

1600m & 3200m Adaptations

The basics of 1600 & 3200 meter training adaptations are best understood after familiarization with “Critical Point” Training and the breakdowns of the 800m race. As speed remains the most important component of 1600 and 3200 meter racing, the 800m basic training carries over quite effectively to the longer track races (as well as cross country).

Real World

The reality of high school racing is that athletes **MUST** be able to run all three distance races to some degree of effectiveness. Coaches will better prepare athletes if they understand this, and the following facts:

- 1.) Speed is the most important component of track racing.
- 2.) Speed is predicated on strength (and the consequent ability to carry speed over distance). This is commonly called speed-endurance.
- 3.) Athletes come into a HS program with a “speed-based” or “strength-based” mentality. The ‘speed’ athletes tend to excel more at the 800/1600 and an occasional 4x400 leg while the ‘strength’ athletes tend to gravitate toward the 1600/3200 with an occasional 800 race.
- 4.) Coaches must combat the ‘single-event’ mentality. A **GOOD** distance runner **WILL** succeed at all three events. An athlete of marginal talent or confidence believes they must specialize (Bingham’s Hopkinson . . . State Record @ 400m and 3rd in FL-Nats @ 5000m).
- 5.) Strength is 75% and speed is 25% when getting to the critical point. Speed is 75% and strength is 25% after getting to the critical point.
- 6.) An athlete must be able to run $\frac{3}{4}$ of a race on pace prior to running all of it on pace (critical point).
- 7.) Contact with the leaders helps build confidence (proper heating).
- 8.) Count the awards . . . if 8 are available 8 athletes will break away.
- 9.) A coach and athlete must determine what is important on that day . . . the win or the time. PR or team points. It is hard to do both.

Overview

The 1600/3200 athlete may be counseled that he or she will be trained as if going into a battle. Frankly, the start, jostling for position, surges, outdoor conditions, tactics, and finishing kicks all require a physical and emotional mindset that is similar to a mini-battle on the track. So, your training may be set up to “provide all the weapons” necessary to win the battle. If you neglect any component of preparation, the athlete has a weakness in the battle. In some cases the weakness may not be exposed, but in many races a championship athlete will have to defeat athletes in the pack who use various weapons.

Keep foremost in mind that the 1600 and 3200 are still ‘speed’ events. In many areas of the country, athletes who ‘have no speed’ are directed to the longer distance events but this is a situation peculiar to only high school competition. In the real world, the mile/1500 requires 3 laps for men in the 58 to 60 second range, followed by a kick of 300 to 400 meters at 50-flat pace to win, with a commensurate pace for women. Championship high school athletes at the 1600/3200 need to fight the stigma that they are slow. In fact, they have an ability

hold pace (speed-endurance) for an inordinate space of time and still run a 400 that might place them on the average mile relay team. These athletes are the opposite of what many coaches think. The 1600 and 3200 are not dumping ground events for the 'slow' runner . . . they are the most competitive and difficult of all the track events.

Training Implications

The best 1600/3200 runners come to the event with a bit of strength background from other school sports or cross country, although it certainly is possible to get substantial improvement in a first-year runner, whether freshman or senior. The best coaching philosophy for these distance athletes would be:

Make every workout and day count for something in your macrocycle plan!

Many coaches fall into the trap of viewing the 1600/3200 kid as 'expendable'. Just give them a distance run and go work with the pole vaulters! If this rings too familiar, you are just falling into the trap brought upon us by inadequate ability to hire or pay enough staff to monitor or individualize for the events. In many cases in high school, one or two coaches must instruct 17 events, and the 1600/3200 is the first to be 'generalized'.

The 1600/3200 has specific needs regardless of experience of the athlete. Within every microcycle (week) you must allow for three components to receive attention, with rest days also planned in so the athlete can recover. Those three elements are:

SPEED

SPEED ENDURANCE

AEROBIC STRENGTH

If any of these three elements are lacking in development, the athlete will be ill-prepared and lacking one of the critical 'weapons' to do battle on the track.

1.) Speed

Speed is the legspeed necessary to conduct the race at the desired goal pace without physical limitations such as turnover or excessive lactate production. Speed (and speedwork) is commonly done at *faster* than race pace and is designed to adapt the body by super-compensation to handle the physical turnover required to run fast and/or kick. Overall, speed is done with proper form as a paramount goal, so full recovery is allowed between intervals.

The prerequisite to speed is running form. Athletes need to be drilled on the three elements of speed . . . *dorsiflexion of the foot, proper arm action (drive arms down), and cycling the foot so the athlete lands at or behind her or his center of gravity*. Speedwork is done *much faster than race or goal pace* in order to condition the body to the kinesthetic feel of high velocity. When the athlete slows to race pace, form will fall into line but the athlete feels much more comfortable

running a race at sub-maximal velocity rather than the 'flat-out' velocity of speedwork.

Duration of the interval in speedwork must be below the level where the athlete will tie-up and lose form . . . generally less than 200m. This will require the runner to run at maximal velocity, working on form, and maintaining speed through the duration of the interval. Full recovery will allow the athlete to repeat the performance without form break. Total volume of a speed session will be from 1000-3000m. This workout is generally placed in the middle of the microcycle (week) when a major meet is on a weekend.

Sample workouts designed for speed development could include:

- a. Warm-up
8-12 x Flying 40s
Cool-down
(40m full sprints done once every time around the track with a jog-walk of 2:00 to 2:15 between.)
- b. Warm-up
Speed ladder 50m – 150m
Cool-down
(50-75-100-125-150-125-100-75-50 flat out with a 5-1 rest (5 times the duration of the interval) between each.)
- c. Warm-up
6-8 laps "Ins & Outs"
Cool-down
(Accelerate & sprint the straights and decelerate & jog the curves.)

2.) Speed-Endurance

Speed-endurance is carrying maximal velocity over time. It is sub-maximal legspeed and governed by oxygen uptake and efficiency and to a minor extent, strength. The purpose of the workout is to develop oxygen uptake, improve lactic acid buffering, and callous the athlete to the rigors of racing. The limiting factor of *speedwork* is form maintenance . . . the limiting factor of *speed-endurance* is processing and delivery of oxygen. Our goal is to place the athlete into oxygen debt and train from that position. Recovery in this type of workout is incomplete. The runner will complete longer exercise bouts at race pace (approximately) with an incomplete recovery usually 1-1 or 1.5-1.

Total volume in these workouts will be 2000-4000m and should consist of exercise bouts of 600-1000m duration. Girls and boys may complete the same volume with girls' times being about 85-87% as fast as boys over the same exercise bout.

The objective of speed-endurance is to simulate race conditions and stress for a period longer than that which can be sustained aerobically, but short enough to allow repetition and conditioning of the lactate buffering system. Also, this type of workout will callous the athlete mentally to expect some of the rigors of racing.

This workout is generally placed *as far away as possible* from the most important race of the week (Monday) and after a substantial rest period (Sunday?).

At the end of speed-endurance, good race preparation would dictate that coaches condition the athlete to “run fast when they are tired” by the addition of 2 x 200m at ‘all-out’ pace and just a 200m jog recovery. The purpose of that is to force a rhythm –shift in the runner and condition them to the fact they will have to go to terminal velocity at the end of a race (or practice in this case).

Sample workouts designed for speed endurance could include:

- a. Warm-up
5 x 800 with a 1-1 recovery
2 x 200 ‘all-out’
Cool-down
(Called the “Core” workout. Chart this one from week-to-week and set goal paces roughly $\frac{1}{2}$ of 1600m race pace minus 10 seconds, i.e. 2:30 for a 4:40 miler or 3:10 for a 6:00 miler.)
- b. Warm-up
Speed-endurance ladder 600m-1000m
2 x 200 ‘all-out’
Cool-down
(600-800-1000-800-600 with a 1-1 rest.)

3.) Aerobic Strength

Speed is the ultimate velocity, aerobic strength is the ultimate strength, and speed-endurance is the hybrid of the two. Conditioning runs off the track that are below race pace but longer than race distance (usually 2x or greater over race distance) will develop aerobic strength. Workouts of this type help develop the oxygen pathways to peripheral tissue and develop strength in the joints and soft tissue that supports form under load and stress. Many athletes who run the 1600 will also double back in the 3200, so aerobic strength and the ability to recover are paramount.

This workout is the intensive day that will be deleted when end-of-season racing requires multiple race days within one microcycle, although easy recovery runs may be continued to speed blood flow to soft tissue and hasten reparation.

This workout is variable in intensity depending upon the microcycle load. If no competitive effort is required on a Saturday, Friday is the opportune time to insert this run. If racing requires Saturday effort, the Thursday recovery run can be extended by 33% or hills can be added. If racing requires multiple full efforts in a microcycle, run this workout as an extended cool down after Saturday and reduce intensity. *Some* aerobic strength is being produced from even recovery runs, so this workout can vary depending upon coaching preference.

Sample workouts designed for aerobic strength could include:

- a. Warm-up
6 x 800-1000m Stepdown
Cool-down
(Start at well above race pace and every 800-1000m increase the pace by 10 seconds per 800-1000m until the last continuous interval where the athlete is running the fastest. Girls on an 800m stepdown with 1600 PRs in the 5:45-6:00 range would run 3:50 – 3:40 – 3:30 – 3:20 – 3:10 – 3:00 and boys with 1600 PRs in the 4:40-5:00 range would run 3:20 – 3:10 – 3:00 – 2:50 – 2:40 – 2:30.)

- b. Warm-up
4-5m hard fartlek
Cool-down
(Varying intensity over distances and terrain types. Add hills here if the microcycle allows.)

- c. Warm-up
30-40 minute Power Run
Cool-down
(Steady state run at threshold pace. Sustained conversation is uncomfortable at this pace.)

Putting it Together

A microcycle (week) of training for the 1600/3200 requires the coach to visit *speedwork*, *speed-endurance*, and *aerobic strength* once each. In a normal microcycle, you have an option of 14 workout periods if you exercise twice per day, but should follow an intensive day (races may not be intensive depending upon the level of competition and requirements of the meet!) with a recovery day and of course look at microcycles in a 3/1 series (3 intensive, building micros followed by one recovery micro where you cut back volume and intensity by 33%).

A sample microcycle with no competitive effort would be:

Monday AM	Easy 3 miles
Monday PM	Speed-Endurance
Tuesday AM	Weights/Core
Tuesday PM	Easy-medium fartlek
Wednesday AM	Easy 3 miles
Wednesday PM	Speedwork
Thursday AM	Weights/Core
Thursday PM	Easy medium 3-5 miles
Friday AM	
Friday PM	Aerobic Strength
Saturday AM	Easy 3-4 miles
Saturday PM-Sunday	OFF

A sample microcycle with one competitive effort on Saturday would be:

Monday AM	Easy 3 miles
Monday PM	Speed-Endurance

Tuesday AM	Weights/Core
Tuesday PM	Easy-medium fartlek
Wednesday AM	Easy 3 miles
Wednesday PM	Speedwork
Thursday AM	Weights/Core
Thursday PM	Medium 3-4 miles
Friday AM	Off or easy 3
Saturday AM	RACE
Saturday PM	Easy 3-4
Sunday	OFF

Doubling & Tripling

Very few teams are deep enough to allow athletes to not double at any level of racing. It is a fact of life and ALL older athletes do the equivalent or more as they run heats, rounds, and multiple events (Olympians).

If an athlete intends to double or triple in an event, consider the following:

- 1.) Evaluate the need for time or place in each race and minimize the impact on the athlete as much as possible in the first event or early in the day.
- 2.) Determine the daily plan for the athlete that will incorporate racing timeframe for each event, warm-up, warm-down, briefing and debriefing, hydration, nutrition, and rest.
- 3.) DO NOT consider tripling an athlete unless she or he has demonstrated the ability to *double* with ease.
- 4.) If at all possible, place the longest event you are asking the athlete to do LAST.
- 5.) Emphasize the importance of Gatorade and nutrition throughout the day, particularly within the recovery window.
