



# 1/2 marathon and marathon training zone

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2009



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## Benefits of Marathon Training

- Great Experience
- Great Cause
- Possible Highlight of your athletic career
- Tremendous sense of pride & accomplishment
- Elevated health & fitness to a higher level
- Great motivator to train through the winter
- Develops high level of self confidence, discipline & mental toughness
- Decrease risk of heart disease
- Decrease in blood pressure & cholesterol
- Decrease in stress
- Improved immune system
- Increase in brain function
- Increase in energy level
- Decrease in body fat & risk of obesity related diseases



## Checklist for Getting Started

- ✓ Build a training plan
- ✓ Build one that matches your current goal, ability, available training time, injuries, etc.
- ✓ Buy a good pair of running sneakers & proper clothing
- ✓ Review warm-up and stretching info
- ✓ Review section on strength training and gradually add in some exercises after 3 weeks. If you are already doing weights, yoga, Pilates, body weight exercises, or some form of strength training, please continue.
- ✓ Buy foam roller for stretching [www.performbetter.com](http://www.performbetter.com)
- ✓ If you have been on a strength training program, continue. If not, wait for a couple of weeks.



## Injury Prevention is the Key

- 80% of running injuries are caused by too much of an increase in mileage
- The cardiovascular system adjusts to stress quicker than the joints
- Joggers/runners should increase their total weekly running amount by no more than 10%
- Get a good pair of running sneakers and change them every 400-500 miles
- Run on soft, flat surfaces whenever possible. Treadmill training is fine
- If you cannot take more than a couple of days per week of impact, cross-train on bike or elliptical trainer to increase fitness level
- Maintain or achieve ideal body weight to minimize joint stress
- Stretch regularly, ideally with foam roller
- Add strength training to program

### What do I do if I become injured?

- Ice area: 15-20 minutes several times per day (frozen peas work well)
- Elevate injured part while icing
- Rest (at least initially)
- Analyze program for possible causes
  - What did I do differently in training?
  - Big mileage jump?
  - Significant pace increase?
  - Shoes beaten up? Or change in shoe model?
  - change from all treadmill to road running?
- Cross-train on non-impact cardio – follow similar minutes that you were doing running/walking
- Determine plane to return to full program, return to running very slowly
- Possible physical therapy/orthopedic may be needed

### What pain is ok?

- General muscle soreness
- Slight joint discomfort after workout or next day that is gone in 24 hours
- Slight stiffness at beginning of run or walk that dissipates after first 10 minutes

### What is pain is not okay? (You should not train!)

- Pain that is keeping you awake at night
- Pain that is evident at beginning of run/walk then becomes worse as run/walk continues
- Pain that changes your stride



## Selecting Proper Footwear

Things to consider...if you have no idea what to wear, visit a running specialty store

- Body weight – heavier runners need a more supportive sneaker
- Running on hard surface roads require a more supportive sneaker
- Replace sneakers between 300-500 miles; there may not be visible wear sign on the shoes but there will be internal compression
- Mail-order catalogues and factory outlets offer discounts
- Stick with the brand that's been successful for you, even if it is not ideal for your foot
- Marathon Sports in Boston, Cambridge, Brookline, Wellesley is an excellent resource, as well as:

Runner's Edge in Melrose  
The Boston Running Company on Charles Street in Boston  
Whirlaway Sports in Methuen  
New England Running Co. in Beverly  
Yankee Runner in Newburyport  
DB Sports in N. Attleboro  
Marx Running and Fitness Center

Road Runner Sport Catalog has pretty good prices. [www.roadrunnersports.com](http://www.roadrunnersports.com)



## Footwear Info

Step 1 - "Do you have a very flat foot? A high arch? Or a normal arch? Knowing this will help you determine your foot type. Wet your foot and make a footprint on a dry piece of paper to find out."



Flat Arch



Normal Arch



High Arch

Step 2- "Pronation is the degree to which your arch collapses after heel-strike. Some pronation is needed to effectively absorb shock. However, some people pronate too much (over-pronation) while others do not pronate enough (under-pronation). Examine the tread bottom of your running shoes to find where your shoe is wearing down and compare that to the pictures that correspond."



Over Pronation



Normal Pronation



Under Pronation

Step 3- "Now that you know your feet, you need to know your shoes. There are three main categories of shoes to fit each of the foot types. I have used a symbol to help you identify each type."



Motion Control

These shoes provide maximum stability to decrease the excessive pronation of a flat foot.



Stability

This shoe is designed for a neutral runner or a mild overpronator who needs some extra support.



Cushioning

A must-have for underpronators and also great for a neutral gait.

Step 4- "A proper fit gives you a thumb width of space between your longest toe and the end of the shoe. You should not be slipping in the heel. Now that you are a shoe expert, you can use our shoe chart on the next page to find your perfect shoe."

### Heavier runners weigh in...

If you weigh over 2.5 pounds for each inch of body height, you have a heavy weight category that requires a "heavy" Runner designation.



For racing and doing speed workouts, choose a shoe in this category. These shoes are lightweight and should be worn by efficient runners with little or no pronation problems. Some performance shoes have a little bit of stability in them while others would be classified in the cushion category.



## Importance of Warm-up and Stretching

- Proper warm-up and stretching helps reduce injury and improves performance
- The first 5-7 minutes of a run should be easy in order to gradually warm-up muscles
- Stretching is more effective after the run
- Key areas: hamstrings, calves, lower back, hip region, quads, groin (see traditional stretches)
- Do not bounce
- Do not stretch beyond the point of tension, but not pain
- Hold each stretch for 30 seconds; do two sets minimum
- Foam roller stretching is ideal
- Traditional stretching is good
- Stretching can be done every day
- The cool down should consist of 3-4 minutes of easy walking after the run or walk





## Traditional Stretches

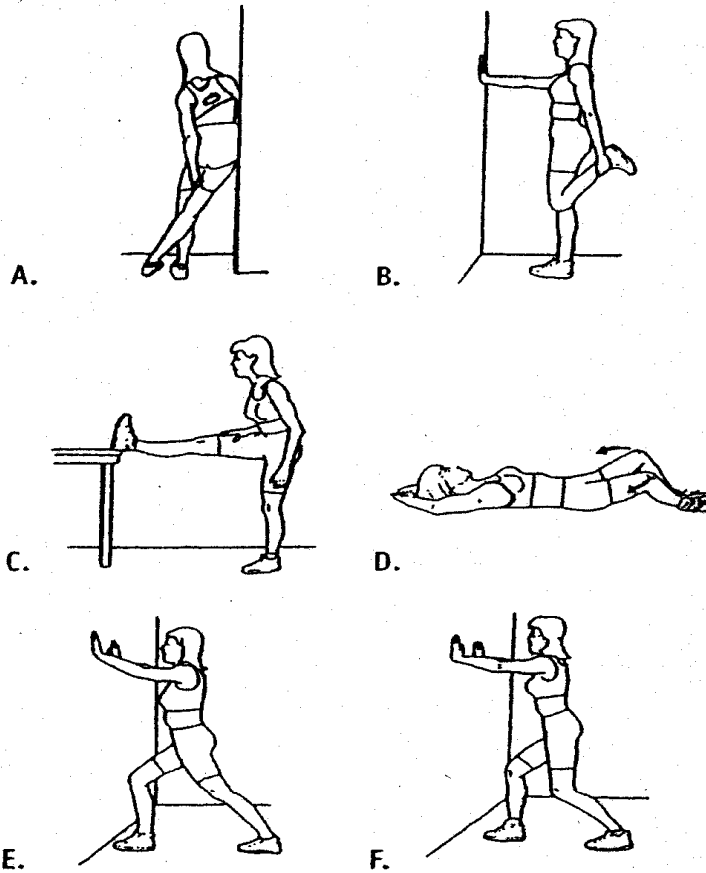


Figure 1. Lower extremity stretching. (A) Tensor fasciae latae, (B) quadriceps, (C) hamstrings, (D) adductors, (E), gastrocnemius, (F) soleus.



# Foam Roller Stretches

Can be performed before or after the workout/run



## Iliotibial band (outer thigh) massage

Lie on your right side with the roller placed under your hip. Bend your left leg and place it over and in front of your right. (You can increase the pressure of the massage by placing the left leg on top of the right.) Bend your right elbow and gently roll from your hip to your knee and back six times. Repeat on the other side.



## Piriformis (buttocks) massage

Sit on the roller with your left knee bent and your right leg crossed over your right. Place your palms on the floor behind you and shift your body weight onto your left butt cheek. Roll up and down the length of your butt six times and repeat on the other side.



## Hamstring massage

Sit on the roller with it placed at the junction of your left upper thigh and the lower portion of your buttocks and extend your right leg. Your right leg is bent and to the side of the roller or sitting on top of the left leg if you wish to apply more pressure. Your hands remain behind you as in the piriformis exercise. Roll up and down the length of your posterior thigh (from butt fold to knee) six times. Repeat on the other side. Play with turning your foot inward and outward to emphasize the medial and lateral fibers of the hamstring as you roll.



## Calf massage

Using the same body position as the hamstring stretch, place the roller just below your left knee. Roll from knee to ankle and back six times and repeat on the other side. As with the previous exercise, inverting and everting your foot allows you to massage different fibers of the calf compartment.



## Quadriceps massage

Lie on your stomach with the roller placed under the top of your thigh. Your left leg is either bent to the side or resting on top of the extended right leg. Your hands are to the side of the roller with elbows bent as you roll the length of the thigh to your knee and back six times. Once again, you can change your foot position to emphasize different fibers of the muscle. Repeat on the other side.



## Iliopsoas (hip flexor) massage

Using the same body position, lie on the roller with it resting just above your right hip bone. Roll from here up to your bottom-most rib and back six times. Repeat on the other side.



## Hip adductor (inner thigh) massage

Lie on your right side with the roller parallel to the front side of your body. Bend your left knee toward your chest and place that knee and foot on the roller. Push the roller forward with your right knee, allowing it to glide toward your groin and back to the knee for six repetitions. Repeat on the other side.



## Low- to mid-back massage

Lie on your back with your knees bent and place the roller in the small of your back. Cross each arm to the opposite shoulder and tuck your chin to your chest. Your feet should be 15-18 inches from your buttocks. Roll from your lower back to just below your shoulder blades and back again six times making sure to not raise your chin off your chest.



## Weekly Training Schedule

- The importance of the weekly training schedule is that it allows you to improve your aerobic fitness level
- It helps to maximize calorie expenditure bringing you closer to ideal weight
- It strengthens specific walking and running muscles, tendons, and ligaments
- It provides tremendous health benefits
- With the wide range of ability in the group, it is difficult to provide one specific training program
  - The weekly schedule should be determined by the following factors:
    - Goals
    - Current fitness level and training schedule
    - Time available to train
    - Injury status – Current & Past
    - Motivation level
    - Body Type
- Check in with your everactive coach if you need assistance building a plan. ACS runners get a 20% discount on any of the everactive coaching programs. Visit [www.everactiveonline.com](http://www.everactiveonline.com) for more information.
- The minimal amount of training to do is probably 2 days during the week and one on the weekend
- The ideal amount for most people is 3-4 days during the week and one on the weekend
- The high-end for more advanced runners is probably 5 weekly days, one weekend
- The general amount of training during the weekly workout is between 30 and 70 minutes
- The distance covered during these sessions will vary dramatically based on how fast you are
- The workouts should be moderately difficult, not real hard, and not too easy. You should be able to talk while you are walking or running.



## Importance of the Long Run

- The single most important component of the training program
- Prepares the muscles, ligaments, and joints for long-duration exercise
- Trains the muscles to efficiently use energy
- Builds self-confidence and mental toughness
- Burns a tremendous amount of calories
- This schedule may be adjusted to meet individual needs
- Some long runs may feel easier than others based on the given day
- The day before the long run should be a day off or an easy workout
- The long runs become the dress rehearsal for the actual race
- Pace of the long runs should be slightly slower (30-60 sec/mile) than the typical weekly run
- Get a good night sleep the night before a long run
- The meal the night before the long run, as well as breakfast the morning of, are key



## Cardio Cross Training

*Refers to using different modes of cardiovascular exercise during training*

Reduces the risk of overuse injury while maintaining or improving the level of cardiovascular fitness

Maintains fitness while recovering from injury, even if you cannot run for 3-6 weeks

Strengthens muscles that will help improve performance

Nordic Track, Stairmaster, bike, water running, elliptical trainers, and inline skating are all good modes for cross training

Studies show that cross-training on a bike or elliptical limits performance decrements in individuals who have had to take time off from running

Ideal for runners who would like to run 5-6 days per week, but whose bodies cannot handle the stress

Because cross-training has much less impact than running, it allows you to go for a longer duration and greater intensity than your running workouts

Excellent for weight-control. Expend calories while minimizing impact

# Predicting Marathon Performance

*Running a 5k prior to the marathon is a pretty good predictor of time. Providing weather is decent and you are healthy, add 2-5 minutes and it will be very close to what you could do on race day.*

5k Time	Marathon
17:58	2:57:45
18:50	3:06:42
19:46	3:16:36
20:49	3:27:46
21:58	3:39:55
22:23	3:44:21
22:49	3:48:58
23:15	3:53:46
23:29	3:58:15
23:58	4:01:23
24:27	4:06:44
24:58	4:12:20
25:14	4:15:13
25:31	4:18:11
25:47	4:21:13
26:04	4:24:19
26:22	4:27:29
26:58	4:34:05
27:16	4:37:30
27:35	4:41:00
27:54	4:44:36
28:15	4:48:17
28:35	4:52:04
28:56	4:55:57
29:18	4:59:56
29:39	5:04:02
30:02	5:08:15
30:25	5:12:34
30:48	5:17:01
31:13	5:21:36
31:38	5:26:19
32:05	5:31:17
32:31	5:36:17
32:59	5:41:23
33:28	5:46:50
33:55	5:51:58
34:19	5:56:01
34:38	6:01:24



## Marathon Pace Chart

<b>Mile Pace</b>	<b>2 Mile</b>	<b>5 Mile</b>	<b>10 Mile</b>	<b>15 Mile</b>	<b>20 Mile</b>	<b>Marathon</b>
10:00	20:00	50:00	1:40:00	2:30:00	3:20:00	4:22:00
10:20	20:40	51:40	1:43:20	2:35:00	3:26:40	4:30:44
10:40	21:20	53:20	1:46:40	2:40:00	3:33:20	4:39:28
11:00	22:00	55:00	1:50:00	2:45:00	3:40:00	4:48:32
11:20	22:40	56:40	1:53:20	2:50:00	3:46:40	4:57:16
11:40	23:20	58:20	1:56:40	2:55:00	3:53:20	5:06:00
12:00	24:00	1:00:00	2:00:00	3:00:00	4:00:00	5:14:44
12:20	24:40	1:01:40	2:03:20	3:05:00	4:06:40	5:23:28
12:40	25:20	1:03:20	2:06:40	3:10:00	4:13:20	5:32:12
13:00	26:00	1:05:00	2:10:00	3:15:00	4:20:00	5:40:56
13:20	26:40	1:06:40	2:13:20	3:20:00	4:26:40	5:49:40
13:40	27:20	1:08:20	2:16:40	3:25:00	4:33:20	5:58:24
14:00	28:00	1:10:00	2:20:00	3:30:00	4:40:00	6:07:08
14:20	28:40	1:11:40	2:23:20	3:35:00	4:44:40	6:16:32
14:40	29:20	1:13:20	2:26:40	3:40:00	4:53:20	6:25:16
15:00	30:00	1:15:00	2:30:00	3:45:00	5:00:00	6:34:00
15:20	30:40	1:16:40	2:33:20	3:50:00	5:06:40	6:43:24
15:40	31:20	1:18:20	2:36:40	3:55:00	5:13:20	6:52:08
16:00	32:00	1:20:00	2:40:00	4:00:00	5:20:00	7:01:32
16:20	32:40	1:21:40	2:43:20	4:05:00	5:25:40	7:10:16



## Signs of Over-Training

- ❖ Difficulty performing typical workouts for more than a week
- ❖ Excessive fatigue
- ❖ Higher resting heart rate
- ❖ Decreased appetite
- ❖ More sore muscles
- ❖ Troubled sleep
- ❖ Irritability
- ❖ Increased perspiration
- ❖ Decreased desire to train

## Steps to Take

- ❖ Increase sleep
- ❖ Eat well-balanced diet
- ❖ Take 5 days off or decrease exercise by 50% for 7-8 days
- ❖ Get sufficient mental rest
- ❖ Gradually resume normal workouts when symptoms have decreased



## Good Luck In 2009

Everactive is proud to be working with the American Cancer Society. We can't think of a better way to help others be healthy and active all in the name of fighting cancer. Be sure to Contact head coach Peter Sleight if you have any questions.

Special Thanks to Coach John Furey for all of his help putting this running material together.

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