

The following tables are useful when planning the progression of your sprint training, and what to emphasize during the different phases of your season:

18 week season progression overview:

GENERAL PREPARATION	SPECIAL PREPARATION	COMPETITION
<p>MAJOR EMPHASIS</p> <p>General Endurance General Strength Flexibility Coordination</p>	<p>MAJOR EMPHASIS</p> <p>Specific Endurance Specific and General Strength Coordination Speed</p>	<p>MAJOR EMPHASIS</p> <p>Speed Specific Endurance Specific and General Strength Tactics</p>
<p>Minor Emphasis</p> <p>Speed</p>	<p>Minor Emphasis</p> <p>General Endurance Flexibility</p>	<p>Minor Emphasis</p> <p>General Endurance Flexibility Coordination</p>

sample weekly or 'microcycle' plan during different phases of the season:

	GENERAL PREPARATION	SPECIAL PREPARATION	COMPETITION
MON.	General Endurance General Strength Flexibility	General Endurance General Strength Flexibility	General Strength General Endurance Flexibility
TUES.	Coordination Speed Flexibility	Speed Specific Strength Coordination	Speed Specific Endurance Tactics
WED.	General Endurance General Strength Flexibility	Specific Endurance General Strength Flexibility	Specific Strength General Endurance Flexibility
THURS.	Coordination Flexibility Speed	Coordination Speed	Light warmup
FRI.	General Endurance General Strength Flexibility	General Endurance Flexibility	Light Speed Coordination
SAT.	General Endurance Flexibility	General Strength Specific Strength	Competition
SUN.	Rest	Rest	General Endurance/Rest

excellent resource: Will Freeman's Peak When it Counts available from "Track and Field News"

Anaerobic Alactic Speed Work *(True Speed & Power)*

Intensity	95 to 100% Effort
Distance of Run	20 to 60 meters
Number of Reps in a Set	3 to 4
Number of Sets	3 to 4
Total Distance Run in a Set	80 to 120 meters
Total Distance in a Training Session	400 to 600 meters
Recovery time between Reps	90 seconds to 3 minutes
Recovery Time between Sets	8 to 10 minutes

Remember the high end of the total distance run in one session is for advanced athletes

Anaerobic Lactate Work

	Speed Endurance	Special Endurance 1	Special Endurance 2
Intensity	90 to 100%	90 to 100%	90 to 100%
Distance of Run	60 to 150 meters	150 to 300 meters	300 to 600 meters
Number of Reps in a Set	2 to 5	1 to 5	1 to 4
Number of Sets	2 to 3	1	1
Total Distance Run in a Set	150 to 300 meters	Not Applicable	Not Applicable
Total Distance in a Training Session	300 to 1200 meters	300 to 1000 meters	300 to 1800 meters
Recovery time between Reps	2 to 5 minutes	Near Full: 10 to 20 minutes	Full Recovery 20 to 30 minutes
Recovery Time between Sets	8 to 10 minutes	Not Applicable	Not Applicable

Remember the high end of the total distance run in one session is for advanced athletes

Aerobic Running

	Continuous Running	Extensive Tempo	Intensive Tempo
Intensity	40 to 60%	60 to 80%	80 to 90%
Distance of Run	Long	100 to 400 meters	100 to 1000 meters
Number of Reps in a Set	Not Applicable	6 to 30	8 to 16
Number of Sets	Not Applicable	2 to 3	2 to 3
Total Distance Run in a Set	Very Long	Long	Long
Total Distance in a Training Session	Very Long	Long	6,000 to 12,000 meters
Recovery time between Reps	Not Applicable	Pulse 120 to 140 bpm	Pulse 120 bpm
Recovery Time between Sets	Not Applicable	Incomplete 5 to 10 minutes	Incomplete 10 to 20 minutes

Anaerobic Lactate Work

The next demand for energy comes from the Anaerobic Lactate System (also known as Glycolysis). The breakdown of glucose (sugar) is used to produce 2 to 3 ATP. Ultimately the system shuts down around 60 to 90 seconds due to the accumulation of hydrogen ions (H⁺). The muscle cannot function in a highly acidic environment. No oxygen is present utilizing this energy system.

Training the Anaerobic Lactate System

	Speed Endurance	Special Endurance 1	Special Endurance 2
Intensity	90 to 100%	90 to 100%	90 to 100%
Distance of Run	60 to 150 meters: 7-20 Seconds	150 to 300 meters: 20-40 seconds	300 to 600 meters: 40 seconds - 2 minutes
Number of Reps in a Set	2 to 5	1 to 5	1 to 4
Number of Sets	2 to 3	1	1
Total Distance Run in a Set	150 to 300 meters	Not Applicable	Not Applicable
Total Distance in a Training Session	300 to 1200 meters	300 to 1000 meters	300 to 1800 meters
Recovery time between Reps	2 to 5 minutes	Near Full: 10 to 20 minutes	Full Recovery 20 to 30 minutes
Recovery Time between Sets	8 to 10 minutes	Not Applicable	Not Applicable

The high end of the total distance run in one session is for advanced athletes

The Aerobic System

The aerobic system is highly trainable. In the aerobic system, pyruvate (from Glycolysis) and fatty acids (stored fats) are oxidized to create energy for movement. The aerobic system produces 36 to 37 ATP. The aerobic system is a very efficient producer of ATP compared to the anaerobic system. All energy systems are always available for operation instantaneously. A higher level of aerobic conditioning supports higher levels of intensity and effectively postpones the point at which the muscular action becomes totally anaerobic, with the resulting production of inhibiting lactic acid and hydrogen ions (H⁺)

Training the Aerobic System

	Continuous Running	Extensive Tempo	Intensive Tempo
Intensity	40 to 60%	60 to 80%	80 to 90%
Distance of Run	Long	100 to 400 meters	100 to 1000 meters
Number of Reps in a Set	Not Applicable	6 to 30	8 to 16
Number of Sets	Not Applicable	2 to 3	2 to 3
Total Distance Run in a Set	Very Long	Long	Long
Total Distance in a Training Session	Very Long	Long	6,000 to 12,000 meters
Recovery time between Reps	Not Applicable	Pulse 120 to 140 bpm	Pulse 120 bpm
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Anaerobic Alactic Speed Work (True Speed & Power) 1 to 7 seconds

The energy for movement in the first 7 seconds comes from the splitting of ATP (adenosine triphosphate) into ADP (adenosine diphosphate) and phosphate (P). Creatine Phosphate (CP) is then split to resynthesize ADP back into ATP. No oxygen is used with this energy system.

First 2 seconds ATP is split → ADP + P + Energy Released for Muscle Contraction
 Next for 4 to 5 seconds CP is split to provide energy to resynthesize ADP + P back to → ATP
 The Total Time for this Energy System in 7 seconds and no lactic acid is produced.

Training the Anaerobic Alactic System

Intensity	95 to 100% Effort
Distance of Run	20 to 60 meters
Number of Reps in a Set	3 to 4
Number of Sets	3 to 4
Total Distance Run in a Set	80 to 120 meters
Total Distance in a Training Session	400 to 600 meters
Recovery time between Reps	90 seconds to 3 minutes
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The time period for ATP and CP resynthesis is 50% for 30 seconds, 1 minute = 75%, 90 seconds = 80%, 3 minutes = 98% You must allow for adequate recovery if you want high quality work!

TEN DIFFERENT SAMPLE SPEED WORKOUTS

Workout	1		2		3	
	*	†	*	†	*	†
30	3x30	90	4x30	120	5x30	150
40	3x40	120	4x40	160	5x40	200
50	3x50	150	4x50	200	5x50	250
60	3x60	180	4x60	240	5x60	300
30-40	2x30 1x40	100	3x30 2x40	170	4x30 3x40	240
40-50	2x40 1x50	130	3x40 2x50	220	4x40 3x50	310
50-60	2x50 1x60	160	3x50 2x60	270	4x50 3x60	380
20-30-40	2(20,30,40)	180	2(20,30) 3x40	230	2x20 3(30,40)	250
30-40-50	2(30,40,50)	240	2(30,40) 3x50	290	2x30 3(40,50)	330
40-50-60	2(40,50,60)	300	2(40,50) 3x60	360	2x40 3(50,60)	410
30	2(3x30)	180	2(4x30)	240	2(5x30)	300
40	2(3x40)	240	2(4x40)	320	2(5x40)	400
50	2(3x50)	300	2(4x50)	400	2(5x50)	500
60	2(3x60)	360	2(4x60)	480		
30-40	5x30 4x40	310	2(3x30) 2x40	260	2(4x30) 3x40	360
40-50	5x40 4x50	400	2(3x40) 2x50	340	2(4x40) 3x50	470
50-60	5x50 4x60	490	2(3x50) 2x60	420		
20-30-40	3(20,30,40)	270	3(20,30)	310	3x20 4(30,40)	340
30-40-50	3(30,40,50)	360	3(30,40)	410	3x30 4(40,50)	450
40-50-60	3(40,50,60)	300	3(40,50)	470		

Note: * Suggested Workout † Total Distance Run