



BMC News

OFFICIAL JOURNAL OF THE BRITISH MILERS' CLUB
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Sponsored by



FRANK HORWILL
BMC FOUNDER
1927 - 2012

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Due to the number of pages designated to Frank's untimely passing, a number of coaching articles including one on the steeplechase have had to be held over to the next edition.



British Milers' Club

Founded 1963



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All official correspondence to the BMC should be addressed to the National Secretary at the above address. All matters so received will be addressed by the national committee at their next meeting. All other requests should be sent to the BMC Administrator Pat Fitzgerald and will be dealt with as soon as possible. Matters concerning specific areas of the club should be sent to the relevant person from the above list.

The BMC are always looking to expand its network of people and locations that host BMC races. If you feel that you can help or want to get involved then please contact the BMC Administrator Pat Fitzgerald.

Chairman's Report

BY TIM BRENNAN BMC CHAIRMAN

Welcome to the Spring 2012 addition of the BMC news. Olympic seasons are always a bit special and a home Olympics is a once in a generation experience.

Frank Horwill

You will find a large part of this magazine and of my notes devoted to the passing of Frank Horwill the BMC founder who died on January 1st. This is only right and proper as without Frank there would be no BMC.

Frank has been the constant in the BMC with his involvement stretching through the creation of the club, through dark days when the club was threatened with closure and into our current period of strength. Through that time Frank has been an inspirational figure and all of us are going to miss him tremendously.

Many of our younger members will not have had the opportunity of meeting Frank personally and might wonder why the fuss? You will read more elsewhere in the magazine but at the time of the club's foundation British middle distance was in a slump and it took vision and drive to turn that around. This was often in the face of direct opposition from the authorities and others but Frank never backed away from a fight (sometimes literally!) in his life. Moreover the principles that Frank set-up of specialist competition, coach education and training together apply equally well today and have evolved over time to give us the events that you participate in today. Above all though we are going to miss Frank because he was a lot of fun to be around; never short of an opinion, a master joke teller, a great drinking companion and a charmer with the ladies.

Frank's funeral took place on 17th Jan. It was a day when there was plenty of laughter as people shared their memories of Frank; I came away feeling much the better for the experience which I think is fitting as I always had the same sense after spending time with Frank.

There was a full church of 250 plus, and as Frank had only distant relatives surviving him it was almost entirely made up of the athletics family particularly his training group and the BMC. The tone was set with the service kicking off with a tape recording of Frank cracking one of his Jokes. Peter Thompson had prepared and read a wonderful eulogy (which you can read in this magazine)

including describing how Frank had founded the BMC with the aim of making Britain the best in the world and how he had seen that come to fruition in the 80s. Tim Hutchings, Frank's most successful athlete, spoke bravely admitting how he had lost touch with Frank and then talking about how close they had been. Apparently Frank would even give credit cards on his account to his athletes.

Sebastian Coe, Daley Thompson, Dave Bedford were all there. Steve Overt was in contact as well from Australia.

At the reception after there was an open invitation for anyone to take the microphone and say what they want. There were many attempted Frank impersonations and away from the church his rich use of Anglo Saxon could be given full tribute!

We will be gathering again for the memorial service on 29th April and have also been looking at other commemorations. Something which has been in place for many years is the Frank Horwill mile. This is a young athlete's trophy race for girls which with its counterpart the Peter Coe mile for boys will take place at Iffley road track Oxford. We are delighted to be at the home of the first sub 4 minute mile by Roger Bannister and the day will be a full programme of mile race across for seniors and the age groups.

Also already in place is the Frank Horwill scholarship an annual award for academic research into athletics topics which is helping and encouraging new thinking and innovation.

Work has started on a book of Frank's published and unpublished articles. Brendan Byrne has stepped forward to do this and money from the memorial funds will be used for the publication.

Frank has left the BMC his extensive collection of athletics literature and we are currently looking at the best way to make them most useful in the future.

Important though these tangible remembrances are the most important thing is to maintain the 'BMC spirit' which Frank shaped. Helping athletes achieve their life ambitions and to go further than they believed they could. Taking pleasure from seeing their success and always being athlete orientated.

Coach Shadowing

We have launched a new initiative called coach shadowing. The idea is that coaches spend some time watching sessions being run by some of the top coaches in the country with their international athletes. The aim is

to spend some time in discussion with the coaches and to get an insight into the thinking behind the sessions. We are very pleased that Norman Poole, Craig Winrow, Andy Hobdell and Dave Sunderland have agreed to be our coaches for the programme. Details of how to apply can be found on the BMC website. We are also delighted that England Athletics will be encouraging participation from those on their coach mentoring programme.

2012 Season

We are gearing up for Olympic season. Our first two Grand Prix fixtures at Sport City (19th May) and Watford (9th June) are before the Olympic trials and close of qualification. We expect these to be big high quality meetings. We will pitch Watford as our international meeting and invite strong overseas competition to help in the chase for qualifications time.

The season will start early and we will have one of our fullest programmes ever with the usual structure of PB Classics for young athletes, the Grand Prix the Gold Standard Races and a regional programme across the whole of the UK.

The Grand Prix will be part of the UKA McCains Challenge. We are also very grateful for the continued kit sponsorship from Nike. Good luck for the coming season!

The BMC is looking for additional sponsors for its competitive programme. If any member can help link us up with potential sponsors we would be grateful. A sponsor would enjoy prominent coverage in our high profile meetings.

Please contact: Tim Brennan –
timbrennan@britishmilersclub.com

Cover Photograph
Frank Horwill OBE.
By Peter Thompson

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Frank's Eulogy

Docklands Christ Church – 17th January 2012

BY PETER THOMPSON

Hölmer, Gerschler, Igloi, Cerutti, Lydiard, Bowerman, van Aaken, Horwill.

We meet here today, representatives of friends, athletes, coaches, lovers; united in grief and as representatives of a wider, global, family of athletics in mourning, the bounds and reach of which I believe many of us can scarcely comprehend.

We have all known Francis John Horwill, or rather we have all known our 'comrade', Frank. To be gifted time with Frank was precious. Whether it was to share a fact, a story, a reminiscence, a whispered rumour or scandal, to experience a session; to be with him was to stand in the light. How selfishly we sought this presence and company. But for those who wish to canonize his memory; there is no need to do so. He stood tall enough as a human being of unique qualities not to need to be seen as a saint.

Words, however, are not enough for what we wish to say and there are not enough words for us to say what we wish, there never could be. But, as Frank had frequently said to me, "Peter, I want you to speak at my funeral and I want you to tell them about all the bad things. I don't want a bloody eulogy." Well, although I'm completely in your hands in this matter, Frank, a eulogy, replete with my inadequate words, is what you shall receive.

I'm Peter Thompson, I'm a coach of athletes and I'm privileged to have been able to count Frank Horwill as a friend. I first met Frank in the early 1970s when we both coached squads of athletes at what was at that time the only synthetic athletics track in the UK, Crystal Palace. Each Sunday I would drive from Sussex with my squad of athletes from various clubs and that represented, I believe, a second



immediate link to Frank, that we coached athletes regardless of affiliation.

After training all morning and afternoon, with a brief break for a snack and a snooze on the indoor high jump landing areas, my squad would eagerly delay our journey south and homewards to join Frank's larger squad in an enthusiastic game of 'crab football' or indoor volleyball.

My friendship, then, goes back over almost 40 years. I am aware that there are those amongst the congregation today whose history with Frank goes back well beyond that and there are many of lesser duration. But I also know that if you were a friend of Frank's, mere time did not define the depth of your relationship. I know some of his deepest secrets and I know his most wonderful accomplishments. I also know that the day that he died, the world lost a very special man. His words and his writing always slapped you awake with its directness. Every brisk sentence crackled with energy and insight. He was unique, a one-off, a person more concerned about following his beliefs and passion than he ever was about doing the easy thing.

Frank was born in Alperton on the outskirts of London in the very different era of the 1920s, 1927 to be precise. His was not an easy childhood. In this respect he was living proof of the triumph of 'nature over nurture', the triumph of the spirit over the environment. He came out of his childhood as a passionate, caring man but perhaps from his experiences, as a man with distinctly eccentric traits that he channelled into a life's coaching of athletics.

Somebody once said, "A coach is someone who always makes you do what you don't want to do, so you can be who



you've always wanted to be." Frank was such a coach, a proper coach.

From the outset, success followed success and he began building a dynasty of international athletes representing Great Britain, England, Wales, Scotland and New Zealand many of whom are among us today. He developed his own methods and in 1973 launched his innovative 'Five Pace system'. This system is now recognised as the foundation of multi-pace training systems around the world and Frank Horwill is recognised as one of the global 'System Coaches of the 70s'. In training he demanded nothing more from his athletes than they erase the words, "I can't" from their vocabulary and replace it with, "I shall try."

Knowing that he had worked as an inspector for the RSPCA one of his athletes once asked of another, "doesn't he know it should stand for, 'Royal Society for the Prevention of Cruelty to Athletes?'" How many of you remember his favourite sayings, such as, "I require you to run 'til your eyeballs burst". And, there were so many more such sayings, each delivered with an exaggerated emphasis and a twinkle of the eye.

I look out on you assembled here and see athletes he took through from school age to becoming senior Internationals and world master's International athletes, some who developed from his own squad of senior athletes. Frank's athletes stayed with his squad and stayed with the sport of Athletics because of their training in a programme imbued with enthusiasm and motivation, both intrinsic and extrinsic. He matched his unparalleled achievements as a coach by producing those results in an ongoing atmosphere of focussed fun. His energy, enthusiasm, humour and passion were infectious.

During the past 50 years, Frank has become widely known as the principal Founder of the British Milers' Club.

In June of 1963, he famously wrote a letter to Athletics Weekly suggesting the formation of a specialist club dedicated to raising the standard of British miling. From this letter ten 'founder members' made up the initial meeting and the British Milers' Club was born, screaming for attention, into a not wholly appreciative or welcoming world of athletics. From such small acorns do great oaks grow.

Frank was particularly proud that by

the early 1980s our men had achieved the BMC's original objective of raising the standard of British miling to world supremacy. British athletes held world records from the 800 metres through to the 5,000 metres and, at one point, claimed every leading global 1500 metres title. Sebastian Coe was the Olympic champion, Steve Cram was world champion, Steve Ovett held the European crown and Dave Moorcroft, the Commonwealth title. All were members of the British Milers' Club (BMC)

Such success would surely guarantee the Club's future, or would it guarantee that there would be those in the athletics community who would seek to destroy it. In the 1980s, foul deeds were afoot. At one particular AGM the officers had secretly orchestrated a mass 'step down', anticipating that their withdrawal would cause the Club to fold. Frank summoned his athletes and they accepted the committee positions and threw enough money on the table that the BMC survived – just. So, we should perhaps add 'saviour' to 'founder' for his BMC appellation.

That and other struggles seem far off now, in concept and in time. Driven by Frank's



dynamism and supported by a loyal band of officers, the Club slowly re-grouped, re-focused, re-built and in what a way. In 2004, Kelly Holmes took British women's middle distance running to world supremacy when she achieved Gold in the 800m and 1500m at the Athens Olympic Games. Today, the BMC is 2000 members strong, and testimony to the original vision of its founder.

There are those who say that Frank was 'anti-establishment'. Clearly, he was a non-conformist but as far as 'the establishment' was concerned he was against it when it was self-serving and populated by an apparently immovable executive, supported by sycophantic underlings. He would suggest that, "They're all a load of ..." and here he would insert a word that rhymes with the plurality of employees of financial institutions. He railed against any perceived injustice on behalf of athletes, on behalf of coaches and on behalf of the good of the sport.

He was the scourge of the Women's AAAs because he had the audacity to believe that women should be training as hard as the men. And in the early 70s, an era when the longest Olympic distance race for women was 1500 metres, he championed their running long distance races like 3000 metres through to the marathon. In this respect, he was always a visionary and spoke his mind without care for what others thought.

In recent times some have expressed the thought that Frank had mellowed as if this was almost to say that he had lessened his values. To those thoughts I would say that nothing could be further from the truth but he was astute enough to recognise when the sport was changing, as it had done so significantly and fundamentally from the 90s to the present day. He recognised that athletics, with the inception of UK Athletics and the leadership from a former athlete he greatly respected, had become professional, placing the athlete at the centre of its mission and operations. Since he had always practised this athlete-centred approach from the very first day he coached, there had become a natural resonance between him and 'the establishment'.

He actively supported the growing cooperation that the officers of the BMC achieved for the Club with UK Athletics and was re-assured when these same officers would remind junior employees of the place and role of the BMC when callow, shallow youth did not respect the Club or its history.

He was one of the first coaches to transfer

to the new UK Athletics coaching scheme in the early 2000s but would still 'say his piece' through the written or spoken word if he felt that any individual, group or strategy did not conform with his view of what was best for athletics. In all his life he never shirked from saying something controversial, if he believed it was for the good of athletics, and this honest determination was the hallmark of everything he did, which was to remain consistently faithful to his friends, to his coaching, to his athletes, to the BMC and to the community of athletics.

He continued to dedicate his life to improving distance running right until the end. Despite occasional chemotherapy and frequent hospital visits he had been coaching at Battersea track, as before, placing what physical energy he had into care for his group of athletes. He still wrote and his passion and enthusiasm for coaching burned as brightly as ever. When talking about his time coaching at Battersea, his frequent quote was, "When I come to the track, I become alive."

This past year he celebrated his 84th birthday. One week prior to that day it was announced in the Queen's Birthday Honours list on June 11th that Francis John Horwill, an Athletics coach of East London, had been awarded an M.B.E. for "Services to Sport". We are grateful that he could receive it in person from Her Majesty.

I remember clearly the last time I was in Frank's company, for six precious days over this past Christmas period. On Christmas Day, Steve Connell and I were sitting with Frank as he drifted into and out of our company. At one point Steve and I thought that he was asleep and we began reflecting on the state of the men's 800m. Suddenly, Frank's eyes opened, immediately becoming alive as he uttered, "I wonder what it would take to run sub 1:40?" and so ensued an animated discussion on whether Rudisha had the unique capacities to achieve this and if not he, then who might? Here was a man on what was to become his death bed, critically thinking, interested, accurate - a coach to the end ...

In the future, Frank, you will be remembered by the running community for so many things, not least as the innovator of Five Pace training and the Four Seconds Rule and as Founder of the British Milers' Club. You are the BMC and you are so much more. You have created an enduring legacy of coaching practice and knowledge.

It is clear that while you will not physically be with us anymore, Frank, your spirit will live on as long as there is a mile yet to be run.



Today we have gathered to say goodbye. Among you I see the many generations of Frank's friends, coaches and athletes. Each of you feel special, each of you were special and each of you remain special, part of a unique brother and sisterhood.

The winter stadium is quiet now. The session has finished. The athletes are gone. In glistening patches on the track, the earlier rain now lies as ice, like the frozen sweat of so many workouts, long past. In the stillness we hear an echo. Is it of a whistle? a bugle? is it of an exhortation?

I close with the words of Emily Dickinson,
***"Because I could not stop for death, He kindly stopped for me;
The carriage held but just ourselves and immortality."***

Tributes to Frank

"What a loss to our sport, one of the great characters and coaches of an era that sadly we will all miss.

I can still picture, very vividly, cold winters nights at the Crystal Palace track hearing Franks whistle blowing at regular intervals as his athletes slogged their way though one of his killer sessions. Or attending one of the BMC camps and being regaled by Frank for not trying hard enough even though we were all semi conscious at the time with exhaustion.

Frank and a few other coaches were in my mind solely responsible for pulling British Middle Distance running up to a level which matched and occasionally beat the rest of the world.

I for one was really pleased when Frank received his MBE, outspoken, anti-establishment and sometimes politically incorrect no one deserved it more!

These are few memories, there were many, many more which will not be forgotten and I am sure others will also remember Frank for the laughter and pain but above all his love for the sport which he gave his life to."

Steve Overt

It was a privilege to be in at the start of the BMC I responded to Franks call in 1963 and never regretted it.

To start a club that could list some of the greatest names in British middle distance was a great and lasting achievement.

I caught up with Frank over the years and his enthusiasm never dimmed.

Please pass on the regards from Member no. 1.

Kind regards
Hugh Barrow

Many thanks - Frank has influenced and helped so many people - going to Battersea on Saturdays is something I shall never forget.

Gill Morgan

This is Stephen Nelson in Dubai. I trained with Frank from 1999 to 2004 during that time I was privileged to be associated with a man who gave everything but expected nothing (but your effort) in return. Frank will be a man sadly missed by more than just the athletics community worldwide.

Peace be with you comrade! "you've only just begun to work"

Regards
Stephen Nelson

Give him a hug from me please Bernie and tell him not to terrorise the female angels with raunchy innuendos. Please give him my love. Anna x
Anna Vuckovic

Frank may remember me!

I will always remember how generous and caring Frank was with his Athletes, please send my regards.

Best Regards
James Goldring

Please thank him for the huge contribution he made to the improvement of British MD standards. A charismatic guy loved by everyone. I for one enjoyed his BMC weekends away.

Tony Maxwell

I can't really put into words how grateful I am to Frank for all his support and wisdom over the 4 years I have been coming to the track. He has given me a love for running that will last all my life. There is not another personality quite like Frank's and that is only one of the many reasons I will miss him.

Helen Sharp

Remembering the obscenities Frank screamed at me whilst running laps has motivated me throughout life and I thank him for this because my life has always been full of fun. He certainly knew how to get the best out of people.

My memories of Frank go back to a schoolgirl aged 12 when I saw a pack of toned athletes running laps at Crystal Palace to the intermittent sound of a whistle. Later when I joined the squad I learned that if you were late on the whistle some verbal abuse followed 'you scrubber' and the like which incredibly had the effect of actually making you run faster! That group in the 70's led by Wayne Tarquini thrived on his motivation and fed off each other. He was simply a man possessed so we just kept running. In the afternoons after lifting weights we ran intervals and played crab football to round off the day. The Horwill squad were achievers because of his dedication to hard work and self-belief. No gain without pain!

Some of us were delighted to spend Saturday evenings at his favourite restaurant La Primavera where the banter and food was as infectious as the day's race results. Some of the older athletes would sometime stay at his flat ready to be up early for Sunday training and would amuse us with stories of 'the rack'. If you had raced badly you got to sleep on this notorious fold up bed (hence its name) which according to legend left you with crookes in the back for weeks!!! Somehow I always managed to escape this torture but I know Frank did spend some drunken nights himself when we managed to get out with him.

Typically Frank left us on New Years Day on an Olympic year...

He left an impression.

Still running after 40 years
Lesley Pamment

He really was the best coach ever. They will say "The great Frank Horwill" about him too!

Some years ago I was photographing an Advertising campaign in Capetown for HSBC I think. One shot was going to be set in the arrivals area at the International airport, always a "fun" place to control a shoot. I was recce-ing with crew members incl assistant, client, art director, location manager and producer etc etc We'd just cleared the relevant area, and had a number of airport staff just keeping passengers away from our deliberations, when an old gentleman with panama type hat wanders straight through "our" area pretending to look confused ;o) One of the airport staff jumped to usher him away, rather officiously, which made me notice; I headed over, then caught sight of who it was? And bright as a button, Frank said "Ah, comrade, good timing". The rest I cannot remember, but I had another slightly amusing chat to him before he headed off to Stellenbosch I guess. Always razor sharp, & often lost on me as I am rather slow witted. But never.. ever an unkind word, or sarky comment to anyone in all the time I knew him!

Quintin Wright

I will always treasure the memories of our wonderful holidays in Stellenbosch. Frank was such fun and such great company! I have absorbed one of his favourite sayings "keep on keeping on" into my everyday life (although I think he borrowed that saying from Churchill or someone of that ilk!!). So my dear beloved Frank, keep on keeping on

and thank you for all the fun and joy you brought to my life.
Much love Libby x x

I trained under Frank at Crystal Palace during my teenage years (the late 70's and early 80's.)

I have very happy memories of training hard, with motivational banter.

He is an ongoing inspiration.

He is a legend.

Our thoughts and prayers are with you.
Mark & Chris Hirsch

Frank stayed with me in Dublin a number of times and to say we had fun is an understatement. I set up the Irish Milers Club and we both loved the controversy. He had as much fun out of my stories of fights with Irish athletics authorities as his own. My son Ross was very fond of him. He is 13 and he was very fortunate to visit him in his house last year.

Brendan Hackett

I would like to thank him for all the hard training he has put me through. The short time I've trained with him I've laughed and enjoyed training- and it's largely because of his coaching that I have been inspired and motivated to rekindle my athletics ambitions. You will be a part of every step I take and every race I run. Lots of love to you dear Frankie – you have truly touched my heart.
Nelle Quispel xxx

Frank is one of those people who you think will always be there, indestructible. To me he epitomises everything that is good about athletics in this country, the way it used to be and the way it should be. A huge human being and a lovely man with time for everyone.

Terry O'Neill

I have been trawling through the many letters and training schedules he sent me over the years, fantastic memories.

David Palmer

I enjoyed our last long meeting, when I interviewed him at length for my book on Coe and Ovett. He was, as usual, a mine of invaluable information, and amusing with it.

I still live in West Hampstead, near to where he used to live in the 1960/70s,

when I first used to write to him, as a member of the BMC, and where we finally met. Tell him that his contribution to British athletics has been second to none

Best wishes, and fond memories.

Pat Butcher

Frank is a big part of my life in the past eight years and I always cherish the time he spent with me and take his life lessons to heart. I wish him well.

Best wishes,
Theodore Chen

I will always be proud to be able to say that I knew Frank in some way and had the pleasure of spending many a Saturday morning hearing his choice phrases and quotes in person which I'm sure will be passed on as legend.

Cathy Ansell

His coaching helped me fall back in love with running and his comments still make me smile when I think of them.

Kira Morser

Frank, the ultimate middle distance enthusiast.

I did a sessions twice a week with his group in 1966, when I was at Thames Valley, and really learned a lot from him. Lovely man.

Douglas Gillan

My personal thanks to him for his enormous contribution to athletics, but in particular for everything he has done for BMC especially in those early years.

Brian Boulton

He coached me in the 60s and after a stint on the National Committee (I designed the original BMC tie!) I met Frank on numerous occasions. He once left a bottle of whisky outside my front door in Walmer, Deal, Kent many years ago!

I ran a mile in 4mins 7secs and joined the BMC in its first year – 1963! I even borrowed Frank's bugle at our 30th Anniversary in 1993 when we dined in Oxford University; after he'd used it of course! My comrade he is in my thoughts and prayers as we speak!

Bill Bennett

A Vice-President of the BMC

Frank and I shared much fun and many adventures, in the 1960s and 70s in particular. He has been a true friend over the years and I am proud to have had him as a friend .

I am so pleased that he made it to the Palace to receive a well deserved MBE from the Queen.

Colin Richards

Frank has been a great influence and friend in my life and I will always remember him.
Roderick Lock

Frank, he inspired beyond the norm - both coaches and athletes alike. Only last year he passed on his passion and training beliefs to some of our Kenyan and American athletes who came out to see him coach one evening in Battersea - so much so that they went out and found copies of his now out of print books to further study his training methods. None of us will ever forget the meal that we had with him afterwards where he kept us and the waitress in absolute stitches with his "chat up lines" - all with an absolute twinkle in his eye.

He is a unique and inspirational character, unsurpassed in his contribution to so many athletes around the world and specifically to UK athletics as a whole.

Kind regards

Peter Mc Hugh

He has been an absolute power of strength and encouragement, not only to himself, his close friends and to the British Milers' Club but to all those who he came into contact with all over the world.

Love and and God's Blessings to Frank.
As always, he will travel well.

Maureen Bonanno-Smith

I remember our times with great affection and a bloody big smile on my face. If it wasn't thrashing around a track in Carlisle trying to break 4 mins so not to let you down or at another drunken Sharon and Tim party, I only remember us having great times and these are times that I cherish greatly. They were the best times of my life. I also think we had the best days of our glorious sport; a time where we just got on with it, trained and raced as hard as we could and then had a laugh afterwards. You were always part of my great times especially when you walked in to that mirror on Tims stag do! Bloody funny. I got home

that night and dropped a mirror with no frame on to my foot and the corner went in to my big toe joint. I went to bed and woke up under sheets that were bright red with blood! Scared the shit out of me! What a funny night that was. It was an honour to share your birthday party a few years back and it was also fantastic to hear of your long overdue honour, your MBE. You should have been bloody knighted ol boy. God bless you my friend. I will raise a glass to you with a tear in my eye and a bloody big smile on my face. Love you Frank.

John Gladwin

As one of the very early members of BMC I was soon persuaded (?) by Frank to join the National Committee and eventually served a period as Treasurer. It was such a struggle in those early days to get the BMC recognised and, without Frank I feel that it may have folded. I took part in one of Frank's very first paced mile races when I had to lead the first two laps in a hailstorm and Derek Ibbotson won! They were such great days and Frank was such a driving force.

I have lost contact with all of those days but Frank did come to my surprise 50th birthday party when invited by my wife. He brought along a very good bottle of wine which never left his hand and, judging by the state he was in when he left, he really enjoyed it.

Frank will be missed by countless people throughout the world - what a man!

Martin Wales

(BMC membership number 41)

I found an inspirational mentor in Frank when I joined his squad back in 1987

I never had much talent, I learnt to live and breath running while training with Frank.

Through the squad, I met many wonderful people including my wife Caroline.

Incidentally Frank was instrumental in getting us together. He announced to Caroline after one training session that I fancied her.

Since we moved to Australia, we borrowed his ideas and are now using them in the Sydney Striders Junior Running Club which we started 5 years ago. Our formula is based entirely on our experiences in Frank's squad

In 1988 when Frank was first diagnosed with cancer, he used to tell us "if anything happens, just think I'm in the other room".

Well Frank, thank you for being a part of my life as a coach, a mentor and a friend. If I hadn't met you all those years ago, my life would probably have been totally different.

Tony Wong

Frank coached me in the 90's. He was a terrific coach and a lot of fun to be with.

I will never forget the time I spent training with him, nor the lessons I learnt.

Regards

Wayne Oxborough

I used to train with the group while at university. My attendance was a bit sporadic, but I still highly value the time I spent at Battersea track.

Frank's sessions were the best of any coach I've ever trained with - you can see very clearly how they were going to give you results. I've also found it very hard to match the camaraderie of Horwill's Harriers at other groups.

Best

Vikram Balachandar

Margaret and I will always remember him shouting encouragement at our daughter Bryony. He was such a lively personality in the field of athletics. There are not too many such characters around today and too many seem as dull as dishwater. We love his sheer enthusiasm and thoroughly academic approach to athletics.

Margaret & Geoff Cubley (Parents of Bryony Lovett)

Although Rachel and I haven't trained with the group for a couple of years now, we have still felt a part of things with the emails. I'm delighted that he was able to receive his MBE recently, which says far more than I ever could, sincere thanks for everything that he did for us, and hundreds of runners like us.

Tim and Rachel Woodthorpe (nee Townend)

I forgive him for emptying the hot ash from his pipe on my guest room floor in Belgium, boiling eggs in my kettle and losing my near brand new Specialized mountain bike when he took it for a few drinks...

I'm still scrapping, kick-boxing, and only yesterday in the gym quoted him on the merits of stretching, he once said to me, "I've never seen a bloody racehorse stretch in all my life..."

Bob Llewellyn

Although Frank only coached me a couple of times I immediately felt his support and desire for athletes to improve. I am aware of the massive amounts he has done for sport

and how many people he has influenced which is absolutely fantastic – an extremely deserved MBE.

Clare Coley

We often smile about his many wonderful quotes when running and hanging out with friends. When we were in Ethiopia our running friends Richard and Gail Nerurkar always enjoyed us saying "we haven't begun working out yet".

Frank was a remarkable man who has done so much for British athletes. Please pass on our best wishes.

From

Grethe and Owen

He is a gentleman who commands the greatest respect.

Bev Thomas

Frank dedicated himself to helping others and was a selfless coach. He was also a very successful coach. At one time there were five members of us from his squad in the AAA Junior 1500m final. The race was won by Seb Coe.

One of the athletes whom I introduced to Frank, Tim Hutchings, went on to take 4th place in the 5000m at the 1984 Olympic Games in Los Angeles. I am currently a Professor of Architecture at USC (University of Southern California), whose football stadium, the Coliseum, hosted those games - along with the 1932 Olympic Games. USC is also famous as the university where Neil Armstrong, the first man to walk on the Moon, studied. One of the projects that I am currently involved in at USC is a research project funded by NASA to design structures on the Moon using robots. I doubt whether many other of Frank's former athletes have ended up working on such a curious project. I shall be eternally grateful for his generosity and commitment to athletics.

Neil Leach

Frank stayed with us in Glasgow when doing missionary work and he warned my wife that he sleep walked.

He was true to his word he almost fell down our stairs.

Hugh Barrow

He was such a brilliant man, I felt like he was my third grandfather! Frank and his group really has made the biggest

contribution to my life over the past six years; I've met my partner and some of my best friends, and so many brilliant memories and fun times because of Frank!

Sara Luck

Frank has been my major influence over the past 30 years. He turned me into an immature teenager into a mature athlete.

Frank has always been a fighter, although I am sure it has always been god's will that decided that he needed to stay with us, to make so many people happy and proud.

Many thanks for taking the time to keep all his friends up to date about Frank. I was hoping that Frank would not pass away on New Year's eve or day, as I didn't want to get upset on these days in future years. But then I thought about, and as well as being selfish I realised that New Year's day can be celebrated even greater than before. For this will be the day that we can all remember how he touched people's lives - on the dawn of a new year...

Steve Haywood

Director

Enduroman

I'm very grateful for Frank letting me join in with the group 3 years ago. The most remarkable thing is that despite the fact he has trained so many people for so many years, he was as dedicated and interested in someone of modest talents like myself, even in these latter years, so that I felt genuinely inspired and elevated by being a part of the group and felt as valued as his more celebrated charges (past and present) as long as I was willing to work as hard. I think it's a very rare quality to inspire people to bring out the best in themselves amongst such a spread of individuals.

Running has certainly become a huge part of my life since I joined the group and almost all of that that is due to what I have learned from Frank and the perspective he has given me on running and training.

I had a friend who works with the UN in Afghanistan. We have known each other about 15 years and he often asks about my running (like many people he is fascinated by my obsession!). When I started Frank's sessions these added a new dimension to my perceived insanity. Especially when I related the Saturday sessions to him. His favourite story about Frank (despite never having met him), and one he quite often refers back to when asking me about training is from when we were doing the lying down and the bottom of the small hill where we do the

figure of 8s and then running towards the tennis court fence. We were all on the floor waiting to start when a hippyish woman with her dogs walked across the area we were about to run across. Frank had us all wait where we were, informing us we couldn't start yet "as there's a Bohemian wandering across the course".

It's a privilege to have been around for even a small part in what he has done and achieved.

Tim Ballard

Frank is one of the very special people that I have met in my life. I can't think of anyone else who has devoted so much of his life so generously to help others. He's an inspiration to us all.

Neil Leach

I have nothing but fond memories of Frank and the BMC.

If it were not for the advice and encouragement that I received from Frank and the other BMC coaches, at their training weekends and up to this day, I would not be coaching now.

I have attached some pictures from one of these training weekends, at Ogmore Oct 2002, which shows Frank coaching a mass warm up session, with a great number of athletes with them all enjoying his sense of humour and coaching skills.

He is in my thoughts and prayers, may God bless him.

Jim Bennett

Dear Frank

Look back on what you have created. Embrace the enormity of what you have done. You have been a giant among men and you have been our best friend.

Countless you have touched. No matter how big or small.

There is a God and you have been his messenger. "Blessed be the meek for they shall inherit the earth."

Your soul is about to go through a rite of passage. He shared you with us and now He is taking you back. You have taught us how to make champions of ordinary people.

The coaches you have trained help children attain pride, achieve their rite of passage into adulthood, with their heads held high in this confusing world, with a sense of accomplishment and victory.

You found true love once, but the mountains took it away. You almost followed her but resolved to stay.

You have searched for her since that day From woman to woman, from the halls of Buckingham Palace to the cold bars of a jail cell, leaving no stone unturned.

She did not die in vain. She left you with a restless soul and look what you did with it. Her voice has been with you every day.

"Keep going. Keep going. Keep going" you said. "Until you hear a little voice in the back of your head say: 'Keep going.'"

You gave every one of us what you would have given her. You touched us all along the way with your grace. Your journey was our destiny. How lucky we were.

You completed her life by living yours. Go now. She is waiting for you. You have nothing to rue. Love is all there was and you found it. You built it out of nothing. You outlived all your siblings because you were the one who found happiness through love. What you have done will outlive you because it will stay with us and we will pass it on to the children you have never met.

You have been our father. We only wish we could see you happy before you go, but your soul is too restless for that. You will find peace soon.

From the depths of your current despair You will find us all again because we love you Frank and nothing can overcome love

Not even death.

Steven Connell

Frank's (or Francis as Brendan calls him) influence transcended the Irish Sea, and we have been privileged that he has had a great influence on Irish athletics also

The thoughts of the Irish Milers Club are with you, our friends, in the British Milers Club in this your time of great sorrow

Ar dheis dé go raibh a anam

Susan Walsh

Vice Chairman, Irish Miler Club

Frank has always been an inspiration to all who had the fortune to meet him.

I personally consider it to have been a privilege and honour to have been a fellow coaching comrade for more than 40 years. He will never be forgotten. May his soul rest in peace.

Mike Down and all of us at Bristol and West AC

I was Scottish Secretary of the British Milers Club in the 1980's and again in the 1990's for a short spell. I invited Frank up several times for conferences or one day coaching sessions and he always came up. For three one day meetings at Huntershill

(accommodation arranged by Hugh Narrow, BMC member number one) he would do two talks and you always found him chatting to runners or coaches at lunchtime or at the end of the day giving advice. The two-day BMC AGM's at Jordanhill in Glasgow both saw Frank in action not only when he was 'on duty' but when he was in the audience asking pertinent questions and talking and telling stories in the lounge afterwards. He liked the Scots and they certainly liked him - Lord Reith would have liked him: he could educate inform and entertain! A real inspiration and a good friend.

Brian McAusland

Frank our comrade! He has enriched all our lives and will live on in our memories of happy days x

The legend of Horwill's Harriers lives on!
Marianne Morris

He was an inspiration to so many athletes and coaches, and of course, the foundation of the British Milers' Club is down to him. I am sure the BMC will find a way to give appropriate recognition to Frank's achievements, as the BMC will remain his legacy.

Like so many people I have countless memories of Frank, at the track, on the sand dunes at Ogmere, at Ardingly, in various pubs and restaurants, and what I shall remember are his enthusiasm and his good humour, the tales he told and his friendship. And I, along with many others, learned so much from Frank. It always amused me when Frank said that the first lecture he ever went to on middle distance running was given by yours truly! And look what that led to! Frank, you will be missed by so many, but the memories will remain. God bless.

Tony Elder

It was a privilege to have known Frank and be trained by him. Trying to achieve my athletic goals under Frank was one of the most exciting times of my life, as the whole buzz of the training squad gave you the belief that you could achieve and surpass them ...whether or not you actually did or not was almost irrelevant, it was the journey trying to reach that point that was all important, and Frank was central to that.

Simon Craig

He really was such an inspiration. I now have 100 people on a training circular in Hong Kong, who all diligently follow his training

sessions. None of them ever met him, but I think all of them felt they knew him!

Charlotte Cutler

Some of my favorite memories of Frank are of the stories he told, most of which are unrepeatable! Even at his 80th birthday, he started his speech with that joke about knowing how Za Za Gabor's fifth husband felt on their wedding night (he knew what was expected of him but he didn't know if he could deliver).

I loved training in the squad, not just because of Frank himself but because of the type of people that were "attracted" to him to train. Great atmosphere, great times.

Jeff Cunningham

Frank

A wonderful friend and a brilliant, enthusiastic and outstanding coach.

Your ideas, common sense and challenging sessions will always be with us.

Goodbye "tremendous" Frank.

Kabir Kemp

I came across Frank when I was living in the States. As someone eager to fulfill my running potential, I often searched the web for new knowledge and keys that would make me run faster. I came across Frank's articles and could not stop reading... They were so insightful and very inspiring (I remember reading 'Run like a gazelle' and '12 Steps to Beating the Kenyans and Ethiopians' over and over again!)

I decided to write to Frank asking for some advice, not really expecting to hear anything back — to my surprise, via airmail several weeks later, came a hand typed 4-page letter answering all of my questions and generously offering words of wisdom. Throughout the coming months the letters continued to come... The time and effort it must of taken to write was such an inspiration and the things written encouraged me so much... On one occasion he noted that I could be an 'international', something I had dreamed of, this boosted my confidence tremendously and remained with me for years to come (I still have all of the letters)

That same summer I traveled home to England to spend a month with the group and took part in sessions I will never forget! I will always remember his little sayings, and even now, in the middle of a session, I quite often think 'keep going, keep going, until a little something inside of you says, keep going!'

What an incredible man!

Susie Bush

Frank has been my inspiration and good friend from the summer of 1971. After arriving at Heathrow, Robbin Barrett whisked me away to Crystal Palace to meet someone very special. Within minutes I was introduced to Frank Horwill who immediately introduced me to David Hemery. I was hooked. This was the running environment I'd always dreamed of. Frank had at least 20 athletes training that day. They had already finished their morning run and were about to do the mid-day track session. Since they'd already had a hard morning session, there was no fear that keeping up with them on the track would be a problem. Well, there was one young chap, Wayne Tarquini behind me; I found out later he was just being nice and didn't want me to feel bad.

It was a wonderful summer of training with Frank's Squad. He could get the best out of you and make it fun. There were times the squad swelled to around 30. It cost a small bit for each of us to run on the track. Frank would pay for 8 to 10 athletes and then send in all 30. I'm sure the management knew what was going on, but liked Frank so much that they let it pass.

In 1979, I decided to come back to London for a year. Lived on the Isle of Dogs with Frank and Wayne Tarquini. A council flat half way up Kelson House. The lifts usually didn't work, so we got some great workouts just getting up the stairs. Tim Hutchings was one of Frank's rising stars. He was over at our place one Sunday after a training session at Greenwich Park. I was going on about all the athletes Frank had turned into great runners — Peter Beacham, Gill Tivey, Liz Brennan, Wayne Tarquini, Lesley Pamment, and Jim Douglas. Tim said, "Yes, Frank's workouts can truly do amazing things for you, if you can survive them."

The woman's squad was an exciting part of training with Frank. They were just as good as the guys and they were truly lovely to look at. It's interesting how much better a guy will run with all those beauties about and we had to work hard just to stay ahead of them.

Frank, thank you for all the great times and the wonderful experiences. It was always an honor to be one of the chosen you'd take to the Primavera Restaurant after a good training session.

Web Loudat

I first met Frank at the tender age of 15 in 1967 at Alpertons cinder track. Even

then he had his whistle and stop watch. Frank had such a charisma about him and I was fortunate to be able to share in some adventures with him and his athletes which couldn't help to make me see life a little differently. in the future. He was so generous with his time and the little money he had then. I remember one cold Sunday morning driving with him to the track in his old grey Bedford van and we saw a 'tramp' wandering along the road. Frank got out and gave him the last bit of money he had on him and when the tramp tried to refuse Frank told him he had won some money and would like to share it with him. I can't begin to imagine the number of athletes he has helped financially as well as athletically.

His training methods were very different and he often had to deal with derogatory comments from more conformist coaches and athletes. However it wasn't long before his results were making people take notice and it has been very satisfying over the years to see him receive the recognition he deserved.

Goodbye Frank, my life is all the richer for having been able to call you my friend. I will miss you and feel blessed to have known you..

Vanessa Aquilina

"I forget the exact date I plucked up the courage to go to Battersea track. Newly recruited to Belgrave, all I knew was to ask for "Frank". Hesitantly I enquired, not knowing what to expect.

"Just follow me", said a voice from behind – and that was my initiation into the comradeship of Frank.

His sessions were like no others and in strength we grew. Reps on Frank's whistle – pushing boundaries only he knew.

Hill sprints, back sprints, bridge loops, leap frogs - on his whistle we would go.

We were Frank's comrades.

And we were not going to let the pain show.

Frank was always there for us, come rain or shine.

In his smart navy track suit and cap, with a twinkle in his eye.

It didn't matter if you were fast or slow, an elite athlete, club runner or below, Frank had time for us all and after a little anecdote or race result, about training we would set.

Although as Frank would remind us "We haven't begun to work yet".

Frank's Saturday sessions were legendary and not for the faint hearted, but Frank was such an inspiration, for him we would give our all and not be down heartened.

Exhausted and breathless, limbs aching

and sore, could we give any more?
And then that little phrase we had been waiting for.

"And that concludes today's minor activities. On Tuesday we will train seriously!"

Frank, you were a true inspiration to us all and will be sadly missed.

You live on in our hearts and minds. Your comrades salut you, Frank.

Rest in peace"

Tilly xx

Mathilde Heaton

"Any success my athletes have had is 90 per cent due to them and 10 per cent to me. Not, as many coaches think, vice versa!" Frank Horwill.

He was the best 10% I've ever had. I feel very fortunate to have known and have been coached by him. Anyone who gives freely of as much of their own time to so many athletes over so many years is special, but Frank was such an exceptional coach on top of that, and a determined organizer to whose vision (and stubbornness!) the UK owes the existence of many of its best middle and long distance races through the British Milers' Club. RIP Comrade.

Hywel Care

There have been some wonderful tributes to Frank from many of the athletes he coached. As a fellow coach, I didn't have the pleasure (!) of enduring one of his training sessions, though I saw him many times with whistle and stop watch. I first met Frank in the early 60s. I was one of the first members of the British Milers Club and served on the committee with meetings held at Bowater House in London. Even in those early days Frank's determination to see the BMC established and become an influence on middle distance running in UK was very evident. In his mind he had a mission, and as many have said, the results speak for themselves. The way the BMC has grown and developed into the UK- wide, successful organisation it is today, is a tribute to Frank's initial dream, his beliefs and his optimism.

Frank was an inspirational coach as many have said. I had the opportunity to work with Frank on numerous courses for middle distance runners, at Crystal Palace, Ogmore, Ardingly and elsewhere. His enthusiasm infected coaches and athletes alike. We listened to his lectures and many of us were in awe at his knowledge and expertise on a wide range of topics all of which had an influence on runners. His

warm up sessions on the sand dunes at Merthyr were legendary. For many years he was the organiser of these courses, writing to invite the coaches and doing all the administration. He did have help but the amount of work he got through was amazing. I count it a privilege to have worked alongside Frank as a coach.

It always amused me when Frank said that the first lecture he ever went to on middle distance running was given by yours truly! And look what that led to! Frank, you will be missed by so many, but the memories will remain. God bless.

And then there's the man I knew. I spent many hours with Frank in various restaurants, bars and at different tracks, swapping stories, reminiscences and jokes. He was a great raconteur and had a super sense of humour. He was great company and always fun to be with. And, selfishly, I was always pleased when I could get him on his own. Often we talked about middle distance running, where we usually agreed. Even when we didn't see eye to eye on a particular point, there was never the slightest hint of animosity; he would respect my view as I would his. He was such a good friend, and he has been such a force in the land for so long, that it doesn't seem possible that he is no longer with us. As he said to me on more than one occasion, "Farewell, Comrade."

Tony Elder

January 2012

In memory of Frank Horwill by Victor Szudek

Blog reader Victor Szudek left this amazing tribute about his experiences with Mr. Horwill in the UK:

Frank Horwill demolished the idea that in order to be a good track runner, you must simply build up your mileage.

His own intuition, plus an encyclopaedic knowledge of applied physiology and coaching by earlier luminaries such as Gerschler, Cerutti and Lydiard informed him that in order to run quickly -as all track events demand – one must train one's mind, as well as one's body, to run quickly. If you cannot run quickly, you must 'get off the track'. In this way, he helped to move amateur attitudes in athletics toward the professionalism of the 21st century, decades before it was conscionable.

Frank encouraged cross-training (especially for the for the young and the injured) and was talking about nutrition, years before it became de rigueur.

Without ever rattling a shingle, he

incorporated proven medical advances into his work.

From the 1960s onward, Frank espoused the notion that the quality of what we do is far more important than the quantity: if athletics is a microcosm of life, then it is surely a lesson worth heeding.

Frank's coaching theory is that we should train above, at and below our selected event.

Such training sessions could be savage, with cruel intervals -some felt like a living autopsy- but by the time the summer season came around, racing a single mile or 800m was a blessed relief in comparison.

The long-distance / short-recovery reps -at pace- prescribed by Frank, remain indicators of aerobic fitness par excellence.

As a skinny 16 year old in Sussex, I was thrilled to receive my first programme from Frank but I remained earthbound when I read that my times offered only 'some hope'. When we met in 1982, I was horrified to be told that I 'ran like a slug' but he persisted and so did I, eventually achieving some surprising results. He coached thousands of ordinary club runners such as myself -pithy comments included- to be the best we possibly could. With Frank's help, I managed to improve sufficiently to travel to South Africa, Zimbabwe and Australia, on modest athletic currency, eventually settling in the latter and working for that country's Olympics Authority.

In a world where to be elite is frowned upon, he taught that, in common with stars such as Hutchings and Coe, excelling at something was to be applauded but that none of us had much time: that we should work on our strengths and minimise our weaknesses and that we should do an honest day's work. The magnificent Obsession For Running that we all shared would only be part of our lives, not all of it.

Post-session drinks at The Rose & Crown on Sloane Street were treasured opportunities to hear about giants of the past such as Ryun, Landy, Elliott, Wottle and Pirie. I once asked Frank how Tim could possibly put together three consecutive miles at almost 60s per quarter and how Sebastian could run 1.5s faster than the awesome Juantorena. He explained that the human body, plus some talent, does not merely accommodate athletic training. If done correctly, it OVER COMPENSATES for the training load ...occasionally leading to miraculous results.

Thank you, Frank, for allowing me to know you and for affording me the honour of calling myself an athlete.

When I go running now, especially through Battersea Park, I realise that the

one person I always wanted to report back to, is no longer there.

And it hurts me like your 4x400m with reducing rest.
Victor Szudek

He was one of the influences on my early athletic efforts, His training weekend lectures were full of passion, even if some of his scientific "data" was dodgy to say the least.

His enthusiasm was absolutely infectious.

You always heard Frank well before you saw him, I always felt a thrill during a big cross-country to hear Frank bellowing for me.

Goodbye Frank you leave big boots to fill
Ron Howe

Frank's contribution to UK Running has been immense and more importantly consistent over the years. He may not be with us but stories about him will continue as usual. An amazing man! He will be missed.

Dave Bedford

Frank Horwill will be sadly missed not only because he was a legendary athletics coach, and coached so many young athletes to great prominence.

His main legacy is that he represented everything that is good about this country, and was in essence "the best of British".

The values that he promoted and imparted to me in my twenties have remained my anchor throughout my life: honesty, integrity, never give up and help others where possible.

To influence others in life is a God given gift, and Frank had this quality in spades.

Thank you Frank from all those who benefited from being in your orbit.
Michael Capel Cure

The term "legend" is banded around all too regularly nowadays. For Frank Horwill it is an understatement.

I first met Frank in the year 2000 when I turned up to Battersea track to do a training session and stumbled across the man who would be my coach for the next 7 years, three times a week, without asking for anything in return. Our Saturday sessions were two hour long affairs which involved all manner of exercises - leapfrogging, piggybacking, uphill hopping - and invariably in my case a recovery nap afterwards but it was not uncommon for up to 50 athletes to turn up to these sessions and to travel up to two hours to be part of

them. I often wondered what the people sat in their cars in the traffic jams on the Embankment thought as 25 or so shirtless guys would fly by at 5 minute mile pace. They must have wondered who we were running from. Truth is, it was all about who we were running FOR.

Frank's athletes quickly learned not to bother asking how many repetitions we were doing or what the recovery was (the response was invariably "enough time for a cup of tea and a bun"). He never gave anything away about the suffering to come because he never wanted us to hold back. I remember one session of 25 x 400m with 30 seconds recovery. We all assumed we would be doing our usual 16 repetitions but when we had given our all on the 16th, we received a sharp "keep going". Same comment after the 20th. There was relief all round when he stopped us at 25 but had he asked us to keep going, we would have. I once asked him to autograph my copy of the book he had authored ("A Lifetime in Athletics") and he wrote in it "Keep going, keep going, until a little voice in your head says 'keep going'".

Frank formed the British Milers Club and created the training system which Peter Coe used to coach his son, Seb, to Olympic glory. He coached Olympic athletes and plodders with the same enthusiasm and only ever asked his athletes to give him one thing - everything. And we did. Because he did.

Well-known in South Africa as "Sir Frank", he finally received the long-overdue recognition he deserved with an MBE in 2010.

Frank's desire to drop our PBs was only matched by his desire to see us pair up. He saw himself as a bit of a match maker. And he was good at it!

Unafraid to create enemies in the establishment with his brutal honesty, he was loved unwaveringly by every one of his athletes. You will be greatly missed, Comrade.
Duncan Marsden.

It was a privilege to have known Frank and be trained by him. Trying to achieve my athletic goals under Frank was one of the most exciting times of my life, as the whole buzz of the training squad gave you the belief that you could achieve and surpass them.....whether or not you actually did or not was almost irrelevant, it was the journey trying to reach that point that was all important....and Frank was central to that...
Simon Craig

A tribute to Frank

BY IAN HARRIES – SOUTH AFRICA

I am deeply saddened by the death of Frank Horwill and all too aware of his contribution to Middle and Long Distance Running.

His MBE was an appropriate award for his contribution to Athletics worldwide.

Whilst living in England, I first bumped into Frank at West London Stadium in 1972 whilst training with TVH and Ron Roddan.

When I returned to the then Rhodesia (Zimbabwe) in 1973, I joined the BMC and have been a member ever since. It was Tony Ward who encouraged me to bring Frank to Zimbabwe for an Endurance Training Camp. What a success it was, so much so that we brought him out again in our preparations for the 1984 Olympic Games in Los Angeles. His lectures were superb as were his training sessions. He really proved to the runners that once exhausted there was still more. They loved him. Frank and I travelled to Inyanga in the Eastern Highlands. We were both adamant that here was the makings of an altitude camp that could serve British Athletics at the same

time. Sadly, despite many other additional plans that were afoot at the time, they were not to be.

I emigrated to South Africa in 1988 determined to continue Frank's exposure to Southern Africa. We brought him out for two further courses, the second of which was for 6 months. We had him lecturing, taking training sessions and writing. We documented his 5-Tier (or Multi-Tier) training system, the 4 and 5 second Rule and the importance of Trio Training. We now have every BMC Newsletter since 1973 and literally a file full of his writings. They are irreplaceable and priceless. Again we travelled to the Lesotho Highlands at 3000m-3400m and again saw wonderful possibilities for altitude training woven into the general infra-structure of that area. Frank put forward proposals for a possible SA Coaching structure, but once again, it was not to be.

Irrespective Frank drew an enormous amount of respect from athlete, coach and administrator alike.



And for that I, personally, salute him.

To hear yet another rendition of his 'one-man band' and a mimicking of 'Mussolini' would be priceless.

God bless you my Friend.

David Cocksedge abstract

DAME Marea Hartman (1920-1994), the formidable secretary of the Women's AAA, once referred to him as "The biggest shit in athletics." Others knew him as 'Mad Frank'. He was massively eccentric and endlessly passionate about his obsession – helping dedicated people to run faster.

Since his death on New Years day 2012, some of his more recent charges have tended to canonise him, but Frank Horwill, MBE was no saint. He had faults and he made enemies, but without ever demanding it he accumulated an almost fanatical following of athletes and coaches who followed his ideas and teachings, which included the famous five pace training system and several books that he co-authored. Few would deny that he was instrumental in dragging British middle-distance running back to a world class level during the 1980s.

Like any true fanatic, Frank lived a frugal life, living in simple rented accommodation and showing no interest in the trappings of wealth. Instead, his accumulated riches were in the priceless realm of middle distance coaching knowledge, and he

was widely read in this specialist area. "We must leave no stone unturned in researching training methods, and seeking legal ways to help athletes run faster," he often said.

Francis was probably at his happiest when lecturing, and perfected a technique of imparting a lot of information in a humorous and memorable manner. Indeed, he became so sought after in this field that he lectured on his ideas and methods in Canada, Poland, Zimbabwe, Kenya, Bahrain, Portugal, South Africa, and in the Republic of Ireland where, in his own words, "They hailed me as a bloody messiah, old boy!" Never afraid to speak his mind, he constantly butted heads with governing bodies such as the BAAB and WAAA during the formative years of the BMC from 1963 to 1983.

During a severe illness in 1988, when he was hospitalised at The Royal London in Whitechapel for weeks, friends fed and looked after his dog and his diabetic cat, named Guinness. Towards the end of his 84 years and 195 days, he was helped financially by his athletes (Horwill's

Harriers), who paid for a driver to take him to and from training sessions at Battersea Park.

Somehow Frank kept going, adding an extra 25 years to his life in spite of having two thirds of his stomach removed in another complicated procedure during the 1990s. He was coaching at Battersea Park track at least three times a week right up until the end, and he never turned anyone away – all he asked of his athletes was that they showed as much commitment to each training session as he did.

In August and September 2011, in the final summer of his life, Francis John Horwill talked at length to David Cocksedge about the early history of the club that he founded and nurtured for almost 50 years. Though somewhat hard of hearing, and riddled with the cancer that finally destroyed him, Frank's brain was razor sharp on many details as he trawled through his memories of the formation and progress of the British Milers' Club. As usual, he gave witty, informative and absorbing interviews.

The Full Interview with David Cocksedge will appear in a future Edition.

2012 BMC Horwill Research Scholarship



- Are you interested in research?
- Do you know of someone who is involved in exercise research?
- Can you help progress middle-distance running?

Background

The BMC is looking for individuals to help us progress middle-distance running by conducting a creative and innovative piece of research. We believe that one way in which we can support this aim is to offer a scholarship of up to **£2000** to help at least one individual pursue a selected topic. The scholarship has been in place now since

2008 and we are currently funding active research.

Coaches, research students, or lecturers may be interested and are welcome to apply. The Scholarship is open to all BMC members, but we are also opening the application process up to non-members so that we can cast the net far and wide.

How to apply?

The application process is a simple two stage exercise. The first step is to complete an application form which is available from the BMC website. This is to be submitted to the BMC by the closing date. The second stage will involve short listing the best applications and then holding short interviews. After this we will inform the successful candidate of our decision and support them to conduct the research in the months and years ahead. The findings will be widely distributed to all BMC members and if appropriate, beyond.

Why the Frank Horwill Scholarship?

Frank Horwill MBE was the founding member of the BMC in 1963. Since then Frank has been working tirelessly to promote and develop the Club. Sadly Frank passed away earlier this year.

One area that Frank became extremely well known for was his work on research and collating research from around the world on middle-distance and endurance running. In order to safeguard his tradition, this scholarship has been established.

How do I apply?

Application forms and more information can be downloaded from the BMC website. If you have any questions please do not hesitate to contact David Reader at davidreader@britishmilersclub.com

The closing date for completed applications is 1st May, 2012.

Want to be the best? Work with the best ...

Are you are a UKA Level 2, 3 or 4 coach with U20/ U23 athletes nationally ranked in the top 20 at either 800m, 1500m 3000m or 5000m? Then here is your chance to observe and learn how four top coaches are preparing their athletes this year with the Olympics as their objectives. Norman Poole, Craig Winrow, Andy Hobdell and Dave Sunderland with a stable of athletes including Andy Baddeley, James Brewer, Niall Brooks, Colin McCourt, Andrew Osagie, Tom Lancashire, Michael Rimmer and Lynsey Sharpe will show the way they do it where it counts, on the training track.

This is a unique and rare opportunity to observe a training session with these coaches and their international athletes and the BMC, supported by England Athletics is once again leading the way in putting middle distance to the forefront. The dates and venues will be announced soon.

If you meet the above criteria and wish to be considered, contact the coordinator, Rod Lock

Tel: 02380-789041 or

Email coachlock@fsmail.net

THE BEST OF BRITISH



Frank Horwill Scholarship

Predicting oral-respiratory symptoms of illness in highly trained endurance athletes

BY RICHARD TAYLOR

Coventry University, School of Biomolecular and Health Sciences, Coventry, UK
rtaylor.sportscience@gmail.com

Background:

Upper Respiratory Symptoms (URS) of illness have been identified as the most common threat to training and performance in endurance athletes (Gleeson, 2000). Previous work with professional sailors has identified a fall in salivary IgA (sal-IgA) as a precursor of URS (Neville et al., 2008). However, it is not known if the same relationship exists in endurance athletes. Furthermore, collection and analysis of serum-IgA (from a blood sample) and sal-IgA is impossible for all but elite athletes, so it would be beneficial to establish whether other markers can be used to monitor an athlete's oral-respiratory immune function and potentially predict when an athlete may be more susceptible to experiencing URS.

Aims:

1. To identify objective and subjective markers of incidences of URS in highly trained endurance runners.
2. To develop guidelines on the most effective way for athletes to monitor and potentially avoid incidences of URS.

Study design:

A longitudinal cohort study was designed to monitor 20 athletes over a 12 month (April 2010-April 2011) period of training and competition. The study was conducted with the subjects following their normal training and competition schedules (as prescribed by their coaches). Competitions included cross-country, road racing and track distances ranging from 800m to Marathon. The study was approved by the Coventry University Ethics Committee.

Participants:

Twenty highly trained endurance athletes (average mileage 45-100 per week) who train 10-14 times per week and compete in county to international level athletics competitions were recruited for the study. All subjects were within 50% of the UK's

best time for 2010 in at least one distance (800m to Marathon).

Setting:

The study was conducted at Coventry Godiva Harriers with saliva analysis at Coventry University.

Data collection:

Daily training diaries included objective training information (time, distance and type), resting heart rate and subjective indicators (motivation to train, quality of sleep the previous night, quality of recovery from previous day, appetite, feeling of fatigue and feeling of stress) and incidences of URS. Saliva was collected fortnightly before the Tuesday evening training session, between 18:00 and 18:30. Subjects were requested to attend in a fasted state (no food ingestion at least 2.5 hrs prior to collection), the day after a rest or steady (aerobic) training day to ensure a minimum of 24 hrs rest following a high intensity training session. Subjects' saliva was collected using a "passive drool" method (with minimal orofacial movement) for five minutes into a pre-marked and weighed 10ml sterilized vial (Figure 1).



Figure 1. Subjects during 5min. of 'passive drool' saliva collection

Data analysis:

Individual-level analyses of training, heart rate, subjective indicators and salivary markers (volume, sal-IgA and cortisol) eight weeks before (pre) and after (post) each incidence of URS was performed to identify the existence of any trends within individuals. To ascertain whether saliva volume (sal-vol) could be used as a proxy measure of sal-IgA, the relationship between salivary volume and IgA was analysed using a "within subjects" correlation coefficient (Bland & Altman, 1994, 1995).

Results:

12 subjects (11 males, 1 female) from Coventry Godiva Harriers' endurance squad completed the study (April 2010-May 2011), providing 163 saliva sample observations over a 52 week period. Seven athletes (6 males, 1 female) completed their daily training diaries with sufficient consistency and detail to allow for analysis of nine incidences of URS although a total of 16 incidences were recorded (Table 1).

Initial individual analysis of results failed to identify any trends relating to URS for the six subjective markers and the objective markers (sal-IgA, cortisol and saliva volume), heart rate or training data (time, distance and frequency of interval sessions/competitions). No trends were identified when markers were expressed as individual absolute weekly totals or weekly differences from the individual's annual mean.

A repeated measures ANOVA for participant sal-IgA ($\mu\text{g/ml}$) and sal-vol (g) identified that fortnightly values moved around individual healthy means rather than around an overall group mean. Therefore individual athletes need to identify their own 'healthy' sal-vol levels.

The relationship between the total amount of sal-IgA and sal-volume per minute was analysed (Figure 2). A positive correlation ($r=0.607$, $p=0.001$) was identified from a "within subjects" correlation coefficient analysis of sal-IgA and sal-vol secretion rates (per min). This means that saliva volume can be used as a proxy measure for sal-IgA: as Neville et

Table 1. Participant data (n=7).

	Age	Height (cm)	Weight (kg)	Weeks training	Training (mpw)	Max weekly mileage (mpw)	Days of URS in 52 weeks	Incidences of URS
Mean	29.3	175.6	64.2	36.7	47.3	72.9	8.3	2.3
SD	7.0	4.5	6.0	15.7	13.6	20.3	6.7	1.9

al. (2008) have found that reduced sal-IgA levels can lead to incidences of URS, athletes whose saliva volume decreases from their 'healthy' mean may be at increased risk.

Conclusions:

Regular monitoring of saliva volume may be a useful proxy of sal-IgA levels in highly trained endurance athletes. Weekly monitoring of saliva volume changes from healthy means has the potential to provide athletes and coaches with a rapid, frequent, non-invasive and effective marker of individual athletes' sal-IgA levels. When combined with regular and standardised monitoring of waking heart rate, this could provide an effective tool to athletes and coaches when trying to identify a depressed or over-productive oral-respiratory immune system. Obtaining data on saliva volume requires no medical training and minimal equipment costs although it is important to note that collection times, processes and conditions must be standardised for reliable monitoring.

No individual trends were identified in relation to athletes' incidences of URS and these results suggest that the causal factors of illness symptoms remain elusive and multifactorial. However, in contrast to previous studies where the participants have been either part of a squad involved in team sports, military training cohorts or squads in training camps, participants did not consistently spend time together outside of key training sessions (no more than 3 times per week). This potentially explains the reason for the smaller number of incidences of URS and the lack of any seasonal trends in incidences of URS within this study. This may suggest that the risk of URS is increased when individual athletes take part in training camps and major international competitions where the increased time together with fellow athletes allows for viral pathogens to be more easily transferred.

Nevertheless, athletes should still follow a periodised training programme to reduce their chances of injury and to be aware

of the effective measures they can take to reduce their chances of infection from viral pathogens.

Key guidelines

- Follow a structured periodised training programme which allows sufficient recovery from high intensity training sessions and competitions.
- Regularly monitor waking heart and saliva volume to identify changes from normal levels.
- Ensure recovery following high intensity training and competitions is enhanced by taking in appropriate levels of carbohydrate, protein and glutamine within 30 minutes of completion.
- Reduce training intensity and volume when symptoms of URS are identified.

Acknowledgments

I would like to thank Dr. Doug Thake, Dr Ricardo Costa and Dr Martin Cox at the University of Coventry for their help in the design of the study and saliva

analysis and Dr Celia Taylor of University of Birmingham for her guidance on the statistical analysis. Thanks also to NP Aerospace and the BMC for their financial support. Finally I would like to thank the members of Coventry Godiva Harriers who kindly participated in this study, as well as their coaches for supporting the research.

References:

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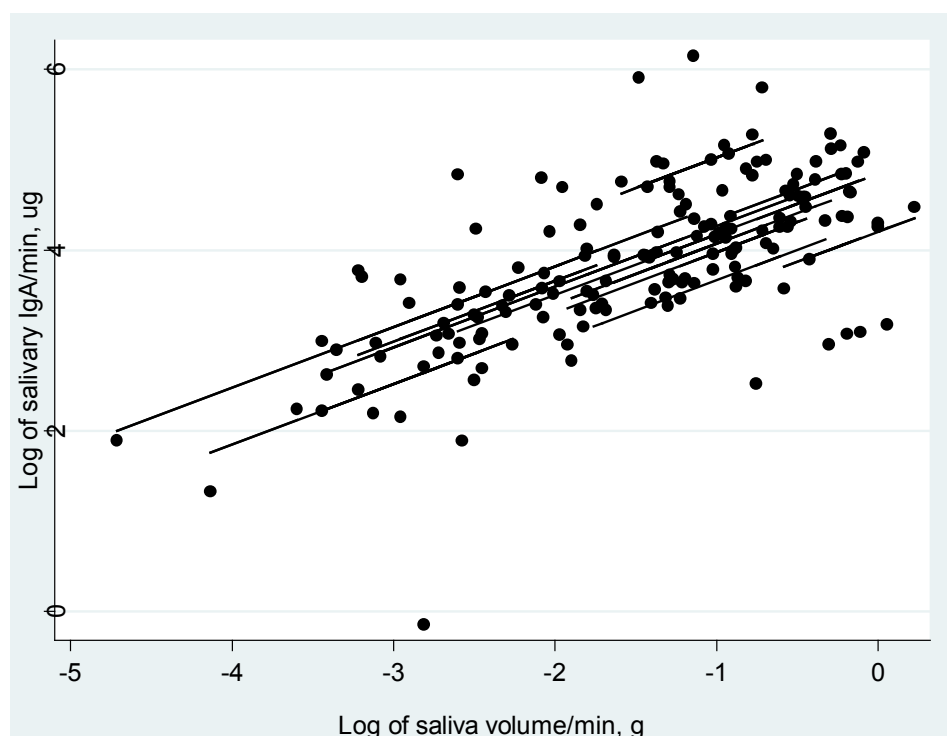


Figure 2. 'Within subject' relationship between participants s-IgA and s-vol secretion rates per minute ($r=0.607$, $p=0.0001$)

Research Study – Frank Horwill Scholarship

BY AARON THOMAS

I am a lecturer in Sport and Exercise Physiology at York St John University. I completed my undergraduate and master's degrees in Sport and Exercise Sciences at Leeds Metropolitan University and subsequently worked there as a research assistant and part-time lecturer. I spent a number of years providing physiological support services to elite and developing athletes. I am also a mentee on the England Athletics National Coach Development Program for middle distance.

Background in the Sport

I joined my first athletics club (Buxton AC) at the age of nine, my Dad used to run and I always used to go along to races and enjoyed the fun runs and wanted to do more. I started out competing in fell, cross-country and road races (there isn't that much else in the Peak District) but when Linford Christie won the Barcelona Olympics I decided I wanted to be a sprinter! Looking back I was more than a little misguided, but I was adamant, and the coach at Buxton (Jim Hoyle) agreed to coach me for sprints. This was my first exposure to drills and the importance of running form and this has stayed with me ever since.

I later moved on to Stockport Harriers, which had a synthetic track to train on. I was at college with Steve Vernon and observed many of Dave Turnbull's grass interval sessions at Woodbank Park whilst I was training on the track. He won the Senior Boys English Schools cross-country title that year. Later, when I started coaching I replicated

this environment and type of session.

Whilst studying I competed for City of Sheffield AC and the university athletics club and that is where I met Charlene Snelgrove (now Charlene Thomas – my wife) she had moved to Leeds from Ipswich on the advice of Steve Benson to be coached by the late Wilf Paish (a founding member of the BMC and coach to Olympic Silver Medallists Peter Elliot and Ezekiel Sepeng). Wilf had a profound effect on my development, initially as an athlete and student, but later he encouraged me to take up coaching when injuries ended my athletic career at the age of twenty-five. I assisted with Charlene's training as she developed and Wilf mentored me so that as his health deteriorated I was able to support her more.

In the last few years I have developed a strong squad training at Leeds Metropolitan University ranging from fourteen years of age through to senior and junior international athletes. For more information see www.teamthomas.org.uk.

Why I have taken on the scholarship?

As coaches we seek to employ training methods that are effective and evidence based. Throughout my coaching career I have often referred to scientific literature, including that disseminated by the BMC, to inform my decision making when designing schedules. This scholarship gives me the opportunity to contribute towards that literature in some way and aid the development of other coaches and athletes.

My Research

The study I am conducting seeks to evaluate the mechanical factors associated with fatigue in middle distance running and how they relate to more commonly studied physiological factors. Specifically, I am looking to assess the importance of mechanical joint stiffness on efficiency and quality of movement during anaerobic exercise.

A number of factors will be assessed in each participant within a single visit to the Laboratory including:

- Anthropometric measurements
- Measurement of shank musculotendinous stiffness
- A maximal treadmill test during which gas exchange response will be measured using a breath-by-breath analyser for identification of ventilatory threshold and VO2max
- A high-speed camera will also be used to record alterations in running mechanics throughout the test and during fatigue.

This information can also be used to provide feedback to athletes and coaches on the current state of fitness and strengths/weaknesses.

Data collection will be taking place in early and late summer 2012. If you would like any further information or would like to volunteer to participate in this study you can contact Aaron Thomas via e-mail at a.thomas@yorksja.ac.uk



EARLY WARNING NOTICE

British Miler's Club Coaches Symposium

SUNDAY NOVEMBER 4TH IN EAST MIDLANDS

Speakers to be announced in the near future

Ensure you book early - all information will be on the British Milers Club website, including application form speakers/venue/arrangements /cost – **CHECK CONSTANTLY**



Academy calling

BY DAVID LOWES
BMC Academy Chairman and
Course Director

WITH the BMC Academy membership now boasting almost 450 members, it shows that our sport is flourishing and hopefully some future stars will evolve from that statistic even though the drop-out rate is still alarming

What is surprising though, is that only a handful of that huge number attend our famed BMC Residential Courses. Let me tell all members without hesitation - you're missing out on a wonderful opportunity to not only learn from coaches and athletes, but yourself as well. You will train hard, but smart, without doubt. You will be guaranteed to learn something and how to train and think differently. You will make friends undoubtedly. The courses pride themselves on their friendly atmosphere with the coaches offering genuine advice, but it is only an offer and no one tries to contradict what an athlete or coach may be doing presently - whether right or wrong. It is up to the individual to make their own choices.

What the courses do manage to instil is a 'think-for-yourself' attitude. Think about it, if you manage to climb the international tree and make a major Games - it will be you and you only in the warm-up area and out in the arena. You will be rooming with someone that you probably don't know too well and maybe the food isn't totally to your liking - but in the real world it is these things that



sometimes make an athlete 'freeze' when they get to the start line. English Schools and UK School Games all necessitate being away from home in strange surroundings and it is those who adapt and plan their time well that succeed - it isn't always those with the most ability who get on the podium. A BMC Residential Course covers all of these scenarios and more and prepares an athlete for the future. If you manage to go to a warm-weather or altitude camp you will be living like a professional athlete - so prepare

yourself now!

Our courses over the last 10 years have been held at venues such as Ardingly College in Sussex, Merythr Mawr in South Wales, Frontier Centre in Northampton, Cliff College and Spinkhill in Derbyshire. Each and everyone of these has seen many athletes of all abilities, some members, many not, enjoy the work, the learning process and certainly the camaraderie of each and everyone. Athletes such as Hannah England have been to numerous courses and speak highly of such occasions as one of their highlights of the year. Guests have included Steve Cram, Peter Elliott and Lisa Dobriskey and they have all been suitably impressed.

The next course is at Spinkhill on 26-28 October and a one-day course is in the process of being organised at St. Mary's, Twickenham for 13 April 2013.

So the onus is on you to get booked for a BMC Residential Course - if you haven't been to one, you haven't lived! Coaches are looked after well by the BMC with a reduced cost and if you bring six athletes or more you get a free place! The message I send to all athletes and coaches is come and see what it is like to train and live like a champion for three days - only the strong will survive - is that you?

Everyone is welcome irrespective of ability - the only thing we ask is 100 per cent commitment. See you all soon!



BRITISH MILERS' CLUB

BMC GRAND PRIX SERIES 2012

See www.britishmilersclub.com for Entries, Timetables, Seedings, Information and Results

DATE	VENUE	EVENTS	CONTACT	TELEPHONE
SAT 19 MAY	Sports City	800m, Men	Mike Deegan	07887 781913
		1500m Men	Jon Wild	07947 157785
		800m & 1500m Women	John Davies	07967 651131
		5000m Men & Women includes UK U20 Womens Championship	Dave Norman	07868 783818
SAT 9 JUNE	Watford	800m, 1500m, 5000m, 3000s/c Men	Rupert Waters	rupert.waters@tiscali.co.uk
		800m, 1500m, 5000m, 3000s/c Women	Tim Brennan	01628 415748
		International Invitations	Matthew Fraser Moat	07802 501895
SAT 7 JULY	Trafford	800m, 1500m, 5000m, Men, 3000m Women, 3000 s/c Men	Stephen Green	07834 773706
SAT 21 JULY	Solihull	800m, 1500m, 5000m, Men & Women, 3000s/c Men	Steve Mosley	029 2030 6733
SAT 25 AUG	Bedford	800m, 1500m, 5000m, 3000ms/c, Men & Women. All events include UK Challenge Final	Steve Mosley	029 2030 6733

GRAND PRIX

Entry to Grand Prix races will be guaranteed for paid up BMC members entering at least 14 days in advance of the meeting provided they have achieved the following qualifying times.

	800m	1500m	3000m	5000m	3K Chase
Men	1:55.0	3:55.0	8:30	14:50	9:15
Women	2:15.0	4:40.0	10:00	16:45	10:45

INTERNATIONAL RACES

International races will be staged at the Watford Grand Prix on 9th June. These races will be paced to achieve Championship qualification standards and will include overseas athletes who have run faster than the qualification standards.

Prize money will be \$5000 for first place, \$3000 for second place and \$1500 for third place provided the championship standards are achieved. If the standards are not achieved, prizes will revert to the normal BMC prize structure.

50% of the places per event will be guaranteed for British competitors with an opportunity to achieve an automatic invite through performances in earlier BMC meetings

Invitations will be sent by the BMC international race coordinators Matthew Fraser Moat (matthew.frasermoat@britishmilersclub.com) and Vince Wilson (vincewilson800m@yahoo.co.uk)

PRIZES

For 2012 the top prize of £1,000 remains at each of the Grand Prix fixtures (except Watford) over 800m, 1500m, 3000m, 5000m, and 3000m Steeplechase. The prize money is determined by finishing position and time. This means a potential total prize fund of over £50,000. See website for full information.

BMC NIKE GRAND PRIX FINAL

Men and Women 800m - Winners of the top race in the first 4 Grand Prix are guaranteed an "A"-race.

Men and Women 1500m - Winners and runners up guaranteed an "A"-race.

PACEMAKERS

The BMC is looking for pacemakers for its 2012 race series. The BMC is able to pay fees for pacemakers.

Those interested should contact Steve Mosley on 029 2030 6733 or via the BMC website.

OVERSEAS ATHLETES

The BMC welcomes overseas entries in its Grand Prix races particularly those of an international standard.

Contact Tim Brennan on 01628 415748 or enter via the website.



PB CLASSICS, GOLD STANDARD, ACADEMY AND REGIONAL FIXTURES 2012

All entries should be made on our website www.britishmilersclub.com

BMC ACADEMY YOUNG ATHLETES PB CLASSICS (Age Groups U13, U15, U17 & U20)						
Entry Fee for BMC Members £3, Non Members £5.						
Mon 7 May	Millfield	800 and 1500 Men & Women, 3000 Mixed	6.15pm	Steve Mosley	0117 9733 407	
Sat 19 May	Milton Keynes	M & W 800, 1500, 3000, 2000s/c & 1500s/c	6.00pm	Jim Bennett	07779 253447	
Sat 30 June	Birmingham Univ	M & W 800, 1500, 3000 & 1500s/c	6.00pm	Paul Hayes	02476 464010	
Sat 28 July	Iffley Road, Oxford	1 Mile, including Peter Coe & Frank Horwill Miles & 2000s/c	5.30pm	David Lowes	07930 318651	
Fastest of U15 & U17 PB Classic 800m and 1500m in May to be invited to Frank Horwill & Peter Coe Mile races in Festival of Miles on 28 July						
ACADEMY RACES FOR YOUNG ATHLETES ARE INCLUDED IN REGIONAL RACES						

OTHER BMC RACES

MONTH	DATE	VENUE	EVENTS	TIME	CONTACT	TELEPHONE	STANDARD
APRIL	Tue 24	Exeter	800/1500	8pm	John Knowles	07850 812229	Regional
	Sat 28	Parliament Hill, London	800/1500	4.55pm	Pat Fitzgerald	01895 811822	Regional
	Mon 30	Durham	1500	7.30pm	David Lowes	07930 318651	Regional
MAY	Tue 1	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard
	Tue 15	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard
	Wed 16	Watford	800/1500	7.30pm	Rupert Waters	rupert.waters@tiscali.co.uk	Gold Standard
	Wed 23	Eltham	800/1500	8pm	David Reader	davidreader@britishmilersclub.com	Regional
	Tue 29	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard
	Tue 29	Exeter	800/1500	8pm	John Knowles	07850 812229	Regional
	Wed 30	Birmingham	800/1500	7.45pm	Paul Hayes	02476 464010	Regional
JUNE	Wed 30	Brighton	800/1500		Neville Taylor	01403 790800	Regional
	Mon 4	Durham	800	1pm	David Lowes	07930 318651	Regional
	Wed 6	LCS, West London	800	8pm	Pat Fitzgerald	01895 811822	Regional
	Tue 12	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard
	Wed 13	Watford	800/1500	7.30pm	Rupert Waters	rupert.waters@tiscali.co.uk	Gold Standard
	Sat 16	Copthall, Hendon	800/1500	4.55pm	Pat Fitzgerald	01895 811822	Regional
	Mon 18	Durham	1500	7.30pm	David Lowes	07930 318651	Regional
	Wed 20	Eltham	800/1500/5000	8pm	David Reader	davidreader@britishmilersclub.com	Regional
	Wed 20	Birmingham	800/1500	7.45pm	Paul Hayes	02476 464010	Regional
	Tue 26	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard
JULY	Tue 26	Exeter	1500	8pm	John Knowles	07850 812229	Regional
	Fri 29	Scotstoun, Glasgow	800/3000	7pm	Norrie Hay	07545 762966	Regional
	Tue 10	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard
	Wed 11	Watford	800/1500	7.30pm	Rupert Waters	rupert.waters@tiscali.co.uk	Gold Standard
	Wed 11	Birmingham	800/1500	7.45pm	Paul Hayes	02476 464010	Regional
	Wed 18	Eltham	800/1500	8pm	David Reader	davidreader@britishmilersclub.com	Regional
	Mon 23	Hexham	800	7.30pm	David Lowes	07930 318651	Regional
	Tue 24	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard
	Wed 25	Coventry	800/1500/5000	7.45pm	Paul Hayes	02476 464010	Regional
	Sat 28	Festival of Miles Oxford	1 Mile/Junior 2000s/c	5.30pm	Chris McGurk	chris.mcgurk@wadh.ox.ac.uk	Gold Standard
AUGUST	Tue 31	Exeter	800/3000 inc SW Champs.	8pm	John Knowles	07850 812229	Regional
	Fri 3	Scotstoun, Glasgow	1500/5000	7pm	Norrie Hay	07545 762966	Regional
	Tue 7	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard
	Wed 15	Eltham	800/1500	8pm	David Reader	davidreader@britishmilersclub.com	Regional
	Tue 21	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard
	Wed 22	Watford	800/1500	7.30pm	Rupert Waters	rupert.waters@tiscali.co.uk	Gold Standard
	Tue 28	Exeter	800/1500	8pm	John Knowles	07850 812229	Regional
SEPTEMBER	Sat 1	Hexham	1 Mile	1pm	David Lowes	07930 318651	Regional
	Tue 4	Trafford	800/1500	8pm	Neil Canham	neilcanham@hotmail.com	Gold Standard

Additional races may be arranged at other venues. Check website for more details or contact the Race Organisers

Please enter at the latest Five days before meeting to avoid disappointment.



Physiological Terminology:

For endurance runners and coaches

ENDURANCE TRAINING GUIDELINES FOR YOUNG ATHLETES U13 +
DAVE SUNDERLAND – NCM ENDURANCE
JENNY HARRIS - NCM YOUTH DEVELOPMENT (ENDURANCE)
BARRY FUDGE – EIS/UKA PHYSIOLOGIST

Background

Is Coaching an Art or a Science?

There is a plethora of terminology regarding energy system training amongst coaches and athletes. This document is designed to present accurate and up to date information for coaches regarding energy system training terminology and its basic application for endurance running. However all athletes are individuals and this should be taken into account when planning training programmes.

Chart I (right) below shows the percentages of each of the three main energy systems for each of the endurance events and is only a guide for the emphasis of a training programme once an event distance has been decided upon:-

Distance (m)	ATP-CP (%) Max HR	Anaerobic-Lactate (%) 90% + of Max HR (oxygen & glycogen. Pace - as when at threshold you burn up fuel quicker)	Aerobic (%) 50 – 85% of Max HR
100	25	70	5
200	15	60	25
400	12	43	45
800	10	30	60
1500	8	20	72
3000	5	15	80
5000	4	10	86
10000	3-2	12-8	85-90
Marathon	0	5-2	95-98

Chart I

Using these energy systems, training can be broadly split in to 6 zones based around key physiological landmarks (i.e. lactate threshold (LT), lactate turn point (LTP) and maximal oxygen uptake (VO_{2max})).

LT: This is the first increase in blood [La] above baseline values. The speed at the LT is a strong predictor of the average speed that can be sustained in the marathon. The speed and heart rate at the LT are also useful in defining the transition between “easy” and “steady” running.

LTP: The LTP is the running speed at which there is a distinct “sudden and sustained” breakpoint in blood [La]. Typically, this occurs at 2.0-4.0 mM. The LTP tends to occur at about 1-2 km/h above the LT (the difference is smaller in longer distance

specialists and larger in middle-distance runners). The LTP can also be used to define the transition between “steady” and “tempo” running.

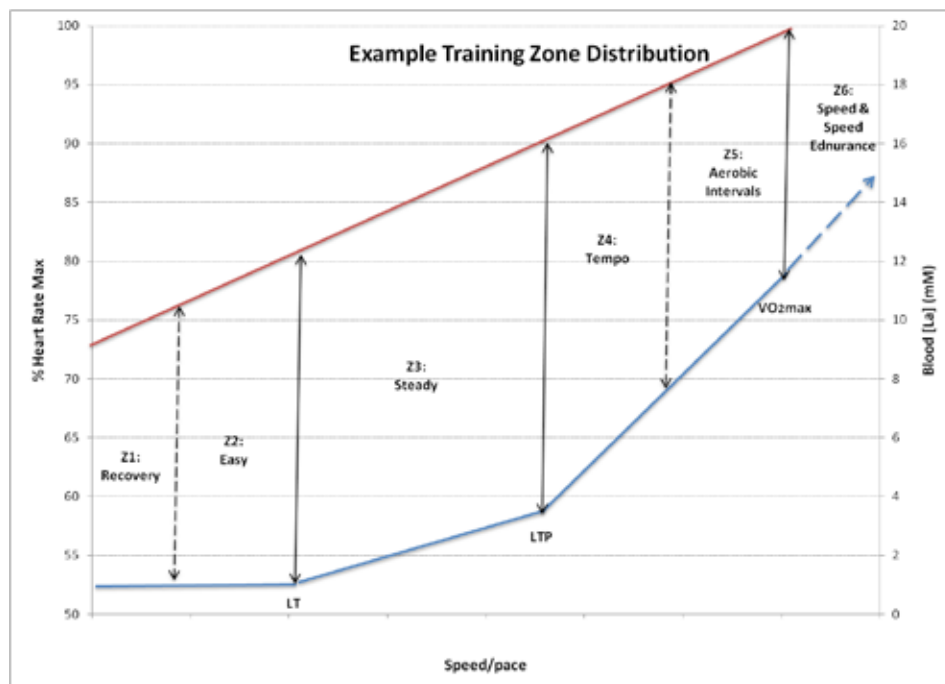
VO_{2max} : This remains an important measure of performance capability in middle and long distance running. While factors such as economy and LT/LTP can partially compensate for a relatively poor VO_{2max} max in elite groups, entry to those elite groups may be limited by VO_{2max} (i.e. the highest rate at which ATP can be re-synthesised aerobically). It should be noted that VO_{2max} tends to be highest in athletes who specialise in events that are run close to VO_{2max} (that is, 3000 m and 5000 m). Other factors may be more important at shorter and longer distances.

In graph II (next page) above and in the table below are general descriptions of each training zone. Following this, each zone is dealt with in more detail (e.g. brief description, main goals, expected physiological changes and example sessions).

Coaches working with younger athletes should ensure that they plan sessions targeting all the different training zones as training at different levels of intensity is important and coaches must, particularly, appreciate the dangers of excess in both volumes and intensity – whilst also realising just how much can be possible with appropriate constraints and good sense.

When setting the training session specific to each zone coaches must take into account the following which will impact

Zone	1	2	3	4	5	6
Description	Recovery	Easy	Steady	Tempo/Extensive Aerobic Intervals	Intensive Aerobic Intervals	Speed Endurance (Anaerobic Speed)
Perceived Exertion	Very easy	Easy	Comfortable	Uncomfortable	Very stressful	Maximal
Breathing reference	Very easy to talk	Easy to talk	Ok to talk	Hard to talk	Cannot talk	NA
Typical %HRmax	<60%	<80%	81-89%	90-95%	96%-Max	NA
Typical [La] range (mM)		<2.0	1.0-4.0	4.0-9.0	9.0-12.0	12.0-22.0



Graph II

upon the training session and the athlete's development and progression.

- Athlete's age,
- Athlete's maturity,
- Years Training
- Different training phases of the year
- Competition distances targeted
- Number of training sessions per week
- Mileage/Kilometre weekly volume
- Athlete's strengths and weaknesses
- Event demands
- What is the purpose of this training session?

Zone 1: Recovery

Recovery runs are used after races, or after a hard training session.

Zone 2: Easy

Easy running is used in long runs, supplementary runs, warm-ups, cool-downs and active recoveries between higher intensity intervals. The primary benefit of easy running is that it enables you to run more distance without greatly increasing stress on your body.

Easy running also develops the capillary network, stimulation of fatty acids and aerobic enzymes.

Running faster on easy days may result in not performing as well on harder days. Simply resting between harder runs on the other hand will not allow accumulation of mileage, possibly negating further fitness benefits.

Zone 3: Steady

Steady running is executed above LT but

below LTP (e.g. 81-89 % of max heart rate). At the lower end of the zone (81-85% of max heart rate), this involves medium to long workouts and at the higher end of the zone (86-89% of max heart rate), this involves medium to short workouts.

All workouts regardless of duration are generally run at a fairly constant pace. The athletes should get tired as a function of volume not the intensity of the session. Training progressions are achieved by increasing the length of time at this load and/or the average speed the runs are completed at.

Zone 4: Tempo/Extensive Aerobic Intervals

Tempo pace is traditionally defined as the running pace at or slightly above which the blood lactate level begins to spike – that is, the LTP.

Tempo runs are traditionally run just above LTP at the lower end of the zone and are generally constant pace efforts for a relatively prolonged period of time. They typically take the form of a sustained effort with the primary purpose to increase the pace one can sustain for a prolonged period of time and increase the time one can sustain a relatively fast pace. Many coaches and runners do longer tempo runs at slower than true tempo pace. Prolonged running at this relatively hard intensity builds a good sense of maintaining a strong pace for an extended period of time. Additionally, some runners gradually build up the intensity of a longer tempo run until actually running at tempo pace for the target duration. All these practices can yield positive results.

Extensive Aerobic Intervals (sometimes referred to as cruise intervals and/or threshold runs) on the other hand are traditionally run at the upper end of the zone and can span a wide number of sets and reps. They should have built into them sufficient rest or slow work to allow complete recovery between reps or sets. This design format ensures that there is no accumulated fatigue between sets or reps allowing maintenance of quality rather than a reduction in performance caused by fatigue. This can generally be achieved by employing a general rule of thumb of 5:1 work:rest ratio – that is for every 5 minutes of running, recovery should be around 1 minute (in practice the coach may alter this depending on time of year, training state of the athlete etc). The aim of these sessions is to get the body used to working intermittently above LTP and practice recovering after each effort. Gradually this type of training stimulates improved economy and increased fatigue resistance allowing the body to gradually increase the work it can do without accumulating progressive amounts of lactate.

Zone 5: Intensive Aerobic Intervals

The reps and sets of these types of sessions are designed in such a way that during each interval and during the workout there will be an accumulation of blood [La] often between 5-12 mM by the end of the session. The main goal however is to maximally challenge the aerobic as opposed to the anaerobic system. To do this, the distance or time governing each rep usually needs to be a minimum of 3 minutes (as it takes around 2 minutes to reach the point where the body is operating at VO2max – the purpose of the workout). If performing shorter duration reps (e.g. 1 minute reps) then recovery must be reduced so that one is not fully recovered before the start of the next rep. Using this practice, after several intervals one may reach VO2max in a much shorter duration thereby accumulating more time at VO2max.

Therefore, when taking into consideration the amount of recovery taken between repeated runs the athlete should aim for equal to (if taking active recovery), or a little less (if taking complete rest – generally half the rep duration) than the rep duration. Depending on the athlete they have to initially have a longer recovery and then slowly decrease at subsequent training sessions. The athlete should be able to perform each rep at the same velocity and with the same

Example Sessions

All the following training sessions for each zone are purely examples.

	NOVICE	IMPROVER	EXPERIENCED
ZONE 1 (RECOVERY)	20 – 30 min continuous	20 – 30 min continuous	20 – 30 min continuous

Example sessions: Zone 1: Recovery

	NOVICE	IMPROVER	EXPERIENCED
ZONE 2 (EASY)	20 – 30 min continuous	30 – 60 min continuous	30 – 120 min continuous

Example sessions: Zone 2: Easy

	NOVICE	IMPROVER	EXPERIENCED
ZONE 3 (STEADY)	20 – 30 min continuous	30 – 45 min continuous	30 – 60 min continuous

Example sessions: Zone 3: Steady

	NOVICE	IMPROVER	EXPERIENCED
ZONE 4 (TEMPO)	10 min run	20 min run	30 min run
(EXTENSIVE AEROBIC INTERVALS)	2 x 1600m (recovery less than rep)	3 x 1600m (recovery less than rep)	4 x 1600m (recovery less than rep)
	2-3 x 1000m (recovery less than rep)	4-5 x 1000m (recovery less than rep)	5-6 x 1000m (recovery less than rep)

Example sessions: Zone 4: Tempo/Extensive Aerobic Intervals

	NOVICE	IMPROVER	EXPERIENCED
ZONE 5 (INTENSIVE AEROBIC REPS)	6 x 1 minute Rec: 1minute	5 x 3mts Rec: 2 minutes	6 x 5mts Rec: 2 minutes
	10 x 200m (30 sec – 2 min rec)	8 x 400m (30 sec – 2 min rec)	10 x 400m (30 sec – 2 min rec)
		15 –20 x 200m (30 sec – 2 min rec)	20-24 x 200m (30 sec – 2 min rec)

Example sessions: Zone 5: Intensive Aerobic Intervals

	NOVICE	IMPROVER	EXPERIENCED
ZONE 6 (SPEED ENDURANCE or ANAEROBIC SPEED)			
For 800m type –	4 x 200m Rec: 5 minutes	3 x 500 mts. Rec: 6 minutes	2 x 600 metres Rec: 12 minutes
For 10 Km type -	Not applicable	6 x 800m Rec: 3 mins	1600m/1200m/800m/400m Rec: 5 mins/4mins/3 mins

Example sessions: Zone 6: Speed and Speed Endurance (Anaerobic Speed)

technique throughout the session.

During adolescence sessions which for mature athletes would be deemed as speed endurance sessions (anaerobic), because of the young athletes metabolism, will be more likely to be aerobic training. The training structure will need to be adjusted to take this into consideration.

Zone 6: Speed and Speed Endurance (Anaerobic Speed)

Speed endurance (Anaerobic Speed) pace training can span a wide number of reps and sets and it corresponds to roughly 1500m race pace at the lower end up to a full sprint at the top end. The benefits of Speed training are associated more with mechanics and anaerobic metabolism than with aerobic factors. As a result speed paced training usually consists of relatively short workouts with enough recovery time to allow each subsequent run to be just as efficient as the first run of the session. Therefore a key difference between speed endurance (Anaerobic Speed) paced running and aerobic interval paced running, other

than the pace of the run, is that more recovery is generally required in order to maintain speed and mechanics for the duration of the session. Determining the exact recovery time between reps and sets can be fairly subjective and may come down to coach experience and athlete status but in simple terms, recovery should be as long as it takes until the athlete is ready to perform the next workout as well as the previous one. If unsure, a heart rate monitor can be used between reps to determine how long recoveries should be by simply waiting until heart rate drops in to at least zone 2.

ANAEROBIC TRAINING

During adolescence sessions which for mature athletes would be deemed as speed endurance sessions (Anaerobic), because of the young athletes metabolism, will be more likely to be aerobic training. The training structure will need to be adjusted to take this into consideration.

ALACTIC TRAINING

It is recommended that pure speed (Alactic)

training should also be included in younger athletes training programmes. These sessions are used to develop both the neurological system and fast twitch fibres and will be over distances of not more than 8 seconds duration e.g. 4 x 50m with complete recovery between repetitions (5 mins +)

CONCLUSION

- Gradual and evident progression during season and career
- Balance of training intensities
- Planning and periodisation or training organisation
- Ensuring adequacy of recovery and recuperation
- Short term and longer-term means of evaluation
- Two-way communication
- Progressive athlete education
- Individualisation in training programmes and progressions are key and physiology testing will suggest the speed the individual has to run in each of the training zones.



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RUN

Houston Marathon 2012

A review of an individual's preparation for the 2012 Houston Marathon

BY MARTIN RUSH

Is National Coach Mentor for England Athletics. He has a background as an international level race walker (Olympics 1992), PE Teacher, Development Officer and Performance Manager. Major influences on his coaching include John Cameron, Alan Storey, Chris Jones and the Italian walks/marathon 'schools'. He would like to thank his wife for permission to use the information below and for further educating his coaching.

Background

The athlete Holly Rush is 34 years old with a 6 year training history. She works 3 to 4 days per week where she is on her feet for the majority of that time. She started running marathons for fun in her early 20's, not having participated in any form of athletics through her school or junior years, although she had been a horse jockey winning a race at Goodwood. She ran 3hrs 50mins for her first marathon in London. Progression followed with self coaching and input from resulting in a 2hr 58 min time at Berlin in 2005. Formal coaching and training started in January 2005 with a rapid improvement to 2hrs 48 in that year's London marathon.

In 2010 she ran three marathons. London in April, running 2.37.56, to gain qualification for the European Championships. She ran 2.42.44 at the European Championship for 19th position and team Bronze, and finally, the Commonwealth Games in Delhi, equal 8th, with 2.49.24.

With three marathons in one year and two in adverse weather conditions the decision was taken to miss the spring marathon season of 2011 and to concentrate on developing some shorter distance speed over the 5k and 10k distances.

Training commenced with this in mind in November 2010 following a break after the Delhi Commonwealth Games. However, real progress proved to be hampered by an ongoing hamstring tendonopathy which curtailed most work involving hills and faster paced work. A compromised cross country season led to a solid, but unspectacular half marathon in early February 2011 (74.56 Granollers, Spain). Problems with the hamstring were compounded with a

heel fracture in late February. Four weeks of non-impact work to allow the fracture to heal also gave an opportunity to address the hamstring injury through an injection and intense eccentric work. Three more weeks of rehab progression brought the athlete to the end of April and the conclusion of the Spring marathon season. The athlete had made no gains in shorter distance pace or aerobic power development and testing showed losses in sub max speeds and economy.

A redrafting of the original plan turned the focus to the autumn marathon season with Berlin an initial target and Amsterdam or Frankfurt as a fall back. Six consistent weeks of training, focusing on 5k to 10k preparation, led to a personal best at the Poole 10k of 34.13. Eight more weeks of this type of work included a track 5k pb and a disappointing 34.39, 10k, in Berlin.

Following this block of work an 8 week build up to the Amsterdam Marathon was planned. This was curtailed after 4 weeks with a shin injury. 4 more weeks of non-impact work took the athlete to early October. Frustrated with the problems since Delhi, October 2010, the athlete was keen to race a marathon and the decision was taken to focus on Houston in January 2012, despite the far from ideal starting point with just 14 weeks to race date.

Houston 2012 preparation

The preparation was blocked into;

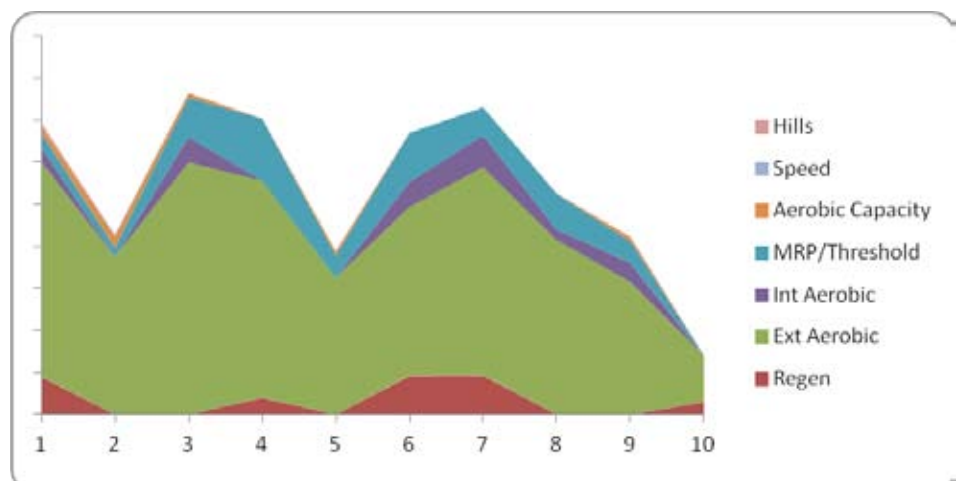
- 2 weeks base running after injury. Increase number and volume of runs – no concern with pace.
- 2 weeks base fartlek. As above but the athlete introduced fartlek to alternating

days with varied time intervals.

- 3 weeks pace development. Build volume but build **pace of key runs**, fartlek converted to tempo and 5k/10k reps. Introduced short sprints on flat and steep hills for mechanics.
- 1 easy week. Cut volume maintain **pace** (adaption of system)
- 2 marathon specific weeks. High volume, 1 progressive long run, 1 long run, 2 x threshold runs, 1 marathon specific run
- 1 easy week. Cut volume maintain **pace** (adaption of system)
- 2 marathon specific weeks. High volume, 1 progressive long run, 1 long run, 1 x threshold runs, 1 marathon specific block run
- 1 short marathon week. Medium volume, 1 short progressive, 1 x threshold, 1 x 10k pace
- 2 weeks taper to race. Shorter specific session, 2 x aerobic capacity maintenance.

The four high volume weeks in the build up were between 100 and 110mls. The key development on previous build ups was an aim to increase the number of long support (90 to 95% RP – race pace) and race specific pace (97 to 103% of RP) runs. In the 10 week build up the athlete completed 12 runs over 90mins including 1 'block day' which included 20k in the morning and 20k in the evening with 30k of this completed at RP or above.

The graph shown below indicates the general success in adherence to the programme although the aim to increase the number of supportive pace sessions was



not achieved due to high levels of fatigue at points in the preparation. This despite a pattern of 'two up, one down' being established following analysis of previous training, combined with the athletes current work commitments.

(The athlete and coach agreed before the preparation for Houston that the athlete would control all of the running outside of agreed key sessions in an attempt to enable the athlete to listen to their body and react to fatigue states.)

Houston Marathon final 10 week build up

- Racing was kept to a minimum with one Park Run completed in the final 10 weeks.
- Training was completed almost exclusively alone.
- Conditioning was carried out approximately 2 x per week. It involved a circuit of static control work combined with a range of strength endurance exercises.
- Short, flat and hill sprints, 6x60m to 6 x 80m were carried out 1 to 2 x per week
- Physiotherapy was accessed once per week and included manipulation work and massage
- No heat or altitude training were used

Progressions within the build were;

- **Endurance runs (80 to 85% Race Pace (RP)) (Extensive aerobic)**
120mins - 135mins - 160mins - 120mins - 165mins - 120mins
- **Supportive runs (90 to 95% RP) (Intensive aerobic)**
30k progressive - 25k continuous - 25k progressive
- **Race Pace development runs (97 to 103% RP) (Note a few sessions contained work up to 110%RP)**

8x1ml(1/2ml float) under/over RP -
8x1ml(1ml float) under/over RP - 25k continuous - Block day containing 30k RP or over - 8x1ml(1/2ml float) under/over RP - 15k continuous

Terminology

1. Regen = regeneration runs or alternative training eg swimming. Lactate level <1.0mmol with aim of dropping lactate by end of activity.
2. Easy running 80 to 85% of marathon race pace. Labelled extensive aerobic on graphs. Long runs usually start easy but about 50% of them ended with 45 minutes done at steady pace or 20 minutes done at a high steady pace. Physiological aim is to develop aerobic enzymes, capillary network and muscular endurance from repeated impact.
3. Steady running 90 to 95% of marathon race pace. On the graphs intensive aerobic. The aim is to develop the body's ability to consume fats at a higher pace. We use courses with undulations to take the system above and allow to recover on the down sections or runs that contain slight changes in pace to promote adaption of the system.
4. Race Pace development runs. Generally runs within 3% of race pace. The aim is to develop efficiency at race pace. There may be some small variation on this pace depending on the overall fatigue state but the closer to the race the more emphasis is given to recovering well for these key sessions so a target RP can be achieved.
5. Aerobic Capacity runs. Runs at 3k to 10k pace with the aim of stimulating central adaptations and requiring a high cardiovascular output. In the final marathon block the aim is generally to maintain this capacity rather than try to increase it. Work at this pace therefore doesn't involve great volumes, 4k to 6k

in general, and is often combined within other sessions.

Houston Marathon final preparation and race.

The Open race was scheduled for Sunday January 15th 2012, with a 7am start time (local time). Houston to GB time difference is -6 hours. We decided to fly on the Wednesday, before the race and stay on UK time, 7am start time equates to 1pm



UK time.

An elite start was arranged with the marathon organisers.

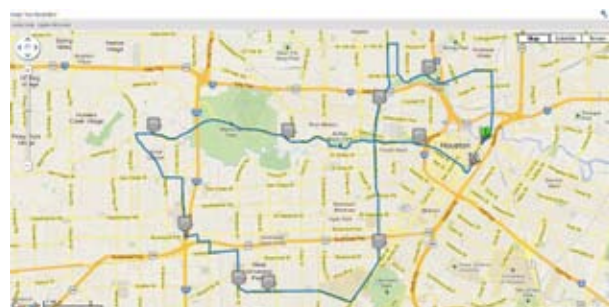
Little training aside from easy jogs and strides/drills were undertaken after arrival in Houston.

The Houston course, for the open race is one large lap with undulations over flyovers and the local city terrain. Approximately 80% of the course is on concrete.

The weather was near ideal in terms of temperature around 4C at start and 13C at the finish. There was a significant wind (4mls/hr) in the last 2 miles as the athletes headed back into the city downtown

SPLITS

Split	Time	Diff	min/mile	mile/h
5K	00:18:32	18:32	05:58	10.06
10K	00:37:10	18:38	05:59	10.03
15K	00:55:51	18:41	06:00	10.02
20K	01:14:39	18:48	06:01	9.99
HALF	01:18:44	04:05	06:01	9.99
25K	01:33:11	14:27	06:00	10.00
30K	01:52:10	18:59	06:01	9.97
35K	02:10:41	18:31	06:01	9.99
40K	02:29:30	18:49	06:01	9.98
Finish Net	02:37:38	08:08	06:01	9.98



(skyscraper district). The humidity was close to 90% at the start and dropped to 70%. It was noticeable running that sweat remained on the skin. The race started in the dark. Organisation for the elite field was good with personal drinks collected the day before the race.

The athlete woke up at 4.15am, to fuel and ingest a beetroot juice shot 90 minutes prior to the start of the race. She arrived at the start in a positive frame of mind with a plan to run a conservative first half, with the aim of running a negative split.

The end result was a very even pace run, with a 7th place finish in 2.37.38, 3 seconds slower than her previous personal best. Her second half was 9 seconds slower than her first. The athlete wasn't able to pick up the pace as planned in the second half of the race despite feeling in control and relatively easy for the first half.

The course was fast with the all of the lead runners running significant pb's and course records of 2.06.51 and 2.23.14. The weather for both the open race and the US Olympic marathon trials was good but the Friday and Monday either side of race weekend were windy and very warm respectively.

Houston Marathon Performance and other marathon comparison

The graphs presented below show the differences in performance and a selection of training data from the athletes' previous marathon build ups.

The graph details performances achieved (red line), average speed (green line) and a comparison of the total volume completed in the final 10 weeks of preparation.

Ignoring Barcelona 2010, completed in hot, humid conditions the graph details a plateau in performance set against different training volumes but a very consistent average pace.

The link between total volume and performance is not born out by the graph above. A link between average pace and final performance could, possibly, be drawn but no training preparation block can be seen in isolation from previous training and it is important to view the Houston preparation in context. With hindsight the athlete went into the block of marathon, 'lengthening work', with compromised 'short' distance speed development in comparison to all of the listed marathons, except Kosice. Performance capacity at the start of the marathon phase for Houston is estimated at around 35mins for 10k and 76min for a half marathon. The volume emphasis of the training resulted in an ability to run the distance but didn't provide the 'headroom' to enable the athlete to generate more pace and run faster than she previously had. Coming off a broken background the confidence to 'run the distance' was a constant factor in the athletes mind and training sessions reflected this. More concentration on pace with fewer long runs may have elicited better responses.

Further analysis

1. Number of runs over 90 minutes in preparation phase;

Houston 2012	12
Barcelona 2010	6
London 2010	8
Frankfurt 2009	5
Hamburg 2009	10
Zurich 2008	12

Of previous preparations only Zurich (pb) equalled the number of extensive (over 90mins) runs that was achieved in the Houston build up. However, if you do the same thing you get the same result is a maxim that springs to mind!

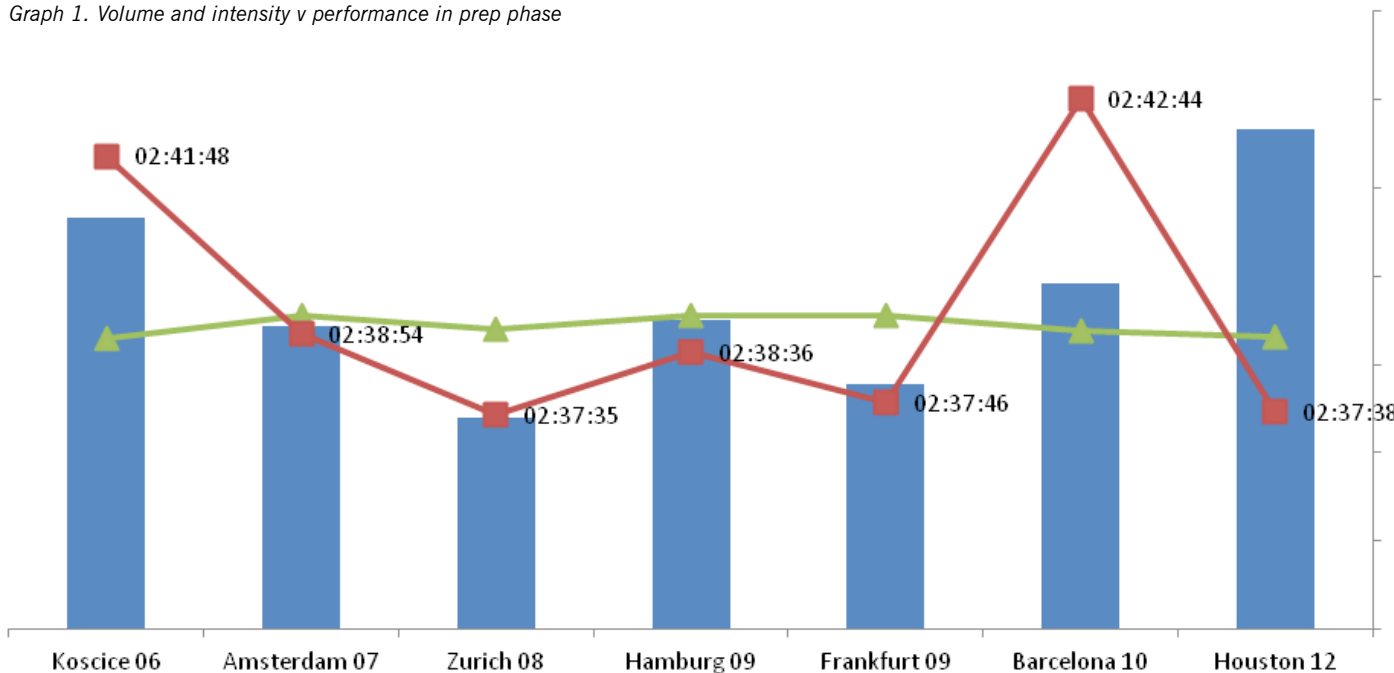
2. Distribution of training

One preparation aim for Houston was to increase the number of long (extensive) runs in the final phase. Another was to increase the number of support pace runs. Only the first of these was achieved and with the 'slower' starting point for the marathon preparation block this is identified as a key reason for the result being similar to that achieved previously.

Graph 2, details the distribution of training by total volume in 10 week preparation blocks, in each speed zone.

Total volume in extensive zone (80 to 85% RP) was the highest of any of the marathon preparations. There was a comparable volume at RP speeds across all the marathon build ups. Capacity work was comparable with Zurich (pb race) but below other marathons. Support pace (Intensive aerobic, 90 to 95% RP) volume was lower than Zurich and Barcelona, both seen as good results.

Graph 1. Volume and intensity v performance in prep phase



Conclusions

- If possible, don't start marathon preparation from a compromised starting position in terms of shorter distance performance capacity.
- With the athlete in question there is little room to increase the number or length of support pace and race pace sessions within the final preparation block given other commitments and recovery abilities. Development potential would appear to lie in increased pace prior to final preparation giving a higher platform to build marathon endurance on and the use of altitude and/or heat.

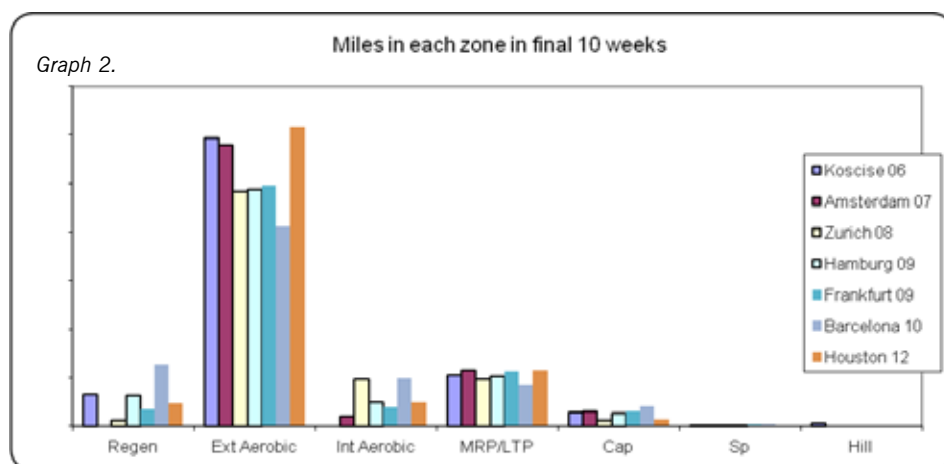
US Olympic Trials

Houston, Saturday Jan 14th was host to the US Olympic Marathon trials. USATF generated a large amount of publicity in the city but there did appear to be a lack of national coverage emphasising the difficulty they (athletics) face in getting coverage for the sport. The format of first 3 past the post going to London produced exciting races with strength in depth. In

the women's race there were 152 finishers with 7 under 2.31 (A standard), 13 under 2.35 (B standard) and 42 under 2.40. In the men's race, 4 went sub 2.10, 8 inside 2.12, 16 inside 2.16 the A and B standards.

The idea of having a qualifying mark to make a trial, with this time getting harder year by year and selection being made from the trial for major Championships,

appears to have been one reason behind positive growth in marathon performances in the US. The US athletes appear to be preparing well for the event and produced high level performances (4 men under 2.10 in the men's race, and 4 women under 2.29). They also appear to be preparing for the way the event is now being raced with aggressive running from the men in the first half, 63.25, without pace makers.



Gait Analysis

RUN 3D – OXFORD GAIT LABORATORY (NUFFIELD ORTHOPEDIC CENTRE) 3D Motion Analysis to help assess and prevent running injuries



Most injuries can usually be traced back to poor or incorrect biomechanics. For most coaches finding a centre to help them analyse their athlete's faults and recommend ways to correct them is very difficult. Therefore, the new Gait Laboratory at the Nuffield Centre, Oxford which can be accessed by the public could be the answer.

Running is the essence of endurance. Unfortunately up to 50% of runners get injured annually. The way an endurance athlete's bones and joints move is critical for both avoiding injury and treating injury, and for maintaining an efficient running technique. These are our biomechanics

It is difficult to accurately measure these movements with common video analysis. Run 3d is the new Oxford Gait Laboratory

and uses advanced 3D technology – the same technology used by elite athlete's running shoe manufacturers and film studios – to measure joint angles at the hips, knees and ankles all in 3D.

To achieve this 12 specialised infrared cameras are used to precisely measure the 3D positions of reflective markers attached to various points on the legs as the athlete runs. These marker positions are used to create an exact computer model of the athlete whilst running. This personalised model is used to accurately calculate the athlete's 3D joint angles at the hips, knees and ankles.

The results of the biomechanical assessment are then analysed by the gait analysis team and the recorded joint information angles are compared to their

extensive database. This assessment enables the laboratory to identify unusual patterns in the athlete's running technique.

With the information gathered from the assessment the results can help identify the root cause of the injury. This will lead to the team recommending the correct treatment to help prevent recurring injuries. Run3D provides this scientifically accurate assessment of the athlete's running biomechanics. The laboratory works alongside sports therapists which includes sports medicine doctors and physiotherapists who offer a unique and specialised service which is not widely available.

The laboratory also has a unique partnership with the world-leading running injury biomechanics:- The running injury clinic at the University of Calgary in Canada. This is in addition of working with scientists at the University of Oxford to ensure that the laboratory is at the forefront of any research in this area. This research provides a great insight into the biomechanics of running injuries and is of great benefit to runners.

**For further information: Dr. Jessica Leitch
run3d@noc.nhs.uk**

Preparing for International Success at International 800m/1500m

BY TERENCE MAHON

At a recent gathering of selected elite coaches Terence Mahon (USA) from Mammoth Lakes, coach to Morgan Ucency and Anna Pierce, outlined his training philosophy and training programme for his 800m/1500m runners. Below are the key points from the lecture broken down into sections.

What are the critical components needed for international success?

- Physiological Demands
- Neuromuscular Demands
- Psychological Demands
- Training Capacity Demands
- Genetic Ability - Cardiovascular & Biomechanical
- Race Specific Development

PHYSIOLOGICAL DEMANDS

Minimum Speed Required for 800 Meters

- Men: 200m: 22-23, 400m: 47s
- Women: 200m: 25-26, 400m: 53s

Minimum Speed Required for 1500 Meters

- Men: 200m: 23-24, 400m: 48s
- Women: 200m: 25-26, 400m: 55-56s

Specific Speed Requirements

– 800/1500 Meters

<i>Fitness Level</i>	<i>Men</i>	<i>Women</i>
800 Pace	1:43	1:57
1500 Pace	3:30	4:00
3k Pace	7:30	8:30
5k Pace	12:55	14:35
Anaerobic Threshold	4:32/mile	5:04/mile
Aerobic Threshold	4:48/mile	5:20/mile

Physiological Demands:

How to Meet them in Training

The "Outside-In" Approach to Peak Fitness

- Begin with 2-3 Weeks of Aerobic Base & General Strength
- Week 4: Introduce Acceleration Development & Aerobic Threshold Training
- Week 7: Introduce Alactic Development & Anaerobic Threshold Training
- Week 10: Introduce VO2 Speed & High Anaerobic Intervals
- Week 12: Introduce Race Specific Workouts

How to meet the Physiological Demands in Training

Key to individual athletic success is knowing how many specific workouts are needed to reach mastery & how to fit them into the training cycle:

- Base Training
- ATP-CP Development
- Alactic Intervals (100-200m)
- High Anaerobic Intervals (250-400m)
- Event Specific Training
- Anaerobic Threshold Intervals & Continuous Runs
- Aerobic Threshold Continuous Runs

NEUROMUSCULAR DEMANDS

- General Strength/ Circuit Training
- Specific Strength/ Super Sets
- Neuromuscular Power
- Neuromuscular Endurance
- Coordination/ Rhythm Training
- Biomechanical Improvement/ Injury Prevention

General Strength

- Circuit Training: 100-300 Total Reps of Body Weight Exercises
- Med Ball Circuits: 50-100 Total Reps of Various Weighted Med Balls
- Core Strength: for Stability

Specific Strength Training

- Overhead Press, Arc Rows, Poliquin Press, Bench Press, Reverse Rows, Arms
- Tempos Lifts: Early Season Endurance to Late Season SpeedSquat Variations: Front, Back, Split, Telemark
- Step Up Variations: Box Height and Unevenly Weighted
- Upper Body Strength

Neuromuscular Endurance

- Slow Tempo Squats
- Slow Tempo Dead Lifts
- Slow Tempo Pull Ups
- Rack Walk Outs
- Slow Tempo Heel Raises
- Slow Tempo Bench Press

Neuromuscular Power

- Jump Circuits
- Plyometrics
- Measured Hops, Bounds & Jumps
- Olympic Lifts

- Med Ball Throws for Height & Distance
- Multidirectional

Coordination and Rhythm Training

- Sprint Drills - Slow & Fast
- Hurdle Mobility - Slow & Fast
- Speed Ladder Circuit
- Low Amplitude Jump & Hop Circuits
- Low Amplitude Hurdle Hops

Injury Prevention Exercises

- Myofascial Stretching
- Anatomy Chain Exercises (Ex. Turkish Get Ups)
- Specific Strength Exercises w/Resistance Bands
- Balance Circuit w/ Eyes Open & Closed
- Running Form Drills w/ Single Arm & Leg Sequencing

PSYCHOLOGICAL DEMANDS

- Individual Personality Assessment
- Connecting Personality with Event Demands
- Psychological Ability to Amp Up, Amp Down & Reboot
- Training Absorption - Using the Appropriate Teaching Methods to Fit the Athlete

Psychological Demands of the 800 metres/1500 metres

- 800 Meters - Favours Aggressive Athletes or Ones with a Supreme Sense of Pace
- 800 Meters Championships - Favours Athletes that Know How to Mentally Get Through Rounds & Reboot Quickly
- 1500 Meters Time Trial - Favours Aggressive Athletes that Like to Test Limits in a One Shot Scenario
- 1500 Meters Championships - Favours Athletes that are Good in Close Company and Can Manage to Be Patient at Sub-Max and Super-Max Efforts in Rounds & the Final

TRAINING CAPACITY

for International 800m/1500m Athletes

- Training Venue: Altitude or Sea Level/ Hot or Cold Climate and Effects
- 10-12 Training Sessions Per Week
- 5-7 Years of Aerobic Development
- 800m (speed athlete): 30-50 Miles/ Week
- 800m (endurance athlete):

- 50-70 Miles/ Week
- 1500m: 60-80 Miles/ Week
- 4-6 Ancillary Training Sessions/ Week

Requirements for 800m/1500m Runner

- Large cardiovascular system - big engine
- High fractional utilization of cardio system - maximizing horse power output
- High max lactate capacity
- High lactate tolerance during anaerobic activity
- Rapid lactate clearing mechanisms with active and passive recovery
- Proper fast/ slow twitch muscle ratios - trained & untrained
- Highly elastic tendons, strong connective tissue, ability to develop muscle strength easily
- Ideal skeletal system - high center of gravity, low q angle (women), good spine mobility

Specific 800m Training

- 3 x (3 x 200 @ goal pace w/ equal rest), 4min between sets
- 3-4 x (300 @ 800 pace, 300 float jog, 200 @ 800 pace), 4-5 min rest between sets
- 3-4 x (200 @ 800 pace, 1min rest, 600 @ 3k pace), 4-5min rest between sets
- 500 @ 800 pace, 400 jog, 300 @ 800 pace

Specific 1500 m Training

- (4 x 400), (5 x 300), (8 x 200) all at goal pace w/ equal rest, 4min rest between sets
- 3 x (800, 400, 300) @ 3k, 1500, 800 pace cut-down
- 2-3 x (1000, 500) @ 3k/ 1500 pace w/ 3min & 6min recovery
- 3 x (400, 600, 400, 200) @ 1500 pace w/ 1-2min recovery

800m/1500m Specific Training Cycle

	Week 1	Week 2
M	ATP (30's to 60's)	ATP (30's to 60's)
T	800m Specific	1500 & 400m Pace
W	Aerobic Run	Recovery Runs
TH	Alactic Sprints (150's)	Alactic Sprints (150's)
F	Mixed Pace (5k-800)	800m Pace, Anaerobic Tempo
SA	Recovery Runs	Slow Long Run
SU	Long Run w/ Accelerations	Off Day

Ancillary Training Cycle 800m/1500m – alongside above.

	Week 1	Week 2
M	Specific Strength - Endurance	SS - Endurance
T	General Strength/Hurdles/Med Balls	GS/ Hurdles/Med Balls
W	Specific Strength - Combo	Jumps/Core Strength
TH	General Strength/Corrective	SS - Power
F	Specific Strength - Power	GS/Corrective
SA	Core Strength/Balance Work	Core, Dynamic Flexibility
SU	Dynamic Flexibility	Off

Points to Consider in an Individual Training Programme

- How many weeks to goal event?
- How many weeks of base work are needed?
- How many weeks of pre season are needed?
- How many event specific workouts are needed?
- How much recovery is needed between specific workouts?
- How many tune up races or time trials are needed to reach peak performance?

	Focus	ATP	Alactic	Anaerobic	VO2 Limit	Lactate Threshold	Aerobic Threshold	Endurance
January	1500	6 x 50m @ 5.75	6 x 100 @ 12.7	4 x 300 @ 42.9	1200 @ 68's	2 x 2miles @ 5:30	6miles @ 5:50-55	12miles @ 6:30
February	1500	5 x 60m @ sub 6.9	5 x 125 @ 15.8	4 x 350 @ 50	1600 @ 68's	4miles @ 5:25	6miles @ 5:45-50	12miles @ 6:20
March	3k	4 x 70m @ 8.05	4 x 150 @ 19.0	3 x 400 @ 57	2000 @ 68's	4miles @ 5:20	6miles @ 5:40-45	12miles @ 6:10
April	3k	4 x 80m @ 9.2	4 x 175 @ 22.2	3 x 450 @ 1:04	2400 @ 68's	4miles @ 5:15	2 x 3miles @ 5:30	12miles @ 6:00
May	1500	3 x 90m @ 10.35	4 x 200 @ 25.3	2 x 500 @ 1:11	2800 @ 68's	2 x 2miles @ 5:10	2 x 3miles @ 5:30	12miles @ 6:00
June	1500	3 x 100m @ 11.5	3 x 225 @ 28.5	2 x 550 @ 1:18	2800 @ 68's	3-4 x mile @ 4:56	2 x 3miles @ 5:25	10miles @ 5:50
July	1500/800	3 x 100m @ 11.5	3 x 250 @ 31.7	2 x 600 @ 1:25	2800 @ 68's	3-4 x mile @ 4:56	2 x 3miles @ 5:25	10miles @ 5:50
August	800	3 x 100m @ 11.5	3 x 250 @ 31.7	2 x 600 @ 1:25	2800 @ 68's	3-4 x mile @ 4:56	2 x 3miles @ 5:25	10miles @ 5:50
September	800	3 x 100m @ 11.5	3 x 250 @ 31.7	2 x 600 @ 1:25	2800 @ 68's	3-4 x mile @ 4:56	2 x 3miles @ 5:25	10miles @ 5:50
October	Vacation							
November	Base							
December	Base							

Monthly Training Goals - 800/1500 - Sample: Morgan Uceny
2011 Metrics

Young Athlete Development to Adult High Performance – A Training system and Philosophy

BY TOMASZ LEWANDOWSKI

Track and Field national coach

Head coach/ distance running Poland

At a recent selected meeting of elite coaches Tomasz Lewandowski – coach to his younger brother Marcin European 800 metre Champion – outlined his philosophy on long term development. The following is an overview of his view on taking an athlete from being a youngster to major championships.

Philosophy

Sport as a Tool

Has a multitude of advantages:-

- Championship - Competitor
- It is also to keep children active
- Health _ Keeps them fit and healthy
- Preparation for adult life
- Be a good citizens
- Job – Athlete or Coach
- Adventure/trips/people
- Get a scholarship – Home or Abroad
- Challenge

How to Develop Young Athletes?

- Practice 3-6 times per week
- Training Camps 3-5 per year (10-14 days)
- Diet (general)
- Mental training
- Injury/Illness Prevention
- Blood tests
- A Good coach - **Doesn't squeeze but develops**
- Motivation, fun, adventure
- Sleep/understanding! Rest/recovery
- No stress! Don't push them. Don't expect!

How to work with a future World Champion ??

The programme begins now to develop and becomes more specific:

- Practice 6 times per week
- 5-7 Camps per year (14-45 days)
- Special diet
- Special care (physio, recover, treatment)

- Supplements
- Injury/Illness Prevention!!

Building an Athlete is like building a house. Just as on a track you cannot take short cuts, you can't build it from the top down. You need good solid and firm foundations.

Building the Successful Pyramid

- Championships at the Pinnacle
- Competition Special Work = 7% of total km in 20 sessions (Specific Work)
- Building Process with = 10% of total km in 30 sessions (Working between lactate levels of 4-10mmol)
- Mixed Work
Intervals, Progressive runs, Fartleks, Tempos.
- Base 2 – Runs (2-4mmol)
- Strengthening exercises = 23% km in 70 sessions.
- Progressive Training
Cross Trials, Hurdling Drills, Medicine Ball, Weights, Gym Work,
- Coordination Drills, Tempo runs, Steady Runs, Easy Runs, Running games



Early leaders in the Junior Women's National Cross Country at Parliament Hill



*Steeplechaser
James Wilkinson
to the fore in the
European Under
23 Cross-Country
Championships*

- Base 1 – Aerobic Runs (Under 2 mmol)
Static = 60% of total km in 180 sessions approx.
- Strengthening Exercises
Hurdles Drills, Medicine Ball, Stability Ball, Weights, Gym Work, Easy And Steady running, running for fun.

If you try and change the Volume of each level you get-

BASE 1 + BASE 2 = ??

- Jogging, easy run, steady run –threshold, cross country -trials, strides, mix zone pure speed/dynamic session
- Skips, jumps, hurdles, drills, agility
- Strengthening training (gym, medicine balls, stabilization, jump drops, circle training)
- Games, bike, swimming, sauna...
- But where is the specific training?
Tempo, race speed, speed endurance training?

BUT BASE 1 + BASE 2 = READY FOR SERIOUS RUNNING

- No injury!
- Not Bored or tired
- Rhythm running
- Coordination/stabalization
- Good technique –Economy of movement
- Strength/endurance/speed
- Specific training/weights, speed

Speed Wins Races

Kipkeeter last 400m (800m) in 53 seconds
Bekele last 400m (5/10K) in 52 seconds!!

I would say therefore that endurance wins races particularly in the last 100 metres.

Building Marcin's House – Championship

1. Step by step /body support
2. Prevention
3. Making the program from the end (general)
4. Increasing the training burden, dropping out of the previous measures-you decide when athlete is ready
5. Optimizing the training process
6. Perfection-details
7. Statistical Summary
8. Train Hard Win Easy – Kenyan main mantra
9. Sessions examples

1. STEP BY STEP /BODY SUPPORT

- Wasn't easy: Fitness and coordination.
- Marcin did not specialize in 800- developing skills in all distances (best performance in long distances).
- When he Started running–started prevention
- Do not care if Marcin advance to the regional team (national team),

or if he wins a medal or not. Just do our job, keeping in mind that sooner or later, our work will bring results. After all, all the kilometers are in the legs, they never fly away. Be patient!

2. PREVENTION

- First: proper development, health(blood tests);and then the training
- participated in gym classes with students studying physical education at the university
- team sports, swimming, yoga, dancing, aerobics.
- Day off on Sunday, a week off after cross or indoor season
- After the season, Marcin does not run for a month(two weeks daily regeneration treatment, two weeks-holiday)
- Change the shoes each season

WHAT SESSIONS MARCIN DOES ?

- 6km general-aerobic endurance, (what do you need?)
- How to go from endurance to speed through all the year?

6. STRIVING FOR PERFECTION -DETAILS. GROWING REQUIREMENTS WITH GROWING SPORTS LEVEL.

- Sunday family lunch – discussion on training
- Not only deal with training, but sometimes stand on guard of the shaping of him
- Travels
- Weather
- Rest after lunch or before?

BENEFITS OF GOOD BASE AND PROGRESSION

- Foot - strong
- 6cm –16cm /two months growth spurt
- No injuries since beginning –8 years
- Better economy(saving the energy)
- Much more stronger/dynamic
- Universal skills

FOOT –KNEE –HIPS WEIGHT –COUNTER FORCE -POWER

Key Points

1. The BASE is the MOST IMPORTANT if you want to achieve a high peak.
2. THERE IS NO SHORTCUT TO THE TOP, devise a step by step system
3. The SYSTEM HELPS the ATHLETES (not the coach)
4. RUNNING IS NOT ONLY ABOUT RUNNING
5. TRAIN SMARTER –NOT HARDER

World Indoor Championships

Istanbul March 9th - 11th

The UK's seven endurance runners had mixed fortunes in Istanbul. They gained an unexpected medal, didn't secure the expected medal and had three other finalists (Top 8)

Men's 800 metres

The two Britons looked completely different in their heats – six heats with 2 plus 6 fastest losers to qualify. Joe Thomas looked commanding as he has done all season in leading throughout his heat (27.47s/55.62s/82.97s) to come home in 1m 49.73s. Andrew Osagie did not look as convincing in his heat. He finished third getting through as a fastest loser in third spot. The semi-finals however were a reversal of fortunes with Osagie looking controlled and assured in semi-final one of three, qualifying well for the Final in second place. Thomas who has had a very good season employed his usual tactics of leading through splits of 25.88s/53.12s before relinquishing the lead and fading to 5th (1m 49.12s) and did not make the Final.

Osagie ran a great race in the Final always being in contention. He entered the final lap - after splits of 29.9s/56.29s/82.56s from Kszczot – in 4th position. As the leader began to run out of legs Osagie put himself in a good position off the final bend to deservedly secure the bronze medal. This showed that even though the races were not ultra quick that



Andrew Osagie on the way to his World Indoor Bronze

he is able to compete on three consecutive days with all the physical and mental implications this takes.

1	Mohammed Aman	ETH	1:48.36
2	Jakub Holuša	CZE	1:48.62
3	Andrew Osagie	GBR	1:48.92

Men's 1500 metres

Neither of the UK's two representatives made the final. Lewis Moses who has had a great breakthrough season finished 9th in Heat 1 in 3m 45.04s but will have gained a great deal from this baptism of fire. James Brewer never really looked like the runner who had looked back to his best earlier in the season finished last in his heat in 11th position.(3m 47.58s)

The final was a very physical affair with Abdalaati Iguider (Morocco) staying out of real trouble by leading through splits of 64.78s/2:09.59s before Ozbilen the former Kenyan took over at 1000 metres. Iguider then came again to finish strongly to take the gold medal.

1	Abdalaati Iguider	MAR	3:45.21
2	Ilham Tanui Özbilen	TUR	3:45.35
3	Mekonnen Gebremedhin	ETH	3:45.90

Men's 3000 metres

All the main protagonists made it through to the Final with Mo Farah looking comfortable finishing second in heat 2 (7m 49.48s) with all the fastest losers coming from this heat.

Choge led through the first kilometre in the final in 2:38.45s and this was then taken on by compatriot Soi who went through two kilometres in 5:16.92s (2m 38.47s) with all the likely medallists at the front or jockey for positions near the front. This included Farah who did not look as smooth as some of his rivals. The race really then came to life in the final kilometre, with it all coming down to the final lap, Lagat looking supreme struck for home hotly pursued by Choge with Farah in a bad position trying to get around Soi for a medal. But it wasn't to be – despite disqualifications and reinstatements – the positions remained the same with only 5/100 th's of a second between the first four. Farah (7m 41.79s) did not look as

impressive as he has done – this was his fourth consecutive indoor loss – and could not match the pace of his rivals. Although early in the year the question has to be asked why did he need to do this competition?

1	Bernard Lagat	USA	7:41.44
2	Augustine Kiprono Choge	KEN	7:41.77
3	Edwin Cheruiyot Soi	KEN	7:41.78

Women's 800 metres

The qualification process for the final in this event was severe. Three heats with only the winner and 3 fastest losers making the final. Marilyn Okoro, going in heat 2 knowing this and that the first three in heat 1 had run under two minutes had everything to aim for. The pace for the first two laps 28.94/59.74s gave them an outside chance. However, when the race came down to the important stages Okoro was found wanting finishing back in 4th position (2m 04.06s) and elimination. It took 2m 01.17s to make the final.

In the final Moore took out the pace at a good clip going through laps of 28.13s and 29.56s (57.69s) before being overtaken by Kofanova (Russia) who passed three laps in 30.38s (88.07s). However, this was to be it for her as Pamela Jelimo majestically swept to the front and ran away from the field with a last lap of 30.76s. She won by nearly a second and looked back to her imperious best. In this form and with a fit Savinova the Olympic final should be one to savour!

1.	Pamela Jelimo	KEN	1:58.83
2.	Nataliia Lupu	UKR	1:59.67
3.	Erica Moore	USA	1:59.97

Women's 1500 metres

This was the one event with no UK representation. Nine athletes made the final from 2 heats. With no days rest in between Genzebe Diababa – the youngest of the Diababa dynasty – continued where she had left off in Birmingham leading for virtually the whole race. (Her team mate the Junior Bogale leading briefly between 200metres and 400 metres.) Her splits were 71.12s/2m 16.59s/3m 19.34s coming home with a last 400 metres of just over 60 seconds to run away for the field. The way she dominated the field may encourage her

to run this event and not her preferred 5000 metres in London.

1	Genzebe Dibaba	ETH	4:05.78
2	Mariem Alaoui Selsouli	MAR	4:07.78
3	Asli Çakir Alptekin	TUR	4:08.74

Women's 3000 metres

There were two heats from which Helen Clitheroe (9m 02.27s) comfortably qualified as a fastest loser from heat 2. The big question in the Final was whether Meseret Defar could win a record breaking fifth consecutive title. The first kilometre was led out at a sedate pace by Clitheroe (3m 01.60s) with everyone in contention. Defar then hit the front and began to control and increase the pace of the race passing two kilometres in 5m 56.31s (2m 54.71s). The race then began to accelerate – final kilometre in 2m 40.85s – with Defar looking all over the winner as she smoothly increased the pace. However, Hellen Obiri had not read the script and overhauled her on the back straight of the last lap to eventually win convincingly and deny Defar her moment in history.

1	Hellen Onsando Obiri	KEN	8:37.16
2	Meseret Defar	ETH	8:38.26
3	Gelete Burka	ETH	8:40.18

The big 4 Soi (Kenya), Farah, Choge (Kenya) and Lagat (USA) contesting the World Indoor 3000m Final



The 2012 Grand Prix programme

BY KEVIN FAHEY

THE British Milers' Club will be doing everything they can to help Britain's leading middle distance runners fine-tune their preparations for the Olympic Games in London this summer.

The 2012 Grand Prix programme has been brought forward with the first fixture at Manchester's Sport City taking place on Saturday May 19th followed by Watford on June 9th.

"We are gearing ourselves up for the two early meeting before the Olympics at Manchester and Watford and we are expecting a lot of interest in them," said BMC chairman Tim Brennan.

Olympic hopefuls – in addition to hundreds of club runners all around the country - will certainly be looking at those two meetings to sharpen their form ahead of the UK Athletics trials so competition will be more intense than ever before.

"The Sport City meeting will also incorporate the UKA women's

5000m trials for the World Junior Championships so we are expecting a really good race there that night," added Brennan.

The BMC is also putting greater emphasis on the 5000m this summer reflecting the huge interest in the event last summer which saw club athletes queue up to post personal bests.

"There was growing participation in both the men's and women's 5000m races and we are expecting that again this summer," said Brennan.

The remaining three Grand Prix meetings will be held at Trafford Stadium, Manchester, on July 7th, Solihull on July 21st and at the Bedford International on August 25th which will include the final of the UK Challenge and the Inter Counties Championships.

Brennan confirmed that as in previous years there will be the usual extensive prize structure on offer.

In addition to the Grand Prix series the BMC will be holding a Festival of

Miles meeting at the Iffley Road track, in Oxford, on Saturday July 28th, the same weekend that the Olympic Games start.

"The Iffley Road track is the home of the four-minute mile and coming just before the Olympic track & field programme gets underway we are hoping to attract some good standard runners to that meeting as well," explained Brennan.

The BMC programme also includes its extensive Gold Star and Regional programme and Academy races, kicking off with the popular PB Classics at Millfield School, in Somerset on Bank Holiday Monday May 7th.

"This year we are looking to promote more steeplechase races for young athletes in a bid to help improve standards in that event," said Brennan.

For full details of the BMC programme, which gets underway at Exeter on Tuesday April 24th and information on how to enter see the club website at: www.britishmilersclub.com

Tendinopathy in Runners

BY DR. JOHN ROGERS
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Consultant in Sport & Exercise
Medicine DMRC Headley Court

1. What is tendinopathy?
2. What are the different types of tendinopathy?
3. Risk factors for tendinopathy.
4. Other causes for Achilles region pain.
5. How is tendinopathy diagnosed?
6. How is tendinopathy treated?
7. How is tendinopathy prevented?

1. What is tendinopathy?

Tendinopathy is the modern clinical term used to describe a tendon overuse injury which usually results in pain and/or altered function. This is probably the most common running injury seen by sports medicine doctors and physiotherapists. It can be very challenging to manage and can result in considerable time out from competitive running (months to years in some cases). Previously this condition was known as **tendonitis**. In medicine anything which ends in 'itis' usually indicates inflammation but a large number of histopathological (microscopic study of diseased human tissue) studies of patients having surgery for chronic tendon problems have shown no evidence of inflammatory cells so the term tendonitis was dropped about 10 years ago. To confuse things further the term **tendinosis** is also currently used interchangeably with tendinopathy and essentially means the same thing.

2. What are the different types of tendinopathy?

We can differentiate the different types of tendinopathy seen in runners by:

- a. anatomical site
- b. severity
- c. what part of the tendon is affected

In terms of site, the most commonly affected area in runners is undoubtedly the Achilles tendon. Other common sites of tendinopathy in runners include the patellar tendon (immediately below the lower end of the patella/kneecap) and hamstring tendons (either the origin at the buttock crease or distally behind the knee). Again, histopathology studies have shown that the

condition commonly called 'plantar fasciitis' is actually more akin to a tendinopathy and some authors now refer to this condition as plantar fasciopathy. Other less common areas of tendinopathy sometimes seen in runners are at the gluteus medius tendon insertion at the bony prominence on the outside(lateral aspect) of the hip and at the iliopsoas (hip flexor) tendon in the groin.

Two of the world's leading authorities on tendinopathy Jill Cook and Craig Purdham published a paper in 2009 proposing that we consider tendinopathy as a continuum with 3 different stages of increasing severity¹.

Stage1 – Reactive tendinopathy

Stage 2 – Tendon disrepair

Stage 3 – Degenerative tendinopathy

Stage 1 or reactive tendinopathy is typically seen in younger athletes who have overloaded their tendon over a short period of time. The tendon responds by becoming thickened due to the tendon cells producing too many repair proteins(proteoglycans). When a reactive tendinopathy is imaged through ultrasound or MRI scanning there is a focal area of swelling. This swelling is related to an increase in the amount of water bound to the protein scaffolding(proteoglycan matrix) within tendon.

Stage 2 or tendon disrepair occurs when the runner pushes through the tendon pain for a period of time and there is a worsening of tendon pathology. Typically there is separation of the tightly packaged collagen bundles and disorganised tendon

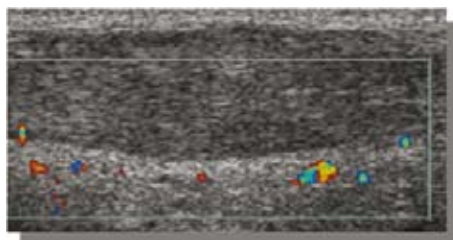
matrix. This occurs across all age of runners and on ultrasound scanning one can see black areas within the tendon (hypoechoic regions) and sometimes 1 or 2 small blood vessels.

Stage 3 or degenerative tendinopathy is the end stage and most severe type of tendon pathology. It indicates significantly disordered tendon matrix with a significant increase in the number of blood vessels (neovascularity) and nerves within the tendon and a reduction in the parallel collagen fibres. Typically this is seen in older runners but it can also be seen in younger runners who continue to train despite having tendon pain.

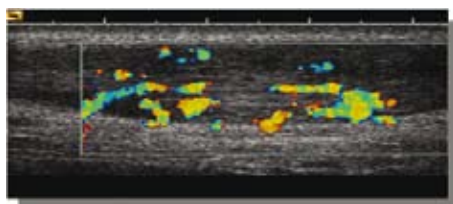
With regards to what part of the tendon is affected this is most commonly the middle of the tendon (mid-portion). The tendon sheath (tenosynovitis or in the case of the Achilles - paratenonitis) or the tendon insertion (enthesopathy) can also be affected. Tenosynovitis and paratenonitis are often true inflammatory conditions hence the 'itis' ending. Occasionally, one can also see true inflammation at the site of tendon insertions in association with an inflammatory arthritis such as ankylosing spondylitis or psoriatic arthritis. Partial tendon tears are acute as opposed to overuse injuries and their histology is similar to tendinosis.

3. Risk factors for tendinopathy

Tendon is living tissue and adapts to graduated loading such as strengthening exercises and running by becoming stronger and stiffer whilst maintaining tight bundles of parallel collagen fibres. Tendinopathy often occurs as a result of excessive loading before the tendon has had time to fully adapt to cope with increased demands. This may occur when an athlete increases their volume or intensity of running too quickly. Often tendon problems present following a break from running or when there is a significant change in the type of training eg. increased track work or hills. There are usually biomechanical factors that come into play that predispose a runner to developing tendon problems eg. excessive pronation or supination of the foot, leg length difference, or pelvic, leg or foot malalignment. Other risk factors include poor choice of footwear(eg. doing a longer track session in spikes), regularly running on



Reactive tendinopathy



Degenerative tendinopathy

cambered surfaces, lack of flexibility with restricted joint range of motion, inadequate recovery following hard training sessions, muscle imbalance and muscle weakness.

4. Other causes for Achilles region pain

There are several other common causes of pain in the region or the Achilles tendon. These conditions are usually differentiated from achilles tendinopathy by seeing a sports physician, physiotherapist, podiatrist or other musculoskeletal clinician along with appropriate imaging (usually MRI or Ultrasound). The management for most of these conditions is quite different to the treatment of tendinopathy so accurate diagnosis is crucial.

- a. Bursitis – retrocalcaneal or superficial. A bursa is a fluid filled sack (a bit like an internal blister) which reduces friction at sites where tendon or skin pass over bone. They can become inflamed, swollen and painful and when this happens they are called bursitis. Sometimes the heel tabs on running shoes can cause excessive friction (eg. if the shoes are too tight) and this results in a superficial Achilles bursitis.
- b. Haglund's disease – a bony prominence of the posterior superolateral aspect of the calcaneus in association with retrocalcaneal bursitis and insertional Achilles tendinopathy.
- c. Sever's disease (adolescents) – an insertional Achilles tendinopathy due to repetitive traction on the bony projection (apophysis) where the Achilles attaches to the calcaneum (heel bone). It is seen in very active teenagers especially during growth spurts. It is the Achilles equivalent of Osgood Schlatter's disease which is seen at the bony prominence below the front of the knee (tibial tuberosity).
- d. Compressive Plantaris – Plantaris is a small muscle that travels from behind the knee to insert onto the inner aspect of the calcaneum. It travels along the inside (medial aspect) of the Achilles tendon. It is much stiffer than the Achilles tendon and can cause a shearing compressive load on the inner (medial) aspect of the Achilles thereby contributing to Achilles or plantaris tendinopathy².
- e. Partial or Complete tendon tear – these present with sudden onset of pain. A partial tear is uncommon and often difficult to distinguish from Achilles tendinopathy. The main clue is that it is an acute injury. A complete rupture is an acute injury and usually occurs in older runners with degenerative tendons. In younger athletes it is usually treated by surgical repair.
- f. Calcaneal stress fracture or stress reaction – an overuse injury sometimes seen in runners. It typically causes impact related pain and is associated with focal bony tenderness. It may be seen in association with bone related problems such as osteoporosis.
- g. Arthritis – ankylosing spondylitis, psoriatic arthritis and other types of inflammatory arthritis can cause an enthesitis (pain and swelling at the site of tendon insertion) eg. insertional Achilles pain.
- h. Posterior ankle impingement syndrome – this is usually due to an overuse injury and causes pain at the back of the ankle joint when the foot is pointed downwards (maximal ankle plantarflexion). It is commonly seen in ballet dancers (en pointe position), footballers and long or triple jumpers but it is also sometimes seen in runners. It can also be due to a small extra bone at the back of the ankle called an Os Trigonum which is present in about 10% of the population.
- i. Accessory soleus – this is present in approximately 6% of the population and can cause pain and swelling in the Achilles region³. It is a rare but recognised cause of Achilles region pain in runners.
- j. Referred pain from lumbar spine or other neural structures such as the sural nerve – these are rare cause of Achilles tendon pain in runners and can usually be distinguished by clinical examination.

5. How is tendinopathy diagnosed?

As with any injury, a doctor, physio, podiatrist or other clinician will take a detailed history of the problem and then thoroughly examine the area of injury. If necessary this will be followed by investigations such as ultrasound imaging or MRI to confirm the diagnosis and grade the severity. The history and examination should also be used to look for risk factors as to why the injury has occurred eg. training loads and biomechanical abnormalities.

- a. History – typically tendinopathy starts by causing pain with running which gradually eases as the run progresses and then returns when the athlete cools down. It can cause significant pain and stiffness the morning after a hard training

session or long run. With tenosynovitis or paratenonitis there is often a creaking sensation around the tendon.

- b. Examination – usually reveals localised tenderness with or without swelling. There can also be pain on resisted exercises eg. loaded calf raises for Achilles tendinopathy and single leg squats for patellar tendinopathy. In cases of tenosynovitis or paratenonitis there can be crepitus (crackly rice crispy type feel) around the tendon.
- c. Investigations – Ultrasound (US) imaging is the investigation of choice for most tendinopathies. US imaging of a reactive tendinopathy often shows a localised fusiform (spindle-like shape that is wide in the middle and tapers at both ends) area of swelling within the tendon but there are still parallel collagen fibres. With more advanced tendinopathy (tendon disrepair) there are dark patches within the tendon (hypoechoic regions) associated with some loss of the surrounding normal looking well organised parallel collagen fibres. With end stage tendinopathy (degenerative tendinopathy) there is a combination of localised swelling, dark patches (hypoechoic regions), loss of organised parallel collagen fibres and increased vascularity (neovascularisation). Ultrasound is also good for diagnosing bursitis, paratenonitis and tenosynovitis. It can help confirm other diagnoses eg. partial tear or plantaris related problems. In tendinopathy, MRI shows up swelling within the tendon and in more advanced stages of tendinopathy, it shows an increased bright signal within the tendon. MRI is particularly useful for looking at surrounding soft tissue and bony structures and to confirm or exclude other diagnoses.

6. How is tendinopathy treated?

The evidence base behind treatment options for tendinopathy has grown significantly over the last 10 years. The first step is usually to reduce the loading of the tendon by reduction of running volume. In the short term often a complete rest from running is necessary. This offloading can be supplemented with cross training to maintain aerobic fitness.

Appropriate loading can actually help stimulate healing in cases of tendinopathy. Most cases of tendinopathy are now treated with a progressive strengthening programme. This is usually in the form of eccentric exercises (the muscle works as it is getting longer eg. action of gastrocnemius

during heel-drops off a step) but may also involve isometric(holding the muscle and joint angles in a static position whilst resisting a specific weight/load) and concentric exercises (the muscle works as it is getting shorter eg. calf raise) depending on the site and type of tendon pathology.

Nearly 15 years ago, Prof Hakan Alfredson, a Swedish surgeon and now a world leading Achilles tendon researcher, developed a painful heel drop protocol for Achilles tendinopathy⁴. This protocol is now widely used as first line treatment for chronic midportion degenerative Achilles tendinopathy. It involves performing 3 sets of 15 repetitions, straight knee and then bent knee, twice daily over the edge of a step, with added weight in a rucksack and working into pain, for 7 days a week and for a total of 12 weeks. For a video demonstration of how to perform eccentric heel drop exercises there are several useful youtube links which you can easily find by searching for 'eccentric calf muscle exercises' or 'achilles tendinopathy'. For patellar tendinopathy eccentric single leg squats on a decline are used in a similar way⁵.

Other commonly used treatment options for tendinopathy include:

- Night splint
- Heel raise
- Running re-education drills
- Orthotic prescription
- Anti-inflammatory medication (NSAIDs) topically or orally eg. with a reactive tendinopathy, tenosynovitis or paratendonitis. Celecoxib or ibuprofen are 2 commonly prescribed NSAIDs used to treat tendinopathy.
- GTN patches
- Extracorporeal Shock Wave Therapy (ESWT)
- Sclerosant injections
- High volume injections
- Corticosteroid injections (Peritendinous)
- PRP(platelet rich plasma) injections
- Iontophoresis (small electric charge delivers corticosteroid or NSAID through the skin)
- Surgery

Injections are performed under ultrasound guidance. They can be effective at reducing pain but need to be combined with appropriate rehabilitation exercises. Obviously other risk factors such as training load, biomechanical abnormalities, strength and conditioning deficits and footwear need to be addressed. This usually requires physiotherapy input and often podiatry input is also required. Sometimes orthotics are

prescribed to address specific foot related biomechanical problems such as excessive pronation or a leg length difference. Despite our best efforts, tendinopathy remains one of the most challenging musculoskeletal injuries to treat and prevent. Some people struggle with tendon pain for several months or even years. It is however usually a reversible process and with accurate diagnosis, appropriate offloading and graduated reloading, other treatment options outlined above and by addressing the risk factors, the athlete can usually get back to running pain free. If symptoms persist for more than 1 year despite these measures then surgical intervention is sometimes required.

7. How is tendinopathy prevented?

This remains the million dollar sports medicine question! There are no hard and fast rules but the main advice for runners is to make sure that increases in volume and intensity of running are progressive without significant acute increases. In terms of volume, a 10% increase per week guide is a useful rule of thumb and coaches will be able to guide different runners through this with an individualised programme. Runners should have adequate recovery between harder running training sessions and usually this means no more than 3 high intensity interval sessions per week with at least 48 hours between sessions. Steady and

easy runs can safely be integrated between harder sessions. An appropriate graduated strength and conditioning programme throughout the year is also important. Biomechanical and functional screening by an experienced physiotherapist will help identify those runners who would benefit from specific strength conditioning work, running re-education drills and those who will benefit from podiatry input and orthotic prescription.

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Ryan McLeod, Frank Tickner and Keith Gerrard crest the long hill in the Edinburgh International Cross-Country

Book review

David Sunderland – High Performance Long Distance Running

BY NEVILLE TAYLOR

There are today, numerous books on middle and long distance running.

This publication is a must for ambitious coaches and athletes striving for high performance and international standard.

Dave Sunderland is a coach of many years experience, whose athletes have attained medals at major games, and the author of 'High Performance for Middle Distance.'

Although the book covers the theory of physiology and sports science it is mainly a tried and tested practical exposition.

In the chapter on injury prevention there is a pertinent sentence 'one of the tests of a good coach is what he does when things are not going well with his athlete'

There also a section on training and straining with a very good checklist.

So often in many publications when dealing with sessions etc. the time of the year and fitness of the athlete and objectives are not taken into account, Also the use of the eye and observation. I am glad that this is covered.

As one would expect, from a meticulous thinking coach, there is an excellent commentary on preparation and planning including testing and training at altitude.

Racing tactics are also well covered in a practical manner.

This book is well crafted in great detail and conviction by someone with a strong feeling for endurance running.

I highly recommend this book, as a reference point, for those who are looking for success at the highest level

BY BUD BALDERO

I am delighted that Dave Sunderland has turned his attentions to long distance training, after his earlier book on High Performance Middle-Distance Running.

Predictably he has produced a valuable guide to the key coaching issues.

His succinct lucid style allows coaches to access essential concepts in a direct and manageable fashion.

The book is in valuable to beginner and experienced coach alike.

It is particularly strong on dealing with the difficult issues of the energy systems

A pleasure to read I recommend this book warmly

BY DAVID LOWES

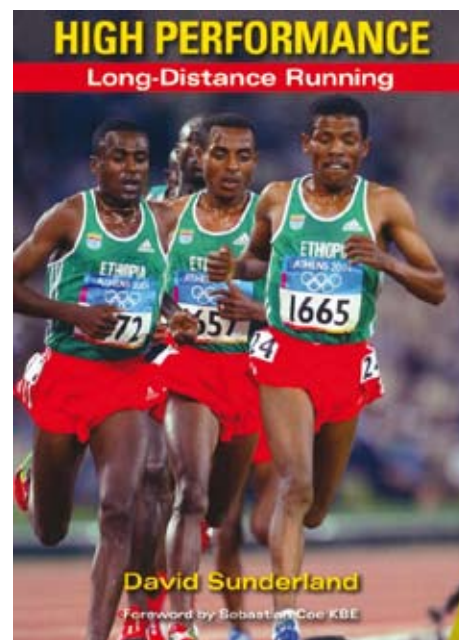
High Performance Long-Distance Running

is a publication by England National Coach Mentor, David Sunderland, and is unashamedly aimed at elite athletes who specialise in distance running events ranging from 5000 metres up to the marathon, writes **David Lowes**. Throughout the 150 plus pages, it tries to cover everything that this niche of running requires - no small feat in itself - and it just about succeeds!

Containing seven chapters, each segment is full of information, diagrams and adequate illustrations and the book will no doubt prove to be an invaluable tool for the coach and athlete to refer to from time-to-time in their quest for success. An early chapter 'The Requirements for Success' takes up 14 pages and reinforces just what is needed to be successful with no stone left unturned. This takes the reader into perhaps the most important section of the book, 'Training Methods and Effects' and at 31 pages it describes in great detail what every aspirant should know in order to progress to their absolute optimum levels.

Of course, running isn't all about pounding the roads and trails and the next chapter on 'Conditioning Training' will prove to be very useful with almost every body part covered along with some alternative training to strengthen body parts not normally put under great stress while running. One of the most crucial parts of any training related book is 'Injury Prevention' and this 23 page chapter deals with all the common denominators that cause malaises and how they can be dealt with.

The penultimate chapter 'Planning and Preparation' delves into how to put the training ingredients into a meaningful format with weeks and months planned meticulously along with competition dates so that the athlete knows exactly



where they are going and how they will get there. It can be argued that this is the most important chapter in the book. The final chapter on 'Tactics' suggests that all the right training and preparation can be rendered useless if the athlete doesn't execute the correct strategy in their races. Every aspect is covered both on the track, indoors, cross-country and on the roads. There is also an appendix which gives some suggestions of training weeks for world-class males and females over all of the distance events which will give the reader an idea of what is required at the highest echelons.

High Performance Long-Distance Running by David Sunderland; The Crowood Press. Available via www.crowood.com or most good bookshops £14.99.

Interesting Historical Snippet

BMC Denner Mile, Yeovil, 31 August 1987

1, Mark Olesen (CAN) 4:03.2; 2, Chris Buckley 4:04.1; 3, Mark Scruton 4:05.4; 4, Nick Rose 4:07.8; 5, S Overton 4:08.9; 6, David Lake 4:09.3

(The entire field of 11 runners was disqualified for 'pacing' by Yeovil Track Referee Paul Gregory, sparking a memorable storm of controversy)

A full-body photograph of Paula Radcliffe, a British long-distance runner, captured in motion during a race. She is wearing a red short-sleeved athletic top with orange trim around the neckline and sleeves, and black running shorts. Her hair is blonde and pulled back into a ponytail. She has a determined expression on her face. Overlaid on the image is the text "NEARLY ISN'T ENOUGH!" in a large, white, hand-painted font. Below this, the name "Paula" is written in a smaller, white, cursive script. At the bottom of the image, there is a social media call to action and a Nike logo.

NEARLY
ISN'T
ENOUGH!
Paula

@PAULAJRADCLIFFE
#MAKEITCOUNT

