

## Brent Ayer – Education Seminar – Training

42.5% of all female distance runners say the half-marathon is their favorite race. It is the favorite race of 38.1% of all male runners.

The system you place under stress is the system that improves. The energy system utilized in the half-marathon is almost entirely aerobic. If you want to improve in the half-marathon, you will need to do running that is largely in the aerobic zone. Hint: you should be able to talk while training.

**Aerobic running** provides exercising muscles with a great supply of blood vessels – more capillaries become active and distribute blood – thus more oxygen is available. To put the previous point more finely, these changes occur at about 65-79% of max heart rate, or about 45-60 seconds slower than marathon pace (or 90-120 second slower than 5k pace) -- basically, at conversation pace. It takes a loooong time to fully develop the aerobic system.

To over-simplify, the body has three basic types of muscle fiber, fast-twitch, slow-twitch, and convertible. After 2 hours at a very easy training pace, significant **convertible muscle fiber** recruitment is taking place.

3-6 weeks is optimal time to maintain a given cycle of effort. As a result, in the closing weeks of training for the half-marathon, err on the side of caution. If **it takes a minimum of three weeks to see any improvement**, that means that nothing you do in the last three weeks will have a significant positive effect on your performance. So, minimize risk.

It is an unfortunate paradox that there are plenty of un-wise things you may do in the final three weeks that will have a negative effect on your performance.

**The 10% rule** is always wise. Do not increase intensity or volume any more than 10% a week. Your long run should total somewhere between 25 & 30% of your weekly total. See note on convertible fiber.

It is first important to **focus on every day meals** and snacks as opposed primarily emphasizing what is eaten right before, during and after exercise. What you eat in the time surrounding exercise, cannot make up for nutrient deficits that occur day in and day out. Real sport nutrition is about training your taste buds and honing your cooking skills all day long, every day, to train your body and mind to enjoy high quality, unprocessed foods that prime your body for running performance. – RRCA Coaching Certification Course Material.

When you run a half-marathon, your primary sources of fuel will come from a combination of fat and glycogen (complex carbs). Your body has about a two-hour supply of glycogen. You will need fat after the carbohydrate stores run out and at the lower end of aerobic running. You will need protein for muscle regeneration.

If you re-fuel mid-race, practice using what you will be eating on race day during your training runs. Avoid unpleasant race-day surprises.

Over-striding does a number of bad things, most significantly it has a slight braking effect. **Your foot should come down directly under your center of mass**, your hips. 180 steps per minutes seems to approach the ideal. If you are over, probably no worries. If you are 170 or less, you might want to consider shorter, quicker strides.

**Three days out:** stay off your feet as much as possible. Avoid sources of stress, both mental and physical. Cut-back on your mileage. You are running on what you did three months ago, not three days ago. Lose negative emotions. Engage in positive visualization. Relax.

**Race Day:** Even splits, on race day and in training, are good. **Negative splits are even better.** What is a negative split? Running the second half faster than the first. Eat breakfast. Eat what you are used to eating. Arrive at the race **hydrated**. (Performance will decrease if you are 1% dehydrated and it will decrease significantly if you are 2% dehydrated). Eat 2-3 hours before competition, depending on individual preferences. Arrive at the race at least one hour prior to start. Over-dress in layers. You can always get rid of clothing. If you left it at home and you need it, it will be at home. Having a helper is always nice. They can take your discarded clothing, encourage you along the course, provide support. Don't clinch your hands or lock your elbows.

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