The Advanced High School 800m Race

Overview

The high school 800-meter race is a true ‘hybrid’ event in that virtually any sound athlete has an opportunity to succeed, whether coming from a sprint background or coming from a history of cross country or distance running. Beyond high school, the truly successful 800-meter specialists almost always come from a speed background as the physiological racing needs can only be satisfied with a rate of sprint turnover normally beyond that of the distance athlete. To this end, girls or boys interested in the event need only have a *desire* to run the long sprint coupled with a moderate aerobic background. This can come from either a specific preseason buildup aimed at 800-meter distances or a year-round approach to conditioning involving summer mileage and cross country.

The 800-meter training has long-range advantages for high school athletes. First and foremost, any coach desiring ultimate success beyond high school for his or her distance athletes must realize that the majority of training intensity in a collegiate area will involve additional mileage at higher speeds (i.e., doing all that is possible to raise the speed of the ‘comfort zone’ and also raise the level of endurance at that speed). Mileage will be added by a collegiate coach as a factor of the athlete’s more advanced training age, the increased distance of the racing in college, and the desire to maximize the physiological adaptations possible through greater training loads. If a high school coach emphasizes this aspect too early, there isn’t much room for collegiate increases in mileage. Conversely, if a high school athlete has an exposure to the form and rhythm of speed, especially through intense races such as 800 meters, the speed developed or revealed might ensure collegiate success. Therefore, not only will 800-meter speed help an athlete draw collegiate attention, it will also help he or she continue a positive direction of racing success in all distance events.

Regardless, the high school 800-meter race is still 70 to 80 percent aerobic strength and 20 to 30 percent speed. Later in a career, those 800-meter athletes who are going to continue with racing success will need to be more speed oriented. To run below 1:53 for boys and 2:14 for girls will require a dramatic speed component not often present in every distance athlete, yet many regional, sectional and state championships are won with times much higher than the elite levels. The Maria Mutolas, Sebastian Coes and Hazel Clarks of the world have tremendous 400-meter bests and these translate to world-record 800-meter times, but any high school athlete with a 400-meter best that is reasonably sound can develop 800-meter times that can win.

First, to calculate the rough 800-meter race best for any athlete – male or female – a simple formula is available. The only required information from an athlete with an aerobic base is the 400-meter personal best. To calculate the 800-meter time (per lap) simply take 10 percent of the 400-meter race best time (55 second 400-meter race best = 5.5 seconds) and add that to the race best time (55 seconds + 5.5 seconds = 60.5). This is the rough speed of the first lap. Now, do the exact same procedure with this new figure to arrive at the second lap time (60.5 seconds + 6 seconds = 66.5). Add these two figures together and you will *approximate* a race best for any athlete (60.5 + 66.5 = 2:07). This formula may be found to be slightly pessimistic for athletes with personal 400-meter bests beyond 54 seconds, but is

still relatively accurate. The faster the athlete races the 400-meter, the more precise the ratio becomes. An athlete with a 400-meter best of 45 seconds (Coe) would then be expected to produce times in the 1:42 range (precisely what he accomplished). However, although this formula will give a rough race goal, it will not necessarily reflect the per-lap racing strategy.

Training

Once an idea of what types of times are possible, imagine the types of training that will affect the energy systems responsible for competing at the 800-meter distance. Simply put, the 800-meter race is substantially beyond the ability of the adenosine triphosphate-creatine phosphate (ATP-CP) system to provide enough energy (6-10 seconds) and is substantially beneath the time frame of the aerobic system (15 minutes plus). The ATP-CP system is used for an efficient start, but athletes will find themselves operating in a LA (lactic acid) energy system for the length of the race (1:50-2:20 depending on gender and ability). The training of that system, and the ability to handle high levels of blood lactate while maintaining form and speed, is at the core of elite level high school running.

Although many competent high school coaches have found that there are many ways to prepare the athlete, they will presume that training for an 800-meter race will start with a preparatory phase to some degree. Following will be a competitive phase where the athlete has racing efforts with continued advancement in the seasonal training. So, training encompass two time periods – pre-competition and competition phases.

Pre-Competition Phase

Although success in the 800-meter does not absolutely require a pre-competitive period due to the relatively slower times that qualify as ‘successful’ in high school, any runner desiring to get the most out of themselves in any season should attempt a basic pre-training routine if at all possible. Multi-sport athletes may supplement basketball or wrestling training with event-specific technique development, or the distance coach may prescribe additional strength and aerobic work beyond technique if the athlete has no other sport during a winter season. Coaches should maintain a ‘hard-easy’ balance in training allowing for complete recovery between workouts, but may want to include the following in an 8-12 week pre-competition phase (macrocycle) of 800-meter training:

1. Aerobic base work. Starting at 10 to 15 miles per week (mpw) and ascending to 15 to 20 mpw during the pre-competitive phase. This running may be done at all speeds and in varying distances from 2.5 to 4.5 miles per run. Runs may be:
    - Fartleks: Literally speedplay. Run as you feel with varying degrees of speed from ATP bursts through long-slow-distance and constantly changing distances at which you hold that speed.
    - Power Runs: Anaerobic threshold level runs of non-conversational pace for durations of 15 to 30 minutes.
    - Stepdowns: After a relaxed warm-up, a series of 600- to 800-meter paced runs, strictly measured, where each successive run is faster than the one before. Usually four to six stepdowns will occur in one run, each typically 15 seconds faster than the one before. Sample times could be 3:30-3:15-3:00-2:45 for boys and 4:00-3:45-3:30-3:15 for girls with an 800-meter to one mile warm down.

- Conversational: Placed after more intensive base runs in order to speed the removal of trace lactic acid and to speed the blood flow of nutrients to taxed muscle groups. These runs are very slow (8:00 for boys and 8:30 for girls) and moderate in distance (3 miles).

2. Aerobic Strength Work. One exercise bout per week (microcycle) which requires a greater development of power during the running motion. Several possibilities include:
    - Hill Running: Fartlek running over rolling terrain of varying inclines. Focus should be on driving knees and arms on the uphills and full extension of stride length on the downhills.
    - Stadium Steps: Patterns of one and two-leg hops up stadium steps with easy jogging down or track lap circuits. The objective should be to follow 30- to 45-second stair bouts with one to two minutes of easy running.

3. Plyometrics. Bounding and depth-jumping exercises selected by the coach to develop greater strength through the range of motion. These highly stressful exercises should only be performed by athletes in training shape and not as a method of acquiring basic conditioning. Performed twice weekly, the plyometric workout is superior for conditioning explosive power in a greater range of motion, contributing to a greater stride, effective stride length and quicker turnover with shorter ground contact time. The references on plyometrics by Dr. Donald Chu seem to be best for high school athletes. Coaches should select three or four exercises from the manuals that are designated for the running motion.
4. Core. Abdominal and upper-body strength are two of the most grossly misunderstood and neglected areas of pre-competition conditioning. Core workouts develop that and may be done daily as it is isometric (using only body resistance) in nature. A good core workout would be:
    - Push-ups: Two sets of 25 done in strict form. Explosive power strokes and slow relaxing strokes.
    - Sit-ups: 100 to 200. Any variation of sit-ups or crunches in minimum blocks of 50.
    - Towel Scrunch: Two sets for five to 10 minutes (while watching TV or studying) of grabbing a bath towel with a bare foot and drawing it up under the foot by using the toes only. Grab the towel with the toes and then reach out and re-grab more of the towel. Use a single foot at a time and rest the other foot while doing them alternately. This strengthens and develops the foot for staying on the toes in the 800-meter and pushing off effectively.

5. Circuit Weightlifting. Use a combination of upper and lower body lifts done in rapid succession (keeping heart rate higher) with emphasis on explosive contraction strokes and lighter weights with higher repetitions. Possible lifts would include leg extension (done single leg at a time), leg curl, seated leg press and calf raises for the lower body. Do arm curls, dumbbell flys, and bench press (traditional or incline) for upper body.

Placing this into a weekly microcycle will be the ‘art’ of the individual coach, but a possible format might be:

(Pre-Competition – No competitive efforts – No alternate conditioning)

Monday AM:	Circuit Lifing. Easy Fartlek 20-30 minutes (3M).
Monday PM:	Core. (Optional base run. Becomes required later in macrocycle.)
Tuesday AM:	Conversational Run (2M).
Tuesday PM:	Core. Plyometric workout (30-40 minutes).
Wednesday AM:	Circuit Lifting. Conversational Run (2M).
Wednesday PM:	Core. Stepdown Run.
Thursday AM:	Rest.
Thursday PM:	Core. Plyometric workout (30-40 minutes).
Friday AM:	Circuit lifting. Conversational Run (2M).
Friday PM:	Core. Power Run (20 minutes).
Saturday AM:	Core.
Saturday PM:	Hill Run (30 minutes) or Stadium Stairs (30 minutes).
Sunday AM:	(Optional base run depending upon fatigue level.)
Sunday PM:	Rest.

(Athletes involved in another sport program during this time frame will need to consult with coaches and adjust the aerobic base and aerobic strength work dependent upon their physical sport demands and recovery options.)

Competition Phase

The coaching of an 800-meter athlete during this phase requires a delicate balance of continuing long-term development while allowing proper physical and mental rest in order to meet the demands of competition. Training requires a coach to determine whether there are one or more competitive efforts per microcycle and what type of effort will be given to racing at different times of the season. Are qualifying meets or specific placings in major meets important throughout the season or can the athlete just focus on one season-ending championship?

During this phase, a specific attempt must be made through the workouts to develop the body's lactic acid 'buffering' mechanisms to the fullest. Normal training accommodation to lactic acid development requires about eight weeks of intermittent workouts designed to force the body to deal with lactic acid strain while under workload, so this type of training must be in place as well as ATP-CP speedwork and continued strength and endurance efforts. Whenever possible, instruct the athletes not to let their heels touch the ground at all during trackwork. When combining this varied intensity and energy-system training with a competitive schedule, a coach must be sensitive to the fatigue levels of each athlete. During an eight- to 12-week macrocycle of 800-meter competition (a normal high school track season), the following types of work should be included:

1. ATP-CP speedwork. Turnover in the long sprint is critical, and the only way to keep turnover developing is with high-speed work. If tactics require an athlete to run 14-15 seconds per 100 meters in succession, each athlete must be within his or her 'comfort zone' at that speed. True speedwork can only be done with the ATP-CP system for bursts of six to 10 seconds before the body must take two to three minutes to regenerate creatine levels in the muscle fiber. A perfect workout would be the 'flying 40's' whereby an athlete focuses on maintaining high turnover for 40 meters with a running start followed by a slow jog the rest of the way around the track. Coaches may feel it beneficial to video the 40-meter burst and evaluate the form in the presence of the athlete. Dorsiflexion of the foot, proper footplant on the ball, extended back-kick, and driving 'sprinter' arm action are emphasized. The 'flying 40' workout can be done for 12 to 16 laps, once per week.
2. L.A. (Lactic Acid) Workouts. The critical step here is to place the athlete into lactic acidosis early in the workout, potentially even higher than levels encountered during the race, then have the body work within this state to develop the 'buffering' mechanisms that will delay the onset of acidosis during racing situations. Perhaps the simplest way to accomplish the lactic-acid production is an 'all-out' 300-meter sprint, even faster than 400-meter race pace at the start of the workout. Follow that with a short but intense series of 400- to 500-meter long sprints at 800-meter race pace and 1:1 or 1.5:1 recovery to force the body to deal with lactic acid production and clearance.
3. Pacing Workouts. Done best with cones marking every 50 or 100 meters. The concept of pace is critical for an 800-meter athlete to develop. An occasional visual cue of seeing cones at each 100-meter mark not only helps the athlete stay focused on pace, but allows the coach to view any loss of pace and the precise location at which the pace is being lost. These are best done in conjunction with the speed-endurance workout.
4. Speed-Endurance Workouts. Over-distance, usually at 1000 meters, but at sub-maximal sprint levels. Times of 2:50 for boys and 3:15 for girls would be challenging. A series of three or four repeats with a 2:1 rest will help build a fast comfort zone in each athlete. An alternative to this can be 200 'ins and outs' – a 200-meter jog followed by a 200-meter acceleration to race pace during the last 50 meters. Continue this for 3,200 to 4,000 meters or ladders at race pace from 200 to 500 meters with a 2:1 rest.
5. Continued Core and Aerobic Base Work. Core workouts should continue and aerobic workouts be placed in order to assist the body in clearing lactic acid remnants. The increased blood flow to the peripheral tissues caused by the easy-paced running also speeds healing to the micro-cellular tears and capillary disturbances caused by the speedwork.

The construction of a 'competition' microcycle is highly dependent upon the number of competitive efforts required during the course of a one-week cycle and the intensity of those required competitions. Typically, high school requires a league or regional meet once per week and an occasional Saturday invitational or qualifying event. With such a myriad of factors weighing in on the building of a 'hard-easy' microcycle each week, the coach has to consider the following as every week is built:

a. Fatigue will build daily, weekly and throughout the competitive macrocycle.
b. Fatigue will be mental as well as physical.

c. Working in an “on-3, off-1” schedule of intensity would be beneficial for dealing with long-term fatigue. Every 4thweek, cut back intensity and distance by 25 to 33 percent to allow for a ‘deeper’ rest.
d. Shortness of duration of the competitive high school track season forces a coach to continue to train while racing.
e. Meets will have to be prioritized. This may mean some athletes rest during some meets, some athletes may compete in a time-trial format and not as varsity or athletes may use a meet as a training exercise.
f. ‘Hard-easy’ workout regimes will allow the best type of training and recovery, but it is possible to work ‘hard-hard’ afternoon sessions once per week if different energy systems are called into use (e.g., ATP-CP on Monday and lactic acid on Tuesday followed by an easy day on Wednesday). Injury potential goes up when ‘hard-hard’ days are using the same energy systems.
g. Morning workout periods are necessary to supplement the more intensive afternoon sessions. Morning sessions accomplish the corollary training, help to clear fatigue, and allow for team camaraderie.
h. Although workouts have slightly different end goals, the critical aspect of microcycle design is not necessarily covering each workout type within one week, but keeping the workouts on a primarily ‘hard-easy’ schedule and keeping hard workouts <u>hard</u> and easy workouts very <u>easy</u>.
i. Multiple competitive efforts in one microcycle will make it impossible to cover each workout type in one week to a full extent. In that case, plan microcycles in blocks of two weeks, covering all areas of training. As long as a ‘hard-easy’ schedule is maintained, there is no mandatory requirement a specific workout be repeated on a certain cycle in order to show performance gain!
j. Plyometrics during the competitive season could subject the athlete to enough stress to cause injury when done in conjunction with hard workouts and competitive efforts. Eliminate the plyometric workouts or decrease their number and intensity during the competitive season.
k. Aerobic strength work will be drastically reduced and replaced by lactic acid workouts (using aerobic strength) at higher speeds.
l. Circuit lifting should now enter a ‘maintenance phase’ with two sessions per week.
m. All workouts should include a substantial warm-down period.
n. Speed-endurance workouts may be ended with several all-out 150- to 200-meter sprints to psychologically condition the athlete to run fast when tired.
o. Conversational runs should be done in training flats. Trackwork should be done in spikes when possible emphasizing no heel touches at all.

With these principles in mind, a possible mid-season two-week microcycle with three competitive efforts is listed below (adjust intensities as needed depending upon ability and progression of the season).

(Competitive races on day 2, day 9, and day 12 of the 14-day double-microcycle. Efforts on day 2 and day 9 are minor level while the effort on day 12 is major.)

Monday AM: Core. Conversational Run (2M).

Monday PM:	ATP-CP Run. (10 x ‘flying 40s’ down the home stretch of the track with rest of the remainder of the lap at a slow jog.)
Tuesday AM:	Circuit Lifting. Core.
Tuesday PM:	RACE. (Low key event. Considered an ‘easy’ day in intensity.)
Wednesday AM:	Core. Conversational Run (2M).
Wednesday PM:	L.A. Workout. (‘All-Out’ 300m followed by 1 x 400, 1 x 500, 1 x 400 @ 800m race pace and a 1:1 walking rest.)
Thursday AM:	Circuit Lifting. Core.
Thursday PM:	Conversational Run (2M).
Friday AM:	Core. Conversational Run (2M).
Friday PM:	Speed-Endurance Workout. (200 ‘Ins & Outs’ for 3200m focusing on finishing accelerations greater than race 800m pace then backing off to a slow strider pace.)
Saturday AM:	Core. Conversational Run (non-measured 30-35 minutes).
Saturday PM:	Rest.
Sunday AM/ PM:	Rest.
Monday AM:	Core. Conversational Run (2M).
Monday PM:	Pacing / Speed Endurance Workout. (Establish race pace per 50m interval and place cones @ each 50m. 1 x 650, 1 x 600, 1 x 550 with a 1:2 rest to maintain pacing). Finish with 2 x 200 *or* 2 x 150 with an interim 250 jog after the last 550 and a 200m jog in between.
Tuesday AM:	Circuit Lifting. Core.
Tuesday PM:	RACE. (Low-key event. Considered an ‘easy’ day in intensity.)
Wednesday AM:	Core. Conversational Run (2M).
Wednesday PM:	L.A. Workout. (‘All-Out’ 300m followed by 3 x 400 @ 2nd-Lap 800 race pace target time with 1:1.5 rest.)
Thursday AM:	Circuit Lifting. Core.
Thursday PM:	ATP-CP Run. (8 x ‘flying 40s’ down the home stretch of the track with rest of the remainder of the lap at a slow jog.)

Friday AM:	Core. Conversational Run (2M).
Friday PM:	Light 800m jog in trainers on track followed by 2 x 150 accelerations finishing at 800m race pace with 800m jog warmdown.
Saturday AM:	RACE. (Major event. Run for personal best.)
Saturday PM:	Rest (or optional Conversational 2M).
Sunday AM/ PM:	Rest.

Tactics

Viewing 800-meter racing at a high school level will show the most radical variances of tactics depending upon coaching expertise, athlete maturity and coachability, and coach-athlete understanding of the energy systems required for successful efforts. However, that same viewing of a multitude of races will show that athletes who are successful in their endeavors stay within basic parameters. Tactical considerations in the 800-meters must rely upon an understanding of how two aspects of the event are intertwined, mainly, pacing and energy systems used. The 800-meter event is a blend of pure speed modulated over distance. Done with attention to pacing and energy systems, the event is controlled, tactical and perfection in combining speed with endurance. Done incorrectly, the event exposes lack of preparation and racing knowledge, inattention to detail and haphazard understanding of the physiology of the event.

Pacing & Energy Systems

The length of the 800-meter run makes pacing a critical element to considering race tactics. Any sprint distances beyond 300 meters tax the body's ability to clear lactic acid so some degree of control in race pacing is mandatory if the athlete plans to finish in the best possible time. As a general rule of thumb is: To run an optimal time, keep the first and second laps between 1.5 and 3 seconds apart.

It is possible to run quite fast by violating this rule in high school, but the objective is to run the *optimal time*. Remember from the discussion of training, the formula for forecasting a finish time in the 800-meters is only to predict an approximate goal time, not to delineate splits per 400 meters. To give a rough approximation of goal pacing:

a. Determine the potential or goal finishing time using the formula.
b. Divide that time in half.
c. Subtract 1.5 seconds from the halfway time to get the first lap split.
d. Add 1.5 seconds to the halfway time to get the second lap split.

This is a beginning point for developing a racing strategy based on pacing. As coaches understand the strengths and weaknesses of the athlete, adjustments are made.

After determining a 1st and 2nd lap split for the event, it is possible to break down each 100 meters of the event to chart the progress of the athlete through training and racing. Taking into account an ATP-

CP start, going out hard for the first six to eight seconds and then ‘settling in’ to pacing, the splits for an athlete attempting to run 1:57.00 might look like this:

100m	14.0	(14.0)	500m	14.5	(1:12)
200m	14.5	(28.5)	600m	15.0	(1:27)
300m	14.5	(43.0)	700m	15.0	(1:42)
400m	14.5	(57.5)	800m	15.0	(1:57)

This splitting takes into account the general lactic acid buildup and shortening stride length, coupled with the decreased turnover as the racing nears the end. Now that the coach has determined the pacing of the event per 100 meters, the training and racing goals should include running 100-meter increments well within the 14.0 to 15.0 pace even when tired in order to allow the body to accommodate to the demands and stresses of racing at this pace (1:57). In other words, if an athlete cannot muster a 14.0 per 100 meters when tired, more time in training needs to be spent on form during speedwork and speed-endurance.

Paces faster and slower than this are equally easy to determine, but the coach still will end up with an average velocity per 100 meters. The athlete will find that there is an almost direct correlation between the effort given at the closing portions of the race and the amount of slowing in the pace. Simply put, if the athlete feels she or he is speeding up at the finish, they are actually just maintaining pace, while a feel of finishing while maintaining pace usually results in a slowing at the end of a race.

This knowledge of 100-meter pacing will help the coach determine ‘checkpoints’ the athlete should have at various portions of the race as well as visual indicators during workouts of where the athlete should be at different times in the race. Coaches may also evaluate training and racing performances via video if a performance is critiqued for form or slowing. This evidence is compelling when discussing goals and personal bests.

The energy systems in use during an 800-meter race begin with six to eight seconds of ATP-CP ‘burst’ energy, similar to what would be found in a ‘fight or flight’ response. If the athlete does not use this energy system during the first six to eight seconds of a race by starting quickly (and therefore getting out of the potential ‘banging’ in the pack) the energy system will be naturally depleted over the next 40 to 50 seconds. He or she would be wise to burn it up in a useful way as opposed to letting it ‘leak’ out as the body makes a transition to the L.A. system. Once the athlete gets to the L.A. energy system, the ‘comfort zone’ determines the speed at which he or she can maintain pace. Proper training will continue to push that ‘comfort zone’ back to near race pace (or beyond). If an athlete is unable to clear lactic acid from the system in training at a rate which allows form maintenance, there is no way he or she will be able to race at that rate. So, training of the energy systems must mimic or exceed the stresses of the race so the training effect is the ‘accommodation’ of lactic acid and the knowledge by the athlete that this is a normal effect. Consequently, the athlete should feel comfortable during exercise bouts exceeding the *velocity* required to maintain race pace, and should also be comfortable with exercise *duration* that exceeds the total time of the race. An athlete loses fear of the event when each of those two goals is met, and then the coach blends the two into a race plan.

Tactical Variances

No two races are the same. Although it is possible to plan a pacing strategy that will give an optimal race effort, the true nature of the race is that successful athletes must race each other with conditions and fellow competitors throwing variables into the mix. Still, it is advisable to give athletes a basic idea of how a race is to be broken up in order to allow them to feel comfortable that they have a plan they can implement. This allows them a jumping off point to adjust effort from depending upon race conditions. A solid beginning strategy would be the idea of the 800 meters being a *three-stage race*, consisting of a starting 200 meters, a central 400 meters, and a finishing 200 meters. Again, this is a rough approximation, but it takes into account the initial ATP-CP start and 'settling in' to a power float, a focused middle 400 meters that takes the competitor's mind off the distance and keeps the focus beyond the 400 meters split point, and the final 200 meters where the athlete hits the critical point and must race the way to the finish.

Most athletes find that a three-stage race accounts for energy system changes and gives them an ability to hit the critical point in a race where they have to decide how they want to finish. For many athletes, that critical point is at or near 600 meters in high school, but athletes with superior talent may find that they are able to hit the critical point earlier. Advanced competitors may hit their critical point at 400 or 500 meters at which time they shift to a driving finish which is at top sprint speed they know they can maintain. Athletes who are still learning their capabilities and limitations may feel more comfortable with a critical point at 650 meters. Regardless, the critical point of a race ends the second stage of a three-stage race. The final stage will be the stretch drive beyond the comfort zone.

It is impossible for an athlete to check a watch for splits during an 800-meter race, so the coach must provide the information at the relevant place on the track. Many times, that place will be the critical point of the event. This can be 550, 600 or 650 meters into a race for a typical high school competitor, but it should be a time the athlete knows quite well. If the athlete comes through the critical point faster than projected, either a breakthrough race will occur or the athlete will reach lactic acid levels slowing them down prior to the finish (and observable through split analysis). If the athlete is slower than projections, they usually have the knowledge they can attempt slightly faster finishing efforts without tying up. A strong, distance based competitor may feel more comfortable at a critical point at 550 meters into the race, knowing he or she can mount a stretch drive using greater levels of speed-endurance. A speed basedcompetitor may feel more comfortable at a critical point at 650 meters or more. In any case, at that point the athlete should be free from competitor obstruction and with a clear path to the finish, focusing on nothing but form maintenance and turnover. That same 1:57.00 competitor would have the following goals and direction during the race:

FIRST STAGE

100m	14.0	(14.0)	(ATP-CP start and then settling in to a smooth ball-of-the-foot 'power float'.)
200m	14.5	(28.5)	(Check 200m split and adjust for conditions. Begin focus for relaxed second stage. Continue

			power float.)
SECOND STAGE			
300m	14.5	(43.0)	(Continuing to sort out competitors and pre-paring to use home stretch to establish a physical position in the pack that will allow efficient use of the 3rd turn and transition to the third stage.)
400m	14.5	(57.5)	(Verbal split check from meet administration and adjustments. Focus on relaxation now is paramount for the next 200m. Ball-of-the-foot minimal ground contact is the feeling you are after. Get through 3rd turn as close to the inside as is possible.)
500m	14.5	(1:12)	(Focus is now on avoiding the 'let-down' in turn-over due to third stage anticipation. Evaluate field position for final turn.)
THIRD STAGE			
600m	15.0	(1:27)	(Critical point split. Shift to stretch drive by driving arms, particularly in the downstroke and focusing on rapid turnover with the arms leading the legs.)
700m	15.0	(1:42)	(Use all of the track coming off the turn as the distance is the same up the straight. Eyes up running 'tall' keeping the chest high.)
800m	15.0	(1:57)	(Focus on a point 10m beyond the tape and run through the finish completely.)

Other tactical varieties can be played off of this basic strategy, but many of these are "positional" races with slower starts and tactical adjustments of the critical zone (i.e., saving an inordinate amount of energy for a highly prolonged stretch drive). In these cases the final times will not reflect the best abilities of any athlete but will emphasize surprise and positional advantages on the track. A great

finishing turnover is the best weapon in the arsenal for tactical varieties. So, training work on turnover and sprint form will be great defense for surging and kicking races. The event should be thought of as a sprint. Not too many tactical opportunities occur in a sprint, so the faster an athlete decides to run, the less the chances are that positional disadvantage on the track or competitor's actions will have any bearing on the outcome.

Tactical situations regarding competitors also include:

a. Avoid passing wide on turns if at all possible, but if necessary, get around and clear (full stride ahead) as quickly as possible.
b. Pass with authority. The event is too quick for gamesmanship. If someone is in the way, go around at the earliest opportunity that does not put you at a disadvantage by forcing you off pacing.
c. Starting in lane 1 allows the competitive field to 'collapse' into your lane if you do not get out with authority.
d. Understand the rules for protecting your position in the field at the start and during the race. Avoid fouling at all costs, but use high arms for balance and protection at the start and do not be afraid to 'mark' or check competitors who cut in prematurely with a light touch to the back or side.
e. Run your race; 400-meter or 200-meter athletes do not worry about what is happening to competitors in other lanes. This race is the same, just without lanes. Any race effort that depends upon the actions of a competitor puts you in a position of 'reacting' instead of 'acting'. You alone are accountable for your race.
f. Train to be able to do battle at the critical point of your race. You must get to that point *within your 'comfort zone'*so you can race to the finish. *Your* critical point in the race may not be the same mark used by your competitors.
g. Composure is key. Full race efforts do not happen very often, so maintain your composure regardless of the actions of your competitors. If you are fouled, startled, or get off your race plan, focus on recovery and stay with the pacing you must have to get your goal. Racing is full of distractions and complications. The best competitor is the one who maintains composure in the face of adversity.

Conclusion

The best 800-meter athletes in high school may or may not be the fastest long sprinters, but they certainly are the ones who consider the race that way. Either distance-based or speed-based athletes may be supremely successful at this event at a high school level. In any case, girls and boys competing at advanced levels in the 800 meters will be training and adapting to velocities requiring workouts that produce and force clearance of high amounts of lactic acid produced when competitors exceed 90 seconds or more of work. But clearance of lactate levels must be balanced with training requiring turnover (ATP-CP) work as well as speed-endurance efforts which train the physical and mental athlete to exceed the limitations of the race distance.

The coach is key to understanding the flexibility of the high school athlete. Training the energy systems in a ‘hard-easy’ format, allowing proper recovery, developing a sense of pacing and race strategy, and emphasizing speed will allow each athlete to develop to their maximum potential.