

BMC

NEWS

*Official Journal of the
British Milers' Club*

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World Records at Oxford!

Give Women Respect!
Norma Pugh

Winter Training for Juniors
Sean Kyle

The Role of the Podiatrist
Ron McCulloch

Mind over Matter
Derek Parker

*Twelve Things you should
know about ...*
**The Marathon
Weight
Stress**

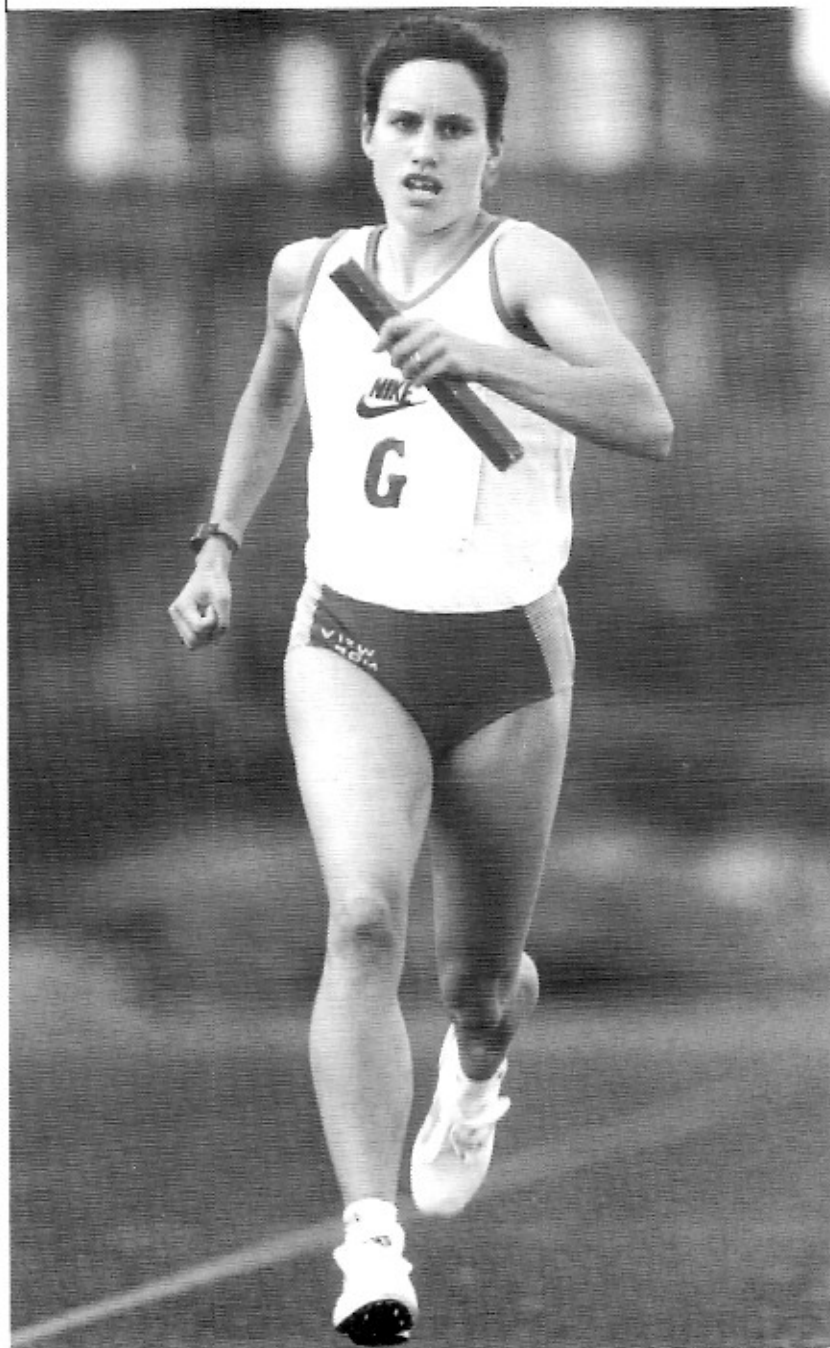


Photo by Ken Hickey

Debbie Gunning anchors home the BMC National Squad that broke the Women's 4 x 1 Mile Relay World Record at Oxford on 10th July 1993.

The British Milers' Club

Founded 1963

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MEMBERSHIP

Membership is limited to those athletes who have achieved the required qualifying times, and to Senior BAF Coaches. Associate membership is granted to those possessing special qualifications likely to benefit the club.

Members receive the *BMC News* free twice a year. They are eligible for reduced entry fees to BMC Races and Courses, as well as receiving travelling expenses to some sponsored BMC Races. Coaches receive the quarterly *BMC Coaches' Newsletter*.

Annual subscriptions of £8 are due 1st January each year. All applications to join the BMC should be sent to the Membership Secretary enclosing a large SAE.

MERCHANDISE

BMC Vests (S/M/L - £8), BMC Ties (£5) are available from Runnersworld, 333 Rayners Lane, Pinner, Middlesex. Please make all cheques payable to 'Runnersworld'.

Back issues of *BMC News* (£1 each) and the *BMC Fitness Testing Reader* (£1) are available from the Treasurer, Pat Fitzgerald. Please make all cheques payable to 'The British Milers' Club'.

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BMC QUALIFYING TIMES

	800m	1,500m	3,000m	5,000m	10,000m
Senior Men	1:52.0	3:49.0	8:10.0	14:10.0	30:00.0
Under 20	1:55.0	3:56.0	8:35.0	14:50.0	
Under 17	1:59.0	4:05.0	8:45.0		
Under 15	2:05.0	4:20.0	9:15.0		
Senior Women	2:12.0	4:28.0	9:35.0	16:50.0	36:00.0
Under 20	2:14.0	4:35.0	9:50.0	17:10.0	
Under 17	2:17.0	4:40.0	10:00.0		
Under 15	2:20.0	4:50.0			

BMC News...News...News...

** World Records at Oxford

The BMC 30th Anniversary Meeting at Iffley Road, Oxford on Saturday July 10th resulted in one World Record, one World Junior Record, one UK All-Comers Record and one World Veterans Record. For full details see page 15.

** 1993 BMC Races

Despite national standards falling, the strength in depth of BMC Races in 1993 was the best for well over a decade. The fastest times of the year were :

Senior Men

800m	Des English	1:48.7
	Andy Hart	1:48.8
	Kevin McKay	1:48.9
1,500m	Rod Finch	3:43.4
	Bobby Farren	3:43.47
	Tom Buckner	3:43.5
Mile	Ian Gillespie	3:59.3
	Matt de Freitas	3:59.7
	Rod Finch	4:00.0
5,000m	K. Tadesse	14:24.5

Senior Women

800m	Diane Modahl	2:03.9
	Sue Parker	2:06.6
	Joanne Latimer	2:07.0
1,500m	Diane Brockley	4:23.0
	Bev Hartigan	4:24.1
	Una English	4:26.6
3,000m	Alison Barnes	9:22.3
5,000m	Lesley Morton	15:52.4

Junior Men

800m	Justin Swift-Smith	1:49.5
	I. Bowden	1:50.8
	Scott West	1:52.31
1,500m	Justin Swift Smith	3:46.6
	Scott West	3:51.3
Mile	Neil Caddy	4:04.9

Junior Women

800m	Juliette Oldfield	2:12.76
	Sarah Salmon	2:13.33
	Emma Graysmark	2:14.03
1,500m	Juliette Oldfield	4:38.5
	Emma Graysmark	4:40.4
	Sarah Salmon	4:41.1



Photo by Rosemary Iszatt

David Iszatt presenting Ian Gillespie with First Prize for the 1993 BMC Post Office Counters South - West Grand Prix.

** 1993 Coach of the Year Award

This has been awarded to Bob Parker, coach to Alison Wyeth and Katie McCandless, both of whom reached the 3,000m final in Stuttgart. Alison justified her predictions at last year's National Training Day by once again topping the domestic 1,500m rankings.

** Sports Aid Foundation Junior Races

A grant from the Sport Aid Foundation allowed us to promote a short series of races from which a great deal of experience was gained. Whilst all races produced floods of pbs (especially at Cheltenham where there were 29), the quality was not uniform.

The highlights were the setting of a new Junior Men's World Record for the 4 x 1 mile relay and the winning of the English Schools and the Schools International Championship by Juliette Oldfield.

Hopefully the Sports Aid Foundation will continue to support us and allow us to expand the opportunities for junior athletics.

** BMC Development Officer's Award

This new award recognises the athletes who have contributed the most to BMC activities over the last twelve months.

The inaugural award has been made to Ian Gillespie for the fastest leg in the Mile relays at Oxford. Ian then went on to win the Post Office Counters SW Grand Prix, and also won the fastest BMC race of the year, 3:59.3 at Salisbury.

Honourable mentions have been given to Diane Brockley, Tom Buckner, Michelle Faherty, Pat Gallagher, Michael Gooch, Glen Grant, Julie Swann, Justin Swift-Smith, and Richard White. These are the athletes whose names crop up in conversation time and time again and, in the opinion of the Development Officer, have shown the true 'BMC Spirit'.

** National Endurance Weekend

Norman Poole is holding the inaugural National Endurance Weekend on 19th - 21st November at the Friendly Hotel, Loughborough, and will encompass athletes from all distances from 800m to marathon, including the steeplechase and the race walking events. Speakers include Frank Dick, Rick Fenoglio, Dr. Royce Darnell, John Bicourt and Mary Neville.

The cost will be £40 (£60 if you stay two nights), and payment will be required with booking. Up to 25 BMC members will be able to attend, and places will be allocated on a 'first come, first served' basis. Please apply to Matthew Fraser Moat on 0304 379777.

BMC News...News...News...

** BAF Endurance Co-ordinator

BAF Director of Coaching Frank Dick has put himself in personal charge of Britain's recovery in endurance events. He will act as Endurance Co-ordinator for the next twelve months. For further details please see the report on the National Training Day on the page opposite.

** National Event Coaches

BMC Coaches achieved a clean sweep in the recently announced middle distance coaching structure. Our congratulations go to:

	Men	Women
800m / 1,500m	Norman Poole	Phil Banning
3k / 5k / 10k	George Gandy	Malcolm Brown

** BMC Helpline

As an experiment for 1994, we are commencing a 'BMC Helpline' for athletes experiencing difficulties with their training. Athletes should contact Matthew Fraser Moat on 0304 379777.

** Age Group Qualifying Times

At the 1993 AGM, our U15/U17 qualifying times were challenged as being too harsh when compared to U20 and Senior times. The AGM gave the National Committee its authority to review the situation, and, if appropriate, revise the qualifying standards as from 1st January 1994. One of the proposals is that junior men should have the same standards as senior women. Any changes will be published in *Athletics Weekly*.

** Veterans admitted

Also at the 1993 AGM, it was decided to extend the qualifying times to allow veterans to qualify for membership based on performances achieved since becoming a veteran. The new qualifying standards will be advised in *Athletics Weekly*.

** 1993 Coaching Directory

With this issue is included the 1993 *BMC Coaching Directory*.

** BMC in Lanzarote - March 1994

For the third year running we have arranged special rates for BMC members at Club La Santa from 3rd - 17th March. Frank Horwill and Derrick Harding will be conducting two training sessions each day from 4th - 12th March. Some sessions will be in the swimming pool, and others in the weights room.

Club La Santa organises the following events each week; half-marathon, 10k, aquathlon (swim - run), duathlon (run - bike - run) and mini - triathlon (swim - bike - run). Based on last years' performances, BMC members need to work on their swimming prowess!

At the end of the second week, the 1994 BMC race programme will commence with the BMC International Grand Prix. The Grand Prix will comprise three races in three days over the following distances: 2 miles, 800m and 1 mile. The training course is open to all, prices start at £219 for one week, £319 for two weeks, including entry fees for the Grand Prix and the use of all sports facilities. For further details please contact Matthew Fraser Moat on 0304 379777.

** BMC Vests

Runnersworld have now restocked with another new supply of BMC vests. All BMC kit is sold via mail order at Runnersworld, 333 Rayners Lane, Pinner, Middlesex (Tel. 081 868 6997). Please make cheques payable to 'Runnersworld'.

** 1994 Subscriptions

Your 1994 subscriptions have been held at £8 for a third year, and become due on January 1st. If you do not pay by standing order, please could you send your cheque, made payable to the BMC, to the Treasurer, Pat Fitzgerald. If you have changed address, please let him know.

** Committee Meetings

The dates of the next meetings are: 5th December, 6th February and 3rd April.

All meetings take place on Sundays at 2:30pm in the Club House, Linford Christie Stadium, London W12.

** Next Issue

We have all read much about Seb Coe's and Steve Ovett's training, but not a lot has been known about Steve Cram's training. In the next issue we hope to correct this by publishing for the first time the definitive article on Steve Cram and his training methods.

It is planned to publish the next issue in March 1994. All members who wish to contribute articles should send them to the editor by 31st January 1994. The editor would greatly appreciate offers of assistance in typing, proof-reading etc. next February!

** 30th Anniversary Thank You's

We would like to extend our thanks to all who contributed to our 30th Anniversary Celebrations at Oxford, especially to Charles Booth, Neil Duggan, David Green, Derek Graham, Sean Kyle, Andy Norman, Derek Parker, Ray Roseman, Tony Saunders, Douglas Stott, Denis Watts and Alf Wilkins for donations totalling over £350; to Maureen Smith and Eric Nash for arranging the officials; to Jim Raiton and Mark Loveridge for providing Iffley Road facilities; to Keith Morbey of NUTS for patiently answering all of our questions; to St. Stephen's House, Oxford, for flying the flag of St. George; to Peter Richmond of Oxford Radio for capturing the atmosphere so well; to Sarah Griffiths and all at St. Hilda's College, Oxford, for organising such a memorable dinner; and finally, to Sir Roger Bannister and Derek Ibbotson for handing out the medals, posing for photographs and signing autographs - giving us all a day to remember for the rest of our lives.

National Training Day 1993

This year's National Training Day was once again held at the Linford Christie Stadium (formerly West London Stadium) London W12 on Saturday 23rd October 1993.

The first speaker was to have been Director of Coaching Frank Dick, but unfortunately he was called away to an international fixtures conference, so he took time out to send a videotaped message to us :

"Like you I am rather concerned at the present situation with British endurance running. When we look at the 800m, 1,500m, 3,000m, 5,000m, 10,000m, steeplechase, marathon and race-walking events, they are not flourishing in the way that we would like them to. I don't believe that there is one easy answer why.

I don't think we have forgotten how to coach, or how to understand sports sciences and how they can be used, nor have we missed a place in the new commercial world, but what I think we have failed to do is work together. We are superstars when it comes to individual achievement, but the concept of a team working together doesn't seem to sit comfortably with us. I think that this is the time for us to learn to work together.

I've decided to focus tightly on endurance events over the next twelve months. As Endurance Co-ordinator, I want to get to the bottom of things :

- * Is it through lack of competition that things have gone wrong?
- * Should we be reviewing our training methods?
- * Should we look again at altitude training?
- * What about the impact of humidity on our athletes?
- * What about 'corporate' training camps?
- * How should we compensate endurance athletes for all the hours and hours they spend in training and therefore unable to work?

I'm not in the position, at this juncture, to say what is a good or bad idea, but what I'm very interested to do is to put together as much information as possible from the experts - people like the BMC. What I would like is a working group of seven to nine people to look at a broad agenda.

- i) The physiological bases required across the range of endurance events.
- ii) Our coaching theory and methods.
- iii) Specific training camps ie altitude and humidity.
- iv) Elite and Excellent Athletes', support and monitoring. This has to be my first priority at the moment.
- v) Opportunities for fast, meaningful competition.

Although the BMC and I haven't enjoyed the happiest of marriages, I am pleased that we are singing from the same hymn sheet now.

Without a shadow of doubt, the BMC is a critical plank in the future of endurance development, and is the starting point for making sure that the right level of competitive opportunity is available to bridge between regional performances and national performances as a spring board to international performance. You and I know that that is not there at the moment.

We need opportunities to develop pace judgement, and other opportunities to teach the real trade of middle distance running - 'races for places'. Because the BMC knows more about the provision of that sort of stuff, I want us to be round the table in the very near future to cement these relationships. We must co-operate in making sure that endurance in British athletics is exactly where it should be, that is right at the top!"

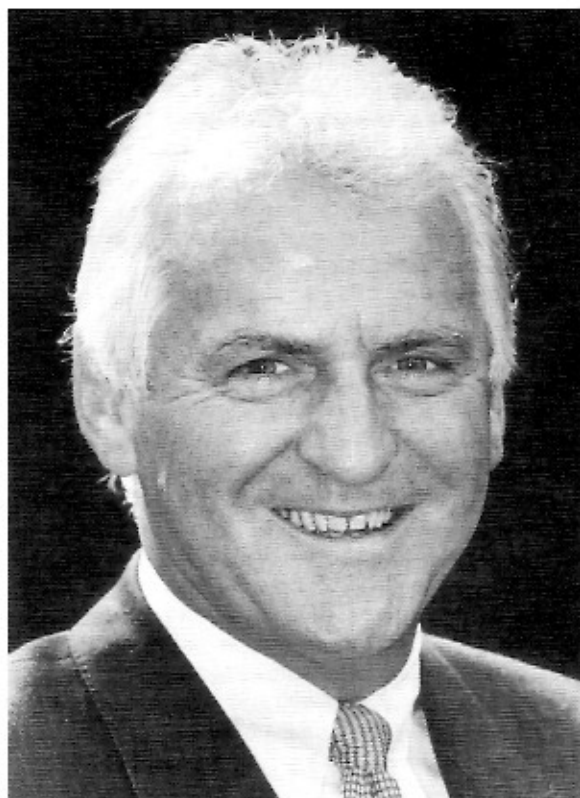


Photo by Shearman

To illustrate the gravity of the situation, BMC Chairman David Iszatt then presented a series of graphs which showed just how dramatically performances in the National Top Twenty had fallen away during 1993, and attributed this to the lack of A Grade Races. Mike Down pointed out that standards in B Grade Races, ie Loughborough, Reebok Challenge and BMC, had appeared to hold up well, but it was agreed that this could not be confirmed until the NUTS produced the Top 100 lists.

The BMC have produced a Performance Development programme for 1994 to give athletes extra opportunities to compete in really fast races early and late in the season. Its success will depend upon support from athletes and sponsors alike. Full details will be unveiled at the forthcoming National Endurance weekend.

A report on the remainder of the day, (lectures by Dr. Norman Poole, Phil Banning, Major Glen Grant and Frank Horwill) will appear in the next issue of *BMC News*. Juliette Oldfield was nominated 'Young Athlete of the Course'.

BMC Development.....

This discussion document paper has been written by BMC Chairman David Iszatt and endorsed by BMC Development Officer Matthew Fraser Moat as a basis for Senior Athlete Development.

Introduction

The BMC was founded in 1963 in response to a serious decline in the UK's middle - distance standing; its objectives were (i) to raise the standards of British middle - distance running to world supremacy, and (ii) to assist in the acquisition of knowledge to achieve that goal.

The early success in achieving the former has not been sustained through the late eighties and early nineties. If the BMC is again to play an active role in response to its objectives it must do so in full recognition of the developing athletics environment. Partnership with other like minded organisations and individuals can be the only way forward.

Background

An analysis of the 1992 ranking lists show that 80 of the top 100 British 1,500m performances were set in non-representative competitions in the UK; 61 of those 80 came from the efforts of just four meetings / race organisers.

- | | |
|----------------------------|----|
| a) Reebok Challenge | 18 |
| b) AAA Championships | 16 |
| c) British Milers' Club | 14 |
| d) Loughborough University | 13 |

The peak month for season's bests at 1,500m was July (32 - 18 from the Reebok Challenge), followed by June (25 - 16 at the AAA's). Only five were set in August and September with none set during the period of the Olympic Games or the following three weeks.

Whilst season's best performances are not the only measure of an athlete's worth they are usually the most objective. Season - on - season improvements in an athlete's best performances are similarly the most objective measure of progress. It follows that increasing an athlete's opportunities to record best performances is one way to raise the overall standard of

Table 1 - Definition of Performance Bands.

	800m Men	1,500m Men	800m Women	1,500m Women
i) Elite (i.e. world top 12)	1:44.5	3:35.0	1:58.5	4:04.0
ii) High Potential (i.e. UK top 12)*	1:47.2	3:39.5	2:04.0	4:14.0
iii) Trials Entry Standard** (i.e. UK Top 30)*	1:49.0	3:44.0	2:07.0	4:21.0
iv) BMC Entry Standard	1:52.0	3:47.0	2:12.0	4:28.0

* based on three-year averages 1990 / 91 / 92.

** approx. 1993 AAA's entry standard.

Table 2 - Proposed Race Standards.

	800m Men	1,500m Men	800m Women	1,500m Women
i) 'A' Grade Races [potential field]* (to be held after the Trials')	1:48.2 [20]	3:41.5 [25]	2:05.5 [18]	4:17.0 [18]
ii) 'B' Grade Races [potential field]* (to be held either five or more weeks before the Trials or in the eight weeks after)	1:50.0 [43]	3:46.0 [60]	2:09.0 [45]	4:28.0 [60]
iii) BMC Members' Races	1:52.0	3:47.0	2:12.0	4:28.0
iv) BMC Race Standard**	1:54.0	3:50.0	2:20.0	4:35.0

* based on three-year averages 1990 / 91 / 92.

** unless justified by local needs (as decided by Regional Secretary) no athlete should be allowed into a BMC race unless he or she has achieved at least this standard.

British middle-distance running and, sadly, it seems that the current fixture list does little to help in this respect. New initiatives seem to be necessary.

There is sound evidence that athletes progress best if they compete in good quality competitions at distances on either side of their 'main' event. The balanced race programme this implies requires that high quality racing / opportunities are available throughout the whole season.

Frank Dick has suggested that athlete support be provided over three performance bands. Whilst these have yet to be fully defined relative to BMC entry standards, they might be assumed to be as shown in Table 1.

The BMC's Medium Term Aims

Whilst accepting that sustained high standards will only be achieved through policies optimally developing young athletes through to international standing, in the medium term the objective must be to develop the existing pool of senior and junior athletes.

In practical terms the BMC should seek to ensure that competition is available to -

- assist athletes to achieve membership status.
- assist members to achieve AAA entry standards, and
- provide opportunities for members to achieve 'high potential' status.

BMC *Development.....*

It follows that the BMC should organise, or press for the organisation of, three grades of races (races suitably paced) with entry standards as indicated in Table 2.

BMC Regional Races

BMC Members and entry races should continue to be the responsibility of Regional Secretaries taking advantage of local opportunities. They should be advertised in a composite national advertisement in March / April, and supplemented as the Regional Secretary considers necessary.

BMC National 'A' Grade Races

The purpose of these races would be to assist athletes to achieve, or maintain, their 'high potential status'. The races would have to be paced, would require the atmosphere of a major event and because the pool of potential competitors is small, not more than one race at each distance (men and women) could be contemplated on each occasion. Travelling expenses would have to be paid and other inducements might be necessary if worthwhile fields are to be assembled.

This is the role that the BMC played prior to about 1978, and is once again open to us now that the number of international fixtures is declining.

Whilst the BMC might be able to assemble the fields, it would be inappropriate for us to seek to promote the event. Once the 1994 fixture list is available we should seek like minded support and lobby for the inclusion of such races in TV spectaculars and the like, and for the introduction of 'B' finals (for home athletes only) in the Trials etc.

The ideal, in 1994, might be a three-meeting Grand Prix Series, with one meeting in the gap between the Trials and the European Championships, one in the week between the European Championships and the Commonwealth Games and one in the two weeks after the Commonwealth Games. During this period athletics will have a high profile, increasing the newspaper, radio and possibly local TV coverage with corresponding appeal to sponsors.

BMC National 'B' Grade Races

These races should be designed to assist athletes to achieve, or maintain, the trials entry standard. The list of potential athletes is still small, and reduced by those 'A' grade athletes who would not wish to compete. Great care would be needed in drawing up a co-ordinated national programme of 'B' Grade races if the full range of distances is to be covered throughout the season, and if allowing lower standard athletes to run, just to fill the lanes, is to be avoided.

The BMC Manchester races early season, and Reebok Challenge style of meeting later in the season, are suitable vehicles for these races, but better coverage through the season and across the country is needed. A modified version of the BMC SW Grand Prix series in other regions would be suitable. These three initiatives suitably developed should satisfy the need.

The BMC should, in 1994, extend the Manchester races to the Midlands / SW and to London. Initial funding would be required to generate goodwill and reimburse track and officials expenses.

The BMC should seek the extension of the Reebok Challenge style of meeting (i.e. a broader range of events than just middle distance) mid-season. This would comprise of meetings in the South, Midlands and North. With good quality races costing about £1,000 each, this is a costly proposal needing proper funding.

The BMC should repeat the 1993 Oxford meeting to include 'B' Grade races, 5k / 10k races, and there is certainly further scope for reducing our world relay records. Such a meeting would cost about £3,000, and the English Schools Championships weekend would appear to be the best date for an annual fixture. This should be the BMC's second priority after extending the early season races. With the backing of National and Area Event Coaches there is no reason why such an initiative should not be successful.

The BMC SW Grand Prix depends upon the existence of Open Meetings and the goodwill of the Clubs promoting them -

this has taken many years to build up. With this goodwill the costs are very low and sufficient sponsorship has been forthcoming. However the series only has races for men so the first need here is for additional sponsorship to enable a womens' series to be run. The BMC's first late season priority should be to seek the extension of the SW Grand Prix to include at least four women's races. Assuming promoting clubs will co-operate, the additional sponsorship needed would be £800 - £1,200 plus arrangement fee.

As a second late-season priority the BMC should seek to establish another Grand Prix in the East and a third in the north. Provided that suitable Open Meetings (with co-operative promoting clubs) can be identified, the cost per series would be £1,000 plus arrangement fee.

In Scotland a middle-distance Grand Prix based in Grangemouth is proposed, and the BMC will encourage and assist this initiative.

The BMC's Long Term Aims

Whilst the above should go a long way to providing the competition opportunities of senior athletes, the real future must lie with the U15 / U17 / U20 athletes. The BMC must ensure that whenever it organises a senior race, it arranges meaningful competition for younger athletes. More on this in the next issue.

Meeting the Costs

The priorities set for the BMC will cost about £30,000 - money not currently available from the 1994 BAF finances. Sponsors will have to be actively sought if we are to do what is needed. We hope for the continued support of the Sports Aid Foundation for the Junior Races, but we recognise that this sustained level of funding can only realistically come from the BAF. We will be lobbying to set this up on an annual basis from 1995 onwards.

These are *our* thoughts for Senior Athlete Development. What are your views? Write to us and we will publish them in the BMC News. In the next issue, Spring 1994, we shall consider Junior Athlete Development.

Norma Pugh

Give Women Respect

David Iszatt, discusses coaching women athletes with Norma Pugh, Midlands Event Coach.

David Norma, you have the distinction of being the only woman coaching current GB middle distance internationals, including Olympian Maxine Newman and World Student Games Champion Lynne Robinson. How did it start?

Norma When my son and daughter went down to the local club my husband and I followed along and always seemed to have a little throng of youngsters around us. Charlie Kelly suggested coaching and I qualified first as a senior sprint coach and only later as senior middle-distance coach. Perhaps that is why I place such emphasis on athletes running well and with good style.

David Does being a woman make any difference?

Norma Oh, yes, it makes a difference! Both male colleagues and athletes doubt whether you can really do the job.

David So you think it makes life more difficult?

Norma I do. You are unusual, often the only woman in the room. No-one is unpleasant but you feel there's a lack of confidence in you. But that's the same as in other walks of life.

David As a female coach do you feel you have a different relationship with your male athletes than a male coach would have?

Norma The relationship is bound to be different. People expect a woman to be soft, they expect men to be tough - stiff upper lip and all that - which can lead to the male-male relationship becoming unbending. Women can be more flexible whilst still being tough.

Yes, as a woman coach I do have some advantages over male coaches with male athletes, but much more so with females.

David What do you enjoy best about coaching?

Norma [long pause]... the club nights when the groups are all there - all ages, all abilities - the helpers have all turned up. We do a really good session that's been of value to everybody, and then it's off to the Club House for a cup of tea and a chat - that gives you a lovely feeling!

David And the worst...?

Norma Oh, the opposite - it's raining, blowing a gale, there's a whole crowd of athletes and no one to help - that initial moment when you think "What the hell am I going to do with all these people?"

David It's interesting that your replies relate to helping ordinary mortals achieve their full potential rather than the successes / failures of high flyers.

Norma Yes that's it; of course I've had some lovely moments - athletes winning championships, or their first national vest, up to Maxine going to the Olympics or Lynne winning her world title - but those are end products, not coaching.

David The 'poor standard' of women's middle-distance is often linked to the 'shortage' of women coaches. Is there a reason to believe that women are better coached by women?

Norma We'd have an awful job proving it! After all there are so very few women coaches! I certainly think women coaches have something extra to offer. There are exceptional men who work extremely well with women and have great success but I'm sure that if we did have more input to coaching from women we would be more successful. Let me link what I've said to the work of the Womens' Advisory Group - last year at Loughborough they gathered together most of our elite women athletes; this year there'll be two courses with coaches invited as well as athletes, with and a major input from Alma Thomas, a sports psychologist working across a wide range of sports. Such inputs from the top

women in sport must make a difference. Clearly women coaches can better identify with younger athletes blossoming from 'bean sticks' to glamorous young women, with all the physical and emotional changes that that entails. With more women coaches we would nurse more females through to the senior ranks.

David There were tremendous difficulties finding UK representatives for the 1,500m in Stuttgart. Were our women really given a chance?

Norma No, and it's so sad. There were very few opportunities for our women to get qualifying times. We could have done with some real fast races, either at home or abroad where the climate might be kinder and the competition good. Lynne certainly had the opportunity to get the time in Buffalo - she was easy coming down the home straight, an extra push would have done it - but her goal for 1993 was the world student title and she made 100% sure of that. Realistically, she didn't have the winter background to go to two world championships - the World Student Games may not be rated highly here but much of the world rates it second only to the Olympics! It's a world title that really counts.

What chance did our other girls have of qualifying? And we really need our girls to have as much experience of major championships as possible. That means making sure all the places in the teams are filled - leaving placed unfilled robs us of vital experience.

David What must be done to bring our women up to world class?

Norma First, we must start to give our women the respect they deserve. They train as conscientiously as the men, their aspirations are as high, but until we respect them we can't expect them to respect themselves, and that is where some of the problems seem to lie. I sometimes think that our women are afraid to race each other. They must be willing to join in with the kind of thing the BMC sets out

Dr. Marie

Women in Sport

to do - good, strong, fast races where the only thing that's guaranteed is a fast time. But our society does not expect women to be good at sport, to be competitive; they're supposed to be gentle and demure. With this conflict, a woman finds it harder to cope with a bad race - if a man runs badly he'll come back fighting, a woman will dwell on it, and that feeds self-doubt.

So we must help women to respect themselves. Coaches must help women get over the idea that the slightest thing going wrong in the build up to a race doesn't give the opposition an overwhelming advantage. Everything can't be perfect every time, life isn't like that. And when things do go wrong we must help the athletes to see that the next race is now the most important thing.

These problems come from deep in a woman's psyche, reinforced by culture and society, they aren't easily dealt with. In training they'll match the men - they'll do as many reps, just as hard - they'll do the same aerobic work, at the correct intensity - but when it comes to competition it's so different. If a man wins a race his attitude is "I stuffed them" whilst a woman is as likely to turn round to a rival and make an excuse for beating her! Instead of being justly proud of her achievements she questions whether she deserves them! What women winning her first GB track-suit turns up at the track wearing it? Men do so at the very first opportunity!

It's not only down to the coaches. The administration in this sport must reach out to women and tell them that they are of value. They must provide more, and better, domestic competition. And women must take examples like Sally Gunnell as role models, accepting the highest challenges, giving equal performance and demanding equal billing.

[Chairman's Note : The BMC are taking Norma's point about more and better domestic competition very seriously and will try to get the necessary funding - but women must accept the challenge and line up on the starting line!]

The effects of training and high-class competition on the female form have long been a matter of much debate, but - until recently - very little valid scientific research. For many years it was believed that physically women were weaker and hence should be protected from the more demanding events such as long - distance running, triple jump and pole vaulting. However, the improvement in performance of women has been increasing by leaps and bounds, and they are drawing ever closer to the levels set by men. The physiological effects of this are beginning to be studied in greater detail. One of the main areas of concern has been the effect of training on the menstrual cycle - on both the age of onset of periods and on their continued regularity - and this article briefly considers some of the issues.

The timing of the menarch (onset of periods) varies greatly between different countries and cultures, but in the UK is on average at 12 - 15 years. Many factors affect the timing of the menarch in an individual, including nutritional status, body type, family history and skeletal maturity. It has been suggested that there must be at least 17% body fat for menarch to occur. The average adult female has 25% body fat, but highly trained, endurance athletes may drop to as low as 6% body fat. Such high levels of training would be unusual in a pre-pubertal girl, but some of the former Eastern Bloc gymnasts showed it was not impossible. Some authors have suggested that for young athletes each year of heavy training delays the menarch by five months. It also seems that whilst menarch - and to some extent breast development - may be delayed, other signs of puberty such as the development of pubic and auxiliary hair occur at the expected times.

Obviously each girl is different, but those involved in the training of younger athletes should be aware that professional advice should be sought if the menarch appears to be delayed. It is not wise to assume it is the training causing the delay - other causes will need to be considered.

Having achieved menarch, the regularity of menstruation and the effects of the menstrual cycle on performance need to be considered. Again, no two women are the same, and the effects felt throughout the cycle will vary from individual to individual. Women at all stages of the menstrual cycle have won gold medals, and providing the subject is comfortable, there is no reason for avoiding sporting activity during any phase of the cycle.

Pre-menstrual tension is, as many women know to their cost, a veritable medical minefield. The list of symptoms is endless, as is the list of possible remedies and solutions. In the field of sport, the weight gains, lack of concentration and increased liability to accidents may all have an effect on performance.

Lack of periods (amenorrhoea) or infrequent periods (oligomenorrhoea) are also causes of much debate and current research. As intensity and duration of training increase there is an increase in the incidence of irregular periods, amenorrhoea and oligomenorrhoea. The exact mechanisms by which these occur are as yet unclear, as are the long-term effects on both future fertility and bone density (osteoporosis), although much research is being undertaken. One widely held belief is that, just as with the menarch, there is a crucial percentage of body fat below which menstruation is 'turned off'. This however is unlikely to be the whole explanation.

It is important to remember that a female athlete (just like any other woman) may miss periods for any number of reasons. At any one time around 5% of females are amenorrhoeic, and of course pregnancy is an oft forgotten cause of missed periods!

This article has given an all too brief look at two of the issues involved in coaching a female athlete, but obviously specific problems should always be referred to the athlete's GP.

Dr Marie BM MRCP DCROG DFFP can be contacted via the Editor.

Frank Horwill

Reflections on coaching Female Runners

A fairly well-known British coach said to me last year, "I do not coach women. They are a complete waste of time. Gutless, finicky, more concerned with showing their legs than using them. They always fall back on their guile to dodge one activity or the other." And to think that research has shown that women prefer to be coached by men!

I thought for a few moments before commenting on his remarks, then I asked "How many of your male athletes have run 10.49 for 100m, 21.34 for 200m, 47.60 for 400m, 1:53.26 for 800m, 3:52.47 for 1,500m, 8:22.62 for 3,000m, 14:37.33 for 5,000m, 30:13.74 for 10,000m, and 2:21:06 for the marathon?" He came back fast: "Come off it Frank, you're talking about women who've broken world records. In any case, half those records were drug induced." I retaliated, "The fact is, old boy, that some of your male athletes, and mine, will never run those times!". He was not too pleased.

The psychological literature on the female runner is almost non-existent. One hopes that the day will not be too far off when someone writes a book specifically about the psychology of the female runner.

The female runner has come into her own and, like her male counterpart, she is earning big money from winning or being placed in races. If somebody had prophesied this in 1964, when women were permitted to run a maximum distance of 800m in the Olympic Games, he would have been laughed out of court.

Women's struggle to be recognised as endurance athletes has been long and hard. Early pioneers were Kathy Switzer, who in 1967 created an uproar, by running 'officially' at Boston, the first woman to do so, and Patty Johnson and Francie Larrieu, who objected to the fact that the AIAW national track meeting wasn't open to women on track scholarships. At the 1970 AAU convention, the national chairman of women's track and field dismissed long distances run by females as a "lark". In Britain, the same cautious attitude

prevailed in 1969, when the BMC tried to get the ban on junior women running 1,500m lifted. The WAAA Coaching Secretary, Ken Oakley, stated, "The only people who want junior women to run 1,500m are coaches, who see it as an opportunity to enhance their reputations."

It did not matter that the girls banned from running 1,500m on the track ran slightly further in cross country races. One coach who opposed the lifting of the ban, said, "You cannot compare running 1,500m on the track to running 1,500m cross-country. Cross-country is a casual affair." All this is, of course, water under the bridge, but it does show an overprotective attitude by men who thought they knew what was best for women. Women's views were irrelevant.

At a BMC training weekend in 1972, someone asked Conrad Milton, a senior BAAB coach who had a highly successful squad of female runners, "How do you coach women runners?" His reply was apt: "I do not coach male or female runners, I coach athletes." What he was saying was that they should be treated the same and do the same work as the men.

The physiological differences between men and women as runners have been well documented. They are as follows-

- 1) The ratio of strength to weight after puberty is normally greater in the male. Women have a smaller amount of muscles in relation to a considerably larger amount of fatty tissue. However, those muscles can be exercised to greatly surpass the strength of the average man.
- 2) The ratio of heart weight to body weight in women from age 10 onwards is less than in men. Women only have 85-90% the heart size of men. However, by exercise a female can make her heart more efficient than sedentary males.
- 3) Men have a higher basal metabolic rate. But when related to muscle

mass instead of surface area, the difference between them disappears.

- 4) Men have a better blood count. Many women are chronically anaemic due to iron deficiency, often the result of being non meat-eaters. Men under 30 years of age have, on average, 15% more haemoglobin than comparable females. However, well-trained women have been known to equal the haemoglobin level of non active men. Men also possess 6% more erythrocytes per milli-litre.
- 5) Women have a lower erbo-lung quotient, which indicates the degree to which an athlete can encroach on her anaerobic reserves to perform well. Nevertheless there are thousands of men who cannot achieve women's world record times for anaerobic events like the 400m and 800 m.
- 6) Cardiac cost, the measure of stress on the heart for a given workload, shows that girls aged between 12 and 13 work most efficiently. There is no further improvement with increasing age. Boys of the same age only have a third of the capacity of males in the 31-36 age group.
- 7) Maximum oxygen consumption peaks at an early age in women. Eight and nine year old girls have the highest oxygen consumption; it declines up to age 15, then it remains constant. The level in boys peaks at 15-16 and maintains that level through young adulthood. However, a female sub 2:30 marathoner can have an much higher oxygen uptake figure than a non-active male and marginally better than many male club runners.
- 8) Women have a greater femoral angle and broader pelvic girdle. However, many of the world's great female runners have smaller pelvic girdles than men.

- 9) Women have shorter legs relative to the trunk, although this can be deceptive with some women.
- 10) Women have a faster pulse rate than men.
- 11) Van Aaken is of the opinion that women can train their hearts by the same measure as men can because the muscles of women work slowly and men's muscles are more suited to explosive functions.

No discussion about female athletes can omit the subject of menstruation (periods), because the hormone changes involved in the menstrual cycle can often change the temperament of the female runner. This has been recognised by gymnast coaches who have a simple remedy for it, they stop them occurring in their charges. Women have a fat content of around 22 to 26 per cent; if this drops their normal monthly cycles may become irregular or stop altogether, as can happen with menstruating women who train or diet vigorously. Generally speaking, a girl's fat content has to reach about 17% before menstruation will begin; this could be the Great Geometrician's way of preventing pregnancy in half-starved individuals.

Pregnancy, once thought to be the death-knell of a female's sporting career, is now considered an asset. There are numerous cases of women returning to training within a month of childbirth and winning major championships within six months. As one coach jocularly said to me, "You know, Frank, the average weight of a baby at birth is seven pounds. The mother has been carrying that around at that weight for at least six weeks. We should buy all our female runners a weight jacked loaded up with seven pounds and make them do all their training in it for six weeks before a major race. I'm sure that's what transforms some of these women into world-beaters after having a baby." Many a true word said in jest.

Women, if told they are overweight for running purposes, receive the news with

mixed feelings. Some take it as an insult and mentally reply, "I'll show you!" while others are more rational, and then lower their fat intake and up their mileage to burn off calories. The first group may go to extremes and literally starve themselves into emaciation to prove a point and come near to death in doing so. This condition is called anorexia nervosa and seems to have caught the attention of the media who are more concerned with the one death in five thousand caused by it than the 200 deaths in a thousand resulting from heart failure caused by obesity.

The true definition of anorexia is loss of hunger on a psychological basis, however, anorexics do not lose the desire for food, they simply will themselves not to eat. It is a middle-class affliction found among industrious young women, perfectionist by nature, inward thinking and acting, who are single minded.

The driving force behind an anorexic is by no means clear, but one theory is that the anorexic grows up in a restrictive, emotionally stifling environment where her own rights are subsidiary to those of her parents. Anorexia is more common among sportswomen and women in the professions where thinness is the order of the day, such as fashion modelling and ballet dancing.

Having coached women to international class standard over the last 12 years, and also a number who must be classed as good club runners, and also some who are not so good, I make the following observations on them, with tongue in cheek:

- 1) The influence of a male running partner is far greater than the influence of a female running partner on male runners, for good or bad. If a male partner tells his girlfriend that her coach is 'thick as two short planks', she will invariably agree and leave the coach. Likewise, if the male partner believes that the coach can walk on water, that belief is transferred.

- 2) About a third of female runners are guided by their own intuition as to what is right for them and are less reliant on a coach than men are.
- 3) Female runners as a body are not enamoured with strength training. There is still a reluctance to lift weights to increase muscular strength for fear of becoming too masculine. The fact is that muscle definition in women after prolonged weight training is far less than in men because their increased layer of fat hides their muscles.
- 4) Women require more convincing than men to realise their potential. Once convinced they become more dedicated than men.
- 5) Pushy parents are more common with female runners than men.
- 6) More promising young female runners give up running when they go to university than talented men.
- 7) More women than men are successful in making a comeback into running after several years' absence.
- 8) Women remain in contact with their coaches much longer after they have retired from running than do men.
- 9) A well trained female makes faster progress at her chosen event than do men for the same period of training time.
- 10) Women who give up running when they marry and start a family miss their running more than men do.
- 11) A female races to instructions more precisely than men do.
- 12) Females respond better to genuine praise more than men do.
- 13) Women are affected more by a break-up of a close partnership with a male than vice versa.

Achilles Writes...

The most influential column in Athletics

On Oxford

We make no apologies for being rather self-indulgent about our 30th Anniversary celebrations. It was right and fitting that full tribute was paid to all the regional secretaries and officers who have worked so hard over the years.

We tried therefore to make the 10th of July a special day for older members to remember days past. We achieved this, but the younger generation took the day over. The relays were magnificent and there were some marvellous individual performances. We suspect that the camaraderie and team spirit so developed will prove to be a major turning point in the fortunes of British middle-distance running.

We achieved one world record, one world junior record, one world vets record and one UK all-comers record. We had all these races, plus interviews with Sir Roger Bannister, Derek Ibbotson and Peter Coe transmitted live on BBC Radio.

When all the spectators had gone home, we all trekked to St. Hilda's College where Frank's bugle inspired us to a truly memorable evening! Menu cards autographed by Sir Roger, Derek, Peter, Norman, Phil, Wendy and of course Frank will be treasured for years to come.

It is unlikely that we shall ever try to repeat the grandeur of the occasion, but you can be sure that next year we will be staging another relay meeting and will be trying to improve on the records we set.

We must also thank Morceli - the Oslo Dream Mile was being held that evening. All day we were dreading that the fourteen year British domination of the world mile record would end on *our* day. We all gathered round to watch, waiting anxiously as the seconds ticked past ... to 3:47 - safe for a few more weeks...!

Steve Cram came a magnificent third, prompting Frank to blow another bugle call, to "Steve Cram - *still* the world mile record holder!"

On China

It is a sad reflection on a sport when every remarkable performance is greeted with the reaction 'well, it must be drugs'. In the case of the Chinese women, the rumour factory has been working overtime. Even the normally reticent Mel Watman went to print and described the times as 'science fiction'. Achilles feels that Ma Junren and his athletes should be considered innocent until proven guilty. Several polls of journalists, however, have prejudged the issue by voting Sally Gunnell as female athlete of the year.

Dave Cocksedge points out that, magnificent as Sally's 400mH world record of 52.74 was, you can't compare it to 8:06.11 for 3,000m and 29:31.78 for 10,000m. Dave writes 'When Zatopek first broke 29 min for 10,000m, expert observers said: "Impossible. Can't be done. Something wrong here." Then when Clarke ran 27:39.4, the same doubters said: "Impossible. Did he run a lap short?" The doubters have been wrong every time.'

Our Chairman David Iszatt points out that the special 3,000m time is 8.2% slower than Morceli's 3,000m 1993 world best, which happens to be same ratio as Sally's time to Kriss Akabusi's 1993 best. Achilles feels that these times from the Chinese are very good, but not beyond belief. We must change our perception of what is possible.

On Injured Juniors

The grant from the Sports Aid Foundation allowed us to put on some very good age-group races, but we were very concerned to have many of our invitations turned down, because at any one time up to a third of the athletes were injured.

Then at the National Training Day we heard horrific tales of talented young athletes being pressed by their clubs to double up, treble up, or even more, in league matches. We are bound to ask if there could be a connection.

On Linford Christie

In a year when the decision for the Coach of the Year award was very close, one nomination considered by the Committee was that of Ron Roddan, Linford Christie's Coach. Although some of the Committee are over fifty, yes we do realise that Linford is not a middle-distance runner. We do feel, however, there is much that middle-distance runners can learn from his preparations.

If you remember he was injured early in season, that the Americans were saying that he was Olympic champion by default, that the Americans had run fast all season, and that Cason had ran the fastest in the heats and semis in Stuttgart, you can only then appreciate the pressure on Linford. Frankly, Achilles only expected bronze.

Linford chose that moment to run, not only a lifetime best, but also a world best on a legal track. A wonderful moment, and, for Achilles, the performance of the year, even ahead of Wang Junxia.

Vale Athletics Today

It was very sad to see the demise of our old friends *Athletics Today*. The quality they brought to their results service, the detailed coverage of Grand Prix meetings, their analytical commentaries and clarity of layout, all set the standard by which to judge *Athletics Weekly*. It was, unfortunately, always difficult to find AT in newsagents, and circulation never reached break-even levels. With the advent of Dave Cocksedge and Paul Larkins, AW has improved, but the price has now reached £1 and their wretched pb club fills more and more pages each week.

However, all is not lost. Mel Watman and Peter Matthews now produce *Athletics International*, which contains all the relevant results in one small A5 publication. Published fortnightly, you can subscribe for £50 per annum by writing to Mel Watman, 13 Garden Court, March Lane, Stanmore, Middlesex HA7 4TE.

BMC Quiz

On Morceli

Achilles is never afraid to admit he was wrong; Nouredine Morceli has forced Achilles to eat his words! In the last issue, when reviewing your votes for the greatest miler of all time, Achilles named his top ten and then wrote 'Anyone who would place Aouita or Morceli above these ten masters should have their head examined!'

Well, another world title and another world record later, his dominance is almost total. He leads the mile rankings by seven seconds and the 1,500m rankings by three seconds. His new world mile record of 3:44:39 exceeded all expectations and must indicate that he can run 1:42 for 800m sometime soon.

On BAF

We realise that things take time to evolve, but we had hoped for more from Dave Bedford's new regime at the BAF. Elected back in March promising, amongst other things, to appoint a new 'Director of Development', they haven't even let candidates know whether they will be required for interview yet! If there is no more progress in the next four months, make your voice count by ensuring that your club sends their full complement of delegates to the AGM next March.

Derek Johnson gets gold at last!

BAF Management Board member Derek Johnson is best known for his 800m silver medal in the 1956 Melbourne Olympics. Well, 37 years later Derek has scored two major victories. First in June he defeated Frank Horwill over 800m on a grass track, and then in August he got a gold medal in the Discus at the Serpentine Club Championships.

Frank Coaches More Sprinters Shock!

Four athletes coached by Frank Horwill broke the Southern League Division Six 4 x 100m sprint relay record last season.

A Challenge to all Coaches.

Clear your desk for half an hour, take a blank piece of paper and answer these questions. Then we shall see if you are worthy of the title Senior Coach!

A Challenge to all Athletes.

If your coach can't answer most of these simple questions, we suggest you find a coach who can!

COACHING HISTORY

1. What was the essence of Arthur Lydiard's coaching system?
2. What was the basis of Percy Cerutti's training ideas?
3. What did Van Aaken stress was necessary for running success?
4. Gerschler claimed that 6 weeks of certain work would achieve major fitness changes. What were his recommendations?
5. Igloi pioneered new track training procedures. What were these? Igloi was the Hungarian coach in charge of coaching for the Los Angeles Track Club.
6. In 1960, Professor Nocker (Germany), made important observations about A V Hill's analysis of distance events. What were his recommendations?
7. Gosta Holmer introduced a new form of training in 1943 which resulted in two of his compatriots breaking several world records. What was it?
8. State the basis of the Bill Bowerman system, also known as the Oregon system?
9. In 1972 Frank Horwill introduced a training system which was said to be adapted by Seb Coe to break 12 world records. What is the essence of this method?

10. In 1971 Karvonen issued a training threshold table. What does it state?
11. In 1988 Daniels devised a lactate response table. How does it work?
12. In 1970 Bruno Balke introduced a predicted oxygen uptake test. What is it and how does it work?

RUNNING PHYSIOLOGY

13. What is Stillman's table?
14. What is the Lewis Nomogram?
15. Cooper in 1980 gave effective substitutes for running when injured. What are they?
16. Astrand discovered and recommended something about the 800 metres event. What?
17. In 1974 Matthews and Fox introduced us to a new terminology and analysis of running events. What were their findings?
18. What is the Conconi test?
19. In 1992 a new, legal, aid to performance was introduced. What and how does it work?
20. Russian physiologists claimed in 1972 that all circuit training should take place in a gym with one fitted and operating. What was it?

NUTRITION

21. Tea drunk with meals has a bad effect on what?
22. Excessive sweating causes the loss of what? If not replaced what happens?
23. A Swiss researcher stated that if taken daily for a week it will improve performance. What is it?

Answers on Page 28

Oxford 1993

from Michelle Faherty

It was a gloomy, wet day when we arrived at the famous Iffley Road track in Oxford for a day at the races. I was still trying to fathom out whether it was Norman Poole's driving, or the ancient map that we had received from Matthew Fraser Moat to guide us to Oxford, that had delayed us on our journey.

To say that racing conditions were ideal would be a major league overstatement. However, the weather seemed to have little effect on the atmosphere of the crowd that day - many optimistic voices could be heard coming from the enclosed stadium above the noise of the downpour! There were many famous faces in the crowd, including the likes of Sir Roger Bannister, Peter Coe, Derek Ibbotson and John Whetton.

The main races of the day were the 4 x 1 mile relays for men and women. A BMC National Squad would be competing against the BMC Regional Squads. Five minutes before the ladies' race was about to start the clouds suddenly had pity on the athletes and the rain ceased. The BMC national ladies team were led off by Jackie Hansford, who didn't quite have things entirely her own way. Although she ran 4:56.5, she actually headed by Amanda Thorpe of BMC North who ran 4:53.9. Jackie handed the baton to Wendy Williams. But the seed had been sown and the BMC National Squad were now committed to breaking the world record. Wendy recorded a season's best 4:48.8.

I received the baton with a substantial lead and went out hard; I had nothing to lose. I remember with just under 800m to go hearing the unmistakable boom of Frank Horwill's voice, "Sprint drive for home Comrade!". At the time I thought I had miscounted the lap counter or did Frank just ask me to sprint with two laps to go! I ran a 4:44.6 mile and passed the baton onto Debbie Gunning. The gap was now over 200m between us and the second placed BMC Midland Team. Debbie finished in 4:47.4 and the clock stopped at 19:17.3. *A New World Record!* The

previous record had stood since 1974. It was a great performance considering the conditions that had been bestowed upon us but it must be said that the old record of 20:20.5 was not too difficult to beat. BMC Midlands were second and BMC North were third. *The first three teams were all inside the old world record!* Earlier the Men's BMC National squad had run a new UK all-comers record of 16:21.1 holding off a strong American team. It was a great day of racing but the fun had only just begun!

The post race celebration dinner was at St Hilda's College. Those who were staying the night went to the lodge and were given a key and a map to their room, an indication of the many buildings juxtaposed around the grounds that could prove quite confusing to the visitor. By the time 7.30 pm arrived there were some major hunger pangs threatening to erupt. We made our way down to reception where the drinks were being served. Wendy Poole and I made a beeline for the drinks table. Of course Wendy got there first! Sherry was on the agenda and I opted for the orange juice. Everybody looked very smart in their formal dress. Mr Frank Horwill, never known to be short of words walked by, and said, "Good to see you can look human, Michelle". Thanks Frank.

As we turned to enter the dining room he got a taste of things to come as Frank Horwill blew into his trumpet with all the might he could muster, "Dinner is being served", he bellowed. As we entered the dining hall I was struck by its beauty. The whole room was of solid oak reminiscent of the old public schools. I was pleasantly surprised to see 5 different glasses by my plate setting as I sat down ... it was going to be a long night!

On viewing the menu that was printed in French we spent some pleasant minutes guessing what we would be eating that night, since our high school French had been long forgotten. I think the closest we got to 'Bavarois Espagnole' was, "It sounds Spanish!". We were about half way through 'Consommé Brunoise' when the tooting began. The first screeching note

caused a lady sitting nearby to send her spoon clanging into her soup. Frank was blowing his trumpet again. "The President would like to propose a toast to Her Majesty the Queen"; and a few minutes later, "The President would like to take wine with all those who have broken four minutes for a mile". The toasts went on and on, and Frank had a knack of tooting that trumpet at the most unexpected of times, at one point catching one gentleman so unawares that he was spotted quickly rearranging his toupee!

During the meal Peter Coe took us on a trip down memory lane on a guided run through some of Seb and Steve's great races; there was also some footage of Sir Roger Bannister's first sub 4 minute mile back in 1954. All eyes were glued to the many TV sets around the room as we watched some of the greatest races and athletic achievements ever. There were many great speeches that night in the dimly lit dining hall of St Hilda's. Mr BMC President Dr. Norman Poole led them off. National Junior Coach Phil Banning was in fine form telling one of his exceedingly long dirty stories much to the delight of the males present judging by their rambunctious laughter! And finally Frank - need I say more?

After the last mouthful of petit fours had been consumed and the final sip of coffee swallowed there was an air of contentment as one sat back and allowed their digestive juices to set to work in devouring the meal that had just been engulfed. Anyone for a ten mile run in the morning? After many congratulations on the superb meal and the great day of racing, the congregation retired to the drawing room where yet more drinks were served, and we watched Martin Steele's great run in Oslo. The party conversation was still going strong at midnight - I made my excuses and dragged my weary self to bed.

I am not alone when I wish the British Milers' Club many congratulations on such a wonderful weekend of racing and records. I along with many others wish the BMC many more fruitful and growing years - see you next year at Oxford where I hope to be defending my world record.

British Milers' Club - 30th Anniversary Celebrations - 10th July 1993

Men's 4 x 1 Mile Relay

	Leg 1	Leg 2	Leg 3	Leg 4	Total
BMC National Squad	Andrew Pearson 4:09.7	Ian Gillespie 4:01.7	Paul Larkins 4:04.2	John Nuttall 4:05.5	16:21.1
BMC International Select	Buck Jones (USA) 4:07.2	John Warren (USA) 4:04.6	Dave Wittman (USA) 4:03.6	Jamie Harrison (AUS) 4:12.4	16:27.8
BMC South West 'A'	Paul Orchard 4:10.6	Adam Duke 4:10.5	Glen Grant 4:12.3	Wayne Speake 4:15.9	16:49.3
BMC North	Bashir Hussein 4:10.5	Steve Brooks 4:14.5	Peter Toxtell 4:12.4	Paul Bennett 4:16.3	16:53.7
BMC National Junior Squad	Justin Swift-Smith 4:09.1	Eddie King 4:13.5	Simon Sasby 4:13.4	Daniel Furnidge 4:20.8	16:56.8
BMC Midlands	Andy Hart 4:07.3	Darren Daniels 4:10.8	Mark Russell 4:12.4	Matthew McCallum 4:29.7	17:00.2
BMC South West 'B'	Paul Gray 4:30.2	Ian Manners 4:24.4	Martin Hula 4:21.3	Nick Smart 4:24.4	17:40.3
BMC Devon & Cornwall	Darren Varcoe 4:24.4	Chris Harry 4:21.7	Mark King 4:33.0	Jeff Gill 4:33.3	17:45.9

Note 1 BMC National Squad set a new UK All Comers Record of 16:21.1.

The previous record had been 16:28.2 by Northern Counties AAA (Taylor, Simpson, Berisford, Hall) at White City on 28th June 1961.

Note 2 BMC National Junior Squad set a new World and British Junior Record of 16:56.8.

The previous World Junior Record had been 17:12.2 by an American High School team in 1960.

The previous British Junior Record had been 17:23.02 by Belgrave Harriers (Gladwin, Waller, Paton, Richley) at Crystal Palace on 13th June 1982.

Women's 4 x 1 Mile Relay

	Leg 1	Leg 2	Leg 3	Leg 4	Total
BMC National Squad	Jackie Hansford 4:56.5	Wendy Williams 4:48.8	Michelle Faherty 4:44.6	Debbie Gunning 4:47.4	19:17.3
BMC Midlands	Jenny Hawthorne 5:04.2	Julie Swann 4:56.0	Nilla Karlsson 4:57.3	Catherine Mijovic 5:10.0	20:07.5
BMC North	Amanda Thorpe 4:53.9	Julie Casey 5:09.8	Diane Brockley 4:57.8	Margaret Boleman 5:06.8	20:08.3
BMC South West	Alison Barnes 4:57.6	Michelle Wannell 5:10.7	Melissa Watson 5:13.9	Clare Keller 5:00.7	20:22.9
BMC Devon & Cornwall	Maureen Wooldridge 5:03.4	Luey Wright 4:58.9	Emma Craig 5:29.4	Jenny Williams 5:27.2	20:58.9
BMC National Vets Squad	Debbie Howard FV35 5:11.6	Pat Gallagher FV45 5:11.9	Viv McConnell FV35 5:16.0	Johanna Jay FV50 5:34.6	21:13.3

Note 3 BMC National Squad set a new World Record of 19:17.3.

The previous record had been 20:20.5 by San Jose Cindergals at Sacramento on 23rd March 1974.

Note 4 BMC National Vets Squad set a new FV35 World Record of 21:13.3. This is being claimed as an inaugural mark.

from Bill Bennett

It was a weekend not to be missed and could almost have been labelled the BMC's Command Performance. Of course it was the 30th Anniversary Celebrations at Oxford, incorporating an afternoons track meet at the famous Iffley Road Stadium (where we witnessed World Records!); an evening sherry reception and dinner at St. Hilda's College and a flavour of university bed and breakfast!

For me, membership No. 65 (I think!) it embraced all that is good in the British Milers' Club, the comradeship and the knowledgeable athletics chat, which, if taped, could have netted the Club a fortune. It also enabled me, as a former National Committee Member, and Equipment Secretary (and indeed club tie designer!) a weekend to relish as I rubbed shoulders with some great people. My only regret was that I did not rub shoulders with the beautiful Wendy Sly, but at least I got her autograph - twice!

As a member since the Clubs' inception, and celebrating a 30th Anniversary, myself (of my 4:07.5 mile), it was an athletics thrill to speak to the great Roger Bannister. I will always appreciate, and I know that my present running club Deal

Striders will be forever grateful, that he took time out at the sherry reception to sign half a dozen tee shirts commemorating my Club's recent Goodwin Sands Mile.

There were so many other exciting moments throughout the weekend which I will cherish for years to come:

- * Turning on the radio as I drove into Oxford and hearing Frank and Matthew being interviewed live.
- * Seeing the flag of St. George flying proudly over the church tower.
- * Talking with the four minute smiler himself, Derek Ibbotson and meeting his attractive and charming wife.
- * Chatting with Ray Roseman (please don't forget my photos), John Whetton, Glen Grant and Phil Banning etc.
- * Saying hello again to Brian Boulton and being introduced to our Chairman, David Iszatt.
- * Having lengthy natter with BMC President Norman Poole who made me wish I had more time to get into coaching.

* Being so impressed with the involvement of MFM and the efficient way he and his committee organised the whole weekend.

* Listening to the wisdom of Peter Coe and being asked to go out of my way to drive him home on the Sunday (how could I refuse?).

* Winning the Handicap Mile on a 'carpet' of a track, and wondering what times Bannister and Ibbotson would have achieved on these types of tracks in the '90s.

and finally - teaming up again with Mr. Inspiration himself, my former coach - Frank Horwill. His enthusiasm will never die and his continued loyalty to the BMC cause was a pleasure to witness after all these decades.

Frank, may you and your trumpet continue to blow strong throughout athletics in the UK, particularly as a new era unfolds with the BAF. Thank you for what you and the BMC have done for middle-distance running over the last 30 years.

Thank you all for a memorable and inspiring weekend. Incidentally Matthew, isn't it the tenth anniversary of Wendy Sly's silver medal next year?

Photographs by Ken Hickey



The start of the Men's 4 x 1 Mile Relay



John Nuttall pulls away from Jamie Harrison



Wendy Williams hands over to Michelle Faherty



Julie Swann hands over to Nilla Karlsson



Sir Roger Bannister with the new UK All-Comers Record Holders



The new 4 x 1 Mile Men's World Junior Record Holders

Photographs by Ken Hickey



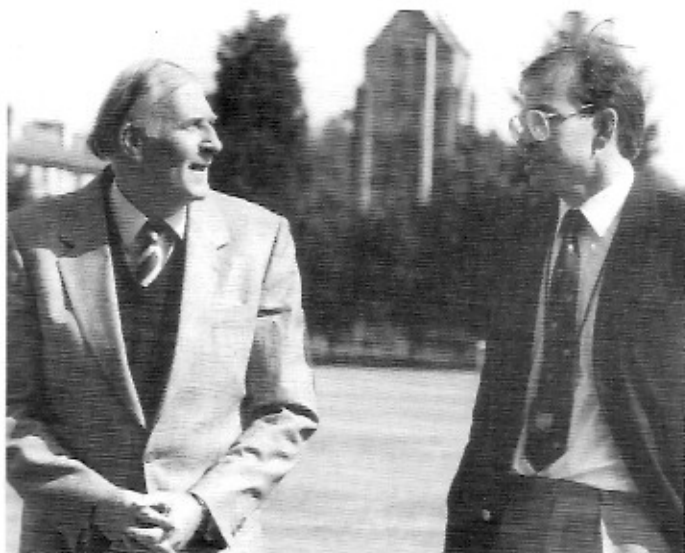
Mr. Derek Ibbotson with most of the Ladies' Squads



Sir Roger and Derek Ibbotson



Sir Roger with Paul Larkins



Sir Roger with Matthew Fraser Mout

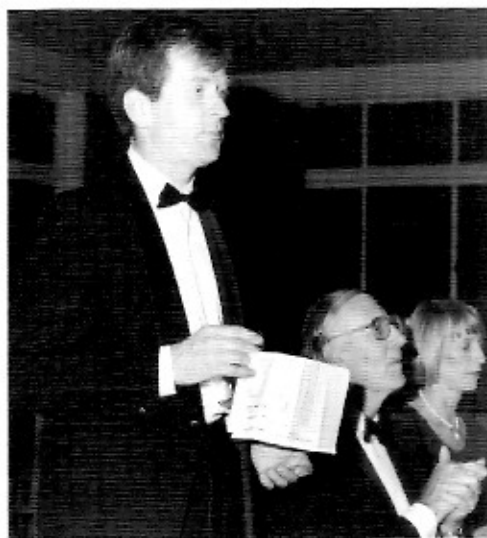


Sir Roger with Maureen Smith

Photographs by Ken Hickey



Mr. Frank Horwill



Dr. Norman Poole



The wonderful officials at Iffley Road



Mr Peter Coe showing the Moscow 1,500m Final



Major Glen Grant and Mrs Wendy Sly

Your Letters

Best Mile Relay Splits Oxford, 10th July 1993.

Men

Ian Gillespie (National)	4:01.7
Dave Wittman (Int. Select)	4:03.6
Paul Larkins (National)	4:04.2
John Warren (Int. Select)	4:04.6
John Nuttall (National)	4:05.5
Buck Jones (Int. Select)	4:07.2
Andy Hart (Midlands)	4:07.3
Justin Swift-Smith (Nat. Junior)	4:09.1
Andrew Pearson (National)	4:09.7
Bashir Hussein (North)	4:10.5
Adam Duke (South West 'A')	4:10.5
Paul Orchard (South West 'A')	4:10.6
Darren Daniels (Midlands)	4:10.8
Glen Grant (South West 'A')	4:12.3
Peter Tootell (North)	4:12.4
Mark Russell (Midlands)	4:12.4
Jamie Harrison (Int. Select)	4:12.4
Simon Saxby (Nat. Junior)	4:13.4
Eddie King (Nat. Junior)	4:13.5
Steve Brooks (North)	4:14.5

Women

Michelle Faherty (National)	4:44.6
Debbie Gunning (National)	4:47.4
Wendy Williams (National)	4:48.8
Amanda Thorpe (North)	4:53.9
Julie Swann (Midlands)	4:56.0
Jackie Hansford (National)	4:56.5
Nilla Karlsson (Midlands)	4:57.3
Alison Barnes (South West)	4:57.6
Diane Brockley (North)	4:57.8
Lucy Wright (Devon & Cornwall)	4:58.9

From Des Oldfield

I should like to express my sincere thanks for your help and guidance which have proved to be of great benefit to my daughter Juliette's performance this season.

Three months ago, Juliette was feeling somewhat in the doldrums as, belonging to a small provincial club, competing in lowly leagues, she was concerned that she was not getting the level of competition necessary to improve. I rang Norma Pugh, Midlands Staff Coach, for her advice, and she immediately recommended that I should contact the BMC.

After two BMC meetings, she achieved a pb, but more significantly, she benefited in two important respects. Firstly she improved her tactical skills, running against older women, and, secondly, her personal confidence grew. This was perhaps the most important benefit.

Juliette has since gone on to win the English Schools Intermediate 1,500m Championship, followed a week afterwards by the International Schools Championship in Dublin.

I have no doubt that your timely contribution was significant in her success, and my only regret is that the splendid work you are doing in the BMC does not have the awareness it deserves amongst talented middle-distance runners in smaller clubs.

From Janet Cole

Congratulations on a well organised Anniversary race day at Oxford. I would like to nominate Bob Parker for the Coach of the Year Award. I hope it is not out of line but then I've always believed members of the club should be given a chance to nominate a coach, with the voting left to the committee.

Reason for my nomination of Bob Parker whether considered or not: his achievements with Alison Wyeth, Britain's first finisher in Stuttgart, first Briton to defeat Yvonne Murray over 3,000m in seven years. Alison has never failed to produce her best at major championships. Currently, and probably will finish the season as, the country's top ranking 1,500m runner, just as she did last year, 10 seconds faster than our only representative in Stuttgart. Much improved times in all contested distances from 400m - 3,000m. If you also have an award for outstanding middle - distance runner of the year, then I think she deserves it.

Despite the failure of Yvonne Murray again in a major championship, and the injured Liz McColgan, I think British women distance running is at present doing well with pbs from Alison Wyeth and young Paula Radcliffe in the 3,000m final and Kelly Holmes in the 800m plus Diane Modahl's aggressive running in the 800m final.

So much noise has been made about our decline in the men's distance events that yet again the need of the women have been pushed into the background, what plan is there to help women's transition from 3,000m to 5,000m for future major championships?

I hope the BMC will play an important role in this, something to consider when you sit down to plan your races for next year. I wish the Club every success in the future.

[Ed: This year the second fastest 5,000m by a British lady was set in the BMC race in Cheltenham - but only one lady turned up for the 5,000m race at West London.]

Oxford 1993 - Mixed Handicap Mile

	Net	H'Cap		Net	H'Cap
Bill Bennett	5:40.0	7:50.0	Kim Osmont	5:16.5	8:26.5
David Iszatt	7:15.6	8:00.6	Alan Bray	6:23.9	8:33.9
Phil Banning	5:21.8	8:01.8	Ray Roseman	6:54.2	8:34.3
Jane Blunden	8:02.3	8:02.3	John Whetton	4:55.3	8:35.3
Jackie Wharton	7:11.3	8:06.3	Peter Kyberd	4:55.8	8:35.8
Brenda Brown	7:06.9	8:16.9	Paul Kyberd	5:14.4	8:39.4
Harry Rocks	6:14.5	8:24.5	Rose Webb	6:35.0	8:45.0
Colin McCallum	6:05.4	8:25.4	Paul Grimsdale	5:22.4	8:52.4
John Ashton	5:15.8	8:25.8	Alan Sage	5:07.1	8:57.1

Sean Kyle

Winter Preparation for athletes aged 16-17

It is acknowledged that an overall programme should *not* normally be imposed de rigueur on an entire group and that allowances have to be incorporated to accommodate individual strengths / weaknesses / age and maturity levels. Thus the following is only a suggested format, to be used as a general base.

It is also assumed that athletes in our imaginary group are healthy and uninjured and have a background of at least a year in the sport and are now keen and committed to follow a progressive training regime, beginning early October. The aim is to produce a good track performer rather than a cross-country champion (occasionally a lucky coach can have both!).

Considerations : 1) Endurance base, 2) Strength, 3) Speed, 4) Flexibility and co-ordination, 5) Winter competition - a) Cross-country, b) Road races / relays, c) Indoor, 6) Diet, 7) Medical back-up / testing, 8) Work and family, 9) Other activities / sports, 10) Overall planning and record-keeping, 11) Rest. The Programme is based on a two-week cycle, one training session per day.

October :

A break-in period of 3-4 weeks : steady runs over varied surfaces - 20-40 mins, plus light stretching before and after runs. This for 6 days per week, with one rest day. Then: Test Run - 15 mins evaluation.

November :

Day 1 Steady run, 30-40 minutes.

Day 2 Easy 15 mins run, then fastish 10 mins run, then 10 mins easy.

Day 3 Run from home to gym, 10-12 exercise circuits, running drills / flex. work, plus 4-6 reps x 600m varied paces, run home.

Day 4 Warm up, then hills, 2 sets 4 x 120m using an extended stride, end with 6-8 x 100m down hill.

Day 5 Track: longer reps i.e. 600 / 700 / 800 / 1000's at 3,000m pace, recovery 3-4 mins, slightly reduced weekly, end with 6 x 90m reverse bends fastish.

Day 6 Rest

Day 7 Race or easy 15 mins, plus stretches, then Fartlek 20 mins.

Day 8 Longer steady run, 40-50 mins end with 6-8 x 100m fast strides.

Day 9 Easyish 10 mins run, end with careful full stretches.

Day 10 Circuits, as per Day 3.

Day 11 Warm-up, drills, then: hills : 4 x 200m using normal stride. 3 x 150m - 50% run, then 50% bound. 3 x 150m -50% bound, then 50% sprint. 6 x 100m - fastish down hill.

Day 12 Track: shorter reps. i.e. - 300 / 200 / 150m at 400m or 800m pace. Reducing recovs. 6 mins.

Day 13 Easy 15 mins, plus stretches.

Day 14 Easy 15 mins, stretches, then Drills - high knees, flick-backs, skips, fast feet etc. - 15 mins. Then good pace run over undulating ground - 20 mins.

N.B. Only normally complete once per two or three weeks. Encourage stretch routine 10 mins *daily*.

General notes :

1. A period of approximately 4 weeks is used to establish work before progressing.

2. Progression is by longer runs, slightly faster pacing and variation of recovery periods in the track sessions.

3. Check on weight, say every 10 days.

4. Check on pulse, occasionally, during track sessions, and before and after the longer runs.

5. General observation on ability to cope, enthusiasm level and general factors such as work, sleep, diet etc.

6. At this age weight training is not included per se, rather emphasis is on strength gains by using own body weight (bounding, skips, hills).

7. Speed emphasis is in downhill runs, drills work and in the shorter reps track sessions.

8. Cross-country races - a means to an end - once per 2-3 weeks : 2-3 miles to 5 miles for the boys; 1-3 to 4 miles for girls.

9. In general, there are no difference between girls and boys work -loads.

10. Indoor competition: 2-3 meets at own distance or below, usually January - February. Training eased for 7 days before racing indoors, with two rest days allowed. Normal training with one rest day before cross-country race.

11. Emphasis on full warm-down after any work.

By Mid March : Assuming reasonable weather conditions, perform Kosmin Test. The results are informative both then and for future reference. If any weakness is exposed there is still time to tighten up work before main racing mid. May through to championships in June / July.

Programme would alter by later March to include two track sessions weekly with circuit session dropped. (Several circuit exercises would be included in most warm-up routines). Track sessions would have more emphasis on specific race pace.

In general, weekly mileage in late October / early November might be 20-25 miles; by end March this would have enlarged, and at better paces, to 30-36 miles weekly. At this age group this would seem to provide a suitable base to sustain a good summer racing programme, whilst allowing for due progression the following year.

On occasion during the winter a forest run or a beach / sand hills session can be undertaken to help vary work. An emphasis on fun and the social aspect is not overlooked.

Sean Kyle is a BAF Senior Coach and has been a BMC member since 1971. One of the athletes to benefit from this training is Eddie King, a member of the record breaking 4 x 1 Mile Junior Relay squad.

Ron McCulloch

The role of the Podiatrist

If a runner is always injured, it is nearly always as a result of a bio-mechanical deficiency. Coaches should then consider consulting a podiatrist.

The foot has 26 bones and is a complex dynamic structure. The 'perfect' foot (ie perfectly aligned) is rarely, if ever, seen. The role of the podiatrist therefore has to determine whether any discrepancy that does exist is sufficient to cause problems.

Podiatrists study the alignment of the joints of the leg and assess muscle flexibility and other factors. If the podiatrist identifies any joint mal-alignment, then an orthosis can be produced to correct the position of the foot. In addition an accompanying programme covering training, stretching, mobilisation and strengthening of the muscles can be prescribed.

Athletes should not wait until they are injured to have an assessment, but should have a routine check to prevent potential problems.

An orthosis is a device to support the function of part of the body. Foot orthoses (also known as orthotic devices) are prescribed by the podiatrist to fit the individual and correct their particular problem. They are not arch supports but specific devices to correct mal-alignment. They are complex because they not only tilt the foot into a better position but also allow normal foot function. As many as thirty different stages may be involved in their manufacture. Ideally a patient should have two sets of orthoses - one specifically for sport and the other for every day use. The latter are harder and give better long term correction. Orthoses are made from a variety of materials but carbon fibre is used for the top devices.

A consultation with a podiatrist will generally include a bio-mechanical assessment. This involves taking a series of foot measurements followed by gait analysis on the treadmill, using visual display equipment. The measurements taken determine the foot's position during the midstance phase of gait - the time

before propulsion. If the foot is perfectly aligned at this stage, it is likely to be correct throughout the cycle. Video analysis is used to confirm any findings.

The movement of pronation (landing on the outside of the foot and rolling in) results in flattening of the foot while supination (landing on the inside and rolling out) arches the foot. Both movements are part of normal gait but can cause problems when they occur at the wrong time.

Abnormal pronation may not simply be due to incorrect joint alignment. Tight calf muscles are a major cause of over pronation and must be corrected by vigorous stretching before other treatments can be effective.

A frequent problem is forefoot varus. This occurs when the forefoot faces inwards with the foot is in its neutral position. Abnormal pronation results, particularly at push off, when the whole foot flattens and becomes excessively mobile in an attempt to bring the inside of the foot to the ground. The foot is therefore unstable and susceptible to injury.

Some case histories I have treated :

1. A runner complained of pain on the medial (inner) aspect of the right knee and on examination there were signs of a sprained right medial collateral ligament. Five years ago, he had sprained his right ankle and there was now limited movement in the rearfoot.

Full compensation was possible in the left foot, but scar tissue in the right ankle limited its movement and prevented compensation. Instead the right knee was pushed to a knock knee position and this allowed the foot to make contact with the ground. This put stress on the medial knee ligaments causing pain and injury.

The patient was given functional orthoses which supported the forefoot in its inward position. These eliminated the need for compensation and allowed normal foot function.

2. A patient complained of pain in both arches but worse on the right. On examination both feet were abnormally pronated and splayed. This caused stress of the aponeurosis, the long ligament of the foot. In addition the right leg was longer than the left. When this occurs the longer leg pronates because this effectively shortens it. This accounted for the more marked pain on the right.

Functional foot orthoses with a heel lift on the right were prescribed and the patient was pain free within 4 weeks.

3. The patient had general foot strain and was flat footed with a marked degree of abnormal pronation in both feet.

Bio-mechanical assessment did not show any joint mal-alignment or structural problems. However the calf muscles were extremely tight, and restricted the upwards movement of the foot, and the foot was pronating to allow a greater range of movement. The patient was referred to a physiotherapist for an exercise programme to ease the calf muscles.

4. The patient had lower back pain with strain of the hip flexors. Gait analysis showed sudden flattening of the foot during propulsion with inward rotation of the limb instead of the normal outward rotation. The hip muscles, which arise in the lower back and insert into the femur, were under strain with every step.

Functional orthoses were issued together with a rehabilitative exercise programme prescribed by the physiotherapist. This resulted in a complete recovery.

These case histories show that many injuries result from abnormal foot function. Although natural compensation may occur initially, eventually fatigue sets in and problems arise, all of which are preventable if diagnosed sufficiently early.

Ron McCulloch SRCh, MChS, Dip.Pod.M. A.Pod.A. consults at BIMAI, Sports Injuries Clinic in Hammersmith, West London. Tel. 081 741 9711.

Derek Parker

Mind Over Matter

Intelligent coaches and athletes are aware of the need to train purposefully and objectively for races. Carefully planned training schedules, integrating hard work with adequate rest and recovery sessions, produce the recipe for success and the fulfilment of sporting potential.

Yet, in spite of the conscientious adherence to these principles, many athletes fail to do justice to themselves and their abilities during races. This is invariably because they are mentally unprepared for the task in hand and because fear, anxiety, tension, and their own inhibitions get the better of them on the day of competition.

It is all too easy to neglect psychological preparation in the build-up to important races. Very often the emphases are on peaking procedures, energy boosting diets, and discussions on tactics. The importance of mental as well as physical ability on athletics performance is frequently overlooked.

Yet psychological readiness is imperative at all levels of endeavour. It is especially crucial when the difference in physical fitness and skill levels between rival competitors narrows. When physical factors such as speed, stamina, strength, suppleness and skill are more or less equal, the advantage in a closely contested race lies with the athlete who has the better mental edge.

Irrespective of ability, most athletes are conscious of the damaging feelings of anxiety and apprehension during the hours which precede competition. Skin paleness, faster breathing, copious perspiration, mental and muscular tension, and the frequent desire to visit the toilet are all symptomatic of high stress levels which adversely affect performance if not controlled.

These physiological responses are caused by increased levels of a hormone known as adrenalin which is secreted by the adrenal glands close to the kidneys. Increased adrenalin flow is nature's method of

equipping humans with the capacity for 'fight or flight' in stressful situations.

A degree of nervousness prior to competition is necessary if a good performance is to be achieved. It is an acknowledged fact that under-arousal of physiological and psychological processes can be as detrimental to performance levels as over-arousal.

Lethargy, indolence and lack of emotional involvement and goal-identification are not conducive to good athletic performance. Under-arousal is frequently caused by over-confidence or a fear of the consequences of a race and the desire to dissociate oneself from it.

Conversely, over-arousal usually occurs as a result of unrealistic expectations, obsessive commitment to perfection, and intolerable pressure from parents, coaches, colleagues, and sometimes even the news media.

The objective of psychological preparation is optimum arousal of the athlete's mental, physical, and spiritual resources - along with a realistic assessment of his/her capabilities and racing and training goals.

Instead of worrying about coming last in races or failing to qualify to subsequent rounds, athletes should set themselves goal-oriented tasks such as emphasising technical skills, running smoothly from starting blocks, avoiding being boxed in, and aiming to run laps or miles at, or close to, pre-planned paces. Self-oriented thoughts such as the fear of finishing last or being lapped by rivals are negative, destructive and purposeless. Conversely, task-oriented thoughts are constructive, positive and purposeful. They reduce anxiety, fear and stress levels. They enable the athlete to fulfil his/her potential and to do justice to his/her training efforts.

Psychological training is as essential to performance as track, road, cross-country and gymnasium sessions. At its highest level it can involve hypnosis, autogenics, transcendental meditation, bio-feedback,

and a process known as centering which requires the athlete to focus his/her thoughts on certain areas of the body and on rhythmic breathing exercises to induce relaxation and feelings of well-being.

These methods should only be used under the guidance of professionally qualified instructors. They can be expensive and are not suitable for everyone. Athletes should examine these methods carefully before embarking on courses.

The vast majority of athletes are most likely to benefit from more simple and basic forms of mental rehearsal. These will include lying comfortably and relaxed in an armchair or couch while visualising himself/herself in action in a competitive situation. Breathing deeply, eyes closed, and aware of soothing feelings of relaxation pervading the entire muscular, nervous and cardio-respiratory systems, the athlete sees him/herself performing each sequence of the running pattern with precision, skill and perfect technique.

As the arms and legs rotate symmetrically around the hip and shoulder axes, there is an awareness of fluency and effortlessness as the athlete glides and flows across the track or road with each muscle group contracting and relaxing in perfect co-ordination and synchronisation. The athlete is aware of the absence of tension in mind and body, yet conscious of an intense outpouring of nervous, mental and physical energy into the race. He/she visualises running the perfect race. By mentally rehearsing its continuous sequence of technically correct movement patterns, the athlete programmes them into the neuromuscular systems and subconscious mind. Then, during the real (as opposed to imaginary) race, the implementation of these movement patterns is automatic and instinctive.

Several athletes visualise the performance of top-class competitors then mentally transfer it to their own self-images. Mentally, they imagine themselves inside the body of their role model. By visualisation, they experience aspects of

skill and technique comparable to the mental and physical experiences of the role model. These periods of visualisation are interspersed with mental pauses of between 10 and 20 seconds.

The visualisation session ends with the athlete mentally stepping out from the role model's body while still retaining an awareness of the movements experienced in the imagination moments earlier. The next time the athlete uses in a race or training session the skills and techniques visualised in the mental rehearsals, he / she can expect to produce the requisite movement patterns more smoothly and efficiently.

Mental rehearsal can also focus on the athlete's arrival at the race venue or the use of tactics when races get under way. By fixing the mind on task-oriented objectives, he / she is mentally preparing the mind and body for the demands of competition.

Mental rehearsal can also be practised 'in situ'. For example, the athlete can visit competition venues prior to races and familiarise himself/herself with the surroundings. Simultaneously, he / she will take the opportunity to visualise the intended sequence of events and their outcome once the race gets underway. Also, when participating in training sessions, the athlete can mentally project specific training situations into competitive environments. For example, when running repetition 150m or 200m, the athlete can imagine himself/herself coming off the final bend into the finishing straight - responding to the challenges of imaginary opponents and consciously maintaining good technique and form to minimise deceleration just as would be done in an actual race. Training colleagues can also be regarded as opponents so that tactical manoeuvres such as overtaking, dealing with being 'boxed-in', and long or short finishing sprints can be rehearsed.

When running longer repetitions such as 400m, 800m, 1,200m or 1,600m, the athlete can imagine himself / herself at various stages in a race maintaining an economic running rhythm and sustaining pace under varying conditions of tiredness. Mentally, he/she can visualise crowds of spectators cheering him/her on towards the imaginary training goal which will become reality in the actual race being prepared for.

It should be emphasised that athletes must have developed sound bases of physical fitness for mental rehearsal techniques to be effective. But in a competitive situation where differences in skill and fitness between rivals are minimal, psychological training will give the mentally prepared athlete a decisive advantage.

Derek Parker, MA, BD Hons., is a Senior BAF Coach and has been a BMC Member since 1975.

NEW MEMBERS

Congratulations to the following who have been elected to the BMC since the last issue :

2330	Tariq Ali Khan	Associate - 1993 only	2352	Juliette Oldfield	Kettering Town
2331	D.R. Davey	awaiting confirmation	2353	Richard Brown	Dudley & Stourbridge
2332	Ian Wilson	Saudi Arabia	2354	Sarah Bouchard	Salford Harriers
2333	Garth Watson	East Cheshire Harriers	2355	Isabel Linaker	Babcock Thom Pitreavie
2334	Richard Mann	Solihull & Small Heath	2356	Margaret Whelan	Galway City Harriers
2335	Duncan Niblett	Solihull & Small Heath	2357	Ben Mewson	City of Bath
2336	Alison Potts	City of Glasgow	2358	Tina Wales	City of Bath
2337	Wendy Jane Farrow	Derby Ladies AC	2359	Amanda Thorpe	Hyndburn AC
2338	Keith Wilson	Senior Coach	2360	Richard Burn	Lincoln City
2339	Jack Hawey	Club Coach	2361	Bryan Conway	St. Malachy's
2340	Catherine Gowland	Spenborough & District	2362	Ben Reese	Wirral AC
2341	Simon Hilton	Spenborough & District	2363	Timothy Henry	Florida Track Club
2342	Tina Baker	Andover	2364	Jennie Hawthorne	Dorchester AC
2343	Mark Griffin	Walton AC	2365	Scott West	Birchfield
2344	Christopher Wooldridge	Newquay & Par	2366	Norrie Williamson	South Africa
2345	Benjamin Sutton	City of Stoke	2367	Keith Redpath	Club Coach
2346	Ian Gillespie	Birchfield	2368	Stuart Margiotta	GEC
2347	Matthew McCallum	Solihull & Small Heath	2369	Sarah Salmon	Newquay & Par
2350	Vicki Andrews	Wolverhampton & Bils.	2370	Lee Cadwallader	Liverpool Harriers
2351	Mark Miles	Solihull & Small Heath	2371	Ivan Hollingsworth	Basildon

Twelve things you

Twelve things you should know about ...

The Marathon

1. A survey on all city marathoners throughout the world revealed that *half* of them only ran up to 26 miles a week in total, i.e. the marathon distance spread over 7 days. If done daily this would be just over 4 miles per session. If workouts were every other day they would be just over 6 miles each. If one session per week is double the daily average, this would give a long run of nearly 8 miles and about 13 miles respectively for these two groups. The actual marathon times achieved by the 26 miles per week group range from 4½ to 5½ hours. Those who trained every other day and did the ½ marathon distance weekly recorded better times, i.e. 4 to 5 hours.

2. About a quarter of the competitors ran twice the marathon distance weekly (52 miles). This would be just under 8 miles a day, seven days a week. The every other day runners (4 sessions) would do 13 miles per session. The first group could do one run of 16 miles and five runs of 7 miles per week. The second group could do one long run of 22 miles and three runs of 10 miles each. The times achieved by the 52-mile-a-week group range from 2¼ hours to 3¼ hours according to age and the quality of training.

3. Recent information from the top marathon annual *Long Distances* published by Jeff Jarver, 1992, reveals a trend against big mileage and the total weekly score favoured is three times the marathon distance (3 x 26½ = 79 miles approx.). The man who altered the big mileage mania was Costill, who showed that consecutive days of 30 miles a day depleted the carbohydrate reserve *which could not be made up by normal food intake*, therefore the mileage done was of low quality and of little benefit.

4. One of the problems facing the novice marathoner is what pace to settle

for in the actual race. A clue to this comes from a current 10k time of 40 minutes x 5, should expect a marathon time of 3 hours 20 mins. A further clue is the ½ marathon time x 2 + 10, e.g. current ½ marathon time = 104 mins x 2 + 10 = 3:38. Once the potential has been determined it is important to *rehearse this pace* regularly each week, starting with 10 miles and adding a mile per fortnight up to three-quarters of the marathon distance (20 miles). To ensure accuracy a 6 mile measured loop is useful. These times are to be noted for rehearsal purposes:- 6 mins / mile = 2:37:12, 7 mins / mile = 3:03:24, 8 mins / mile = 3:30:00, 9 mins / mile = 3:58:00, 10 mins / mile = 4:22:00. Often marathoners run short distances fast in training, and, long distances slow, and find that in the marathon race they are uncertain and uncomfortable with the pace selected, whereas if regular rehearsal of the race pace had been done they would quickly recognise it and settle down. *This is a major factor* for the novice marathoner to consider.

5. It is estimated that only 1 in 30 novice marathoners do any relative speed work on the track, however, world class marathoners, male and female, rocket to a two-thirds of them include a regular track session per week. Emil Zatopek, 1952, won the Olympic marathon (his first ever marathon) by doing *all* his training on the track. He also broke the unofficial Olympic record for the distance. Frank Shorter (USA), the surprise winner of the 1972 Olympic marathon, liked 20 x 400m, with 100m jog recovery each week. He held the USA 10k and 6 mile records. A track session which is popular in America and said to improve runners drastically in 12 weeks is for the athlete to run 400m at best 5k pace and then to run the next 400m at best or potential marathon time. Thus a runner with a best 5k time of 18:45 would run 400m in 90 seconds and the next 400m in 2 mins for a 3:30:00 potential or actual marathon time. This fast and slow running continues until the times cannot be maintained.

6. Brendan Foster is of the opinion that the modern-day marathoner should

train on the track, road and grass, as for the 10k, with an added *rehearsal pace run* per week up to 20 miles. The evidence is that this view is gathering momentum. The new record holder for 10k is also a world class marathoner. Zatopek broke the world record for 10k as well as winning at Olympic Gold at the distance. Frank Shorter held the USA 10k record. Ingrid Kristiansen broke the world 10k record with 30:13.74 and 2:21:06 for the marathon. A good 10k session is 6 x 1 mile with 100m jog recovery (45 secs) or 3 x 2 miles with 200m jog recovery (90 secs). The speed of the miles is at target pace for 10k (90 secs / 400m = 6 mins / mile = 37:30 for 10k). Kenyan 10k runners are fond of 2 x 5k with 300m jog recovery (2¼ mins) or 1 x 4 miles, 400m jog recovery (3 mins) + 1 x miles.

7. Former National Coach for the marathon, Alan Storey, believes that there are four key sessions to be done regularly for marathon success, each one is followed by a restoration day where the athlete merely jogs. He also advocates drastic weight loss relative to height. The key four are:- 1) Run *slowly* for the same time as you hope to do in the marathon. Thus if your aim is to run 3 hours for the marathon you run for 3 hours *slowly* during which time you may only cover 21 miles. It is the time on your legs which is the significant factor. This can be built up from a 1 hour slow run by adding 10 minutes running per week. In 12 weeks the 3 hour target is reached. 2) Rehearse the marathon speed and build up to 18 miles. 3) Do a 10k pace session equal to 10k in quantity. 4) Build up to running uphill for a total of 6 miles (6 miles coming down makes a total of 12 miles). If one easy day of restoration jogging is not enough to recover from the key session, two days must be jogged.

8. Dr George Sheehan of *Runner's World* believes that the key factor to successful marathoning is weight relative to height. Grete Waitz is 5'6½" tall and weighed 110lbs at her best. Ingrid Kristiansen is 5'6½" and weighed 128lbs in her prime. Joan Benoit Samuelson is 5'3" and weighed 105lbs. Frank Shorter is 5'11" and 159lbs for running purposes; a

should know about

5'6" woman should not weigh more than 117lbs. Weight is lost by avoiding high-fat foods (fried food, butter, sardines, etc.) and increasing the mileage to burn off calories.

9. One of the reasons for knowing, rehearsing race pace is to conserve energy in the form of muscle glycogen. If the novice misjudges pace and gets carried away and joins others slightly faster not only will the glycogen depletion occur earlier it could also lead to ketosis, this semi-paralyses the musculature. Every trick in the book should be used to conserve glycogen. These include:-

a) a 15 mile slow run 7 days before the marathon, followed by a 24 hours fast where bottled water only is consumed. Then consuming 700g of carbohydrates daily to the race. This should include 200g of a liquid carbo-loader sold by many cyclists' shops. b) Reduction of training from 7 days before the race by up to two-thirds. c) No training at all within 48 hours of the race. d) The drinking of a cup of strong black, unsweetened coffee 15 minutes before the race to stimulate the sympathetic nervous system to burn fatty acids preferentially and to save valuable glycogen. By doing this up to 40% of fatty acids are used as against only 19% if not used. *Do not do this if the temperature is over 22 deg C (70 deg F).*

10. Confidence building before the marathon is important. A race a month up to the marathon helps: 1st race - 5k. 2nd race - 10k. 3rd race - 10 miles. 4th race - 1/2 marathon. 5th race - marathon. Some runners believe that racing a 20-miler helps. However, a 20 mile distance race is as bad as a marathon and can be worse. An old coaching axiom is that it takes a day for every mile raced to recover. This does not mean rest days but does mean greatly reduced effort in running. To train lightly for 20 days after a 20-miler is not a good idea coming up to a marathon.

11. Follow a logical training plan based on *building up*. Day 1 - Build up to long slow run of 3 hours. Day 2 - Rest. Day 3 - Build up to *rehearsing race pace* for 18 miles. Day 3 - Recovery jog. Day 4 - 10k pace session (6 x 1 mile or 3 x 2

miles). Day 5 - Recovery jog. Day 6 - Run up and down a long hill, building up to 6 miles of ascents, which will mean 6 miles of descents - 12 miles total. Day 7 - Recovery jog.

12. In hot weather wear all white. The weight of shoes is an important factor, the lighter the better. Ninety per cent of the body's cooling takes place via the head, avoid wearing a cap unless white and well perforated. Water over the head on a hot day is as important as water in the stomach. Drinking fluids during a marathon does not suite everyone. There is no way that fluid intake can equal fluid loss via sweat, it cannot be absorbed in time. Water swilling around in the stomach has caused trouble in many runners.

Twelve things you should know about ...

Racing Weight

1. The first man that we know of who made a study of weight relative to his performance was Jack Lovelock, 1936 Olympic 1,500m gold medallist and world record holder. He weighed himself after every race, and, by trial and error discovered his best *racing weight*. If he fell below this weight he deemed that he was over-training. If his weight exceeded his racing weight he upped his mileage and restricted his fat intake.

2. The condition of anorexia, where an individual starves himself / herself to near death voluntarily, is a good news story for the sensational press. This has made many so-called sports nutritionists err on the side of over caution. For example, one such, writing in *Today's Runner*, stated, "It is dangerous to be significantly underweight". A person of five feet in height who weighs 15 stones is much nearer to death than a person of that height who weighs 7 stone.

3. The human being can go 3 weeks without food and live, up to 3 days

without water and live, up to 3 minutes without oxygen and live. On average, we lose 2lbs a day if we fast for 24 hours. Edwin Moses, the famous 400m hurdler, Olympic gold medallist and world record holder, unbeaten in over 50 consecutive races, fasted 2 days a week as part of his training plan. Many American marathoners have also fasted on a regular basis, 5 day fasts are common.

4. In order to assess our best racing weight we have to compare our weight with the average person of the same height. Dr Stillman (USA) who is a weight statistician, has fixed the average weight of the Western World person by the following formula: Allocate 110lbs for the first 5 feet in height for a man, then, allocate 5 1/2 lbs for every inch thereafter, thus, a 6 feet tall average, non active male will weigh 176lbs. Allocate 100lbs for the first 5 feet in height for a woman, then, 5 lbs for every inch thereafter, this a 6 feet tall average, non active female will weigh 160 lbs. Stillman then states that a runner must weigh less than average if success is sought. The question is - how much less.

5. Dr. George Sheehan, medical correspondent to *Runner's World*, himself a Masters' record holder at the mile, and also an experienced marathoner, states that the key factor in distance running is weight relative to height. His rule-of-thumb measure is to allocate 2lbs for every inch in height. Thus, a 6 feet tall man (72in) should weigh $72 \times 2 = 144$ lbs.

6. In 1976, the British coach, Frank Horwill, published his height / weight table for different events based on the study of six world record holders in each event from 800m to the marathon. He used the Stillman formula as the standard. His studies showed that 800m runners possessed of great speed over 400m, i.e. sub 46 secs / men, sub 52 secs / women, were only 5 per cent less in weight than the average person. This was due to their muscular power bulk. A typical example was Tom Courtney (USA), 1956 Olympic gold medallist at 800m, who was 6'2" tall and weighed 183lbs, compared to 187lbs average weight. However, his 400m time

Twelve things you

in 1956 was 45.8 secs. But, if the 800m runner does not possess the 400m speed credentials outlined, the figure to reach is 10 per cent below average, therefore our 6 foot runner would weigh 159lbs (male) and 144lbs (female). The 10 per cent rule also applies to the 1,500m runner. It is 15 per cent less for the 5k and 10k runner and 20 per cent less for the marathoner.

7. Many runners believe, incorrectly, that because they run for one hour daily they cannot be overweight for their event. This is a fallacy. An hour of running burns around a thousand calories. We require a further 2,000 to 3,000 calories to maintain the body, depending on size, making a total of 3,000-4,000 calories. If our caloric intake is 5,000 calories we will GAIN weight even though running. In practice, however, many runners have what is termed a chronic overweight plateau, that is they are perpetually overweight but do not gain or lose much.

8. How should the athlete react to the question of weight and performance? The first thing is to establish what the average person of your height weighs. *If you weigh more than average you will never reach your full potential as a runner.* If you weigh precisely the same as the average console yourself that for every pound you lose you will run faster.

9. Cooper, the famous aerobic physiologist, has calculated that for every pound lost in weight from the average, it is equal to half a mile of extra running per day. So, if you believe this, if you lose 5lbs in 5 weeks it is equivalent to running 2½ miles extra a day, that's 15 miles a week (6 days' training). Little wonder that loss of weight leads to dramatic improvements in performance.

10. Now, when we talk about losing weight, *We are not talking about starving, nor are we talking about eating less.* We are talking about a total ban on some foods. These foods are high-fat foods. This is common-sense because, 1 gram of carbohydrates has the produce 4 calories, the same for protein, but, 1 gram of fat produces nine calories, double the other two. We require only 50 grams of fat

daily to digest vitamin A which is fat soluble. Here is a list of foods to BAN:- Frying oil (28.4g of fat per oz.), lard (28.4g), dripping (28.1), cooking fat (28.1), margarine (24.2), butter (23.4), bacon (12.8), cream (11.9), pork (11.4), cheddar cheese (9.8), mutton (8.8), beef (8.0), sardines (6.8), kipper and corned beef (4.5).

11. This now raises the question of what we can safely eat. Potatoes, green vegetables, peas and beans, contain no fat at all. Liver and veal have very little fat (1.4). Most fish have about 3g of fat per oz. Oatmeal, wholemeal bread, barley, rice, white bread, milk and eggs, have 3g minus per oz. The great fat contributor is *fried food*, if we want to fry we should use the grill. The principal source of fat in the British diet comes from the fats (e.g., butter, margarine, cooking fats) about 40%. Next comes meat (including bacon) about 32%. Dairy produce (excluding butter and eggs) makes up about 16%.

12. If we limit our total fat intake to 50g a day we have taken the first major step in losing weight. The next step is to run progressively more each week. A simple way to do this is to run 5 minutes a day extra per week. So, if you are running for 30 minutes daily, with weekly increments of 5 minutes you will be running for 60 minutes in six weeks. Not a difficult task. Peter Snell, the heaviest holder of the world mile record, ran 22 miles every Sunday to keep his weight in check.

Note : Greenberg and Haggard established that meals taken every 4 hours brought about greater physical output, greater resistance to extremes of heat and cold, and better acclimatisation to altitude. The daily diet should include : 1) 1 pint skimmed milk. 2) One non fat meat meal. 3) Five cups full of fruit and vegetables. 4) One plate of whole grain cereal and slices of bread without butter.

"There are no fat world class runners. There are plenty of fat third-class runners. Running calls for sacrifices and watching the calories is the least of them." Edwin Moses.

Twelve things you should know about ...

Stress

1. The word *stress* has a bad reputation, which suggests that all stress is bad for you. However, physical improvement can only occur if the body is stressed, i.e. given ever-increasing loads either in quantity or quality, sometimes both. Our very existence on this planet revolves around continual stress: the stress of learning, the stress of work, etc. Coming to terms with stress is similar to being vaccinated against disease. Small amounts of dead bacteria are injected, the body reacts against the invasion, and in doing so builds up resistance against the live bacteria. When we first start running it is a shock to the system, we breathe heavily, our pulse rises rapidly and we may ache next day. After a while these symptoms are delayed, we can run further and faster before they occur.

2. Physiologists say that all types of stress follow a pattern - alarm, resistance, accommodation and acceptance. One type of stress utilises these things immediately, e.g. if our house catches fire. The other type may last weeks, and with regard to the starting training, physiologists have suggested some timescales. Alarm reaction - 5 to 12 weeks. Resistance - 3 to 6 weeks. But an unwelcome phase may occur 8 to 16 weeks after beginning training - exhaustion.

3. In 1934 Professor Hans Selye, a Canadian endocrinologist, discovered that stress in the extreme produces its own set of symptoms. Although the list of these is general, each individual has a specific stress symptom or symptoms. The list includes: i) Sudden loss of weight (not to be confused with weight loss as we get fit. It is loss of weight from a plateau); ii) continuous sore throat; iii) frequent one day colds; iv) insomnia; v) increased skin disorders; vi) upset stomach - in severe cases ulcers occur; vii) ulcerated mouth; viii) swollen lymph glands under

should know about

the armpits and or in the groin; ix) increased discontent with life; x) constant tiredness; xi) 'haunted' appearance (white face, sunken eyes, blank unemotional stare); xii) unaccountable aches and pains.

4. Our physiological resistance to stress operates from the adrenal glands, which secrete anti-inflammatory corticoids. In severe stress the glands secrete pro-inflammatory corticoids - often called mineralocorticoids because they affect mineral metabolism, causing sodium retention, potassium excretion and magnesium loss. It has also been discovered that vitamin C and pantothenic acid are stored in the adrenal glands and in severe cases of advanced stress these stores are completely depleted. It should be mentioned here that athletes require 250mg of vitamin C and 10mg of pantothenic acid daily. The first is provided by pure orange juice, the second by an egg a day or a meal of grilled liver or a handful of peanuts.

5. Advanced stress is a sneaky situation. Often an athlete can be unaware that he is over-stressed, it creeps in gradually. There can be one major cause or an accumulation of causes. One way of detecting it is to give ourselves a notional number of anti-stress factors, say 12. We not apportion these nominally to our daily life; work may use up five factors; training four factors; everyday wear and tear two factors. It will be seen that we have one factor in reserve. But supposing we are asked to work longer hours for several weeks; this may use up seven factors, resulting in our having to use five factors in training; this together with the other factors leaves us with a deficit of two factors and, in time, the symptoms listed above will start appearing.

6. Contributory causes of advanced stress in runners are as follows: a) increasing the training load by more than 25% over short periods. Physiologists are agreed that it takes six weeks for a new training programme to be assimilated. Increases of 25% within that time often prove detrimental to progress. b) a sudden increase in training during the winter - say, from 50 miles a week to 100 miles a

week overnight. The safer procedure would be to add 12 miles a week over 4-6 weeks to 100 miles. c) poor and irregular meals. We require i) a pint of milk daily. ii) A meat meal daily or its protein equivalent. iii Five cups full of fruit and vegetables. iv) One serving of whole grain cereal. We should eat every 3 hours on the dot. d) Financial problems. The worst offender is the ever-increasing total on a credit card. The remedy is simple - cut it in two and start paying off the amount owed as quickly as possible to save paying exorbitant interest. It may mean that the style of living has to be reduced for a while - so be it. e) A perpetual nagging partner, particularly if the cause of the nagging is the time spent running. The remedy is simple - get rid of him or her. f) Work problems. Not least of these is the times it takes to get to and from by public transport or the tedious business of endless traffic congestion. We either like our work or we don't. If we hate it, it will always be a source of stress and we must plan to make a change. If we like it and the journey is getting the better of us, we must consider moving nearer to work or to better public transport routes. Many runners find that running to and from work gets them there faster than the car or bus does, which kills two birds with one stone. g) Over-racing. There are some idiots who race a marathon every month. Some, a little less crazy, race 10k or 10 miles every week. If we consider that we require on easy day's training for every mile raced, we are not getting much restoration of our energy stores. A race a fortnight is a good plan - 13 races in the summer and 13 in the winter.

7. Once stress is detected we must act fast if the whole season is not to be lost in ill health. The following routine has been found successful: a) Take five day's rest. Then resume training only every other day until you feel fresh. Then train two days together with the third off. If all goes well, train three days together and have the fourth off; stick to this routine for the rest of the season. b) Take 1,000mg of vitamin C daily for a month (*Redoxan* effervescent tablets). Reduce 250mg a month thereafter to a level of 250mg permanently. c) Take a high-powered

vitamin B complex tablet daily (*becosym forte*) which *must* include pantothenic acid. d) Take 50mg of zinc daily or ensure that a handful of any type of nuts are consumed daily. e) Ensure a good iron intake in the diet (all curried foods, cocoa at night, liver or desiccated liver tablets, lentils and all types of dried fruit.) If after 21 days your stress symptoms do not disappear have a thorough medical check-up privately, which should include a complete blood analysis. It may cost £100 plus, but it is a good investment.

8. A medical test for stress is the injection of 25mg of *acth* which will bring about 50% fall in the circulating eosinophils if the adrenal cortical reserve is normal. It will be greater if it is not.

9. A practical long-term stress detector is to take the pulse first thing in the morning *while in bed*, then, take it again immediately after rising. If it is 40bpm in bed and 50bpm on rising, the difference is 10. Write this down in your diary. After a week of this you will be able to work out the average difference. If this difference is much higher on one particular day, e.g. 15, *do not train that day*. If it appreciably lower, e.g. 5, you can train severely that day.

10. A further medical test for stress is the measurement of 17-ketosteroids in the urine, since the result of the metabolism of the adrenal corticoids is the kidney's excretion into the urine of 17-ketosteroids.

11. The French Academy of Sports Medicine suggest that stress can be avoided by following a four day routine: Day 1 - severe training; Day 2 - active rest (walk); Day 3 - moderate training; Day 4 - light training. In terms of mileage this might be Day 1 - 20 miles, Day 2 - nil, Day 3 - 15 miles, Day 4 - 10 miles.

12. For people who do little exercise, physical activity is known to reduce emotional stress, i.e. stress caused by non-physical agents, provided the activity is not over severe for long periods. For example, mental patients have shown less tension after being encouraged to run regularly.

Answers to Quiz

1. Arthur Lydiard stated that all runners should *build up* to running 100 miles a week in the winter for 10 weeks. This was followed by 6 weeks of hill fartlek (400m fast run up to a hill, ascend the hill, jog 400m away, come back fast, descend the hill, jog 400m away, come back fast). Then 3 months of "effort" training. Different track distances were run at different efforts. For example, a runner with a best time of 14 mins for 5k, would run 15:30 for $\frac{1}{2}$ effort, 15:00 for $\frac{1}{3}$ effort, 14:30 for $\frac{1}{4}$ effort.

2. Cerutti believed in weight training. Lydiard did not. He advocated 10 miles a day of good pace running and then up to 50 miles of running from Friday night to Sunday night on sand-dunes involving three sessions a day of 8 miles each. This was divided into steady run (am), uphill sprints (pm), fartlek or repeated runs over a hilly 2k course. The stopwatch was rarely used. It was man versus nature. Effort was more important than times.

3. Van Aaken believed that runners only needed to consume 50g of fat daily. That runners should weight 20% less than the average person of the same height, e.g. 6 ft tall man averages 176lbs - Aaken weight - 142lbs. 6ft tall female averages 160 lbs. Aaken weight - 128lbs. He advocated long, slow running, followed by small segment of the specific race distance at race pace, e.g. 800m runner would run 1 x 400 at race pace after running 5 miles slowly, daily. The marathoner ran 26 miles daily, slowly. The aim of the big mileage was to burn off fat and to make for a powerful oxygen transport system. He said all runners should be able to run a good 5k.

4. Gerschler believed that running 100m, 200m and 600m regularly in turn, 3, 6 and 18 seconds slower than one's normal time for the distances, increased the stroke volume of the heart by one third in 6 weeks. Double this time is needed to get the same result from steady running. After each run the pulse must recover to 120 beats a minute within 90 seconds. If it didn't the pace had to be reduced or the session stopped.

5. Igloi insisted on the following:- 1) 30 minutes warm up run. 2) Untimed repetitions equal in total to the distance of the race, e.g. 8 x 200m = 1 mile, repeated many times as sets. 3) the jog recovery was half the distance of the rep. A session might be 4 x 8 x 200m stride with 100m jog, with 200m jog after each set. Times were not given but runners were simply told, "Too fast," or "Too slow", when executing these sessions. This sort of training took place at 6 a.m. and 6 p.m. daily. He did not like questions - "you run - I think."

6. Professor Noeker said that if the 800m was two-thirds anaerobic and one-third aerobic, that was how to train for the event, e.g. six sessions anaerobic, 3 sessions aerobic, spread over 9 days. The same principle applied to all events, e.g. the 10k is nine-tenths aerobic, one tenth anaerobic. Aerobic running includes marathon pace, half - marathon pace, 10k pace, 5k pace and 3k pace. Anaerobic includes sprints to 400m, 800m pace and 1,500m pace (50-50).

7. Fast and slow running over varying terrain. This might be - 15 minutes jog, 4 minutes hard run, jog 1 minute, 3 minutes hard run, jog 1 minute, 2 minutes hard run, jog 1 minute, 1 minute hard run. Jog 5 mins. Short sprints and jogs. The two Swedish athletes - Hagg and Anderson, who broke world records in 1940s (mile, 3k and 5k) ran over a 5k circuit through a forest, winter and summer. Winter, 2-3 circuits; summer, once.

8. Each month a speed for the mile was fixed. October might be 5 minutes. The pace was sub divided into weeks. 1st week - 8 x 400m in 75 secs 400m jog. 2nd week 8 x 400m with 300m jog. 3rd week - 8 x 400m with 200m jog. 4th week - 8 x 400m with 100m jog. Other distances were used but based on the same recovery and pace system. For example, 1st week - 4 x 800m in 2:30, 4th week - 4 x 800m in 2:30 with 200 jog. The pace increased monthly. Fartlek was done on days between track sessions which were not more than three a week. Strength exercises were always part of a warm up.

9. Horwill stated that the distance runner should perform well at the immediate distances above and below his specialist event. For example, an 800m runner should be able to run 1500m 4 seconds a lap slower than per 400m in the 800, and 4 seconds a lap faster in the 400m. For women the figures are 5 seconds. For example, if your best 800m is 2 mins (= 60 / 400), you should be able to run 1,500m in 4 mins (64 / 400) and the 400m in 56 secs. For women this would be work out to 1,500m in 4:03.8 and 400m in 55 secs. This differential between paces changes to 3 and 4 seconds respectively, at world class standard. In order to achieve this the athlete would have to train at these different speeds on a regular basis. Coe trained at 5k, 3k, 1500m, 800m, 400m paces over a period of 14 days.

10. Karvonen's table is a guide as to whether the training is beneficial. Take your resting pulse before a run, deduct it from 200, take 60% of that figure and add it to your resting pulse. The result is the figure you should achieve in beats per minute for all training, e.g. resting pulse - 60bpm, 60 from 200 = 140, sixty per cent of this = 84 + 60 = 144bpm. Deduct 10 from 200 for every 10 years after 20 years of age. A man of 40 would deduct his resting pulse from 180.

11. Lactate response running means choosing a pace where the lactate level is at its optimum - when jogging your lactate level is low; when running 800m it is high and goes over the top - a lactate response run seeks to find the medium. Daniels devised a tables based on your best 3k time which indicates the speed per mile you should run for a maximum of 4.5 miles, e.g. best 3k time of 8:30 would require each mile of your lactate response run to be run in 4:48. A best time of 9:30 would require each mile to be run in 5:38. Choose an exact mile circuit when doing these runs to check for accuracy.

12. It is a 15 minute run around the track. 12 laps (4,800m) predicts an oxygen uptake of 65mls / kg / min. (fair). 8 laps (3,200m) predicts 48mls / kg / min.

Answers to Quiz

(poor). 13 laps (5,200m) predicts 70mls/kg/min. (good). Women's readings are: 4,600m - good, 4,200, fair, 3,800m poor.

13. Allocate 110lbs for the first 5 feet in a man and 5½lbs for every inch thereafter. 6 feet = 176lbs. This is the weight of the *average* non active man. Allocate 100lbs for the first 5 feet in a female and 5lbs for every inch thereafter. 6 feet = 160lbs *average* non active woman. *Runners must weigh appreciably less than average.* To lose weight - run more miles per week and avoid all high-fat foods.

14. A table which measures your vertical leap touch overhead relative to your weight. For example - If we have two runners who leap 24 inches (0.6m), and one weighs 70kg (152lbs) he will record on the table 120kg-m/sec or 878.65 ft-lb / sec. If the other weighs 60kg (132lbs), he will record 100kg m / sec or 439.34 ft-lb / sec. This means that the 70kg person has greater leg strength. The Lewis nomogram is not popular with many coaches since it favours the heavier person who jumps higher or the same as a lighter person. Weight advantage is not required in distance running.

15. Cooper stated 4 miles of cycling was worth one mile of running; one mile of swimming is worth 4 miles of running. Current opinion suggests this figure be changed to 5 miles.

16. The 800m has more lactic acid concentration in runners after the race than any other distance event. The best way to produce it in training is to run for 75 seconds and then 60 seconds duration at a maximum effort, i.e. 2 seconds slower at 400m than for your best 400m time.

17. Fox and Matthews said that sprinting which lasts not more than 25 secs. duration uses the energy system ATP-PC. Fast work which does not exceed 80 secs. duration uses the ATP-PC-LA system. Work that does not exceed 3 minutes uses the LA-O₂ system. Work which exceeds 4 minutes uses the

O₂ system. An ATP-PC session is 50 x 60m sprints in 5 sets of 10 with 3 times the time taken for the sprint as rest. An ATP-PC-LA session is 8 x 400m in sets of 4 with double the time taken for the repetition as rest. An LA-O₂ session is 4 x 800 is sets of 2, with equal rest time of the rep. time. An O₂ session is 3 x 1,500m with half the time of the rep. as rest. Fox and Matthews state the 800m race is 30% ATP-PC-LA, 65% LA-O₂, and 5% O₂.

18. The Conconi Test is a means of measuring an athlete's lactate threshold. The runner runs 200m in a predetermined time and reduces this time by 2 seconds in each of the following 200m runs. The heart rate is recorded after each 200m. This is done by a telemeter. The athlete runs 2,400 - 3,200m, and 12 - 16 pulse checks are taken. The speed is increased after the first 200m and continues to do so after each following 200m until unable to increase it further. The split times are converted into km/h, the formula is $v = 720 / t$ (t = split time). A graph of the heart rate and km/h values is drawn up. If a HRCT Leuenberg Medicine Technique AG computer is available an automatic analyses of the test is possible. 10.0vd = poor, 12.0vd = fair, 14.0vd = excellent. Translated to training, the following is recommended: Long runs - 75% (2 hours), Slow runs - 80% (90 mins), Medium runs = 90% (50 mins), Fast runs = 95% (40 mins). The percentages indicate intensity of the calculated anaerobic threshold. The test is subject to inaccuracies from both runner and operator unless top quality equipment is used.

19. It is phosphate creatine. It caused an unknown physiologist from Warwick University to criticise a BMC pamphlet issued on the subject. He bordered on the hysterical and his criticism was offensive, arrogant and incorrect. His pomposity was only matched by his condescension. Dr. Sewell, the physiologist in question, has made no known contribution to middle-distance thought. Creatine can be taken as a six-day boost before competition and, quoting from *Peak Performance* which obviously Dr. Sewell does not read, Eric Hultman used 30g a

day for 6 days on a group of athletes (5) with astounding results. Hultman and Roger Harris and Karin Soderlund, at the Karolinska Institute, in another bit of research, found that it boosted quadriceps-muscle with highly successful results. It is not suggested that it is to be taken on a permanent basis but as a boost to a forthcoming important event. By the way, Dr. Sewell got very hysterical over the use of ergonomic and ergogenic. If you don't know the difference he will describe you as "pitiful". Do you know what Fox and Matthews say about the two words? *ergogenic* = any factor that improves work performance. *Ergonomic* = emphasis on certain foods being consumed likely to improve performance marginally. A terrific difference!

20. An ioniser. Creates an atmosphere similar to that found near waterfalls. It opens up ancillary air cells in the lungs and increases performance.

21. One third of the iron in vegetables is rendered useless. A serious matter for a vegetarian.

22. Potassium and zinc. Found in orange juice and nuts respectively. The first affects the heart muscle, the second, the immune system.

23. 1,000mg of vitamin C. It releases hormones that make you feel good, pushes back the pain-barrier and lowers blood pressure.

How did you do? More than 20 correct is a very good score - less than 12 is poor.



David Cocksedge

Stuttgart Distance Analysis

What a Championships - what a great feast of track and field! China's splendid female distance runners proved themselves mistresses of the sustained finishing burst in Stuttgart.

10,000m Champion Wang Junxia ran her second 5km in 15:06 - which no British woman has managed to run for 5,000m this year - and her last 3k of 8:42.5 was faster than Murray was able to do in the 3,000m final. Qu Junxia, 3,000m Champion ran the last 1,500m in 4:06.7, considerably faster than Sonia McGeorge ran in the 1,500m heats.

Women's 1,500 metres

Winner Liu Dong started her effort after two laps in 2:17.58, and covered the last 800m in 2:00.1, 700m in 1:42.92, 400m in 57.48, 300m in 42.77 and 200m in 28.9. Final time - 4:00.50. The only comparison to this sustained speed comes from Tatyana Kazankina, who kicked home with a 56.9 last lap at the Montreal Olympics in 1976 - but that was in a race that was five seconds slower overall. In Moscow (1980), however, Kazankina scorched her last 800m in 1:59.6, and 400m in 58.8, en route to retaining her title in 3:56.58.

Women's 3,000 metres

Olympic 1,500 bronze medallist Qu Junxia blew through the second 1,500m in 4:06.7, last 2k in 5:39.6, kilometre in 2:39.7 and 400m in 59.4 for a final time of 8:28.71. (CBP). With Linli Zhang (8:29.25) and Lirong Zhang (8:31.95) taking second and third, this was the only medal sweep of the Championships.

The only comparison is Tatyana Samolenko-Dorovskikh, who ran her last kilometre in 2:42.5 and 400m in 59.4 to win the 1988 Seoul Olympic title in 8:26.53 from Paula Ivan (8:27.15). Dorovskikh is now serving a four year suspension for a drug offence last June. Alison Wyeth and Paula Radcliffe reacted splendidly to set pbs in a very unevenly paced race. Wyeth must be capable of sub 8:35 in an even race.

Women's 10,000 metres

Here was the star of the Championships for my money. Wang Junxia's closing speed was quite awesome. She poured on the race over the last six laps, running 15:05.9 for the second 5km, 8:42.5 for the closing 3km, 5:39.2 for the closing 2km, 2:43.4 for the final 1,000m, 2:09.1 for the last 800m, and 61.07 for her last lap! The finishing time was a new Asian record and CBP of 30:49.30.

In terms of sheer, sustained finishing pace, there is simply nothing in women's distance running history to compare with that. Now that Wang Junxia has been seen at last on a major public stage, all doubts must surely be dispelled regarding her 2:24:07 marathon at Tianjin last April. The kilometre markers may have been misplaced, but surely the total distance is accurate? Anyway, having seen Junxia, I'm certain that she is quite capable of running the second half of a marathon in 69.09, as claimed.

With a range extending from 54.1 for 400 all the way to 2:24 for the marathon, this amazing woman must be capable of one day cracking the 30 minutes for 10,000 m. A tall order, but I feel she can do it.

(Ed : As we all know, Wang Junxia went on to run 29:31.78 in the Chinese Championships in September. Her first 7,000m took 21:14.31, meaning her final 3,000m was 8:17.47, inside the 3k world record, and her final 5,000m of 14:26.09 was well inside Ingrid Kristiansen's 5k world record. The following day she ran 3:51.92 for 1,500m, second behind Qu Junxia but inside the old world record, and then ran 8:12.19 and 8:06.11 to destroy Kazankina's 3,000m world record twice in two days.)

Elana Meyer allowed herself to get rattled by Selina Barsosio's awkward, blundering style of running. It was a revealing moment when she dropped out. After flailing about rather pathetically, her reaction was to drop out; air her displeasure, and appeal to officials to handle the matter. It apparently did not

occur to her to do what Lynn Jennings and Albertina Dias did - keep out of her way, but, if jostled, shove back!

Men's 1,500 metres

Morceli covered his last 800m in 1:49.6, 400m in 50.62 and 300m in 37.8. Impressive stuff, but he does this sort of thing in circuit races all over Europe when the pacemakers let him down. Yates ran intelligently throughout, but simply did not have enough pace over the last 300m.

Men's 5,000 metres

After Mike Cheshire had shaken things up in the first six laps, Ismail Kirui ran his last 3km in 7:51.46, 2km in 5:17.11 and kilometre in 2:35.90 for a new World Junior record and CBP of 13:02.75. In a savage race, there was no chance for anyone to relax - the first 3,000m took 7:45.64!

First European Rob Denmark was almost blown off the track, although I think the message that distance running is a whole new ballgame these days first came home to him at Crystal Palace in July. The leader's kilometre splits : 2:31.76, 2:39.51, 2:34.37, 2:41.21 and 2:35.90.

Men's 10,000 metres

Gebresilasie covered the second half in 13:46.64, last kilometre in 2:39.57, and 400m in 55.11. Tanui blew his cool just before the bell lap, kicking off his right punctured shoe, and overcooked the next 200m. He was a spent force when the Ethiopian reeled him in over the last 70 metres.

If Tanui was so angry, why then did he allow Gebresilasie to sprint through on the inside up the home straight? The Kenyans are always quick to protest, though the incident was surely accidental. You can't blame the Ethiopian for choosing to sit in until he felt it was time to kick - this was a *championship* race, after all!

No Briton was even entered after Eamonn Martin withdrew injured.

Race Results 1993

29th March	Lanzarote	2 Miles MX	M. Askew	(Serpentine)	9:45.9
30th March	Lanzarote	800m MX	N. Kearsley	(Crawley)	2:01.6
31st March	Lanzarote	1 Mile MX	F. Ovesen	(Denmark)	4:37.8
7th April	Wythenshawe	800m M	P. Roberts	(Cardiff)	1:51.5
		800m W	A. Molloy	(Ireland)	2:05.8
		1,500m M	D. English	(Havering)	3:46.9
		1,500m W	U. English	(Havering)	4:26.6
		3,000m M	B. Hussain	(Stockport)	8:16.3
27th April	Stretford	800m M	P. Hackley	(Border)	1:49.2
		800m W	M. Wilkinson	(Sale)	2:12.3
28th April	Birmingham	800m M	A. Hart	(Coventry)	1:52.94
3rd May	Yate	1,000m M	J. Swift-Smith J	(Westbury)	2:23.4
			I. Gillespie	(Birchfield)	2:23.8
			G. Grant	(Cambridge)	2:27.3
17th May	Wythenshawe	800m M	D. English	(Havering)	1:48.7
			K. McKay	(Sale)	1:48.9
			P. Roberts	(Cardiff)	1:49.5
			P. Hackley	(Border)	1:49.6
			S. Fairbrother	(Haringey)	1:49.9
		800m W	D. Modahl	(Sale)	2:03.9
			S. Parker	(Sale)	2:06.6
			J. Latimer	(Sale)	2:07.0
			M. Faherty	(Skyrac)	2:07.1
		1,500m M (a)	A. Pearson	(Longfield)	3:46.8
			R. Hough	(Sheffield)	3:47.1
			I. Cadwallader	(Liverpool II)	3:47.5
		1,500m M (b)	M. Steele	(Longfield)	3:45.1
			I. Gillespie	(Birchfield)	3:45.2
			R. Whalley	(Stoke)	3:46.7
			D. Daniels	(Birchfield)	3:47.7
18th May	Stretford	1,500m M	L. Cadwallader	(Liverpool II)	3:51.5
		1,500m W	K. Scobie	(Leeds)	4:26.7
26th May	Solihull	1,500m M (a)	J. Jennings	(Birchfield)	3:48.1
		1,500m M (b)	D. Moorcroft V40	(Coventry)	3:53.4
		1,500m W	B. Hartigan	(Tipton)	4:24.1
			C. Keller	(Bristol)	4:32.0
			M. Newman	(Coventry)	4:33.0
2nd June	West London	Mile M	E. Hurley	(F&C)	4:14.9
5th June	Antrim Forum	1,500m M	B. Farren	(Sparta)	3:43.47
8th June	Stretford	800m M	J. Geres	(Rugby)	1:50.6
		800m W	J. Asgill FV35	(Trafford)	2:09.3
16th June	Ealing	800m M	N. Smith	(Shaftesbury Barnet)	1:52.4
29th June	Stretford	1,500m M	N. Emberton	(Wresham)	3:48.0
		1,500m W	D. Brockley	(E Cheshire)	4:23.0
			J. Asgill FV35	(Trafford)	4:24.6
29th June	Loughborough	SAF 1,500m JM	E. Bowen J		3:54.75
		SAF 1,500m JW	J. Oldfield U17	(Kettering)	4:41.78
10th July	Oxford	Mile M	D. Cunningham		4:07.6
		Mile JMX	D. Rocks		4:25.7
		4 x 1 Mile Relay M	BMC National Squad	<i>UK All-comers Record</i>	16:21.1
			BMC International Select		16:27.8
			BMC South West		16:49.3
			BMC North		16:53.7
			BMC National Junior Squad	<i>World Junior Record</i>	16:56.8
			BMC Midlands		17:00.2
			BMC South West B		17:40.3
			BMC Devon & Cornwall		17:45.9
		4 x 1 Mile Relay W	BMC National Squad	<i>World Record</i>	19:17.3
			BMC Midlands		20:07.5
			BMC North		20:08.3
			BMC South West		20:22.9
			BMC Devon & Cornwall		20:58.9
			BMC National Vets Squad	<i>World FV35 Record</i>	21:13.3
14th July	Ealing	1,500m M	J. Warren	(USA)	3:47.2
19th July	Plymouth	800m M	D. Wittman	(USA)	1:50.9
		3000m M	C. Jones	(USA)	8:31.2
20th July	Stretford	800m M	L. Cadwallader	(Liverpool II)	1:49.2
			I. Bowden J	(Skyrac)	1:50.8
		800m W	D. Brockley	(E Cheshire)	2:09.4
21st July	Cheltenham	800m M	A. Hart	(Coventry)	1:48.8
			J. Swift-Smith J	(Westbury)	1:49.5

Race Results 1993

21st July	Cheltenham	3,000m M	M. Yelling	(Bristol)	8:06.2
		800m W	J. Harrison	(Australia)	8:08.3
			J. Swann	(W&B)	2:11.2
			P. Gallagher FV45	(Westbury)	2:17.3
		3,000m W	A. Barnes	(Bournemouth)	9:22.3
		5,000m W	L. Morton	(Westbury)	15:52.4
28th July	Solihull	1,500m M	J. Jennings	(Birchfield)	3:45.4
			R. Howell	(Birchfield)	3:47.4
			P. Bennett	(Rotherham)	3:49.7
		1,500m W	S. Salmon	(Newquay)	4:31.6
4th August	West London	5,000m MX	K. Tadesse	(Belgrave)	14:24.5
			S. Shepley	(London Irish)	14:33.0
			A. Robinson	(Haringey)	14:36.7
10th August	Stretford	1,500m M	G. Lough	(Annadale)	3:44.8
			C. Murphy	(Sale)	3:44.9
			S. Green	(Trafford)	3:45.4
			A. Pearson	(Longfield)	3:45.7
			D. Rowbotham	(Copeland)	3:46.6
18th August	Faling	800m M	A. Knight	(Cambridge H.)	1:50.3
			T. Balogun	(Woodford Green)	1:50.8
		800m W	M. Harries	(Parkside)	2:10.7
22nd August	Solihull	SAF 800m JM	S. West J	(Birchfield)	1:52.31
			K. Wright J	(Leigh)	1:53.05
			A. Parker J	(Scarborough)	1:54.60
		SAF 800m JW	J. Oldfield U17	(Kettering)	2:12.76
			S. Salmon J	(Newquay)	2:13.33
			E. Graysmark J	(Gloucester)	2:14.03
22nd August	Exeter	Mile M	R. Finch	(Southampton)	4:00:0
			I. Gillespie	(Birchfield)	4:01.1
			A. Passey	(B&R)	4:01.8
			N. Horsfield	(Newport)	4:02.7
			N. Caddy J	(Newquay)	4:04.9
25th August	Birmingham	800m M	A. Hart	(Coventry)	1:50.78
		800m W	L. Castle	(Cardiff)	2:10.52
28th August	Cheltenham	Mile M	N. Horsfield	(Newport)	4:01.7
			M. de Freitas	(Portsmouth)	4:01.9
30th August	Welwyn	1,500m M	S. Barden	(GEC)	3:47.9
			D. Mead	(Belgrave)	3:48.3
			M. Yelling	(Bristol)	3:49.5
			J. Gascoyne	(Enfield)	3:50.5
			S. West J	(Birchfield)	3:51.3
1st September	Cardiff	1,500m M	N. Horsfield	(Newport)	3:44.2
			T. Buckner	(Havant)	3:44.4
			I. Gillespie	(Birchfield)	3:44.8
			J. Swift-Smith J	(Westbury)	3:46.6
1st September	West London	Mile M	B. Witchalls	(MVR)	4:10.5
4th September	Salisbury	Mile M	I. Gillespie	(Birchfield)	3:59.3
			M. de Freitas	(Portsmouth)	3:59.7
			R. Finch	(Southampton)	4:00.9
5th September	Southampton	1,500m M	R. Finch	(Southampton)	3:43.4
			T. Buckner	(Havant)	3:43.5
			M. de Freitas	(Portsmouth)	3:43.7
			N. Horsfield	(Newport)	3:44.0
			M. Hibberd	(Leicester)	3:44.4
			S. White	(Coventry)	3:44.5
			N. Hopkins	(Reigate)	3:45.5
7th September	Stretford	800m M	M. Hibberd	(Leicester)	1:49.5
			M. Sesay	(Leeds)	1:49.6
			J. Lobo	(Blackburn)	1:50.0
		800m W	D. Brockley	(E Cheshire)	2:07.9
8th September	Swindon	1,500m M	G. Brown	(Cumbernauld)	3:45.4
			N. Horsfield	(Newport)	3:45.5
12th September	Bristol	Road Mile	I. Gillespie	(Birchfield)	4:05.4
			N. Smart	(Westbury)	4:06.0
			N. Hopkins	(Reigate)	4:07.0
Post Office Counters Grand Prix		Final Standings	I. Gillespie	(Birchfield)	174 pts
			N. Horsfield	(Newport)	168 pts
			T. Buckner	(Havant)	149 pts
			R. Finch	(Southampton)	137 pts
			M. de Freitas	(Portsmouth)	137 pts