

PERFORMANCE NUTRITION

Your diet can play an essential role in optimal performance for training and racing. We should start with a very brief and basic Biology lesson, though. There are certain key points that will help you understand why the foods below are so important.

- 1) Believe it or not your body is made up of mostly water.
- 2) Your digestive system breaks down/metabolizes food into components that are used throughout your body.
- 3) The 2 essential elements (electrolytes) that allow your nerves to make your muscles contract are sodium and potassium.
- 4) Your muscles are made up of amino acids/proteins.
- 5) The more oxygen there is in your blood, the more efficiently your muscles will work.
- 6) The element in your blood that brings oxygen to your muscles is iron.
- 7) Though sugars/carbs aren't the most energy-efficient molecule (fats are), they are what your body will metabolize first at a rate of about 60 g per hour.
- 8) Calcium helps to make your bones strong

The most important thing to say about your diet related to performance is:

REPLACE WHAT YOU USE!

Hydration

Considering point #1 above, staying hydrated is probably the most important tip. Depending on the workout and the temperature, you can lose over 5 lbs. a day in water weight by sweating. The best substance to replace water is (duh) water. You should be drinking enough during the day that you're not thirsty. Drinking water during and after a workout is just as important. Considering the golden rule of replacing what you use, a gallon of water weighs about 8 pounds, so if you lose 4-5 pounds during a long workout, you need at least a half-gallon of water – in addition to the 8 glasses you should already be consuming.

Other than water, Powerade or Gatorade (Powerade is generally cheaper) is a suitable replacement but more so during a workout because it helps to replace some of the sodium and potassium electrolytes lost through sweat.

Chocolate milk is also a good fluid for after a workout (please not before or during as that would lead to a pretty unpleasant result) because it has some protein and calcium (see point #8) which will help start repairing muscles and bones taxed during the workout.

Pre-Race/Workout Foods

For an early morning practice or meet, it is a good idea to have some food beforehand for optimal performance. Particularly on race day, you want fuel to burn for maximum effort. Looking at point #7 above, you should eat healthy sugars 3-4 hours before your race. Heavy fat and protein foods won't be digested in time, so go light on those. For a 6:30 AM practice, to get up and eat at 3:30 is not practical so you're relying on what you ate the night before.

Fruits such as bananas, blueberries, cherries, raisins, and grapefruit provide a lot of calories in small portions as well as electrolytes to aid in prime performance and quicker recovery. For example, a couple handfuls of raisins provide the same amount of calories as gel packs you see many endurance athletes consume, yet at a fraction of the price. A good pre-race breakfast would include oatmeal (more on oats later), fruit, and toast with some water to wash it all down.

Post-Race/Workout Foods

The following foods have all been considered "superfoods," meaning they consist entirely of nutrients that your body will use. They are not wasted calories.

Spinach – as Popeye knew all too well, spinach is packed with iron (see point #6) and calcium promoting bone growth and repair

Soybeans/edamame – packed with protein (see point #4)

Salmon – a protein source, but also known to reduce inflammation

Grapefruit – Vitamin C known to be an immunity booster to help stay healthy

Avocado – more protein than any other fruit, but also has healthy fats which contributes to better blood flow (point #6)

Greek yogurt – again a great protein source. Tastes great topped with fruit and/or granola

Quinoa – small, dried seeds have plenty of protein. Can sub for pasta or rice or mix with dried fruit and/or nuts.

Pomegranate – known to have anti-inflammatory chemicals

Oats – low in calories, but high in protein and fiber. Helps to lower cholesterol and promote heart health. See recipe below for granola recipe.

Broccoli – can enhance detoxification (i.e. break down lactic acid)

Beans – soybeans have already been mentioned, but other beans such as kidney beans, black beans, and black-eyed peas also high in protein

Papaya – loaded with vitamin C (more than citrus fruits) and also contains potassium (see point #3)

Almonds – protein, healthy fats, and calcium. Better for you whole with skin on.

Raisins – small amount still has lots of calories and also contains potassium

Blueberries – can help to lower cancer-risk and onset of age-related diseases

Dark chocolate (in moderation) – helps to increase blood flow (see points #5 and 6)

Eggs – loaded with protein and easily digestible, also pretty portable if hard-boiled

Peanut butter – good source of protein and healthy fats for long-term energy storage

Potatoes/Sweet potatoes – high in potassium, iron, and also Vitamin A which helps strengthen bone tissue

Turmeric – has been found to have anti-inflammatory properties as well as aid in circulation

Peppermint – the smell of peppermint has been linked to increase in endurance performance

Citrus Fruits – Vitamin C is an immune system booster and also aids in the formation of collagen, a connective tissue related to strength of tendons and ligaments

There are lots of products on the market claiming to be great dietary supplements or have things like proteins or anti-oxidants added to them. They are convenient, often tasty, and travel well. They are not as beneficial as foods that don't come with an ingredient list, such as those listed above.

If you love to cook, like I do, you can try the recipes below which utilize many of the foods described above.

Granola

INGREDIENTS

- 3 cups rolled oats (not instant)
- 3 tablespoons packed light brown sugar
- 1/2 teaspoon ground cinnamon
- 1/4 teaspoon salt
- 1/3 cup honey
- 1/4 cup vegetable or canola oil
- 1 teaspoon vanilla extract
- 1/2 cup small-dice dried fruit
- 1/2 cup almonds (or other nuts, seeds of your choice)

INSTRUCTIONS

1. Heat the oven to 300°F and arrange a rack in the middle.
2. Place the oats, brown sugar, cinnamon, and salt in a large bowl and stir to combine; set aside.
3. Place the honey, oil, and vanilla in a small bowl and stir to combine. Pour over the oat mixture and mix with your hands until the oats are thoroughly coated.
4. Spread the mixture in a thin, even layer on a rimmed baking sheet. Bake for 15 minutes, then stir and continue baking until the granola is very light golden brown, about 5 to 15 minutes more.
5. Place the baking sheet on a wire rack and cool the granola to room temperature, stirring occasionally, about 20 minutes. (Note: It will harden as it cools.)
6. Add the fruit and nuts or seeds to the baking sheet and toss to combine. Store the granola in an airtight container for up to 2 weeks.

Mixed Citrus Green Salad

(The recipe calls for canned fruit, but fresh fruit can be substituted as well)

INGREDIENTS for SALAD

1 cup blueberries	2 5-oz. bags of mixed salad greens
1 11-oz. can of mandarin oranges, drained	1 8-oz. can of pineapple chunks, drained
1 8-oz. can of grapefruit, drained	21 walnut halves toasted
¼ cup pomegranate seeds	

(7 servings)

INGREDIENTS for ORANGE-POPPY SEED DRESSING

½ cup fresh orange juice	¼ cup honey
¼ cup Canola oil	2 tbs. champagne vinegar
1/8 tsp. salt	1 tsp. poppy seeds

Combine ingredients for salad in a large bowl.

For dressing, combine first 5 ingredients in a blender and process until blended. Add poppy seeds and pulse once.

Pour over salad.