

PLANNING TRAINING FOR THE SPRINTS & HURDLES

by Peter Warden, Great Britain

A brief overview of the concepts of periodization as they apply to the sprints and hurdles events. The objectives of each phase of training are presented, along with sample programs. A valuable guide for coaches at all levels. Excerpted from a larger piece on "Planning Your Training Year," from Athletics Weekly.

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LONG TERM

Planning training programs is not simply a question of planning a couple of weeks of training; initial plans should encompass several years' progression.

Ultra-long-term planning in detail is a waste of time. All programs should be based on what has gone before. Long-term programs will be subject to changes due to factors which are more than likely outside the coach's control.

Long-term planning cannot be detailed but may be regarded as a skeleton onto the bones of which flesh is put as time passes. Plans laid for several years ahead should be more in the realms of organizing ambitions into realistic goals.

Four years ahead would seem to be about the furthest a coach can realistically expect to plan.

CONSIDERATIONS

1. The talent of the athlete. Should the coach be considering the Olympic Games as a possibility or should the sights be set a little lower?
2. The age of the athlete. With younger athletes consider the date of birth so that the year in which the athlete changes age group can be determined.

A youngster is likely to have a greater amount of success when at the older end of an age group than when at the other end. The coach should consider using the athlete's first year in an age group as a consolidation year where he "learns his trade."

The year at the top of the age group could then be periodized more towards competition success. The long term plans stretching years ahead should be more properly entitled targets or ambitions. All targets must be realistic

but not set too low.

ANNUAL PROGRAM

An athlete's training program should be designed to meet three objectives:

1. Preparation for an optimal improvement in performance.
2. Preparation for a competition peak.
3. Preparation for the major competitions within that peak.

PERIODIZATION

The planning of a year's work for an athlete utilizes Matveyev's Six Phases.

Phase One: Preparation 1

1. Analysis of previous year.
2. Getting fit to train
3. Total body conditioning using strength, mobility and endurance.
4. Modification or consolidation of technique.
5. Preparation for Phase Two.

Phase Two: Preparation 2

1. Beginning and development of event-specific training.
2. Development of technique.
3. Preparation for Phase Three.

Phase Three: Competition Preparation 1

1. Development of competition-specific conditioning.
2. Early competitions including possible selection for major competition performance.

3. Evaluation of early competition performance.

Phase Four: Competition Preparation 2

1. Consolidation of competition-specific conditioning.
2. Preparation for competitive peak.
3. Final chance to make slight technical changes.

Phase Five: Competition

The major competitive part of the year.

Achievement of goals.

Phase Six: Transition Phase

1. Active rest and recuperation.
2. Preparation for Phase One.

The timing of these phases, when to start and finish, will depend on the date around which the major peak is to be targeted. This will vary from year to year. The duration of each phase will depend on whether the year is to be doubly or singly periodized.

Double periodization assumes two competitive seasons. For sprinters and hurdlers this usually means an indoor season in February and March and the usual outdoor season.

According to Matveyev the double periodized year affords a greater improvement in performance over the single periodized year, but double periodization is not recommended for young and developing athletes.

Only the more mature athletes with well-stabilized techniques should attempt double periodization.

Even these athletes should not attempt double periodization for more than two successive years.

The sessions that follow are only ideas, examples of the type of work that can be done in each phase of the periodized year.

This does not constitute a training program. The training sessions are intended for experienced, mature male athletes.

TRANSITION PERIOD (OCTOBER 1)

100m and 200m Sprints

Aerobic Work (a) 6 x 200m. Pace: Average 30 to 31 seconds. Recovery: 200m jog. (b) 30 mm. fartlek.

Strength endurance Circuit training.

Technique Concentrate on correct technical sprinting during track work which is not full-out running.

Sprint Hurdles

Aerobic and strength endurance work similar to that of 100m and 200m sprinters.

Technique Walk-overs and isolation drills to begin work on correcting faults observed during racing season.

400m and 400m Hurdles

Aerobic work (a) 2 to 3 miles steady running. Or (b) 45 mm, fartlek.

Long-term anaerobic (a) 600, 500, 400, 300, 200, 100m. Pace: first 3 runs at around 58 to 60 seconds 400m pace. Remainder as fast as is possible while maintaining form. Recovery: jog/walk next distance to be run. Or (b) 6 x 300m. Pace: 42 to 45 seconds. Recovery: 3 mm.

Strength endurance Circuit training.

Technique As for 100m and 200m sprinters. 400m hurdlers walk—overs and isolation drills.

PHASE ONE (a) (NOVEMBER TO DECEMBER)

100m and 200m Sprints and Hurdles

All sprinters and hurdlers should include strength sessions through phases one and two.

Long-term anaerobic endurance 2 x 3 x 150m. Pace: fast and relaxed. Concentrate on maintaining technique. Recovery: 1 mm. between runs; 6 to 7 mm. between sets. During this phase this session should be progressed to 3x 3x 150m via 2x 4x 150m.

Strength endurance Circuit training.

Technique Concentrate on correct form and holding form. Sprint hurdles—progress transition phase work.

400m and 400m Hurdles

Long-term anaerobic (a) 2 x 4 x 300m. Pace: 42 to 45 secs. Recovery: 3 mm. and 8 mm. This is a progression from the session given in the Transition Phase. Or (b) 5 x 500m. Pace: 58 to 60 secs at 400m then maintain pace and form. Recovery: 4 to 5 mm.

Strength and strength endurance As for sprinters and sprint hurdlers.

Technique Running technique must be sprinting technique even at a slower pace. 400m hurdlers—as for Transition Phase concentrating particularly on ‘other’ leg hurdling. Some short Swiss turnabout session could be brought in towards the end of the phase.

PHASE ONE (b) (JANUARY/FEBRUARY)

100m and 200m Sprints Speed endurance

Strength endurance Mini-circuit, bounding, resistance running and hill work.

Technique Skill drills.

Sprint Hurdles

Speed endurance Bounding, resistance running and hill work.

Strength Technique Begin work on full spacings from a long runup. Use double spacing for speed endurance plus hurdle drills and sprint drills, e.g. walking sprint drill 4 x 40m; hurdle walkovers 3 x 8 hurdles; trail and lead leg isolation drills, 4 or 5 of each over 5 hurdles using 3

strides with hurdles at 3.5m to 4m spacings; 4 or 5 lead and trail leg with one stride between hurdles; either 5 x 5 hurdles at full spacings from 12 or 13 stride approach, or 5 x 4 hurdles at almost double spacings from 12 or 13 stride approach. Spacings should allow 7 strides.

400m

Speed endurance 3 x 3 x 300m. Pace: 40 to 42 sec. Recovery: 3 to 4 mm. and 9 mm.

Strength endurance Mini-circuit, hill running, bounding and harness running.

Technique See 100m and 200m sprints above.

400m Hurdles

Speed endurance (a) 3 x 3 x 300m, Pace: 40 to 42 secs. Recovery: 2 mm, and 6 mm. Or (b) (200, 300, 200) x 3. Pace: 85% max plus. Recovery: 90 secs to 2 mm. between runs; 6 to 7 mins. between sets.

Strength endurance Mini-circuit, hill running, bounding, harness running.

Technique Swiss turnabouts using either 35m spacings and 4 hurdles or 4 stride spacings using 10 hurdles. Continue with hurdles drills and sprint drills.

PHASE TWO (MARCH AND APRIL)

100m and 200m Sprints

Speed endurance (a) 3 x 3 x 150m. Pace: 85% max plus. Recovery: 45 secs, to 1 mm. between runs; 5 to 6 mm. between sets. Or (b) 3 x 3 x 90m. Pace: 85% max plus. Recovery: walk back between runs; 5 to 6 mm. between sets.

Speed Speed drills. Starting practices over 30 to 50m. Emphasis now on increasing speed.

Strength endurance Mini-circuit and hill running.

Technique Starting practices and emphasis more on speed drills.

Sprint Hurdles

Speed endurance As for sprinters, plus work over 10 to 12 hurdles with reduction in hurdle height.

Speed Double spacings and longer approach runs plus work on shortened spacings for speed of limb movement work.

Strength endurance Mini-circuit and hill running, plus short recovery sprints over 30 to 50m. 4 x 4 x 40m from crouch start 'set' position. Pace: flat out. Recovery: 30 secs. between runs; 3 mm. between sets.

Technique Start and approach to first hurdle. Work on speed of technique.

400m

Speed endurance (a) 2 to 3 x (4 x 200m). Pace: 85%. Recovery: 1 min. to 90 secs. between runs; 5 mm. between sets. Or (b) 4 x 4 x 150m. Pace: 85%. Recovery:

45 secs. and 3 mm.

Strength endurance Mini-circuit, harness runs and bounding, plus short distance, short recovery work, e.g. 3 x 3 x 40m from standing start, plus 1 x 300m. Pace: all runs 90% plus. Recoveries: back-to-backs 30 secs. between runs, 90 secs. and 2 mm. between runs, 90 secs. and 2 mm. between sets. 300m is run 7 mm. after final set of back-to-backs.

Strength Technique Starting on bends. Holding form. 1 or 2 x 500m plus 3 or 4 x 150m. Pace: 500m—first 400m should be within 1 sec. of athlete's best 400m time. Concentrate on maintaining form and speed of last 100m. 150m at 85% plus. Recoveries: 10 mm. between 500m and before 150m; 45 secs, between 150m.

400m Hurdles

Speed endurance Similar work to flat 400m plus. (a) Hurdling over hurdles 5 to 10 plus run-in. Start from position of hurdle 4. Five to six repetitions. Pace 85%, concentrating on a smooth rhythm. Recovery: 200m easy walk in not more than 3 mm. Or (b) 500m differentials, 2 to 3 repetitions. Athlete runs 200m on flat and final 300m over hurdles 3 to 10 and run-in. Pace: 200m in the same time as would normally be taken if the run were over hurdles. Pace of last 300m dictated by stride pattern and so on. Recovery: 10 to 12 mm.

Strength and endurance As 400m runner.

Technique Beginnings of stride pattern being set up plus special work on second bend (a) 5 x hurdles 2 to 7. Start at position of hurdle 1. Pace: dictated by pattern. Recovery: walk rest of lap. Or (b) 6 x hurdles 5 to 8. Start at position of hurdle 2. Pace: 85%. Recovery: walk rest of lap.

PHASE THREE (MAY/JUNE)

For most athletes this will be the beginning of the athletics season proper. League, Section and State-or National Championships are usually held in this period.

The number and type of training session will be largely dictated by the number and frequency of competitions and by the ambition of the athlete for championships coming up later in the year.

100m and 200m Sprints

Speed and Speed endurance (a) .3 x 3 x 90m. Pace: build up speed from 75% to full speed. Recoveries: very easy walk back between runs. Full recovery between sets. Or (b) Time trials over 125m or 250m.

Strength endurance Mini-circuit once or twice a week depending on competition. Do not increase loadings.

Strength Probably only one session per week.

Technique Work on block starts both on the straight and on a bend. Finishing technique—continue to concentrate on form.

Sprint Hurdles

Speed and speed endurance Similar to 100m and 200m sprinters but also including work over hurdles. (a) 3 or 4 times 10 hurdles with hurdle 5 or 6 removed. Followed by 3 or 4 times last four hurdles and run-in from a 12 or 13 stride approach. Pace: full effort. Recovery: this must be long enough to enable the athlete to maintain the quality of action.

Or (b) 5 or 6 x 6 hurdles at slightly reduced spacings from a 12 or 13 stride approach. Followed by 2 or 3 runs over 6 hurdles at the correct spacings.

Strength and strength endurance As for 100m and 200m sprints.

Technique All hurdles sessions should begin with a short time spent on walk-overs and isolation drills. This can be used as the completion of warm-up, plus e.g. 2 x 5 hurdles, 2 x 4 hurdles, 2 x 3 hurdles from blocks. This is to work on starting, approach to the first hurdle and pick-up. Pace: race pace. Recovery: adequate.

400m

Speed and speed endurance Emphasis must be on high quality work, some of the work should be very similar to that of the 100m and 200m sprinters. (a) 3 to 4 x 200m. Pace: very fast. Recovery: long.

Or (b) 2 x 2 x 300m. Pace: race pace, i.e. pace judgment. Recoveries: 5 to 6 mm. between runs, 10 to 12 minutes between sets.

Strength and strength endurance As for 100m and 200m sprinters.

Technique Concentrate on good running action and holding form over final 50 to 100m. 1 x 500, 3 x 150. Pace: 500m very close to 400m pace working on holding form towards the end. 150m very fast but relaxed. Recoveries: 10 min. after 500m, 45 secs to 1 min. between 150m.

400m Hurdles

Speed and speed endurance As for 400m.

Strength and strength endurance As for 100m and 200m.

Technique Work must concentrate on stride pattern, pace judgment and effort distribution. Use touch down time charts. (a) 3 x 8 hurdles from blocks. Pace: correct race pace and pattern. Recovery: long.

Or (b) 2 x 10 hurdles from blocks. Pace: correct race pace and pattern. Recovery: long.

Or (b) 2 x 10 hurdles from blocks. Pace: correct race pace and pattern. Recovery: long.

Or (c) 1 x 6 hurdles, 1 x 5 hurdles, 2 x 4 hurdles, from blocks. The first run is to work on change down; the remainder on stride pattern. Pace: correct race pace and pattern. Recovery: long.

PHASES FOUR AND FIVE (JULY/AUGUST/SEPTEMBER)

This is the most difficult period to plan in advance. The coach must be able to 'think on his feet' and modify sessions and programs in the light of early season competition, the time interval to the next major competition and the specific needs of the athlete.

In many cases 'minor' races must become part of the training program and be used as a buildup to the important later ones.

In a situation where the athlete has several races in succession training must be kept to a minimum and be quality biased. The best form of training at this time is racing.