A 16 week training plan for a sprinter

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Please see the outlined programs below. They make up a 16 week block of training. The 16

weeks is divided up by:

General Preparation	4 weeks
Main Conditioning	3 weeks
Specific Preparation	3 weeks
Competition Specific 1	2 weeks
Competition Specific 2	2 weeks
Peak	2 weeks

A Transition Period of 2 weeks is added to this.

Name Sprinter		Stage General	Preparation		From	to
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
LIGHT WEEK a.m Fartlek (<75%) 10 mins warm up jog then 30s,45s,60s,75s,90s,90s, 75s,60s,45s,30s with equal walk/jog rec. Stretch	p.m Weights (light)	p.m Fartlek (<75%) 10x30s with 60s slow jog rec. Stretch	p.m 1. Jumps Box x 15 2. Weights (light)	p.m Grass 10 mins warm up jog then 8x2mins at 70% with 60s slow walk rec. Stretch	Rest day	Late a.m QEII 1. Starts to 30m x 8 2. 8x5 bunny jumps with and without belt 3. Stairs 3xssr,2x2sr,4xssh,2x2sh with fast ecc. coming down p.m Weights UB (light)
MEDIUM WEEK a.m Fartlek (<75%) 10 mins warm up jog then 30s,45s,60s,75s,90s,105s, 105s,90s,75s,60s,45s,30s with equal walk/jog rec. Stretch	p.m Weights (medium)	p.m Fartlek (<75%) 12x30s with 60s slow jog rec. Stretch	p.m 1. Jumps Box x 20 2. Weights (medium)	p.m Grass 10 mins warm up jog then 9x2mins at 70% with 60s slow walk rec. Stretch	Rest day	Late a.m QEII 1. Starts to 30m x 7 2. 10x5 bunny jumps with and without belt 3. Stairs 3xssr,2x2sr,4xssh,4x2sh with fast ecc. coming down p.m Weights UB (medium)
HEAVY WEEK a.m Fartlek (<75%) 10 mins warm up jog then 30s,45s,60s,75s,90s,105s, 120s,120s,105s,90s,75s, 60s,45s,30s with equal walk/jog rec. Stretch	p.m Weights (heavy)	p.m Fartlek (<75%) 14x30s with 60s slow jog rec. Stretch	p.m 1. Jumps Box x 20 2. Weights (heavy)	p.m Grass 10 mins warm up jog then 10x2mins at 70% with 60s slow walk rec. Stretch	Rest day	Late a.m QEII 1. Starts to 30m x 8 2. 10x5 bunny jumps with and without belt 3. Stairs 4xssr,2x2sr,4xssh,6x2sh with fast ecc. coming down p.m Weights UB (heavy)
LIGHT WEEK a.m Fartlek (<75%) 10 mins warm up jog then 30s,45s,60s,75s,90s,105s, 120s with equal walk/jog rec. Stretch	Rest day	p.m Weights (light)	p.m Grass 10 mins warm up jog then 5x2mins at 70% with 60s slow walk rec. Stretch	Rest day	Rest day	Early p.m QEII 100m Late p.m Weights (test)

Training Goals 1. To improve aerobic capacity. 2. To stimulate muscle hypertrophy.

Sprinter General Preparation Weights

- **1.** Do 4 sets of each exercise.
- 2. On a light week do 10,10,9,8 On a medium week do 10,9,9,8 On a heavy week do 10,9,8,8

Monday	10	9	8
Power Cleans			
Bench Press			
Seated Leg Press			
Seated Row			
Lunges			

Wednesday	10	9	8
Power Cleans			
Incline Bench Press			
Straight Leg Dead Lift			
Prone Row			
Step Ups			

Saturday	10	9	8
Chin Ups			
Flies			
Seated Shoulder Press			
Upright Row			
Your choice!			

- 1. The first General Preparation phase is where the aerobic base is established. This is also indicative of the low intensity work that must be conducted at the beginning of the training phase. If high intensity work was undertaken in the first initial weeks then the chance of injury occurring would be significant. (Francis and Patterson, 1986)
- 2. Skill has a low component as most of the running being undertaken is of low intensity, therefore the athlete is not running in a sprint position. Running slowly will not be a chance to practice or work on sprint mechanics (as ground contact is too long, stride frequency is too low etc).
- 3. This sequence of training is following a long to short training plan. That is, longer running of low intensity leading onto shorter running of higher intensity. (A short to long plan can also be used where the athlete starts with short running of high intensity and maintains this high intensity for the whole period, with running distances increasing as time goes by). (Francis and Patterson, 1986)

- 4. Acceleration is addressed in this period, one day per week, to allow the athlete to have the feeling of moving at speed. This also addresses the theory of doing all units of work, all the time, just modifying the volume of work being done with each component during the training period. This acceleration and drills session is the one skill session per week where the athlete gets a chance to work on skills that are useful in race performance. No maximum velocity/speed endurance work is undertaken as this is too higher a stimulus for the athlete to handle at this stage.
- 5. Hypertrophy strength training is undertaken in the initial phases. Again, high volumes of work completed at a low intensity is a suitable stimulus for the athlete at this stage of the year. This strength training is more of an endurance nature and this will follow the classic model of increasing intensity and reducing volume to match in with the running program (Francis and Patterson, 1986).
- 6. As there are no competitions taking place in this phase the structure of this period does not need to be modified in order to address the demands/restrictions that competitions can bring.
- 7. There is no work done that will bring about a high lactate response. This is because the aerobic system is/would not be fully developed to cope with the demands of such high intense work at this stage (Francis and Patterson, 1986).
- 8. The training days follow a low intensity-high intensity alternating pattern. For example, Saturday is the only high intensity day so therefore Sunday is of low intensity to act as an active recovery day (and not drain the CNS further from the day before). Monday is of higher intensity with the lifting, then Tuesday is again low intensity aerobic work to act as active recovery from the day before.

Name Sprinter		Stage Main Cond.			From	to
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
MEDIUM WEEK a.m Ilam 1. 2x3x600m at 2 mins with 2 mins/4 mins rec. 2. Ab circuit 3. 10 mins w-down jog Stretch	p.m Weights (medium)	p.m Victoria Park - Hills 1. Warm up jog 2. 5x200m at 80% with walk back rec.	p.m Weights (medium)	p.m llam 1. 2x3x300m at 55s with 60s/2 mins rec. 2. 10 mins w-down jog Stretch	Rest day	Early p.m Speed QEII 1. 6x20m 2. 6x30m 3. 8x5 hops (4e.I) Late p.m Weights (UB)
HEAVY WEEK a.m Ilam 1. 2x4x600m at 2 mins with 2 mins/4 mins rec. 2. Ab circuit 3. 10 mins w-down jog	p.m Weights (heavy)	p.m Victoria Park - Hills 1. Warm up jog 2. 6x200m at 80% with walk back rec.	p.m Weights (heavy)	 p.m llam 1. 1x4+1x3x300m at 55s with 60s/2 mins rec. 2. 10 mins w-down jog Stretch 	Rest day	Early p.m Speed QEII 1. 8x20m 2. 8x30m 3. 10x5 hops (5e.I) Late p.m Weights (UB)
LIGHT WEEK a.m llam 1. 2x2x600m at 2 mins with 2 mins/4 mins rec. 2. Ab circuit 3. 10 mins w-down jog Stretch	Rest day	p.m Victoria Park - Hills 1. Warm up jog 2. 4x200m at 85% with walk back rec.	p.m Weights (light)	Rest day	Rest day	p.m Testing 1. 100m 2. Weights (Clean, Bench)

Training Goals 1. To improve aerobic capacity further. 2 To improve maximum strength.

Sprinter Main Conditioning Weights

- **1.** Do 4 sets of each exercise.
- 2. On a light week do 6,6,5,4 On a medium week do 6,5,5,4 On a heavy week do 6,5,4,4

Monday	6	5	4
Power Cleans			
Bench Press			
Safety Bar Squat			
Seated Row			
Lunges			

Wednesday	6	5	4
Power Cleans			
Incline Bench Press			
Straight Leg Dead Lift			
Prone Row			
Step Ups			

Saturday	6	5	4
Chin Ups			
Flies			
Seated Shoulder Press			
Upright Row			
Your choice!			

- 1. The Main Conditioning phase is where the volume of work is increased and the intensity is lifted.
- 2. Skill now has an increasing component. Some running is done for technique, but is not very intense in nature.
- 3. Acceleration is further addressed in this period, with the distance run and repetitions undertaken higher than the previous phase. A small amount of maximum velocity work can be undertaken in the second half of this phase in support of increasing intensity placed upon the athlete (Francis and Patterson, 1986).
- 4. Maximal strength training is undertaken in this phase. This is very demanding on the athlete and has an effect on the type of running they can do in this phase. The strength training is very demanding on the nervous system and therefore the running work is limited to mainly acceleration work where the type of force application is very similar (Francis and Patterson, 1986).
- 5. Some plyometric work is incorporated in this phase to facilitate the use of the stretch shortening cycle. This combination of eccentric and concentric work has been shown to improve levels of specific strength and power in athletes (Francis and Patterson, 1986).
- 6. Again there are no competitions taking place in this phase so the structure of this period does not need to be modified in order to address the demands/restrictions that competitions can bring. Competition is only sort at the end of the phase as a means of testing to establish where the athlete is at.

Name Sprinter		Stage Specific	Preparation		From	to
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
MEDIUM WEEK a.m Grass - Tempo 10 mins warm up jog then 1,1,1,2; 1,1,2,1; 1,2,1,1; 2,1,1,1 1=100m, 2=200m walk 50m b/w reps walk 100m b/w sets	p.m QEII 1. 3+2x150m at 90% with 5 mins/12 mins rec. 2. Med Ball (medium)	p.m Weights (medium) + 10 mins jog after	4pm Boys High 1. 3 starts to 30m 2. Hurdle bds x 30 3. Flying 30m with a 10m run in x 4, with 6 mins rec.	p.m Weights (medium) + 10 mins jog after	Rest day	p.m QEII 1. 100m 2. 10 Bounds x 5 Late p.m Weights (UB)
HEAVY WEEK a.m Grass - Tempo 10 mins warm up jog then 1,1,1,2; 1,1,2,1; 1,2,1,1; 2,1,1,1 1=100m, 2=200m walk 50m b/w reps walk 100m b/w sets	p.m QEII 1. 2x3x150m at 90% with 5 mins/12 mins rec. 2. Med Ball (heavy)	p.m Weights (heavy) + 10 mins jog after	4pm Boys High 1. 5 starts to 30m 2. Hurdle bds x 35 3. Flying 30m with a 10m run in x 6, with 6 mins rec.	p.m Weights (heavy) + 10 mins jog after	Rest day	p.m QEII 1. 60m 2. 200m 3. 10 Bounds x 6 Late p.m Weights (UB)
LIGHT WEEK a.m Grass - Tempo 10 mins warm up jog then 1,2,1; 1,2,1; 1,2,1; 1,2,1 1=100m, 2=200m walk 50m b/w reps walk 100m b/w sets	Rest day	4pm Boys High 1. 2 starts to 30m 2. Hurdle bds x 25 3. Flying 30m with a 10m run in x 3, with 6 mins rec.	p.m Weights (light) + 10 mins jog after	Rest day	Rest day	p.m QEII 1. 100m 2. Weights Testing (Cleans and Bench)

Training Goals 1. To improve maximum strength further. 2. To improve acceleration further.

Sprinter Specific Preparation Weights

- 1. Do 5 sets of each exercise.
- 2. On a light week do 4,4,4,3,2 On a medium week do 4,3,3,3,2 On a heavy week do 4,3,2,2,2

Tuesday	4	3	2
Power Cleans			
Bench Press			
Squats			
Seated Row			
Lunges			

Thursday	4	3	2
Power Cleans			
Incline Bench Press			
Straight Leg Dead Lift			
Prone Row			
Step Ups			

Saturday	4	3	2
Chin Ups			
Flies			
Seated Shoulder Press			
Upright Row			
Your choice!			

Discussion:

- 1. The Specific Preparation phase is where the volume of work is starting to decrease but the very high intensity work done on the track makes this phase a very challenging one.
- 2. Skill now has an increasing and relevant component as a great deal of work is done on improving the maximum velocity of the athlete. This is very specific technique rehearsal and is very high in intensity.
- 3. Recovery strategies are fully integrated here and are of the utmost importance, especially with the demanding work placed on the Central Nervous System in this phase.
- 4. If the Main Conditioning phase was allocated 8 weeks in length then the maximal strength training will be finished in the macrocycle and the weight training becomes more speed/explosive in nature. This is often talked about as the conversion phase of sprinting where the athlete is trying to convert the strength gained in the previous phases into athletic sprinting power and speed (Francis and Patterson, 1986).

However, if the Main Conditioning was only 4 weeks in length then the Specific Preparation period is used to finish the second half of the strength phase and the weights lifted are very intense with close to maximal lifts being undertaken. This is again very demanding on the CNS so only acceleration work is completed on the track as maximal velocity work is too demanding.

5. There are some competitions taking place in this phase but these are of little to no importance so the training undertaken in the week does not need to be modified. The competitions really just serve to be high intensity training sessions.

Name Sprinter		Stage Competition	Specific 1		From	to
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
HEAVY WEEK						
a.m Tempo 3x5x100m at 60% with 45s/2 mins rec. Stretch	p.m Weights (heavy)	p.m QEII 1. Starts to 60m x 4 2. 5x50m, with a 30m run in, at 100% with 7 mins rec.	 p.m QEII 1. Hurdle bounds, 10x5 2. 2x200m at 99% with 6 mins rec. 3. 10 mins w-down jog 	p.m Weights (heavy)	Rest day	p.m QEII 1. 120m 2. 300m
LIGHT WEEK a.m Tempo 2x4x100m at 60% with 45s/2 mins rec. Stretch	p.m Weights (light)	p.m QEII 1. Starts to 60m x 2 2. 2x50m, with a 30m run in, at 100% with 7 mins rec.	 p.m QEII 1. Hurdle bounds, 6x5 2. 2x150m at 99% with 6 mins rec. 3. 10 mins w-down jog 	Rest day	Rest day	p.m QEII 1. 100m 2. 200m

Training Goals 1. To improve maximum velocity. 2. To improve lactate tolerance. 3. To improve explosive speed (weights).

Sprinter Comp Specific 1 Weights

1. Light day is = 6,5,4 Medium = 6,5,3 Heavy = 5,4,3

Exercise	6	5	4	3
Clean and Jerks				
Bench Press				
Jump Squats				
Push Press				

2. At end of session...

10x10s on bike (very low/zero resistance) with 50s rec. Aim for max turnover on bike.

- 1. The Competition Specific phase is where the volume of work is decreasing but the very high intensity work done on the track still makes this phase a challenging one.
- 2. Skill still has a very important focus but the athlete should now be getting close to technical mastery after all the time and energy mastering the necessary skills in the previous phases.
- 3. Strength training is continued to be undertaken, but is now speed focused, in an attempt to convert the strength gained previously into explosive power that can be used on the track. This is a session that incorporates light sets. The light sets are very high speed with low 1 rep max percentage, only working in the 30-60% range of 1RM, so speed is very realistic and expected.
- 4. Now the competitions begin to take place more often so the training loads in the weeks of competition have to be reduced to allow the athlete to be fresh enough so that they can perform with some level of merit and gain confidence out of the training they have undertaken in the previous phases. If the competitions involve events that are for example, more seed endurance in nature, then the training session that was going to incorporate this type of work during the previous week will be reduced or perhaps even eliminated as the competition is providing the necessary stimulus.
- 5. This phase also provides the most challenging work that challenges the lactate system. This means that there does need to be some recovery tempo work which is very low and aerobic in nature to help provide active recovery after the very demanding lactate sessions (Francis and Patterson, 1986). Therefore a warm down after the lactate session (on Wednesday) helps facilitate removal of lactate and is of utmost importance.
- Plyometric work is incorporated in this phase to facilitate the use of the stretch shortening cycle. This combination of eccentric and concentric work has been shown to improve levels of specific strength and power in athletes (Francis and Patterson, 1986).
- 7. Two days of high intensity work are now undertaken (Tuesday and Wednesday) to mirror the demands of the major peaking environment where the athlete is required to back up performance on consecutive days.
- A bike session, involving high leg speed is added at the end of the weights session to work on stride frequency, which is very important in achieving higher maximal velocities (as maximum velocity = stride length x stride frequency).

Name Sprinter		Stage Comp Specific	2		From	to
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
HEAVY WEEK						
a.m Aerobic (30 mins) Bike or swim etc Stretch	p.m Weights (heavy)	p.m QEII 1. 4x40m sp bd (w.b.r) 2. 3 x assisted 3. 3x150m at 100% with 15 mins rec.	p.m Weights (heavy)	p.m QEII 1. Starts to 60m x 4 2. Hurdle bounds x 40 3. 3 x (40R/40A/60N) rec. 4 mins/8 mins	Rest day	p.m QEII 1. 100m 2. 300m
LIGHT WEEK a.m Aerobic (30 mins) Bike or swim etc Stretch	Rest day	p.m QEII 1. 3x40m sp bd (w.b.r) 2. 2 x assisted 3. 1x150m at 100%	p.m Weights (light)	Rest day	Rest day	p.m QEII 1. 100m 2. 200m

Training Goals 1. To improve maximum velocity further. 2. To improve stride frequency further.

Sprinter Comp Specific 2 Weights

1. This now involves 5 sets of 3. A light week is 3x60%, 3x80%, 3x60%, 3x85%, 3x60% A medium week is 3x60%, 3x80%, 3x60%, 3x90%, 3x60% A heavy week is 3x60%, 3x85%, 3x60%, 3x90%, 3x60%

2. Each exercise must be carried out as fast as possible!

Exercise	60%	80%	85%	90%
Clean and Jerks/Cleans				
Bench Press				
Jump Squats/Squats				

At end of session...

10x10s on bike (very low/zero resistance) with 50s rec. Aim for max turnover on bike.

- 1. The Competition Specific phase is where the volume of work is decreasing but the very high intensity work done on the track still makes this phase a challenging one.
- 2. Skill still has a very important focus but the athlete should now be getting close to technical mastery after all the time and energy mastering the necessary skills in the previous phases.
- 3. Strength training is continued but is now done in a contrast manner. This is a session that incorporates light and heavy sets, alternating. The light sets are very high speed but low 1 rep max percentage, and the heavy sets are 80-90% of 1 rep max to maintain strength.
- 4. Now the competitions begin to take place more often so the training loads in the weeks of competition have to be reduced to allow the athlete to be fresh enough so that they can perform with some level of merit and gain confidence out of the training they have undertaken in the previous phases. If the competitions involve events that are for example, more seed endurance in nature, then the training session that was going to incorporate this type of work during the previous week will be reduced or perhaps even eliminated as the competition is providing the necessary stimulus.
- 5. There is no specific work challenging the lactate system in this phase. The work is now more anaerobic power. That is, high (maximal) intensity with long recoveries in between repetitions to allow full recovery and therefore good quality of training to be done (Francis and Patterson, 1986).
- 6. The bike session is continued to work on stride frequency.

Name Sprinter		Stage Peak			From	to
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
MEDIUM WEEK a.m Aerobic (30 mins) Bike or swim etc Stretch	p.m Weights (medium)	p.m QEII 1. Starts to 40m x 4 2. Depth jumps x 20 3. Flying 50m with a 30m run in x 3, rec = 7 mins.	p.m QEII 30m,60m,80m,120m,150m 200m,300m with 3,6,8,10, 15,20 mins rec.	Rest day	a.m Aerobic (30 mins) Bike or swim etc Stretch	p.m Track 100m
LIGHT WEEK a.m Aerobic (30 mins) Bike or swim etc Stretch	Rest day	p.m Track 1. Starts to 40m x 4 at 90% 2. 1x120m at 90%	Rest day	Rest day	p.m Warm up	Competition

Training Goals 1. To improve speed endurance further.

Sprinter Peak Weights

1. Light day is = 3x3 at 80% Medium day is = 4x3 at 80% Heavy day is = 4x3 at 80%

Exercise	Set 1	Set 2	Set 3	Set 4
Clean and Jerks				
Bench Press				
Jump Squats				
Push Press				

2. At end of session...

10x10s on bike (very low/zero resistance) with 50s rec. Aim for max turnover on bike.

- 1. The Peaking phase is where the volume of work is decreased further so that the athlete can freshen up for the major peak of the training period. The reduced training volume also allows for high quality training to be done during this phase, even if it is little in volume.
- 2. Skill is being maintained in this phase with all quality running session being done with high levels of technical mastery.
- 3. Strength training is continued to be undertaken but is done as maintenance in this phase. This is to make sure the athlete does not lose the strength gains made in the previous phases.
- 4. The competitions are now of utmost importance and so the training loads in most all of the weeks of this phase are low in volume so that the athlete is fresh enough to perform with distinction and gain more confidence going into the major peaking competition ahead (Francis and Patterson, 1986).
- 5. The high quality work is solely anaerobic power. That is, high (maximal) intensity with long recoveries in between repetitions to allow full recovery and therefore good quality of training to be done. This does mean however that some low intensity tempo work is also included on alternate days from the high intensity work to help provide active recovery as well as keep the athlete aerobically up to a desirable level (Francis and Patterson, 1986).
- 6. Ten days out from a major competition a major session is held. This comprises high volumes of work undertaken at maximal intensity. The next 10 days following this are really to just recover the CNS from this session and a major supercompensation is often seen following a ten day period of reduced volume and intensity (Francis and Patterson, 1986).
- 7. Aerobic capacity is maintained through swimming which comprises no eccentric load, and this is thought to be favourable on maintaining, or at least not adversely affecting, speed qualities.
- 8. The bike session is continued to work on stride frequency.

Transition Phase (2 week example)

LIGHT WEEK a.m Swim 30 mins at very comfortable speed Stretch	Rest day	p.m Run 30 min run on grass at very easy speed Stretch	Rest day	p.m Circuits Bodyweight Circuits x 3 Press Ups, Sit ups, Lunges, Tricep Dips, Glute bridge, Abs. 30s on, 30s off	Rest day	a.m Bike 45 mins at a very easy speed Stretch
LIGHT WEEK Rest day	p.m Run 30 min run on grass at very easy speed Stretch	Rest day	p.m Circuits Bodyweight Circuits x 3 Press Ups, Sit ups, Lunges, Tricep Dips, Glute bridge, Abs. 30s on, 30s off	Rest day	p.m Swim 20 mins at very comfortable speed Stretch	Rest day

- 1. The Transition phase is where the volume of work is very low as well as the intensity. If the athlete needs to undertake training and be in peak shape quite quickly after this transition period then this will have major effect as to how long the transition period is and how challenging the training is.
- 2. Skill is not a high priority here. The athlete is just really getting a mental break from the demands of training in the previous 20 30weeks.
- 3. Flexibility is maintained at this stage.
- 4. Recovery strategies can be utilised here with mainly a relaxation value.
- 5. Strength training can be continued here (depending on the points raised in1.)

References

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