

Preparing Your Body for the Boston Marathon

For all of you Boston Marathoners reading this article, there's only a little time left to prepare your body to endure the demanding 26.2 mile course. Aside from being well trained in advance, surviving an incredible endurance event such as a marathon depends on your body feeling and functioning well, and having the fuel on board to drive your metabolic engine to the finish line.

Routine and adequate sleep is critical, since your body does not heal well with insufficient sleep. Many reparative metabolic processes occur when your body shuts down and cycles into deep sleep. Here, hormones surge and aid in the rebuilding and repair of muscles that are strained and damaged from workouts. Accumulative sleep loss will impair performance. A 20 to 30 minute midday "power nap" can be good, recuperative medicine.

Having a full tank of nutritional fuel is imperative going into a marathon and can make the difference between finishing comfortably or breaking down and suffering. Nutrition for marathoners should promote the storage of carbohydrates (carbs) in their complex form, called glycogen, in muscles and in the liver. Maintaining lean body mass is also important for marathoners, as for all endurance athletes. Carb loading a few days before, and then immediately after endurance training, while maintaining a high-fat, high-protein, low-carb diet in between heavy training cycles is the best approach. The protein/fat mode helps mobilize fat stores, losing fat aids in performance for distance running, and carb loading bolsters glycogen storage. Runners should load up with quality starches right after a workout, including foods such as yams, pasta and raisins. Research suggests that combining a little protein with carbs soon as possible after training as well as ingesting about 40 grams of protein before sleep will aid in the healing of damaged muscle tissue.

Treat painful conditions. Body posture and running style may have little to do with performance. Whether a forefoot striker or arm swinger, the body will default to what it feels is the most efficient movement. Pain management, however, is more important, since pain alters the body's way of working. The brain responds to pain signals and creates compensatory muscle activity to avoid painful movement. In fact, recent research has shown that previous injuries can create brain "programs" which cause the body to move in faulty ways. Akin to driving with one foot on the gas and one on the brake, the brain somehow stores information which drives the body to move in ways that compensate around the injured area. These inefficiencies expend energy, can cause pain and impair performance.

Marathoners can better prepare their bodies by having previous areas of injury assessed for malfunction, such as loss of normal joint movements or painful joint movements, for soft tissue lesions such as unresolved scar tissue, and for fascia trigger points or tendonitis. Finding a sports medicine provider with the skills to examine and treat these conditions will help guarantee success when crossing the finish line.

Following these guidelines for appropriate rest, nutrition and pain management will increase the marathoner's odds for optimized performance. Best of luck to all Boston Marathoners and volunteer staff!