

Coaching for Long Distance

Once you have decided to take up athletic coaching you are immediately faced with the problem of finding time to do the job, but I sincerely hope you will not be deterred because the sport needs your services greatly.

You may think international athletes are not faced with these problems, that they are protected and cushioned by their colleges and firms, but this alas is not the case. Athletes have to do a normal day's work as well as their training.

The eventual success of their athletic career will depend on your ability to balance the various demands on their time, and tailor their training according to their needs taking all relevant factors into account — age — athletic ability — health — studies — work and ambition.

I cannot emphasise too strongly here and now, the necessity for proper planning so that the athlete can get into the routine of daily training which fits in with his/her other duties in life. Almost all long distance athletes started off their career as middle distance runners, and ideally after five to ten years, graduated for various reasons to the longer events, some because they lacked the basic speed to be successful at the shorter events, others because they felt the urge and ambition to conquer new goals, and then there is always the challenge which has inspired mankind over the centuries — and long may it continue.

All of our current top marathon competitors experienced a measure of success in their junior days at cross-country and middle distance on the track, but it is important to remember that a decade or more was spent in training and competing at 5000/10,000 metres and cross-country before they turned their ambitions to the marathon. It behoves all long distance coaches to advise and encourage all young senior athletes to spend a number of years as a middle distance runner before turning their attention to the challenge of the marathon. Let patience, perseverance and fortitude be the hallmark of your calling and the lesson to be learned by your athletes.

It is an often observed dictum that good sprinters are born and not made. In recent years, since the advent of muscle biopsy techniques, this statement may be applied also to distance runners. It is clear from the results of scientific research that the end of the athletic spectrum — speed or endurance — at which one excels, is largely determined by one's own



Some of Ireland's leading runners

muscle fibres and their percentage composition.

Muscle fibres can broadly be classified into two types — fast twitch or slow twitch — although recently a third type has been identified — fast-oxidative glycolytic.

The relative percentages of these fibres present in one's muscle are generally pre-determined before birth (although training can affect their cross sectional area, and certain biochemical changes can occur in both fast and slow twitch fibres following training). world class endurance athletes, such as marathon runners, show a preponderance of slow-twitch fibres — those which are responsible for aerobic (with oxygen) respiration within the muscle cell.

Thus marathon athletes demonstrate a remarkable ability to function aerobically at the highest level — that is they can run at very high speeds for prolonged periods of time without entering into the realms of anaerobic respiration (oxygen debt) where the appearance of lactic acid as a by-product inevitably results in painful side effects.

The primary requirement for endurance is that the muscle fibres themselves enhance the level of oxidative enzymes within the cell, thereby enabling large amounts of oxygen to be utilised. It follows

therefore, that there must also be a concurrent increase in the body's capacity both to take in and to transport this oxygen before its consumption within the muscle itself.

Certainly training affects lung function — the rate of respiration slows down and, at a given work-rate, the volume of air breathed in is smaller, indicating that the lungs are extracting more oxygen from each litre of air that is breathed in. The oxygen absorbed into the blood is then transported around the body by the pumping action of the heart.

Responses to endurance training are found in both heart and the general blood circulation. There is an increase in the total blood volume — the heart enlarges mainly by increasing the size of its ventricular cavities and the main arteries enlarge and more capillaries (the tiny blood vessels) which disperse the oxygen rich blood throughout the muscles.

Since marathon runners sweat profusely during training and racing, and also because they are usually smaller and thinner than their sedentary counterparts, they can function with a reduced blood flow to the skin because by sweating, they dissipate their body heat more efficiently, but the sweat lost helping to keep the body from overheating during prolonged periods of exercise must be replaced at frequent intervals, if not, the competitor may

suffer from dehydration and heat stroke. During the competition, the digestion system is best left unemployed — so to speak. I recommend pure distilled water which contains nothing to activate the digestive system, and water is the natural coolant of the body.

In the Los Angeles Olympic Marathon, John Treacy and Jerry Kiernan topped up with distilled water before setting out in the race and that was the fluid they drank during the gruelling event.

To improve physiologically efficiently in response to training, a specific overload must be applied. This means that, in a progressive manner, you need to increase the intensity, the duration or the frequency of training. In the case of marathon running, the major emphasis should be placed on duration but obviously applied in a progressive manner. In simple terms — an unfit person may commence very gradually.

As you progress through this phase of your training, you will be increasing the intensity as well as the duration. You need however, to keep in mind the fact that generally the highest intensity training is the most fatiguing, and initially therefore you should place more emphasis on low-intensity training coupled with low to medium duration. If you increase the intensity too rapidly fatigue will result, and this will affect future training work loads.

Another thing to remember is that the fitter you become, the more work it will

take to improve your level of fitness yet further. There is a limit to the fitness training effect and the rate and magnitude of the increase varies from one individual to the next. In other words, owing to hereditary differences, some individuals can get fitter sooner and with less training than others.

Once again, I cannot emphasise too strongly, that any progression in training should be gradual — and training must be performed on a regular basis.

Although female runners generally train at lower intensities and durations than do males, it is my strong belief that the two sexes should adopt similar training techniques. There is no conclusive scientific or medical evidence that long distance running is ruled out for the healthy trained female athlete, indeed some female marathon runners — such as Carey May — are capable of better performances than many good male club runners. Most research indicates that men and women adapt to exercise training in a similar manner.

Over-training is common among novice runners. It is simply the result of doing too much too soon, or of not allowing sufficient rest periods after each session of exercise. It can happen to the world class marathoner as well as the novice — indeed everybody falls into the trap of over-training at some point in their runner career. The best protection against over-training is to build up your training load

progressively and not to be in a hurry.

Some of the more common symptoms of over-training are:

1. Reduced performance and raised rested heart rate.
2. Higher breathing rate both at rest and during exercise.
3. Sore muscles, particularly the thighs (very common).
4. Increased tendency to infections — e.g. colds, swollen glands at side of neck.
5. Increased irritability, impatience and intolerance.
6. Restless sleep and lethargy.
7. Loss of appetite.

Footwear is probably the most important item of athletic gear for the distance runner — training and racing shoes should be comfortable and fit your feet like the proverbial glove.

It is important to remember that prevention is better than cure with regard to injuries — do take the necessary precautions to minimise the risk — like carrying out regular flexibility exercises.

Physiotherapy treatment can be expensive and time-consuming, so you can appreciate the wisdom of the words "prevention is better than cure".

Good health is priceless, so when your competitive days are over keep on doing some enjoyable running or jogging on a daily basis and forget the enemy of time, THE STOP WATCH.

Nil Desperandum
Larry O'Byrne

8th ANNUAL COSPÓIR LIMERICK CITY TEN

The 8th Annual running of the above event takes place on Saturday, 28th May, starting at 7.30 p.m. from the Municipal Technical Institute, O'Connell Ave., Limerick. The 10k. event is unique in many respects, not least in that the £1,000 prize fund is drawn for, among all the competitors who complete the course. This year also, proceeds from the run are to be donated to the Milford Hospice, Limerick, a home for the terminally ill. It is therefore expected that a greater entry than usual will be seen through the streets of Limerick this year. The COSPOIR 10 has continued to enjoy tremendous popularity with the fun runner, and the policy adopted at the very beginning of giving all participants an equal chance of winning prizes has been vindicated by the great support which it has enjoyed. As the Milford Hospice is the beneficiary this year it is expected that the run will be particularly well supported. It is also one of the many events organised by the Limerick Sports Advisory Body in conjunction with B.L.E., for the Be Active Be Alive Week instituted by the Minister for Sport, Mr. Fahy, T.D., Let your motto then be "Give hope, give your support, give generously.

Sports Calendar:

Dooneen Open Sports B.L.O.E. — Sunday, 29th May, 1988
Crescent Comprehensive Grounds.