



Running Planet Semi Custom Training Programs  
College of Running Book Series

# Accelerated 12 Week Recreational Marathon Program

# PROGRAM OVERVIEW

This is a 12 week accelerated advanced competitive marathon program that uses one workout per day on 4 to 5 workouts per week. This marathon training program that is designed for recreational distance runners with some running experience. This program includes some high intensity workouts, weekly long training runs and basic strength training. The 12 week program begins with a long run base of 3 miles or 5 kilometers.

Accelerated training programs are designed for those time when you don't have enough training time before your race for a more conventional training approach. This accelerated training program concentrates on goal pace running and quality training sessions with fewer easy or recovery run workouts. There is also greater use of rest days to assist with recovery. This accelerated marathon program also uses a shorter taper or period of declining mileage and intensity that is used for recovery and strengthening before your race. To compensate for the shorter taper I have included more days of complete rest.

While accelerated programs are not the ideal training scenario, these programs will help you reach your training goal in a shorter period of time. When engaging in an accelerated program you should always pay close attention to any signs of over training such as elevated resting heart rate, chronic fatigue, frequent illness, mental burnout, muscle weakness or muscle pain. See [www.runningplanet.com](http://www.runningplanet.com) for more information on over training.

## RUNNING WORKOUTS

There are four specific types of running workouts in your program:

- **Endurance Runs** - This type of run is also known as aerobic conditioning. Endurance runs make up the highest percentage of overall mileage for a distance runner. Endurance runs build your overall endurance, increase your blood volume, improve your ability to store energy supplying fuel, and improves the ability of your system to deliver oxygen to your muscles. These workouts are performed at about 55 to 75 percent of your  $VO_2$  max (your body's ability to process oxygen). This pace should feel easy and "conversational" in nature.
- **Progressive Runs** - Progressive runs are a workout that combines endurance training, tempo training, lactate turn point training. When performing progressive runs you should start at an easy endurance pace and gradually increase your pace through out your training run. Increase from endurance pace to lactate turnpoint pace through all but the final mile of your progressive run. Then speed up to speed or 5K pace for the final mile. For example, if you are doing a 6 mile progressive run you should start at endurance pace and gradually speed up to lactate turnpoint pace through the first 5 miles. Then speed up to goal 5K pace for the final mile.

- **Long Runs** - These runs improve your endurance, goal pace endurance and mental toughness. They also improve your body's ability to burn fat as fuel and conserve carbohydrates. Long runs are performed at an easy pace, goal pace or a combination of the two paces.
- **Goal Pace Training** - One of the most important and often forgotten competitive training paces is goal pace running. Goal pace training will improve your goal specific neuromuscular function and make you a more efficient runner at goal pace.

What about tempo runs? Most training program depend heavily upon tempo training runs. Tempo runs are moderate to long distance run that are performed at between marathon pace and about 15 seconds per mile slower than 10K pace. Tempo training intensity is slightly less than lactate turn point intensity. The purpose of tempo running is to improve your ability to run long distances at paces that produce a significant amount of metabolites without the limiting factor of reaching your lactate turn point. Why doesn't this program include tempo runs? It does - this program uses many goal pace training workouts. Your marathon goal pace is on the low end of tempo run pace. We use this tempo pace because it is critical to develop your neuromuscular efficiency at your goal marathon pace.

## STRENGTH WORKOUTS

The second category of workouts in your training program are strength workouts. Strength training is important for runners because it helps prevent injury, improve your impact resistance, improve your running economy and build your speed and power. Strength training workouts fall into one of three types; general strength, running specific strength and plyometrics. Your program includes only general strength and running specific strength. More advanced competitive programs will include plyometric exercises.

- **General Strength** - General strength workouts build your overall body strength and provide a base for the more specific types of strength training.
- **Running Specific Strength** - These are strength building exercises that target your running specific motions and muscles
- **Plyometrics** - Plyometrics are high intensity strength exercises and drills that are explosive in nature and are great for improving running economy and power.

## YOUR TRAINING PACES

This program uses 4 different training paces. The 4 paces are the critical paces for improving running performance and helping you reach your goal. Specific training paces for your goal time are provided in the tables at the end of this chapter. The five training paces are:

- **Endurance Pace** - This pace, which makes up the majority of your training mileage, is usually done at between 1 and 2 minutes slower than your marathon goal pace. This is one time where your exact speed is not important - as long as you do not run too fast. Rather than try for a specific pace, perform all of your endurance pace runs at an intensity that feels easy. They should be "conversational" in nature, meaning you should be able to carry on a conversation while you are running. Judging your pace by feel rather than pace will insure that you are running at a pace that is easy enough to gain the benefits of endurance workouts and also that you are able to recover from your more intense workouts. Your endurance pace should fall around a level 11 to 12 on the RPE scale at the end of this section.

- **Goal Pace** - This is the pace you must maintain to meet your marathon goal time. The first table lists your specific goal pace in minutes per mile, the second in minutes per kilometer. If you don't have a specific goal time in mind I would suggest performing these runs at about level 12 to 13 on the RPE scale.
- **Lactate Turnpoint Pace** - Your lactate turnpoint pace (LT) is the pace at which your body begins to accumulate lactic acid and potassium faster than your body can process it. This occurs at paces just slower than your 10K race pace. Run at level 13 to 14 on the RPE scale.
- **Speed Pace** - Your speed pace ranges from your 5K goal pace to about 10 seconds per mile faster than 5K race pace or about 3K pace. See each suggested workout for the paces for the individual speed training runs. This is an intense running pace at around level 17 to 18 on the RPE scale.

It is very difficult and not really necessary to maintain these exact training paces throughout your workouts. Instead, try to stay within plus or minus 3 seconds of each training pace.

<b>Training Paces for Goal Marathon Times</b>					
<b>All Paces in Minutes per Mile</b>					
Goal Finishing Time	Endurance - Easy Pace	LT - 10K Pace	Speed - 5K Pace	vVO2 Max - 3K Pace	Goal Race Pace
2:10	Easy	4:24	4:08	3:58	4:58
2:20	Easy	4:45	4:29	4:19	5:21
2:30	Easy	5:05	4:50	4:40	5:44
2:40	Easy	5:24	5:09	5:00	6:06
2:50	Easy	5:45	5:30	5:15	6:29
3:00	Easy	6:06	5:51	5:36	6:52
3:10	Easy	6:25	6:10	5:55	7:15
3:20	Easy	6:46	6:31	6:15	7:38
3:30	Easy	7:05	6:51	6:30	8:01
3:40	Easy	7:28	7:13	6:55	8:24
3:50	Easy	7:48	7:33	7:18	8:47
4:00	Easy	8:09	7:54	7:34	9:10
4:10	Easy	8:28	8:13	7:58	9:33
4:20	Easy	8:47	8:32	8:15	9:55
4:30	Easy	9:08	8:53	8:35	10:18
4:40	Easy	9:29	9:15	8:55	10:41
4:50	Easy	9:48	9:33	9:15	11:04
5:00	Easy	10:10	9:55	9:30	11:27
5:10	Easy	10:29	10:13	10:00	11:50
5:20	Easy	10:50	10:34	10:20	12:13
5:30	Easy	11:11	10:55	10:40	12:36
5:40	Easy	11:31	11:15	11:00	12:59
5:50	Easy	11:52	11:36	11:20	13:22
6:00	Easy	12:12	11:56	11:40	13:44

**Training Paces for Goal Marathon Times  
All Paces in Minutes per Kilometer**

Goal Finishing Time	Endurance - Easy Pace	LT - 10K Pace	Speed - 5K Pace	vVO2 Max - 3K Pace	Goal Race Pace
2:10	Easy	2:44	2:34	2:28	3:05
2:20	Easy	2:57	2:47	2:41	3:19
2:30	Easy	3:09	3:00	2:54	3:33
2:40	Easy	3:21	3:12	3:06	3:47
2:50	Easy	3:34	3:25	3:15	4:01
3:00	Easy	3:47	3:38	3:28	4:15
3:10	Easy	3:59	3:49	3:40	4:30
3:20	Easy	4:12	4:02	3:53	4:44
3:30	Easy	4:24	4:15	4:02	4:58
3:40	Easy	4:38	4:28	4:17	5:12
3:50	Easy	4:50	4:41	4:32	5:27
4:00	Easy	5:03	4:54	4:41	5:41
4:10	Easy	5:15	5:06	4:56	5:55
4:20	Easy	5:27	5:17	5:07	6:09
4:30	Easy	5:40	5:30	5:19	6:23
4:40	Easy	5:53	5:44	5:32	6:37
4:50	Easy	6:05	5:55	5:44	6:52
5:00	Easy	6:18	6:09	5:53	7:06
5:10	Easy	6:30	6:20	6:12	7:20
5:20	Easy	6:43	6:33	6:24	7:34
5:30	Easy	6:56	6:46	6:37	7:49
5:40	Easy	7:08	6:58	6:49	8:03
5:50	Easy	7:21	7:12	7:02	8:17
6:00	Easy	7:34	7:24	7:14	8:31

Not all recreational marathon runners have a specific finishing time as their goal. If you don't have a specific time in mind and simply want to finish your marathon as well as possible you don't really need to train using specific time paces. In your case I would suggest training by perceived exertion using the Borg scale or a modified Borg scale. The Borg scale is a simple system that rates how hard you are running. Below is the basic Borg scale.

<b>Rating of Perceived Exertion</b>			
Rating	Perception of Effort	Rating	Perception of Effort
5	Very Little	13	Somewhat Hard
6	Minimal	14	Somewhat Hard +
7	Very, Very Light	15	Hard
8	Very, Very Light +	16	Hard +
9	Very Light	17	Very Hard
10	Very Light +	18	Very Hard +
11	Fairly Light	19	Very, Very Hard
12	Comfortable	20	Maximal

The Borg RPE scale, while very useful can be a bit hard to follow with the various ratings of hard, somewhat hard and hard+. To makes things a little easier I have adapted the scale to a more user friendly version.

<b>Beginning Runner's RPE Scale</b>			
Rating	Perception of Effort	Rating	Perception of Effort
5	Lounging in the hammock	13	Running harder to catch up with the dog. You are starting to breath noticeable harder
6	Reaching for a cold drink from the hammock	14	Running away from a small dog chasing you. Breathing hard but still able to talk
7	Sitting up to reach for a cold drink	15	Running from a medium dog chasing you. Breathing even harder but still able to talk
8	Walk across the lawn to get a cold drink	16	Big dog chasing you. Breathing heavier. Talking becoming difficult
9	A walk in the park	17	Pack of dogs chasing you. Breathing is very heavy. Talking becoming impossible
10	Taking the dog for a brisk walk in the park	18	Big bear chasing you. Very heavy breathing
11	The dog taking me for a very brisk walk in the park	19	Big bear chasing you uphill. Very heavy breathing
12	Running easy to keep up with the dog	20	Big bear just jumped on your back. You are at maximal effort.

If you choose to judge your pace using a heart rate monitor the table below will give you the approximate heart rate training ranges for each RPE zone.

<b>RPE Heart Rate Equivalent</b>			
Rating	% of MHR	Rating	% of MHR
5	20% - 25%	13	60% - 65%
6	25% - 30%	14	70% - 75%
7	30% - 35%	15	75% - 80%
8	35% - 40%	16	80% - 85%
9	40% - 45%	17	85% - 90%
10	45% - 50%	18	90% - 95%
11	50% - 55%	19	95% - 98%
12	55% - 60%	20	98% - 100%

# TRAINING SCHEDULE - WEEK 1

Suggested Workout Sequence						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest or Cross Train	Key 1  General Strength	Key 2	Key 3  General Strength	Key 4	Rest or Cross Train	Key 5

Running Workouts	
Workout	Description
Key 1	Run 3 miles or 5K at easy endurance pace
Key 2	Run a 2 mile or 3K progressive run
Key 3	Run 3 miles or 5K at easy endurance pace
Key 4	Run 2 miles or 3K at easy endurance pace
Key 5	Run 4 miles or 6.5K @ easy endurance pace

Strength Workouts	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	None
Plyometrics	None



# TRAINING SCHEDULE - WEEK 2

<b>Suggested Workout Sequence</b>						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest or Cross Train	Key 1	Key 2	Key 3	Key 4	Rest or Cross Train	Key 5
	General Strength		General Strength			

<b>Running Workouts</b>	
Workout	Description
Key 1	Run 3 miles or 5K at easy endurance pace
Key 2	Run 2 miles or 3K at goal marathon pace
Key 3	Run 3 miles or 5K at easy endurance pace
Key 4	Run 4 miles or 6.5K at easy endurance pace
Key 5	Run 6 miles or 10K @ easy endurance pace

<b>Strength Workouts</b>	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	None
Plyometrics	None

# TRAINING SCHEDULE - WEEK 3

Suggested Workout Sequence						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest or Cross Train	Key 1	Key 2	Key 3	Key 4	Rest or Cross Train	Key 5
	General Strength		General Strength			

Running Workouts	
Workout	Description
Key 1	Run 4 miles or 6.5K at easy endurance pace
Key 2	Run a 3 mile or 5K progressive run
Key 3	Run 3 miles or 5K at easy endurance pace
Key 4	Run 4 miles or 6.5K at easy endurance pace
Key 5	Run 8 miles or 13K @ easy endurance pace

Strength Workouts	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	None
Plyometrics	None

# TRAINING SCHEDULE - WEEK 4

<b>Suggested Workout Sequence</b>						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest or Cross Train	Key 1	Key 2	Key 3	Key 4	Rest	Key 5
	General Strength		General Strength			

<b>Running Workouts</b>	
Workout	Description
Key 1	Run 5 miles or 8K at easy endurance pace
Key 2	Run 4 miles or 6.5K at goal marathon pace
Key 3	Run 6 miles or 10K at easy endurance pace
Key 4	Run 4 miles or 6.5K at easy endurance pace
Key 5	Run 10 miles or 16K @ easy endurance pace

<b>Strength Workouts</b>	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	None
Plyometrics	None

# TRAINING SCHEDULE - WEEK 5

Suggested Workout Sequence						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest	Key 1	Key 2	Key 3	Key 4	Rest	Key 5
	General Strength		Running Strength			

Running Workouts	
Workout	Description
Key 1	Run 6 miles or 10K at easy endurance pace
Key 2	Run a 5 mile progressive run
Key 3	Run 6 miles or 10K at easy endurance pace
Key 4	Run 4 miles or 6.5K at easy endurance pace
Key 5	Run 12 miles or 19K @ easy endurance pace

Strength Workouts	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	1 set of running strength
Plyometrics	None

# TRAINING SCHEDULE - WEEK 6

<b>Suggested Workout Sequence</b>						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest	Key 1	Key 2	Key 3	Key 4	Rest	Key 5
	General Strength		Running Strength			

<b>Running Workouts</b>	
Workout	Description
Key 1	Run 7 miles or 11K at easy endurance pace
Key 2	Run 5 miles or 8K at goal marathon pace
Key 3	Run 6 miles or 10K at easy endurance pace
Key 4	Run 3 miles or 5K at easy endurance pace
Key 5	Run 14 miles or 22.5K @ easy endurance pace

<b>Strength Workouts</b>	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	1 set of running strength
Plyometrics	None

# TRAINING SCHEDULE - WEEK 7

<b>Suggested Workout Sequence</b>						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest	Key 1	Rest	Key 2	Key 3	Rest	Key 4
	General Strength		Running Strength			

<b>Running Workouts</b>	
Workout	Description
Key 1	Run 8 miles or 13K at easy endurance pace
Key 2	Run a 6 mile progressive run
Key 3	Run 6 miles or 10K at easy endurance pace
Key 4	Run 16 miles or 26K @ easy endurance pace

<b>Strength Workouts</b>	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	1 set of running strength
Plyometrics	None

# TRAINING SCHEDULE - WEEK 8

<b>Suggested Workout Sequence</b>						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest or Cross Train	Key 1  General Strength	Rest	Key 2  Running Strength	Key 3	Rest	Key 4

<b>Running Workouts</b>	
Workout	Description
Key 1	Run 8 miles or 13K at easy endurance pace
Key 2	Run 7 miles or 11K at goal marathon pace
Key 3	Run 6 miles or 10K at easy endurance pace
Key 4	Run 18 miles or 29K at easy endurance pace

<b>Strength Workouts</b>	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	1 set of running strength
Plyometrics	None

# TRAINING SCHEDULE - WEEK 9

<b>Suggested Workout Sequence</b>						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest	Key 1	Rest	Key 2	Key 3	Rest	Key 4
	General Strength		Running Strength			

<b>Running Workouts</b>	
Workout	Description
Key 1	Run 6 miles or 10K at easy endurance pace
Key 2	Run an 7 mile or 11K progressive run
Key 3	Run 6 miles or 10K at easy endurance pace
Key 4	Run 20 miles or 32K. Run the first 18 miles or 29K at easy endurance pace and the final 2 miles or 3K at goal marathon pace

<b>Strength Workouts</b>	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	1 set of running strength
Plyometrics	None



# TRAINING SCHEDULE - WEEK 10

<b>Suggested Workout Sequence</b>						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest or Cross Train	Key 1  General Strength	Rest or Cross Train	Key 2  Running Strength	Rest or Cross Train	Key 3	Key 4

<b>Running Workouts</b>	
Workout	Description
Key 1	Run 6 miles or 10K at easy endurance pace
Key 2	Run 8 miles or 13K at goal marathon pace
Key 3	Run 6 miles or 10K at goal marathon pace
Key 4	Run 22 miles or 35K. Run the first 18 miles or 29K at easy endurance pace and the final 4 miles or 6K at goal marathon pace

<b>Strength Workouts</b>	
Workout	Description
General Strength	1 set of general strength
Running Specific Strength	1 set of running strength
Plyometrics	None

# TRAINING SCHEDULE - WEEK 11

<b>Suggested Workout Sequence</b>						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest	Key 1	Rest or Cross Train	Key 2	Rest	Key 3	Key 4

<b>Running Workouts</b>	
Workout	Description
Key 1	Run 8 miles or 13K at easy endurance pace
Key 2	Run a 6 miles or 10K progressive run
Key 3	Run 4 miles or 6.5K @ easy endurance pace
Key 4	Run 8 miles or 13K @ goal marathon pace

<b>Strength Workouts</b>	
Workout	Description
General Strength	None
Running Specific Strength	None
Plyometrics	None

# TRAINING SCHEDULE - WEEK 12

<b>Suggested Workout Sequence</b>						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rest or Cross Train	Key 1	Rest or Cross Train	Key 2	Rest	Rest	Key 3

<b>Running Workouts</b>	
Workout	Description
Key 1	Run 8 miles or 13K @ goal marathon pace
Key 2	Run a 6 mile or 10K progressive run
Key 3	Marathon

<b>Strength Workouts</b>	
Workout	Description
General Strength	None
Running Specific Strength	None
Plyometrics	None

# STRENGTH TRAINING

Strength training is essential in developing speed, power and muscle elasticity which is important for all runners but especially competitive athletes. Successful distance running depends running as efficiently as possible. If you are able to run faster at a lower fractional percentage of your  $VO_2$  max your race pace will improve.

One of the best ways to improve your running efficiency is to improve your running economy. If you run easy, you will win easy. Strength training will improve your running economy, stride length and foot speed. It will also decrease your ground contact time, which will take minutes off your finishing time.

There are three types of strength training I believe you should be performing on a consistent basis - general strength training, running specific strength training and plyometrics. These types of strength training build upon each other. The general strength training improves your overall strength and provides a base to support the next phases of your strength training. Running specific strength will improve the strength of your running specific motions and muscles. Plyometrics are drills and exercises that increase your power and explosive strength.



## GENERAL STRENGTH TRAINING

Below are the general strength training exercises the I feel are most appropriate for your training program. These exercises build a base of strength that will improve your impact resistance, help you avoid injuries and will build a base of strength for running specific strength exercises and plyometrics.

- Push Ups
- Biceps curl
- Bench Dips
- Supine Lat Pull Ups
- Squats
- Calf Raises
- Core Stabilization

# **RUNNING SPECIFIC MUSCLE EMPHASIS (RUNNING STRENGTH)**

These exercises strengthen your running specific motions and muscles.

- **Bench Step Ups**
- **One Leg Squats**
- **Resisted Paw Backs**
- **Resisted Knee Drive**
- **Lunges**

# GENERAL STRENGTH EXERCISES

## PUSH UPS

- Begin face down on the floor supporting yourself with your hands approximately shoulder width apart and your arms extended. Your feet can be together or up to 12 inches apart. Keep your body in a straight, neutral position. Do not arch your back. Contract your abdominal muscles to stabilize your trunk and spine.
- Slowly lower your body until your chest touches the floor. Push off the floor and return to the starting position. Repeat until you are fatigued.
- Breathe throughout the exercise. Exhale on the upward portions and inhale on the downward portion.
- Do one set to fatigue.



## STABILITY BALL PUSH UPS

- These are similar to standard push ups except you do them with your legs elevated on an exercise ball. Place your feet and lower legs on top of an exercise ball and support your upper body with your hands approximately shoulder width apart and your arms extended. Do not arch your back. Contract your abdominal muscles to stabilize your trunk and spine.
- Slowly lower your body until your chin and chest are near the floor. Concentrate on maintaining your stability on the ball. Push off the floor and return to the starting position. Repeat until you are fatigued.
- Breathe throughout the exercise. Exhale on the upward portions and inhale on the downward portions.
- Do one set to fatigue.



## BICEPS CURL

- Standing upright, grasp the weight with your palms facing away from the front of your body. Contract your abdominal muscles to stabilize your trunk and spine. Keep your upper arms against your ribs and perpendicular to the floor.
- Slowly raise the weight by flexing your arms at your elbows. Keep your upper arms stationary. Raise the weight to the limit of your natural motion. Slowly return to the starting position.
- Breathe throughout the exercise. Exhale on the upward portions and inhale on the downward portion. Do not arch your back. Keep your body still and straight. Control the weight throughout the exercise.
- Use a weight that takes you to exhaustion in about 15 to 20 repetitions. Do one set.



## BENCH DIPS

- Sit on the bench or step with your palms down and gripping the edge of the bench. Slide your feet out in front of you so that you are supporting yourself on your heels and hands.
- Slowly lower yourself until your elbows are bent to approximately 90 degrees. Keeping your elbows pointing behind you push yourself back up by straightening your arms. Repeat this until you are fatigued. Breathe throughout the exercise. Exhale on the upward portions and inhale on the downward portion.



## SUPINE LAT PULL UPS

- A good place to do this exercise is on your treadmill. Lie face up on the deck of your treadmill. Reach up and grab the treadmill handles.
- Contract your core abdominal muscles to stabilize your hips and spine.
- Keeping your body firm and straight, slowly pull yourself up towards the handles of your treadmill.
- Slowly return to the starting position.
- Concentrate on pulling with the latissimus dorsi muscles of your upper back.
- Do one set until exhaustion.



## SQUATS

- Stand in an upright position with your feet shoulder width apart. Hold your chest up and out. Pinch your shoulder blades together. Keep your head up. Contract your abdominal to stabilize your trunk.
- Slowly lower your body by allowing your knees and hips to flex. Maintain an erect body position. Lower your body until your thighs are nearly parallel to the floor. Do not allow your knees to move in front of your toes. As you lower your body raise your arms in front of you.
- Slowly raise your body back up to the starting position by extending your knees and hips. Breath throughout the exercise. Exhale on the upward portions and in-hale on the downward portion. Do not arch your back.
- Perform one set of 20 to 30 repetitions.





## CALF RAISE

- Stand with one foot on a bench or step. Your toes and the ball of your foot should be on the step with your heel hanging off the edge. Hold your other foot up and behind you.
- Extend your foot so that your heel is raised up and your foot is on its toes. Slowly lower your heel until it is slightly below the step and you feel a slight stretch in your calf muscle. Repeat for your desired number of repetitions. Repeat this exercise with the other foot. Breathe throughout the exercise. Exhale on the upward portions and inhale on the downward portion.
- Do one set of 20 to 30 repetitions.



## CORE STABILIZATION

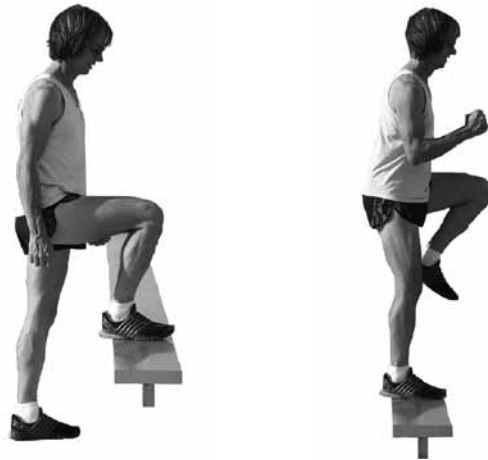
- Lie face down on a mat or on a soft grassy area. Support your weight with your feet and forearms. Tuck your pelvis so that your hips are pressed forward and your body is straight. Hold this position for 20 to 30 seconds.
- Now lift your left arm and hold it straight out so that it is above your head. Hold for 20 to 30 seconds. Return the left arm to the support position and lift your right arm above your head and hold for 20 to 30 seconds. Return the right arm to the support position and lift your left foot off of the mat and hold for 20 to 30 seconds. Return the left foot to the mat and lift the right foot and hold for 20 to 30 seconds.
- Here comes the fun part. Lift your right arm and left foot at the same time. You should now be supporting your body with your left forearm and your right foot. Hold for 20 to 30 seconds. Now return the right arm and left foot to the mat and lift your left arm and right foot. Hold for 20 to 30 seconds.



# RUNNING STRENGTH EXERCISES

## BENCH STEP UPS

- Stand directly in front of a step bench that is 18 to 24 inches high. Place one foot (support foot) flat on the bench. With most of your weight on the heel of your support foot, forcefully push off with the support leg. At the same time drive your other knee up as in a running motion.
- Slowly lower your driving leg back to the ground in the original starting position. Repeat for the desired number of repetitions.
- Repeat this exercise using the other leg as the support leg. Breathe throughout the exercise. Inhale on the downward portions and exhale on the upward portion. Keep your back in a vertical position. Do not allow the knee of the support leg to extend in front of the foot.
- Do one set of 20 to 30 repetitions.



## ONE LEG SQUATS

- Contract your abdominal muscles to stabilize your trunk and spine. Place one foot (rear foot) behind you on a bench that is 12 to 18 inches high. Your other foot (forward foot) should be flat on the floor and directly under you.
- Bend your forward knee until it is at approximately a 90-degree angle. Do not let your knee extend in front of your foot. Slowly straighten your forward leg and return to the starting position. Repeat this exercise using the other leg as the lead leg.
- Breathe throughout the exercise. Inhale on the downward portions and exhale on the upward portion. Keep your back in a vertical position. Do not allow the knee of the forward leg to extend in front of the foot.
- Do one set of 20 to 30 repetitions.



## RESISTED PAW BACKS

- You can do this exercise using a low cable machine or with exercise tubing. Facing the resistance, support your weight on your left leg. Place your right foot through the low cable strap or tubing strap.
- Pull your right foot back against the resistance and bring your heel up and then drive your right knee back through to the starting position. Your foot and leg should follow a natural running motion.
- Do 20 repetitions with one leg, then repeat with the other leg.
- Use a resistance level that takes you to exhaustion in about 20 repetitions.
- Breathe throughout the exercise
- Do not lock your knees at any time during this exercise.



## RESISTED KNEE DRIVE

- You can do this exercise using a low cable machine or with exercise tubing.
- Facing away from the resistance, support your weight on your left leg. Place your right foot through the low cable strap or tubing strap.
- Drive your right knee forward against the resistance.
- Slowly return your leg to the starting position.
- Use a resistance level that takes you to exhaustion in about 20 repetitions.
- Breathe throughout the exercise
- Do not lock your knees at any time during this exercise.



## LUNGES

- Stand in an upright position. Contract your abdominal muscles to stabilize your trunk and spine. Take a long step forward with one leg. Keep the knee and foot of the forward leg aligned.
- Slowly flex your forward knee until your thigh is parallel to the floor. At the same time lower the knee of your trailing leg toward the floor. Do not allow the knee of the forward leg to extend in front of the foot. The knee of the rear leg should stop approximately 2 inches above the floor. Keep your upper body in a vertical position.
- Forcefully push off with the forward leg and bring it back into position with the trailing leg. You should now be back in the starting position.
- Repeat this exercise using the other leg as the forward leg. Keep your back in a vertical position. Do not allow the knee of the forward leg to extend in front of the foot. Do not lock your knees at any time during this exercise.
- Do one set of 20 to 30 repetitions.



# STRETCHING, WARM UP AND COOL DOWN

The most common warm up performed by most runners is a brief easy run to warm up the muscles followed by a series of static stretching. I think that a more efficient warm up for competitive runners is to follow a warm up run with dynamic drills rather than static stretching. There has been a lot of recent research that has suggested that extensive pre run static stretching does very little to prevent running injuries and may also decrease your ability to produce speed and power.

I would recommend first doing a easy warm up run and then do the following dynamic drills. The time to do static stretching is after your training run or race. At that point the static stretching will assist with your cool down and maintain flexibility without adversely affecting your training run or race.

## DYNAMIC WARM UP DRILLS

### WALKING LUNGE

- Take a long, exaggerated step forward with one leg. Drive your knee high and reach out as far as possible. Slowly flex your forward knee until your thigh is parallel to the ground. At the same time lower the knee of your trailing leg toward the ground. Do not allow the knee of your forward leg to extend in front of your foot. The knee of your trailing leg should stop approximately 2 inches above the ground, not touch the ground. Your upper body should remain in a vertical position.
- Forcefully push off with our forward leg, keeping most of your weight over your forward heel. At the same time cycle your trailing leg through and perform the same motion as described above. Keep performing these cycling motions so that you are moving forward with a walking lunge. Keep going for about 20 meters.



## HIGH KNEES DRILL

- Using a short stride and bouncing on your toes, take a step with an exaggerated high stride. Drive your knee as high as possible on each stride. As you drive your knee high bounce up on the toes of your opposite foot.
- Keep cycling your legs through this motion so that you are moving slowly forward over the ground with the exaggerated high knee motion and bouncing on your opposite foot. Keep going for about 20 meters.



## HEEL KICK DRILL

- Begin by performing a slow jog. Using a short stride and bouncing on your toes, raise your heels as high as possible behind your body. Attempt to bounce your heels off your buttocks.
- Most of the movement should be with your lower leg. Concentrate on raising your heels as high as possible and staying on the balls of your feet with a bouncing motion. Keep moving forward for about 20 meters.



## WALKING SIDE LUNGE DRILL

- This drill is similar to the walking lunge exercise except you will be moving to the side instead of forward. Take a long, exaggerated step sideways with one leg. Slowly flex your lunging knee until your thigh is parallel to the ground. At the same time your trailing leg should remain straight and close to the ground. Your upper body should remain in a vertical position.
- Forcefully push off with your lunging leg, keeping most of your weight over your forward heel. Stand upright and bring your feet back together. Keep performing these motions so that you are moving sideways. Keep going for about 20 meters, then repeat going the opposite direction.



# STATIC COOL DOWN STRETCHES

## HAMSTRING STRETCH

- Lie on your back in a supine position. Keep your right foot on the ground with your knee bent at 90 degrees.
- Raise your left leg up, grab it below your ankle and pull it toward your shoulders.
- Pull your leg until you feel a slight pull. Hold that position for about 20 seconds. Switch your leg positions and repeat.



## HIP STRETCH

- This exercise will stretch the iliopsoas muscle on the front of your hip.
- Move your right leg forward until your knee is directly over your ankle. Your left leg should be stretched out behind you with your knee on the ground.
- Now lower and push your hips down and forward to create a gentle stretch.
- Hold this position for 20 to 30 seconds. Switch your leg positions and repeat.



## QUADRICEPS STRETCH

- While standing on your left foot, pull your right foot up toward your right hip.
- Keep your lower leg aligned with your thigh. Do not pull your lower leg to the right or left.
- Pull until you feel a gentle stretch.
- Hold this position for 20 to 30 seconds. Switch leg positions and repeat.



## BUTTERFLY STRETCH

- This is an exercise that will stretch the adductor (groin) muscles of your inner thigh.
- Start in a sitting position with your knees out and the soles of your feet together.
- Grab your toes and pull them gently upward. At the same use your elbows to gently push outward on your knees. You should feel a slight stretch on your inner thigh.
- Hold this position for about 20 to 30 seconds.



## CALF STRETCH

- There are two muscles in your calf that you should stretch. The largest and most visible muscle is called the gastrocnemius muscle. This is the large one you can see on the back of your lower leg. Underneath your gastrocnemius muscle is your soleus muscle. Your gastrocnemius muscle does most of the work when your knee is straight. When your knee is bent your soleus muscle contributes more work.
- To stretch your gastrocnemius muscle lie face down with your arms supporting your upper body in a push up position. Place your left foot over the back of your right ankle. Keep your right leg straight. With your toes flat on the ground push back so that your right heel is forced towards the ground. Hold that position for 20 to 30 seconds.
- Reverse leg positions and repeat.
- To stretch your soleus muscle perform the same exercise except bend your leg at the knee. This will bring your soleus muscle more into the stretch.







# RACE STRATEGY

Proper pacing and race strategy are critical to the success of any race, but this is especially true for the marathon. Running at too fast a pace in the early stages of a marathon can have disastrous results. If you run the first part of the race too fast you may have trouble maintaining a strong pace in the always difficult final miles in your marathon. In most cases running an even pace during your marathon will result in the best performance but your conditioning, course terrain & weather will dictate correct strategy.

## LINING UP

The proper etiquette to follow in lining up for road racing is to place yourself in a position in the starting pack that surrounds you with runners of equal ability. That means that if everyone lines up correctly, faster runners should be at or near the front of the pack. In a perfect world races would work that way. However, many runners do not follow this rule of etiquette. Nearly every race will have slower runners that decide to line up with their toes on the starting line. This results in the faster runners behind them having to weave around the slower runners. If a faster runner were to get caught behind these slower runners it could cost precious seconds at the start of the race. In the same way, a slower runner in the front could get caught up in the excitement of the start and run faster than they should. Starting too fast can be disastrous later in the race.

At your level I would suggest choosing a starting position roughly in the middle of the pack or your starting corral. Unless you are able to maintain a sub seven minute per mile pace, avoid the temptation to start at the front of the starting pack. It will be very easy to get carried along with the faster runners which will cause you to burn more off your valuable carbohydrates early in the race and make finishing strongly very difficult. At the same time, don't line up so far in the back that you are blocked by slower runners.

## THE START

At the start of the race your adrenalin will be flowing freely and you may find it hard to keep your speed down to your planned pace. Make a conscious effort to keep your pace down at the start. Try to get into your planned marathon pace and race rhythm right away. Some

less experienced marathon runners tend to run hard during the first mile or so of a marathon due to excitement and the mistaken belief that they can maintain a fast pace. They will quickly fatigue and drop back. Avoid the temptation to try to follow an inexperienced runner that is running too fast at the start. Let them go and run your race. Any runner that goes out way too fast will crash and burn spectacularly later in the race.

After the first mile or two you should find yourself surrounded by runners that are running a pace very similar to yours. Relax and stay in your race rhythm at this point. Use the muscle memory you built up during your goal pace training workouts and run on “cruise control”. The many goal pace runs you did during training should have made your goal pace feel natural and fluid.

## RACE PACING

There are a number of possible pacing strategies. Each of these have their advantages and disadvantages. The proper strategy will depend upon your strengths and weaknesses; and the race and course conditions.

- **Even Pacing** - Maintaining the same pace per mile throughout the race. This strategy is favored by many athletes and results in very good performances. Many studies have shown that the top runners in most races tend to run both the first half and the second half of the race in nearly equal times.
- **Even Effort** - Maintaining the same perceived effort level throughout the race. This type of pacing is more appropriate for beginning runners. Even effort pacing will result in slowing throughout the race due to the perceived effort level rising as you fatigue. This type of pacing will allow you to finish comfortably, but will not result in optimal performance.
- **Negative Splits** - Running the second half of the race faster than the first. Many coaches favor negative splits, because the easier start will reserve strength and energy for a fast finish. This type of pacing can be very enjoyable because you will pass a lot of runners in the last half of the race. If the course is flat and conditions are good, it can also give very good results. This is not always the best strategy if the second half of the course is harder than the first. It can also become difficult to catch competitors that run stronger in the first half and open up a large lead. Running negative splits is very difficult in a marathon because of the problems associated with neuromuscular fatigue and carbohydrate depletion making this a somewhat less promising marathon tactic.
- **Surging** - Changing your pace throughout the race, depending upon race and course conditions. Surging is a very useful strategy and if used properly can give excellent results in any race including the marathon.
- **Front Running** - Starting strong and trying to hang on throughout the race. This is not recommended for most runners. The idea of this type of pacing is to open a large lead and then try to hang on for the remainder of the race. This will always lead to a lot of pain in the last half of the race and very seldom results in top performances. There are some runners that have a very efficient stride that can maintain a quality pace when very fatigued. This type of runner may have success with this type of pacing, but for most runners, this is a bad pacing strategy.
- **Strong Start/Middle Float** - Starting strong, then running at a quality, but relaxed pace in the middle and finishing strong. This is a modified type of front running. Using this strategy, a runner

will start strong and create some separation from the other runners. This runners will then slow to a strong but relaxed pace and try to recover while maintaining a lead. Then when partially recovered will finish strong. As with front running, only a runner that is able to handle a lot of pain and has a very efficient stride will have success with this strategy.

- **Middle Push/Strong Finish** - Starting at a relaxed pace, pushing hard in the middle miles and try to hang on for a strong finish. This is a very popular strategy that consistently results in top performances. Using this method, the runner will start with a relaxed pace in the early miles. In the middle of the race, the runner will pick up the pace to just over race pace and try to maintain this pace through to the finish. If you have the mental and physical strength to maintain that quality pace through to the finish, you will get very good results with this strategy.

## PACING SUGGESTIONS

I would suggest using a combination of even pacing and surging. Try to maintain an even pace, right at your planned pace for the majority of the marathon. Throw in surges when passing other competitors. Frequent but brief surges will also use additional muscle fibers and give your overworked slow twitch fibers a break.

Use the water and fluid stations as an opportunity for some recovery time. Don't stop, but feel free to either slow your pace or walk while you are hydrating. The brief ten or fifteen second recoveries will give your muscles a much needed break and will pay benefits later in the race.

When you reach the 18 to 22 mile point you will most likely begin to feel the sluggishness and discomfort associated with marathon related fatigue. Stay mentally strong and physically relaxed. Keep up a steady stride rate and try to stay in your race rhythm. In the final mile or two consider increasing your pace. Just as with surging, increasing your pace will recruit some fast twitch muscles that may not be as fatigued as your slow twitch muscles that have been working hard for over 20 miles. With about 400 meters until the finish line smoothly accelerate to nearly a sprint pace and cross the finish line strongly.

If your course has hills, use them to your advantage. On the uphills run strongly, but stay relaxed. Your pace will drop slightly on the uphills, but stay strong on the uphills. Do not allow your pace to drop dramatically. Run with even effort rather than even pace on the hills. Take advantage of the downhill sections to recover. You can maintain race pace or even a faster pace on the down hills and still get in some recovery time. Do not lean back and fight the hill. Maintain a forward lean and use the hill to maintain your speed while decreasing you effort level.

Weather will play a major role in proper pacing. For most runners, high temperature means slower pacing. If you expect hot weather during your race, try to do a considerable amount of your training in similar temperatures. Extremely cold or wet weather can also cause your pace to be slower. If the race day temperatures are mild, you should be able to maintain a slightly faster pace.

