

## **Ten things every marathoner should know about nutrition.** **From our nutritionist-in-residence, Matt Mahowald of [NPN](#).**

**1. What is the perfect snack?** Snacks should consist of a carbohydrate and fat! A good guideline is 15-20 grams of carbohydrate accompanied by a serving of fat (9-10 grams) i.e. 12 almonds and an apple would be an example. Organic, all-natural energy bars work well also, in a pinch when you may have not thought ahead. NPN energy bars are perfect!

### **2. How much water to drink?**

Every training athlete should drink about 0.5 – 1.0 ounces of water per day per body pound. During training, hydration is of paramount performance. You need to have proper hydration intake to keep your body moving and nutrients to where they need to be. Muscle tissue is 70% water and needs it to create ATP (energy).

Race day? Believe it or not, 13% of marathon runners suffer from hyponatremia, an overdose of water. To avoid the effects of taking in too much water on race day, assess during training your sweat level. If you are sweating profusely after a short amount of time then you could be drinking too much. Try to reduce the ridiculous amount of sugars in sports drinks by a 50/50 split water ratio. Use electrolytes either added to water or add water to sports drinks to ensure proper amount.

**3. What do I eat before a run?** A complex carbohydrate snack is the best thing to eat before a run. Carbohydrates are our bodies' quickest source of energy and keep your blood glucose level at a constant, giving you a steady supply of energy. For short runs under 2 hours, a banana and a tbsp of nut butter is a great way to begin your training. For long runs start with a good complex carb like oatmeal (1 cup) and add 2 tbsp of peanut or nut butter 45 min before you run. You can use other complex carbs such as yams, corn, artichokes, potatoes, rice, seeds, legumes.

**4. What do I eat/drink during a long run?** Carbohydrate intake during exercise improves performance when distances go over 13-15 miles. Everyone is different so during training is your time to try powders, gels and bars to see how your body fairs with different energy products. You can eat food while running just avoid protein during your run – it slows down digestion.

**5. What do I eat/drink right after a run?** The best thing you can do for your body after a run is to consume protein. Protein supports your body in its repair of damaged muscle tissue that has been broken down during physical activity. A whey protein shake is a good source to get into your muscles quickly and efficiently. Try to consume within 15-20 minutes after exercise along with some fruit to increase blood glucose levels. Have a well balanced meal of 40% carb, 40% protein and 20% fat 1.5-2.0 hours after long runs. (See Below)

**6. What is the importance of protein?** Protein is your source of strength and repair. It is a nutrient that is not stored in your body so a regular intake is necessary to aid your body in muscular strength and endurance. Regular physical training tends to increase the amount of muscle breakdown and protein loss from the body, but protein is always needed to enhance recovery and muscle build-up. Make sure you get 0.5-1.5 grams per pound of body weight.

**7. What do I eat to give myself the most energy?** Complex carbohydrates are your key to energy. Upon consumption, carbohydrates are broken down into blood glucose and converted into ATP— energy that is instantaneously available to working muscles. As stated earlier, examples would be yams, corn, artichokes, potatoes, rice, legumes, vegetables, peas and beans, fruit. Whole grain foods, pastas and cereals are also complex carbs, but are secondary to naturally grown products. Combine these carbs with fat and you'll have the best combination for energy.

**8. Should I eat fat?** Yes! The importance of fat in your diet can not be underestimated. Although carbs provide a quick energy fix and will help you the majority of the way, it is your fat that will carry you through the 26.2 miles. Fat gives 13.5 times more ATP (energy) per gram than carbs do! Take your body weight and multiply by 0.2-0.5 to get the proper amount of fat in your daily intake. 0.3 is a good average.

**9. Should I take supplements and why?** With your body operating at a high level of performance, you are going to need supplementation to help restore depleted vitamins, build-up muscle, prevent joint and ligament tension, ease soreness and recovery quickly. Although your nutrition is primary, supplementation provides extra aid to get your performance to its optimal performance.

**10. Can I eat too many carbs when I'm running this much?** Yes! An excess of carb intake will result in added weight gain. A marathon runner in training should consume a diet that is composed of 40-50% carbohydrates, 30-40% protein and 20% fat. This percentage would be 0.5-1.5 grams of carbohydrate per pound of body weight. These vary on your frequency of training.

A few more words about hydration. The average human body is 60-70% water and without a constant consumption of fluid a person could become severely dehydrated if not deceased in 3-4 days. When training for a marathon, it is imperative that you keep your body fully hydrated at all times in order to maintain a healthy stamina, keen mind and optimal performance. Water carries out a number of important functions within the human body. One of the many functions is body temperature regulation. When body temperature starts to rise, sweat glands secrete sweat, which is 99% water. As the sweat evaporates, heat is removed from the body and the body is maintained at a normal temperature. While water is lost through perspiration, so are important minerals in the body such as Sodium, Calcium, Magnesium and Potassium. These electrolytes can be replenished by drinking more fluid in combination with electro-mix to ensure your body has the necessary vitamins and water level to keep at optimal performance. Water can be obtained from the foods we eat and fluids we drink. **It is always better to drink pure**

**water rather than juices, tea, coffee, sodas. These sources will actually cause you to become more water deficient as most of the products contain caffeine, which is a diuretic and actually increases your excretion of water.**