

## **The 800 Meters**

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Just as there is more than one route to travel to reach a destination there are several training approaches that can be applied in order to lead an athlete toward their potential as an 800 meter runner. What could be helpful from the outset however, is to identify the type of athlete(s) that you are training. An 800 meter runner can be grouped into three distinct categories(Webb):

- a.) sprint type
- b.) all-purpose
- c.) distance type

The SPRINT TYPE responds best to relatively fast training runs with limited number of repetitions and long recoveries. This group will fatigue easily, so much so in fact that you will sometimes question if they are working hard enough. Repetitions will seldom exceed(believe it or not!) 600m.

The ALL-PURPOSE TYPE is the athlete who can run a variety of events fairly well but doesn't necessarily excel at any one event. This runner is a "jack of all trades". They will train at a reduced intensity but will have shorter recoveries and will handle a considerably larger volume. This group will sometimes train with either group depending upon the workout design and what the coach wishes to accomplish in the particular session.

The DISTANCE TYPE will train at a slower pace but their volume is considerably larger. It will take this group longer to recover from a track workout.

Besides knowing your athlete(s) , it is obviously important to understand the requirements of the event. We are talking about an event that takes anywhere from 1:41.11 to run if your name is Wilson Kipketer to 3:00 if your name is Steve Gardiner. This is a highly anaerobic event. The 800 meter is approximately 67% anaerobic to 33% aerobic. (Freeman, p.55) When planning your training, remember the theory of specificity. You are training your athlete to perform as close as possible to their potential. In order to achieve their potential requires the athlete to train in a very specific manner.

How is this done?

The anaerobic system(LA) produces most of the energy during high intensity running of 1-3 minutes during which oxygen demands exceed oxygen supply. Eight hundred meter running is most efficiently developed by repetitions of high speed running of anywhere from forty(40) to ninety(90) seconds duration.

The aerobic system(O<sub>2</sub>) is best developed by repeated runs of at least three(3) to five(5) minutes duration at the athletes maximum oxygen uptake. Maximum oxygen uptake can be determined by the pace that an athlete can sustain for twelve minutes(Daniels).

Putting these physiological principles into action requires a carefully prepared plan. The most important element is time:(1) there is timing which means doing things at the right time and(2) there is the time when you want your athlete to perform at his or her best. When planning training it is important to count back from the championship week(s). Keep in mind that each training cycle should not exceed 4-6 weeks as the training effect will be minimal beyond 6 weeks. During the early season it is wise to emphasize volume over intensity. Play to an athlete's strengths. This is why we categorize the 800 meter runner into categories. You have to have a mix of training throughout the training year which reflects the energy systems which you need to stimulate. Never neglect speed work(in the form of speed drills, speed endurance and aerobic conditioning). Your emphasis on the speed component will vary as you adjust volume and intensity but keep in mind that sudden changes cause injuries. Avoid a sudden change from one kind of training to another. Weave your training transitions so that the segments do not cause too abrupt of a change. The volume will drop as the season progresses and intensity will increase. Do not increase volume as you are increasing intensity. The intensity of the stimulus is what will give the greatest benefits to the athlete provided the proper base has been laid. Remember, however, that the harder the stimulus requires the greater need for proper recovery.

## **WORKOUTS**

When designing workouts it is important that the coach is careful to avoid turning the session into a what I call the "workout record" syndrome. Don't have your athletes leave their best races on the practice track. "Flying" in workouts will also mean that oftentimes the athlete is not tapping into the correct energy system.

Effort and Duration are keys in training. If you are thinking about the duration of the run than you can apply it to any athlete of any quality. For example, an easy eight mile run for a 10:00 two miler might take 55-60 minutes while for the 14:00 two miler it might take 75 minutes. In this example the weaker runner just put in a more taxing afternoon than did the superior runner. Instead, a run broken down into minutes (duration) will help you accomplish a similar effect with each athlete. Where do you start with interval training? The best way is to start safely. An example would be to take the best time the athlete can produce (at that point in the season) for the distance to be run and add 25% to that time. An athlete who could run a 400meter in 60 seconds would train at 75 seconds with a rest interval of 2-3 times(ie., 2:30-3:45). If the athlete is getting slower as he/she goes along than

they ran the early reps too fast or the rest is too short. As fitness improves, than the pace can be increased and/or the rest decreased. What you need to do as the coach is to develop a program that fits your needs and one that both you and your athletes believe in. Ultimately coaching is not as much writing workouts as it is out on the track or in the classroom with your personal relationships with your athletes.

At New Bedford High School, we divide the spring season into just 3 segments; early, mid and late. What we emphasize in each segment will vary. As mentioned earlier, the intensity will increase and the volume will drop as the season progresses. Most of us are working with only a 10-12 week season thus the 3 segments.

**EARLY SEASON:** we are rebuilding our base and emphasizing aerobic conditioning. New England high school athletes may have completed their indoor season before or just after the February vacation and hopefully they have had the self-discipline to already begin this phase prior to the team practices that begin(in Massachusetts) on the third Monday in March. Speed is not neglected during this phase but the emphasis is on developing the aspects that will be necessary to allow the athlete to carry their speed over the entire distance. Prior to the start of the dual meet season, the athlete can do 3 quality workouts each week(you can have easy weeks built in by doing 2 quality days instead of 3 if you feel that your athlete will benefit). Your athletes will do 1 or 2 quality workouts and 1 meet per week(depending upon their recovery) when the competitive season begins. The early season meets can be used as part of your training program by turning them into anaerobic workout sessions. It is beneficial to move your athletes around (up and down) during the dual meet season. The sprint-type of runner should probably rarely(for most never) race anything over the 800meter. I also feel that it is wise to keep your younger athletes racing at shorter distances; events that they are actually running as opposed to "shuffling".

During the early phase, I am emphasizing with my sprint types 2 components: aerobic conditioning and AT(anaerobic threshold = heart rate to 168-172 bpm). Speed endurance is not neglected but it is given secondary priority. One workout that I like to do with sprint types during this phase involves 600meter repeats(see Clyde Hart). We only do 2 then drop down to 300's but we cover 2400-3000 meters in this workout. We start out slow at first(top boys only at 2:00 and top girls at 2:15-20) but the pace drops as the season progresses. We'll keep doing these until they demonstrate that they are fit. This group seldom if ever goes on a distance run. We do "steady state" runs by doing 1000-1200m cruise intervals with a 60 second rest(see Daniels). They absolutely hate these but you get so much more of this workout than you would by sending them out on the road. Hills are oftentimes used

during this phase to develop overall strength. Recovery runs can take the form of tempo 100's, 200's and/or 300's. Continuous 5-person 200m relays at 75%(see Clyde Hart) is one easy-moderate workout that we do frequently. It's important that the athlete's do this workout at 75% however because they can turn this into a hard workout once you put a baton in their hand.

My distance types also emphasize AT workouts but they may them differently than the sprint types. We might do 20 minutes at a steady state as part of a distance run. If we do cruise intervals we will refer to Danielís VDOT chart(see Daniels p.63-67) Also, this group will begin preparing for the track work that will be following in the next phase by doing repetitions on the road or trails or hills. To maintain our base, the distance runner is also incorporating a long run into their program every other week during this early phase. Recovery runs can be easy running(conversational pace)

from 30-60 minutes.

The all purpose group tends to move freely from one of the other two groups depending upon what we wish to accomplish with them at that time. The track workout mentioned above(600-300) will have a(1200-900m) -300m twist to it for this group. Remember that aerobic conditioning is best achieved in the 3-5minute range.

### **MID SEASON**

Dual meets have become a weekly occurrence(sometimes twice-weekly) by this part of the season. The intensity of the training will increase as the athlete's performances improve. For example, in the early season, the top boys started out doing a 600-300 workout at a relatively pedestrian pace. We are now working up to a 85% effort in this workout. The 2 minute 600meters may now be working its way down toward 1:45-40 for some of the faster boys in your group. Sometime during this phase, we may drop the 600m down to a 500m(volume dropping as intensity is increasing). Try to use the meets to your advantage. Depending upon the order of events a 200-400m relay double might fit into your workout and meet schedule for that particular week.

Your athlete does not have to run the same event week after week. In fact, moving your athlete around will prove to be beneficial to their overall development. During this phase, I tend to continue the AT runs(cruise intervals). At some point during this phase I may begin to include event runs. For an 800meter runner, an event run is 700m. For a 400m runner, it would be 350meters. As you can see, this is 7/8 of their racing distance. The most common way that I incorporate this workout is by running the event run at your current performance time(ie., a 2:00, 800m runner would run probably 2x700 in 2:00 followed by 3-4 x 200m in cut-down fashion). What this accomplishes, is most importantly, you have controlled the effort (87% = 7/8) but also your

athlete just ran almost the equivalent of two 800's without realizing it until you point it out. Another way of doing this is by having the athlete run their goal time (ie., 1:54) for 700m. This can be a huge confidence builder but you also have to be very careful because this has potential for leaving your best efforts on the practice track. This distance type continues with AT "tempo runs" (or cruise intervals) during the mid-phase while introducing "date-pace" intervals (Bowerman). We set this pace up by determining how far they can run in 12 minutes. For instance, a 12:00 two-miler would run 90 second 400m pace in their interval session. Another way of determining pace would be to utilize Daniel's VDOT chart. We move this runner around also at dual meets and try to make sure that they run the 4 x 400m relay as often as possible. Remember, 400m speed is a key for 800meter and mile performances. Because the season is so brief, we bridge this mid-phase to the late-phase by incorporating some "goal pace" tempo in the track sessions as this phase heads toward the late-season phase.

Our all-purpose runners are on a similar pattern as their 900m-300m workout for example is decreased as volume increases. This group can tend to fragment at this point as some members may spend more time on the track (ie., cruise intervals as opposed to "steady state runs") than others. This group tends to race over a wider range of events in your dual meet schedule and can prove to be quite valuable as you try to move the other two groups into various events for their benefit. Once again, dual meet requirements will determine the number of quality sessions that can be performed during the week. Steady state/cruise interval sessions take a secondary role during this phase as workouts need to begin to imitate the specificity of the event which is predominately anaerobic.

### **LATE SEASON**

During this phase you must keep in mind that you should "unload" approximately 7-14 days before the key competition(s). I don't emphasize speed to the degree that the journals and texts advocate because of the number of dual meets that we have had to run throughout the season. I feel that most high school athletes have had multiple opportunities to "sharpen" during the dual meet schedule so oftentimes that "final gear" has gotten developed during dual meet opportunities. You want to sharpen and most importantly get fresh during the late season. The sprint type's intensity is geared toward the 150m-400m range. Where your schedule allows you can run race simulators or broken 800's. For example, 500m-300m at 800m goal pace. The main goal is to maintain fitness (aerobic strength has taken on secondary importance) but it should not be neglected.

The distance type is concentrating on goal paced intervals. For

instance, the 4:30 miler who is pointing toward 4:20 would run that rhythm(65 seconds/400m). It might take the form of 400m-800m-800m- 400m(65-2:10-2:10-65) or it might have even less volume than this. The important issue is to try to be as specific as possible while keeping the athlete as fresh as possible. I have found(from personal experience) that if you begin to emphasize this phase too soon you may well produce a champion at an early to mid-May invitational but they may not performing at the same level three weeks later at the State Final. This is where I have found that weaving your date and goal pace interval sessions will be beneficial to the athlete. You must be careful as it is all about time and timing.

### **ADDITIONAL COMPONENTS**

Circuit training is an important component to our overall fitness. Our warm up has just been changed into a active, mobile-type circuit. We have been incorporating a fairly dynamic circuit routine over the past several years and I feel that this has paid dividends for our middle distance athletes. (see Gambetta; Tenke and Higgins; and Chu)

### **TACTICS/PACE**

Only the first 400m may be planned in 800m racing. The 800m race can be planned only to the half-way mark. There are too many surprises and unknown factors in the 2nd 400m to plan this half of the race. However: Know your opponents strengths and weaknesses. Factor in weather conditions type of track(particularly important during indoor) style of start(stagger, double barrel, etc.) Be aware of positioning(caught on the inside -tight to the curb can be "no-man's land") Do you want to lead?(It's awful hard to lead an entire race in a field where the competitors are fairly evenly matched) PACE: It is wrong to run the first 400m too fast but this is better than running the 1st 400m too slow. Even-paced 800m races are unusual. It is wiser to run the first 400m (particularly the first 200m) a little faster than the 2nd 400m. There should not be more than a 5 second differential from the 1st 400m to the 2nd 400m. The sprinter type most certainly should go out faster in the 400m as this type of runner will not run their best if they try to run even splits. The distance type could run even-paced but it is better even for this athlete to run slightly faster in their first 400m. The 800m is an event where the maximum acceleration-minimum deceleration tactical approach to racing applies. This is due to the speed of 400-800 races where oxygen debt and fatigue products induce exhaustion rapidly. The runner therefore seeks to cover as much of the race as possible at the greatest speed which will permit him/her to finish in a minimum time, before fatigue becomes intolerable. Remember, there should be no more than a 5 second differential between the 1st 400m and the 2nd 400m.

### **PREDICTABILITY**

Best 800m = (400m + 6seconds) x 2

This seems to apply to the distance type runner quite well. The high school sprinter-type appears to lack the necessary strength to fulfill this predictability equation.

### **CLOSING**

The 800m is an exciting middle distance race that has become an extended sprint. Develop a feel for the event as well as a feel for your athletes and success will follow.

### **SOURCES**

William Bowerman, *The Bowerman System*, (1983)

Dr. Donald Chu, *Plyometric Exercises* (1989)

Dr. Jack Daniels, *Daniels' Running Formula* (1998)

William H. Freeman, *Peak When it Counts* (1989)

Clyde Hart, *400Meters Training* (Track and Field Quarterly Review) (Spring 1993, p.23-28)

Andy Higgins and Zoltan Tenke, *Medicine Ball Training* (1992)

### **VIDEOS**

Clyde Hart, *Baylor's Dynamic 400 Meter Training*

Vern Gambetta, *Warm Up Tape* (title unknown)

John Webb, *Getting Maximum Performance from your Middle Distance Runners*

### **RESOURCES**

TRACK and FIELD COACHES REVIEW

United States Track Coaches Association

1408 NW 6 St.

Suite A

Gainesville, Fl. 32601

PEAK RUNNING PERFORMANCE

PO Box 3000

Dept. PRP

Denville, NJ. 07834

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