Firstly, I would like to define for the purpose of this paper the term “young”, and the reasons behind this definition. I feel that this term applies to athletes in the Euro-Junior age group, as far as middle-distance training is concerned. The reasons for this view are as follows: firstly because of the onset of adolescence and puberty, we cannot be sure that results at a younger age prove whether one is a good coach or has a mature athlete, or whether one is an indifferent coach or has an immature athlete. What we should be aware of as coaches is that at this time an athlete’s chronological age can bear little resemblance to his biological age.

Secondly, because of their lack of maturity the younger athletes are still in a continuing state of development with regard to skeletal growth, their muscular development and their cardio-vascular development.

Thirdly, therefore these athletes – I call them athletes as opposed to middle distance runners – should be given an introduction to all events in their for-
mative years, giving them a good basic grounding so that they do not presume to specialize at too early an age.

Therefore, it is important that the best coach in each club should be the reception coach to take them through their formative development in the Sport. It is important that the following basic ingredients should be an integral part of every athlete’s programme, for all events are complementary. These ingredients are:

a) Mobility
b) Endurance
c) Technique
d) Speed
e) Strength
f) Creativity
g) Track Education
h) Fun

It is important that these ingredients are correctly coached, for correct practice equals perfection, and this is the basic model upon which our young (Euro-Junior) 800 metre runner is going to be based.

If the athlete is to be progressed systematically through the various stages at the correct speed, it is of paramount importance that the coach’s philosophy is strong. By this I mean that he must “hurry his/her athlete slowly”. They must resist the temptation to specialize too early, to over-compete, and above all not to take any short cuts that would mean missing out some of the basic ingredients, all of which are essential for the complete 800 metre runner.

Having progressed our athlete correctly through the various stages up until the Euro-Junior age group, we are then in a position to specialize, refining and honing our protégé as we progress towards athletic maturity and perfection. At this stage the coach must look at the following:

(a) the requirements of the 800 metre event;
(b) the current ability of your athletes, including both their strengths and weaknesses;
(c) analyze the future potential of your athletes – assuming that they progress smoothly to athletic maturity;
(d) short and long term programmes designed to bring the athletes’ potential as near as possible to the requirements of the event.

Depending on the athletes’ current ability and their ultimate potential the training will vary from athlete to athlete, for all must be treated as individuals – physically, mentally and emotionally. When drawing up these short and long term programmes and aims the coach must consider the following points (all topics in themselves!):

(a) The sex of the athlete – with regard to work loads, and attendant female problems.
(b) The stage of development of the athlete – biological vs chronological; how many of the basic ingredients are missing?
(c) The training environment available creativity:
   — forests;
   — track;
   — hills;
   — parkland;
   — indoor facilities;
   — warm weather camps, etc.
(d) The non-training environment:
   — home environment;
   — work or further education commitments;
   — time available to train;
   — peers, diet, religion, finance, etc.
(e) Athletes’ personality. How self motivated are they, or how reliant are they on the coach?
This is a crucial time in the athlete's development and the coach is all important as motivator, coach, counselor, and friend so that the transition to athletic adulthood is easy and smooth.

It is essential because of the nature of the 800 metres that the following ingredients are included in the athletes' programmes. In this way the athletes' weaknesses are compensated for, and their strength improved so that buffers are built up to delay the onset of fatigue and the resultant build up of lactic acid. These ingredients are as follows and are all pertinent to the 800 metre event, which as it evolves is becoming more and more a race of sustained speed and therefore more anaerobic.

1. **Endurance**
   **(Oxygen Transport System)**

   This should have been built up over the years to provide a very strong base from which all the other requirements of the event can emanate and develop. The types of endurance training involved in the event are as follows:

   (a) **Short Term (2'-8' duration)**

   (i) Interval running over a short distance, large number of repetitions and with either a 1:2 or 1:3 recovery.

   (ii) Repetition running over a set distance, small number of repetitions with a 1:5 recovery time.

   Where possible all recoveries should be a jogged recovery.

   (b) **Medium Term Endurance**
   **(8'-30' duration)**

   This type of endurance work basically falls into three categories:

   (i) Interval work as depicted above.

   (ii) Steady running to build up and maintain the endurance base, and to help the body recover from hard sessions.

   (iii) Fast aerobic running – a neglected area of middle distance training.

   (c) **Long Term Endurance**
   **(30' and more)**

   This component of endurance training again falls into three areas:

   (i) Continuous steady state running with heart beats of 140, for a certain length of time or for a certain number of kilometres.

   (ii) Alternating the pace of the run so that steady running is punctuated by fast running taking the heart beat up to 170 and then down to 130 again.

   (iii) Fartlek running (speed play). A system of training which can use the terrain to the full and train all of the energy systems.

   Using these methods over the years, a good maximum volume of oxygen uptake is developed to deal with the following more specific sessions required for 800 metre running.

   **Examples of (a)**

<table>
<thead>
<tr>
<th>Longer/Slower Intervals</th>
<th>Shorter/Faster Intervals</th>
<th>Repetitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensity of Effort</td>
<td>80 - 85%</td>
<td>85 - 90%</td>
</tr>
<tr>
<td>Duration of Effort</td>
<td>30 secs. - 3 minutes</td>
<td>5 - 30 seconds</td>
</tr>
<tr>
<td>Duration of Recovery</td>
<td>1:1 or 1:2</td>
<td>1:3</td>
</tr>
<tr>
<td>Number of Runs</td>
<td>8 - 15</td>
<td>6 - 8</td>
</tr>
</tbody>
</table>
2. Speed (Alactate Training)

Most middle distance runners tend to view speed training over 200 metres as their speed training. This is a mistake: for pure speed work, the training of the alactate system is over distances of 40 - 80 metres. This is a very neglected area of middle distance training. The sort of sessions that should be undertaken are as follows:

(i) $4 \times (4 \text{ runs } \times 60\text{ metres})$ walk back recovery, with 5 minutes between sets.

(ii) Sprint drills.

(iii) Up or down the clock sessions. eg: 60/70/80/90/100/110/120, walk back recovery, or 120/110/100/90/80/70/60.

(iv) Skill running over 60 metres; eg: building up the speed the whole way. 20mts. at 90% effort; 20mts. at 100%; 20mts. at 90%; 20mts. at 100%; 20mts. at 90%; 20mts. at 100%. Flat out sprints. All sessions four repetitions.

Emphasis at all times is to be placed on technique and relaxation.

3. Strength at Speed (Power)

This is an important ingredient in 800 metre running, so that the explosive speed required of the event can be utilized to the full. Typical sessions include:

(i) Plyometrics - Hopping on each leg, both legs together, up slight inclines.

(ii) Bounding - Progressing to bounding, and then up a slight incline.

(iii) Hill running - Sprinting up a short (40mts.), sharp incline (30°) with the emphasis on technique and an exaggerated high knee action.

4. Mobility Work

This is not the work done in a warm-up session, but is a session in itself. It must be done daily and involve every area of the body from the neck down to the ankle. With suppleness declining from the age of eight onwards it is essential that this ingredient is not neglected - unfortunately it too often is with middle distance runners. Range of movement is a prerequisite of the event.

5. Technique Work

The importance of an efficient working model cannot be over emphasized. As mentioned earlier it should be taught correctly at a young age, and any fault eradicated. In the Euro-Junior athlete it is refined along with relaxation in all sessions, but in particular the speed, hill and endurance sessions. Bad technique and the inability to relax can be counter-productive.

6. Strength-Endurance

Is it speed that is all important at the end of an 800 metres, or the ability through one's strength to decelerate the least, or is it a combination of both? Either way the athlete's strength in relation to his bodyweight ratio is all important. The following are ways to improve the athlete's strength:

(i) Circuit Training: with or without fixed apparatus.

(ii) Weight Training: heavy weights (70-80%), small number of repetitions.

(iii) Isometrics and multi-gym work.

(iv) Resistance work:

— Hill running.
— Sand and or surf running.
— Harness running.
— Running with weighted belts, pulling or towing tyres, etc.
— Cross country skiing.
(v) The Oregon running circuit.
(vi) Running sessions:
(a) Turnabous eg: 5 (3 runs × 100 mts.), recovery 10 sec. and 2'.
(b) Back to backs eg: 2 × 5 runs × 80 mts., shuttle runs, recovery 3'.

7. Tactics

As well as being discussed with the athlete the coach should include sessions of pace judgement into the sessions, and reflex sprints. The former is helped by differential running eg: 400 mts. aim 60 secs. 1st. 200 mts. in 32 secs., last 200 mts. in 28 secs.

8. Speed Endurance
(Lactate System)

In many respects this is the key ingredient of 800 metre running, and even more so in the Euro-Junior who because of earlier biological and physiological constraints is only just beginning to do this sort of work regularly. Depending on the time of year the coach regulates:
(i) The distance run: 200m, 300m, 400m, 500m, 600m, 800m, 1000m.
(ii) The number of repetitions: 4-12; 12-4.
(iii) The speed of the repetitions: getting faster as the season progresses.
(iv) The recovery phase: shortening and then lengthening as the season progresses.
(v) The density: the number of sets.

Other sessions that can be included are as follows:

(a) Up and down the clock sessions, eg: 200m/300m/400m/500m/600m/700m, or 700m/600m/500m/400m/300m/200m.
(b) Pyramids – 150m/200m/300m/400m/300m/200m/150m – Jog next repetition for recovery.
(c) Quality repetitions: eg: 3×600 mts. in 86 secs. 6' recovery.
(d) High intensity repetitions, eg: 3×(2 runs × 300 mts.), 20'' recovery and 6' between sets.

The emphasis on this area of training is on quality.

The sessions mentioned before are to train the alactate and lactate energy systems in conjunction with the aerobic (oxygen system), for all three systems work simultaneously, albeit at different intensities during an 800 metre race.

Having defined the needs and requirements of the athlete and shown above the examples of these sessions (microcycles), it is pertinent to see how the macrocycles (short term) fit into the coach’s programme. Once he has devised that programme it must be then put into effect.

<table>
<thead>
<tr>
<th>Periodisation</th>
<th>General</th>
<th>Specific</th>
<th>Competition Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1 (November-February)</td>
<td>50%</td>
<td>30%</td>
<td>15%</td>
</tr>
<tr>
<td>Phase 2 (March-May)</td>
<td>40%</td>
<td>25%</td>
<td>35%</td>
</tr>
<tr>
<td>Phase 3 (May-June)</td>
<td>25%</td>
<td>25%</td>
<td>50%</td>
</tr>
<tr>
<td>Phase 4 (June-August)</td>
<td>45%</td>
<td>30%</td>
<td>25%</td>
</tr>
<tr>
<td>Phase 5 (August-September)</td>
<td>25%</td>
<td>25%</td>
<td>50%</td>
</tr>
<tr>
<td>Phase 6 (October-Transition)</td>
<td>75%</td>
<td>15%</td>
<td>10%</td>
</tr>
</tbody>
</table>
Katrina Jane Colebrook. – European Indoor 800 metre Champion and World Record Holder.
Weeks Training in March, prior to the above Championships.
Sunday: Steady 6 miles
Tuesday: Steady 3 miles – 10 x 60 mts, walk back recovery.
Wednesday: 5 x 600 metres, recovery 2’.
Thursday: 10 x 100 metres uphill.
Friday: Steady 5 miles.
Saturday: 2 x (4 runs x 30 seconds), recovery 1 minute and 5 minutes between sets.

Michael Downes. – 3 minutes 55.0 seconds, Miler.
Weeks Training in July, a month prior to the above time.
Sunday: Steady 10 miles.
Monday: 3 x (2 x 300 mts.), recovery 20 seconds, and 4 minutes.
Tuesday: Steady 4 miles a.m. and 10 x 60 metres, walk back recovery p.m.
Wednesday: 3 runs x 1½ minutes each recovery 6 minutes.
Thursday: Steady 6 miles.
Friday: 10 x 150 metres walk back recovery.
Saturday: 1 Hour Fartlek – 25 Bursts – Maximum of 1000 mts. down to 60 mts.

Each phase is important in the overall development contribution to make to the athlete’s ultimate performance. Below are two examples of athletes I have coached, showing their training at different times of the year.

None of the above sessions were done on a track, but in the forest on pine paths so that the athletes come to the track eager to race.

In conclusion, I would like to state that by different methods, different men excell, whether they be athletes or coaches. There is no universal or magic solution that will guarantee success. There are only certain basic ingredients which are intrinsic to 800 metre running. It is how the coach interprets these ingredients and how he weighs and mixes them which is the key to his success. He must at all times remember that both in physique and personality all his athletes are individuals and should be treated as such. No matter how talented the athlete and how knowledgeable the coach, if the athlete has not got the inner motivation that is necessary for success his potential will never be fully realized.

If a coach has an athlete from the age of eleven, then following the above philosophy and covering all the areas that are involved, it could take between twelve and fifteen years before the athlete realizes his or her potential. Therefore it is a question of hurrying slowly, of creating the correct environment, if this potential is to be achieved, and to ensure that the athlete is in our beloved sport after this period of time.