterflies" prior to competition; welcome the sign you are getting ready for maximum effort

outs following an absence—they hurt even at objectively slow speeds that a few months ago were no problem—his words:

"For instance, every year when we begin to go into the 'valley of fatigue' of Phase Three training, our quarter-mile efforts will almost always be in the 67- to-72-second range, depending upon conditions. And they will seem as difficult as if we were trying to run them in 57 or 58 seconds… What the runner must keep in mind in the beginning of such a phase of training is precisely that: Things will get easier. There is not an elite runner in the world who has not been regularly amazed to find out how hard that first session of 70-second quarters seems — when he had been running 59s only four months earlier!"

Plyometrics or bounding drills are also a valuable form of training, especially for conditioning fast-twitch muscle fibers and increasing stride length. Try them out, but early in the training period, and only in place of a speed workout—they are a high-stress activity.

Tempo Running

This workout is sometimes referred to as "repetitions" instead of intervals, but, by whatever name, the objective is raising the anaerobic threshold. The quick succession of reasonably high-speed repetitions run on the track or the roads (i.e., running telephone poles, stop signs, or any other repetitive road marker) varying between 100 and 2,000 meters is undertaken to condition the oxygen transport system to adapt to progressively higher sustained overloads. The recovery phase is intentionally kept short for exactly that purpose, with the next repetition started while the body has a residue of oxygen debt. Recoveries can be jogging or walking; continuous motion helps the muscles clear the buildup of lactic acid. If distances used are less than the race target, speed should approach or exceed the target race pace. If the distance employed exceeds the race target, speed should be slower than expected race pace. As with intervals, tempo running must be programmatic, and progressive, by means of any

Sample Workout Early in Buildup, for a 2:05 Target 800-Meter Runner

Sunday	8 miles easy
Monday	5 miles moderate
Tuesday	3 x 600 @ 1:36–1:40 (GP +2 on 400)
Wednesday	Rest day or easy overdistance
Thursday	Tempo including 3 x 1000 with pace change
Friday	Sprint drills, plyometrics
Saturday	5 miles easy, bike or pool run

or all of the following:

- increasing length of rep distance
- increasing speed of reps
- increasing number of reps
- decreasing recovery time between reps.

Hill Running

Hill running is designed to enhance the ability to MAINTAIN an optimal stride length for the DURATION of a competitive distance. All exercises in this category correspond to the movement pattern involved in the target race, but the runner perform them at a high-intensity level. Although other exercises can promote this objective, hill running doesn't require special apparatus such as a harness, a weighted vest or other gear, or a flotation device for the pool. All that is required is a hill or two. Flatlanders can always seek out freeway overpasses, parking garages in off hours, or treadmills with elevation features. Hill running and bounding create strong resistance for the muscle groups carrying most of the load in running — the ankle, hip, and back muscles, particularly the extensors and plantar flexors of the ankle joint and toe flexors. These muscle groups are important in middle-distance running, not only in driving the body forward but also in the muscle recovery phase of the stride. The forward movement of the body is a coordinated function, an example of which is the simultaneous extension and flexion from the hip joint as the swinging motion of one leg helps the driving action of the other. Therefore, high knee lift should be employed to complement the strong driving action from push off as the hill running or bounding is performed. Quality of form, especially arm and leg action, is far more important than speed going up the hill. Hill length between 300 and 400 meters is recommended once initial adaptation to the training load has occurred. Repetitions should not exceed 5 or 6, and recovery between repetitions should be at least 3 or 4 minutes when later stages of hill work are employed. Even at that level of recovery, very high lactic acid buildup occurs, and the workout should always be followed by 1 or 2 light or rest days for adequate recovery and training effect.

One practical problem is finding a hill of about the right length and grade (5–7% is good) which has some other way to jog down with a gentler slope. Special care must be taken to maintain form going downhill, which includes avoiding locking of the knee and excessive contact with the heel. It is excellent form practice to lean into the hill, stay as loose as possible with low relaxed arm carriage, and try to "fall" down the hill with light and lively steps, without getting out of control. Easy to say, but very hard to do when tired. Easy striding and jogging should always precede a hill workout.

Other Resources

Middle Distances
edited by Jess Jarver, TAFNEWS Press

Long Distances
edited by Jess Jarver, TAFNEWS Press

Focus on Middle Distance Running
Humphreys and Holman, Adam & Charles Black, London

Running and Your Body
Dare, TAFNEWS Press

Marty Liquori's Guide for the Elite Runner
Liquori and Parker Playboy Press

Running the Lydiard Way
Lydiard and Gilmour, World Publications

Winning Edge
Johnson, Atheneum

Inside Running
Costill, Benchmark Press

How they Train: Long Distances
Pfeifer, TAFNEWS Press

The Self-Coached Runner
Lawrence and Scheid, Little, Brown

Long Distance Runner's Guide To Training and Racing
Sparks & Bjorklund, Prentice-Hall

Running and Racing After 35
Lawrence and Scheid, Little, Brown