



Marathon Planning & Training

(Upping the distance)

Greater Peterborough Athletic Network
Peterborough 10th February 2016



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(Endurance Development coach)

Introductions...



Used to be a cyclist, started running after a serious illness and 10 years of doing nothing just to loose weight and prove something to friends & family....also thought marathon running would be much easier than cycling



Have been an athletics coach for 10+ years
Currently an Endurance development coach at Beds & County AC and Bedfordshire University AC

Main motivation as a runner...simply to be the best I could be. I have received a lot of help in the past from other coaches

Main motivation as a coach...to help other people be the best they can (return the favour)

Before we start...

Please introduce yourself:

- Name
- How long you have been coaching
- An interesting fact about yourself
- What you hope to get out of today's discussion

1. Different approaches to Marathon training
2. The secret to success in Marathon running?
3. Foundations to Marathon training and different training elements
 - o Marathon build up
4. Planning for a Marathon
5. Example sessions & training plan
6. Q&A

This event is for you so please ask questions as we go along & make it a discussion

Feedback from the Marathon Conference...

Some of the best coaches in the sport who have coached some of the best British athletes and feedback from some of the best marathon runners Britain has had



The collective talent, knowledge, experience and level of information sharing in the room was stunning...

- Lots of miles and then more miles run even harder
- Very long runs
- Don't need to run longer than 35k during Marathon build up
- Only did ten 10k races in whole life
- Raced almost every weekend
- 3 sessions a week at least
- Never did many sessions just ran hard all the time
- Pace work on the track and need to do long runs on the road
- Never ran on a track, mainly ran on grass or trails
- Easy runs were very slow
- Never did easy runs just took days off
- Carefully planned nutrition
- Ate mainly mars bars and meat pies and never used a sports drink

Athletes are all different and different approaches work with different athletes.

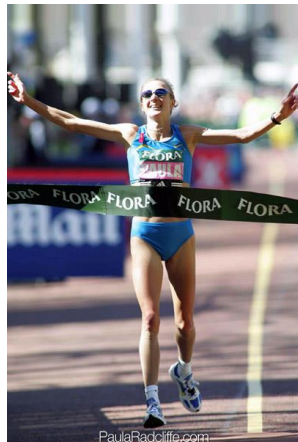
All the various training methods are proven to have worked with someone, all been tried before and they all had certain common elements:

1. Tempo running
2. Long run
3. Speed that is specific to the event
4. Recovery
5. Progression & experimentation
6. Specific build up and taper for key races
7. Injury and setbacks
8. Self belief

Other common themes included the power of the training group
And how the coach gave the athlete confidence and self belief

How to apply to club runners?

- We have all heard of elite athletes who do 100+ mile weeks
 - Its true...
 - But not all the time / not for that many consecutive weeks
 - They have built up towards it over years
 - They have more time, more recovery & more support
 - They are taking big risks / pushing to the very limits



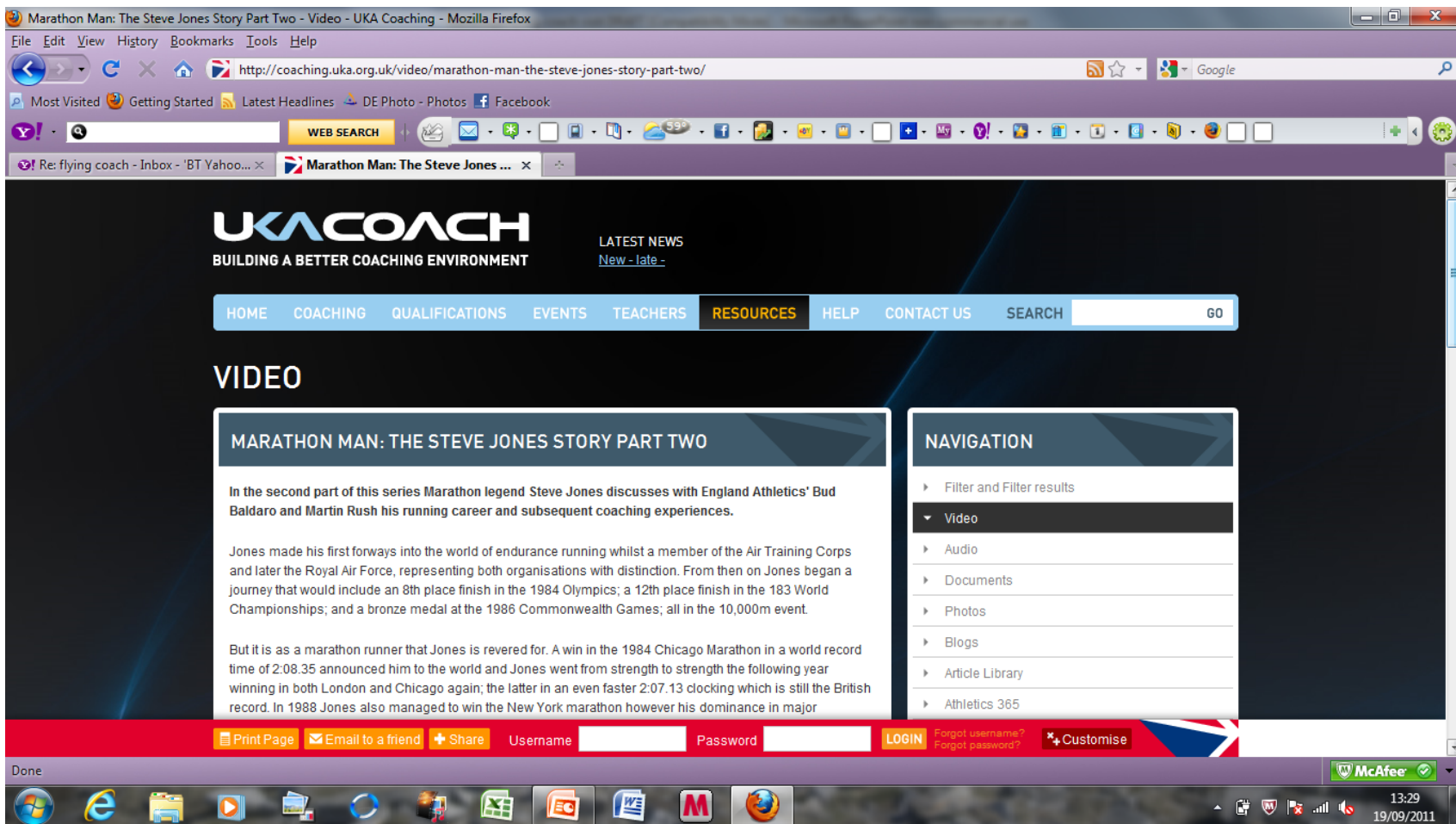
- To simply apply the miles + more miles approach to club runners is likely to lead to slow times, injuries, fatigue and disappointment
 - *Studies suggest that running any distance over 35k (22 miles) can cause temporary tissue & organ damage that can last up to 3 months afterwards*

So What's the Secret?....

But that doesn't mean you There is no secret. should stop looking and learning
(that's the real secret to successful coaching)

Further information...

Presentations and interviews etc on U coach website



The screenshot shows a Mozilla Firefox browser window displaying the UKA Coaching website. The address bar shows the URL: <http://coaching.uka.org.uk/video/marathon-man-the-steve-jones-story-part-two/>. The website header features the UKA COACH logo with the tagline "BUILDING A BETTER COACHING ENVIRONMENT" and a "LATEST NEWS" link. A navigation menu includes links for HOME, COACHING, QUALIFICATIONS, EVENTS, TEACHERS, RESOURCES (highlighted), HELP, CONTACT US, and a SEARCH box with a "GO" button. The main content area is titled "VIDEO" and features a video player for "MARATHON MAN: THE STEVE JONES STORY PART TWO". The video description reads: "In the second part of this series Marathon legend Steve Jones discusses with England Athletics' Bud Baldaro and Martin Rush his running career and subsequent coaching experiences." Below the description, there are two paragraphs of text detailing Steve Jones's athletic achievements, including his world record in the 1984 Chicago Marathon and his dominance in the 10,000m event. A "NAVIGATION" sidebar on the right lists categories like Filter and Filter results, Video (selected), Audio, Documents, Photos, Blogs, Article Library, and Athletics 365. At the bottom of the page, there are links for "Print Page", "Email to a friend", "Share", a login form with "Username" and "Password" fields, a "LOGIN" button, and a "Customise" link. The Windows taskbar at the bottom shows the system clock at 13:29 on 19/09/2011.

Suggested approach

- Train to always be in good shape for 5 -10K (all year round)
- Adapt training programmes to do a **9 week build up** for any specific events that are greater than 10k
- Races in between / that clash with a build up...ok to do but should in effect be done as sessions and without tapering
 - Can compete at all distances but training is better focused on one distance as main event at any one time
- Allow extra time (for more recovery) with less experienced / more fragile athletes

What kind of event is 10k?

Men UK all time rankings

Name	Age at PB	No of years 10k
1. Mo Farah	29	9
2. Jon Brown	28	9
3. Eamonn Martin	30	10

Women UK all time rankings

Name	Age at PB	No of years 10k
1. Paula Radcliffe	29	6
2. Jo Pavey	39	10
3. Julia Bleasdale	31	10



- Its an Endurance event
- Best results are reached after full physical maturity
- 10k effort is very close to / just below lactate threshold
- Lactate threshold approx = blood lactate levels of 80% of V02 max
- Lactate threshold can be developed
- It takes time & patience to develop lactate threshold
- Lactate threshold is the key to a successful 10k
- Heart Rate is the most practical & effective way of monitoring exercise effort
- Lactate threshold is best developed with **Tempo** running

What is Tempo Running?

National Endurance Conference debated this very point:



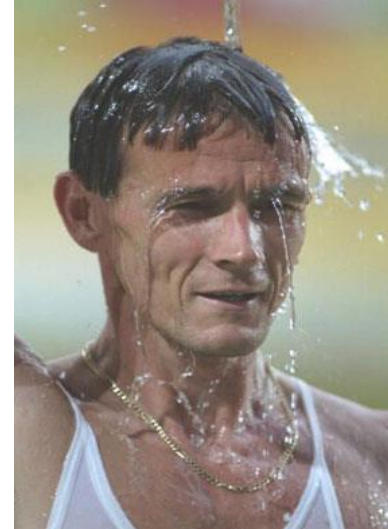
The collective talent, knowledge, experience and level of information sharing in the room was stunning...

What is Tempo Training?

- After lengthy discussion it was clear that there were slightly different understandings of and different approaches to tempo training, but my favourite definition was....

“Did I do tempo runs?...I just used to run as hard as I could for as long as I could, if that's what you mean by Tempo training then I suppose I did do it”

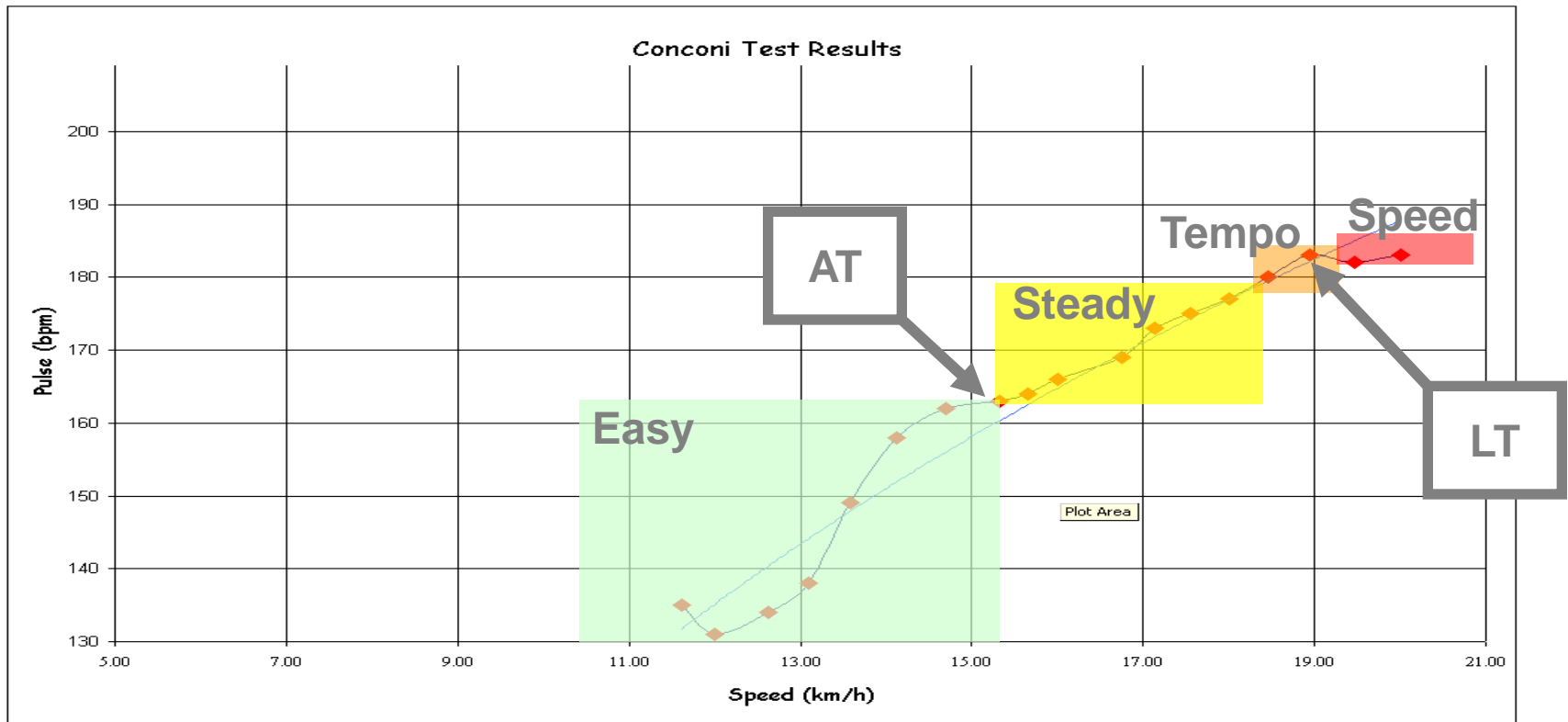
Steve Jones – 2:07:13 Marathon runner (UK - world record holder at the time)
10k pb 27:39



- One thing that all the coaches could completely agree on was that Tempo training is the No1 most important element in any successful training programme for any endurance event
- Tempo running approx = 85 - 90% of max HR

Training in the right zone

1. Speed can increase greater than the increase in HR up to a point: Aerobic Threshold (AT)
2. Above AT heart rate & speed increase is linear up to a point : Lactate Threshold (LT)
3. Above LT speed can be increased but the increase is supported by limited reserves
 - a) **Easy** running is any training where HR is below AT
 - b) **Steady** running is training where HR is above AT but comfortably below LT
 - c) **Tempo** running is training where HR is on / at / close to your LT (uncomfortable but manageable)
 - d) **Speed** work is training at a HR above LT (cant maintain for long)



Training in the right zone

Easy Running: If you only ever train at or below your Aerobic Threshold (AT) you never develop the energy systems required to buffer and utilise lactate

Speed work: At an effort over your lactate threshold (LT) you are running at an effort that can't be sustained and are using different energy delivery systems

Steady Running When you train above the AT but well below the LT you do develop both the Aerobic capacity & lactate buffering capability but you don't stress the lactate energy systems enough to move the LT

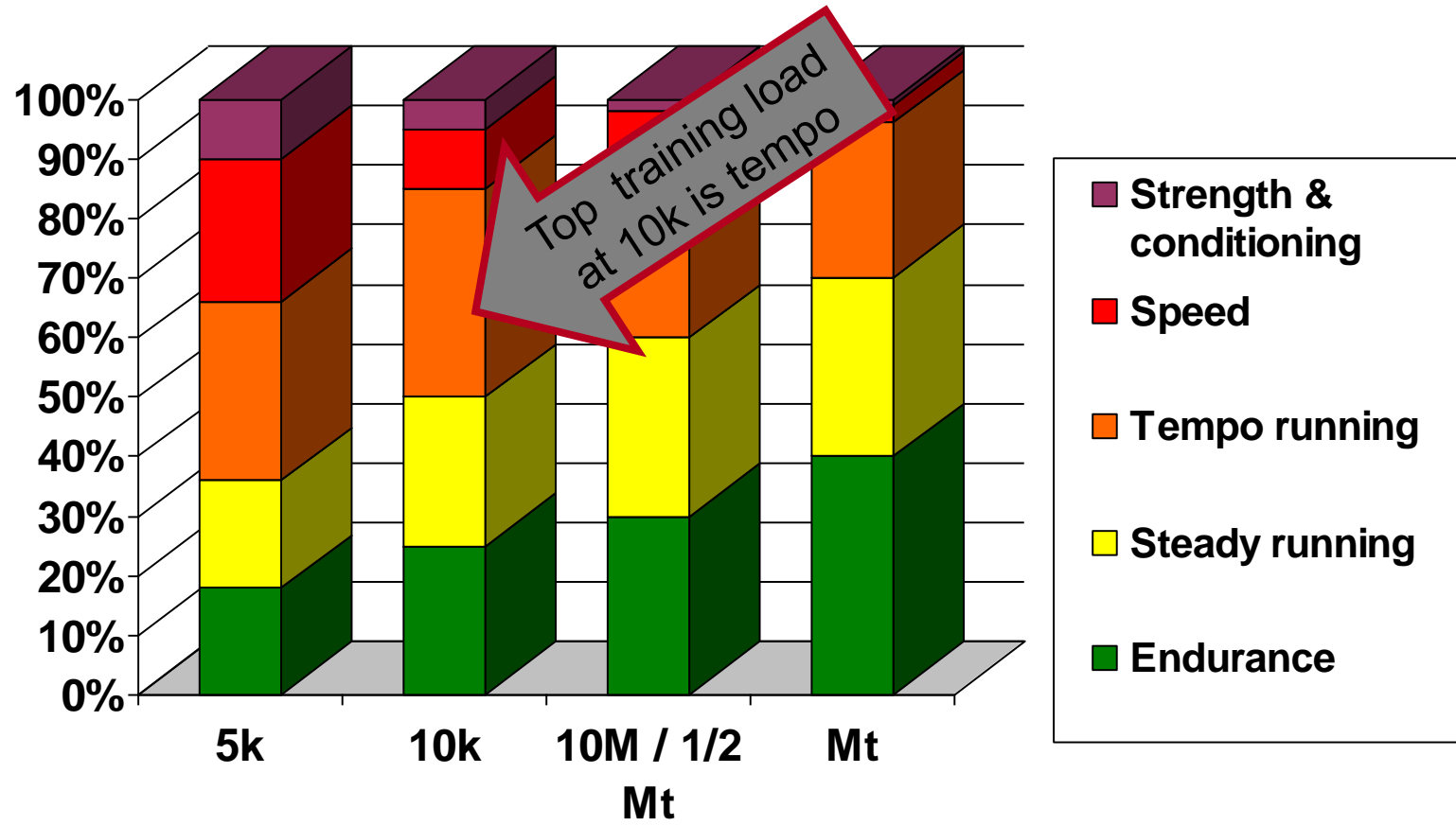
Tempo Running: If you train at or around your lactate threshold you:-

1. Train your body to cope with (buffer) lactic acid more efficiently
2. Train your body to reprocess lactic acid as energy
3. Over time move your LT (deflection point)...delaying the point at which you start to fatigue

Tempo training is the key to running faster and further

Its also about training at speeds that are relevant to the athletes current capability

Contribution of each Element



○ 10k is the gateway to longer distance events....

Training Programme Elements

Element	What?	Example duration / reps	Frequency	Benefit	Adaptation*	Recovery**
Endurance	Long runs - progressive up to 'duration' of race time	Time on feet not distance if want to run 3 hours for Marathon...then need to develop ability to run for 3 hours (max)...(must be within Aerobic capability)	1 long run per week, warm ups, cool down & recovery runs	Developing cardio / Aerobic systems & improving capacity to carry oxygen...also muscle strength (slow twitch)	4-5 weeks	1 day
Steady running	Intended race pace + 30 secs	Up to 80% of intended race distance...but keep the pace and build up distance	twice per week (after easy runs and before sessions)	Developing efficiency of energy systems (Aerobic) & developing stamina	2-3 weeks	2 days
Tempo running	Slightly quicker than race pace	3 mins (min) up to 90 mins. Do either before faster reps (with a short recovery) & or as a run	1 -2 per week Include in sessions or do as a session	Developing Aerobic & Anaerobic energy systems and ability to 'buffer' Lactate (coping but not comfortable)	1-2 weeks	3-4 days
Speed	Faster than race pace (no more than 120% of race pace)	Key, especially for 10k to Marathon, is that its done with a short recovery between reps of 200 - 1600	1 per week	Stressing lactate tolerance (muscle acidosis), use of Fast twitch muscles, running economy and developing efficiency of fuel system (anaerobic)	1 week	5 days
Strength & conditioning	hills & XC (or gym / cross training)	short steep hills best for strength (30 - 60 secs)...longer hills for conditioning (2-6 mins)...focus on running style	1 per week (instead of speed)	Running economy & muscle strength	2-3 weeks	5 days
Flexibility & Mobility	Running economy (style) / muscle co-ordination	Mobility exercises each day, stretching after runs & thinking about correct form when doing steady runs	Daily	Reduced risk of injury, improved stride length & greater economy	NA	NA
Rest	No training or reduced training volume	Aim for once per week min (but can be a short very easy run during mileage phase of Marathon build up)	...Never go for more than 2 weeks without a complete rest day	Adaptation & recovery rate is higher when resting	NA	NA
Race practice	Do shorter races than target race	Do 5k & 10K as part of Marathon prep...but do them without a full taper. If doing 1/2M...do earlier in Marathon build up (4-8 weeks out)	NA	Establishing a routine, calibrating effort and acclimatising to time of race and race atmosphere etc	1 week+	1 week+

9 week build up

		Weeks to Race										
		Starting point	9	8	7	6	5	4	3	2	1	0
Focus	<u>Good 10k shape</u>	Easy mileage week	Build mileage	Build Mileage starting doing some harder runs	Build Mileage starting doing some harder runs / sessions	Build Mileage starting doing some harder runs / sessions	Peak Mileage	Do a race which is up to 1/2 of target race distance		Option to do a short race at intended race pace	Race	
Endurance												
Steady												
Tempo												
Speed												
Volume		Starting point +10%	Add 10% to mileage	Add 10% to mileage	Add 10% to mileage	Add 10% to mileage	Add 10% to mileage	Longest run this week (e.g. 22 miles / 2:45 max for Marathon)	Volume of training reduces (approx 10% per week) but quality stays same	Small amount of 'relevant' speed work (30 secs quicker than race pace)	maintain steady & tempo runs (up to 3 days to go) but reduced mileage	

- Mileage needs to be progressive
- No sessions for the first 2-3 weeks
- Longest run doesn't need to be too long (and only once)
 - 35k (22 miles) max / up to target race time on feet
- OK to do other races during 9 weeks but effort should be adjusted to suit plan and do without taper
- Expect tiredness during first 3-4 weeks
- Expect surprising results

9 week build up - Example

- Starting point of 40 miles per week:

Week	9	8	7	6	5	4	3	2	1	0	Total	%
total mileage	44	48	53	58	64	70	63	56	51	40	547	-
Endurance	44	42	30	22	23	23	17	10	7	6	224	41%
Steady	0	6	15	22	23	23	22	21	19	14	165	30%
Tempo	0	0	8	14	18	24	22	21	19	14	140	26%
Speed	0	0	0	0	0	0	2	4	6	6	18	3%



- Peak total mileage is at week 6 (4 weeks to go to race)
 - Note that peak easy running is actually 1st week

Speed that is specific....

○ Training needs to be specific to the target event...e.g. If target is Marathon in 3 hours then its pointless running:

- 400m reps in 70 secs (+33 secs quicker per 400)
- Doing lots of long runs at 9 min mile (more than 2mins per mile slower)

○ E.g. for 3 hour marathon

- Race pace 7 min mile
- Easy pace < 8:30
- Steady Pace 7:30
- Tempo pace 6:30-6:45
- Fast Pace 6:00-6:30

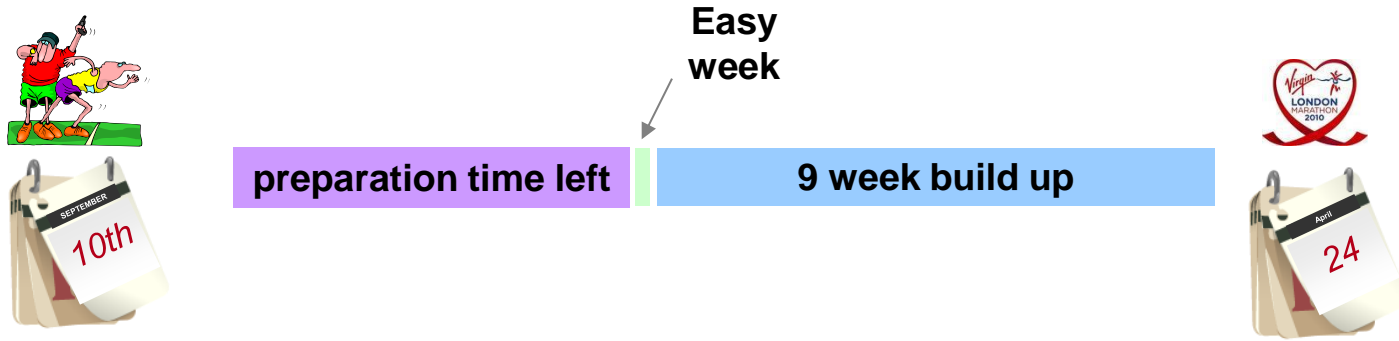
○ E.g. for 4 hour marathon

- Race pace 9 min mile
- Easy pace < 10 min mile
- Steady pace 9:15-9:30
- Tempo pace 8:15-8:45
- Fast pace 8:00-8:30

Best 10k time	Marathon potential	Equiv 400m pace	Min per mile
27 mins	2 hours 5 mins	71	4:47
28 mins	2 hours 10 mins	74	4:58
29 mins	2 hours 15 mins	77	5:10
30 mins	2 hours 20 mins	80	5:21
31 mins	2 hours 25 mins	83	5:33
32 mins	2 hours 30 mins	86	5:44
33 mins	2 hours 35 mins	89	5:56
34 mins	2 hours 40 mins	91	6:07
35 mins	2 hours 45 mins	94	6:19
36 mins	2 hours 50 mins	97	6:30
37 mins	3 hours 55 mins	1:40	6:42
38 mins	3 hours	1:43	6:54
39 mins	3hours 5 mins	1:45	7:05
40 mins	3 hours 10 mins	1:48	7:17
41 mins	3 hours 15 mins	1:51	7:28
42 mins	3 hours 20 mins	1:54	7:40
43 mins	3 hours 25 mins	1:57	7:51
44 mins	3 hours 30 mins	2:00	8:03
45 mins	3 hours 35 mins	2:02	8:14
46 mins	3 hours 40 mins	2:05	8:25
47 mins	3 hours 45 mins	2:08	8:37
48 mins	3 hours 50 mins	2:11	8:49
49 mins	3 hours 55 mins	2:14	9:00
50 mins	4 hours	2:17	9:12

Planning for a Marathon

- e.g. London Marathon 2016
- Work backwards from key race



- Schedule an easy / rest week before marathon build up
 - Also schedule easy weeks / weeks off during preparation phase
 - You won't lose fitness and consistency over longer period is the key
- Use Preparation phase to get in best possible 10k shape
- Can use preparation time to do a mini build up for a key 10k (or other race up to 1/2M)

Planning for a Marathon

- Does that athlete want to run for a time?
 - How fast do you want to run?
 - How much time have you got?
 - How much do you want it?
- Are they doing it just for fun / just to be able to do it



Either way its the coaches role to make it fun & make it an achievement by being prepared

Planning for a Marathon

Know your athlete & make individual plan...

- Where are they now
 - how much training are they doing now
 - What else do they do
- Observe the athlete & find what works for them
- Don't be afraid to experiment (within sensible limits)
- Set realistic, achievable goals & priorities
- Consider availability & motivation to train...don't over commit
- Work on any weaknesses
- Keep it Progressive, relevant, varied & fun
 - Increase mileage slowly (5% - 10% per week)
- Adapt the plan (don't plan details more than 3 wks)
- Measure progress (either races or timed reps)
- Include enough recovery



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Make adjustments for Inexperienced / less trained athletes:

- Schedule rest weeks in preparation period from every 3 weeks to every 6 weeks (depending on background of athlete)
- Change 9 week build up to 12 weeks
 - Schedule 3 weeks training 1 week off
- Greatest adaptation is when resting
 - Don't over commit
- Avoid injury...seek treatment at first sign of injury or strain and adjust training
- Results will be less pronounced but much better than illness / injury.
- Marathon training is hard....so expect pitfalls & snags

- Depends on race distance and how hard the athlete tried.
- Depends on preparation, age & and running age of the runner
 - *The following is just a guide & assumes that the race was at full effort*
 - 5k – approx 1 week
 - 10k – approx 1-2 weeks
 - 10 mile / ½ Marathon approx 2-3 weeks
 - Marathon - up to 3 months
- Don't do sessions / hard runs for 2-3 days after races up to 10k
- 1 week off & or just easy running for 2 weeks after ½ Marathon
- 1 week completely off and then 2-3 weeks of very easy running (no sessions) after Marathon
- Don't do Speed sessions (lactate) in 5 days leading up to a race but don't just do easy runs include steady & tempo runs up to 2 days to go before race

Staying in 10k shape

o Suggested schedule (assuming club nights Monday & Wednesday)

Beginner

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Long run up to 60 mins (Endurance)	Group session with long reps at a pace slightly faster than race pace	Rest	Group run at a controlled pace below race pace (steady)	Rest	Easy short run	Rest
	Club night		Club night			

Intermediate

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Long run 90 mins max (Endurance)	Group speed session with reps faster than race pace	Easy short recovery run or rest	Group run with a portion at a controlled Tempo pace	Easy run or rest	Rest	Short steady controlled run (steady)
	Club night		Club night			

Advanced

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Long run 90 mins max (Endurance)	Group speed session with reps faster than race pace	Easy recovery run	Group run with a portion at a controlled Tempo pace	Rest	Group run with a portion at a controlled Tempo pace	Controlled run (steady)
	Club night		Club night			

NOTE: Mileage of runs depends on individual athlete current training level. Progression should be approx 5% per week

Example Sessions to try.....

- The best sessions have:
 - A good warm up
 - 15 minutes minimum, longer if training for distances
 - Pace is easy to steady
 - including strides if session is speed work
 - (Strides / short reps – dynamically stretch & take edge off over enthusiasm)
 - A focus (Speed, Tempo, Steady etc)
 - Short reps with long recovery = lactate / over threshold
 - Medium reps with short recovery = Threshold buffering
 - Longer reps = tempo running
 - Variety
 - Make it interesting / more fun
 - Element of surprise
 - Efficient use of time...maximum benefit from less distance
- Cool down, helps process lactate and minimise stiffness later

- Try a long Tempo effort as the first rep...
 - Aim is to get into lactate buffering zone (on / just under threshold) which takes approx 4 minutes plus
 - This pre tires and dynamically stretches the athlete
- Jogging between reps to maximise training benefit
 - keeps HR & lactate at the right levels
- Try a long steady effort as the last rep (e.g. 8 minutes)...
 - Provides active recovery and is about learning to run at a good pace when tired and
 - This is also a good guide to Marathon potential...

<u>Out & Backs</u>					
Effort	3 mins	6 sets			
Recovery	30 secs	2 mins recovery between sets			
Effort	3 mins				

- Out & Back session, ideal for keeping mixed ability group together
 - Effort time can be adjusted up/down (including as a pyramid)
 - No of sets can be adjusted down....
 - stop runners who cant get back to their mark / are obviously tired
- Start with longer recovery and reduced progressively each week
- Encourage runners who gauge their pace correctly so that they get to the same point each time (or a little further)

Example Sessions

<u>Marathon Potential</u>						
Effort	90 secs	5 reps	8 mins (tempo)	90 secs	5 reps	8 mins (steady)
Recovery	60 secs	2 1/2 mins	21/2 mins	60 secs		

- Mixed effort session
- Speed at start will pre tire runners and give high lactate levels
- Middle tempo will train runners to buffer high lactate levels
- Second set of speed reps will be challenging (No of reps can be adjusted down to begin with)
- Last 8 minutes is 'Steady' pace...runners will learn to run at a good pace when tired and with some lactate...this is a very good indication of marathon pace potential & can help with target setting
- Session gives big training benefits with a relatively short distance

Tempo, Speed, Tempo

Effort	4 mins	80 secs	2 1/2 mins	80 secs	4 mins
Recovery	30 secs	30 secs	60 secs	2 mins	

- Use tempo efforts to pre tire before fast reps
 - Speed is useless without endurance
- Speed reps reassure athlete aiming to do shorter races
- Fast reps with short recovery overload above LT so that pace is more realistic and 2nd Tempo effort is pre loaded
 - Effect on LT is maximised and 2nd tempo pace achieved is a good guide to athletes current 5-10k race capability
- Adjust tempo effort time (e.g. up to 8 min)
- Start with more recovery if needed and then reduce each time you do the session (as fitness progresses)

<u>Tempo, Hills, Tempo</u>					
Effort	6 mins	30 sec hill	45 sec hill	5 reps	6 mins
Recovery	60 secs	Jog back	jog back	2 min	

- Hills instead of speed
- Hills are used as strength training in distance training
- Number of reps and length of tempo can be adjusted
- Hill reps (10 in total) can be ran alternatively or in sets of 5 each
 - Important to keep form so adjust recovery up if needed
 - Re group / wait for last man down each time
- Tempo run can be part of run to where the hills are
 - Wait until everyone is there before starting hills

So many ways to adjust and make sessions varied and fun...

- Vary the rep distances and get the athletes to pick a rep out of a hat & or the recovery length
- Pick a leader (with good pace judgement) and make other runners sit in – don't overtake
 - Only tell the leader how far the next rep is
- Handicap better runners...e.g. first 3 to finish on each rep have to drop back 100M at the start of the next rep
- Add surprise reps at the end
 - Tell the runners at the start that there is an extra rep at the end...but don't tell them what it is until they are on the start line
 - Runners should finish sessions feeling like they could do another rep if they had to

Example Sessions

- o Longer **Steady** runs (example is for 8 mile run)...
- o Priority is relevant Pace and correct effort over mileage...

Ultimate

Miles							
1	2	3	4	5	6	7	8

How to get there

Miles							
1	2	3	4	5	6	7	8

Miles							
1	2	3	4	5	6	7	8

Miles							
1	2	3	4	5	6	7	8

Miles							
1	2	3	4	5	6	7	8

Miles							
1	2	3	4	5	6	7	8
	Rest (1 min)			Rest (2 min)		Rest (1 min)	



Example Sessions

- Tempo runs...
 - Mix up Tempo efforts with steady runs and longer runs...

Miles							
1	2	3	4	5	6	7	8

Miles								
1	2	3	4	5	6	7	8	
					Rest (3 min)			

Miles								
1	2	3	4	5	6	7	8	
				Rest (4 min)				

Miles								
1	2	3	4	5	6	7	8	
			Rest (3 min)				Rest (2 min)	

Miles									
1	2	3	4	5	6	7	8		
		Rest (2 min)			Rest (2 min)			Rest (2 min)	



Q&A

Talent spotting....

- From jogging club to Olympian (at age 36!)

