Sports Nutrition Guide



When it comes to achieving optimal sports performance, proper nutrition and hydration play a key role. This guide highlights solutions from Orgain® to address common athlete concerns, including pre-fueling for training, post-training recovery, proper hydration, joint health, and implementing plant-based eating patterns that support athletic performance.

Fueling for Performance

Carbohydrates provide glucose to working muscles to support physical activity, and evidence suggests performance of prolonged, sustained, or intermittent high-intensity exercise is enhanced by strategies that maintain high carbohydrate availability.[1] Simple carbohydrates are ideal because they are quickly absorbed and made immediately available to muscles. Simple carbohydrates can be found in fruits, vegetables, milk, and various supplement powders and shakes, among other foods and drinks.

A few hours before intense, long-lasting activity, the American College of Sports Medicine recommends consuming 1-4 grams of carbohydrate per kilogram (0.5-2 grams per pound) of bodyweight.[1] The goal is to top off energy stores and help prevent fatigue. For some athletes, it may be difficult to tolerate certain types or amounts of food leading up to training. Experts suggest avoiding foods high in fiber and fat several hours before endurance activity.[2] While these two nutrients are crucial at meals and snacks throughout the day, they slow down digestion and absorption of carbohydrates, which are essential to fueling optimal performance. They can also result in reduced stomach emptying which increases chances of cramping, bloating and discomfort.[2] Those who have lactose intolerance should consider minimizing intake of lactose prior to participating in intense physical activity to avoid gastrointestinal irritability. Orgain® offers several products which may be helpful to fuel performance.

Nutritional Attributes* (Click on product images to learn more about each product.)	 **Orgain® Organic Nutrition™ Shake**	 **Orgain® Organic Nutrition™ Plant Protein Shake**
Simple Carbohydrates to Fuel Performance	✔	✔
Well Tolerated+	✔	✔
Made with Grass-Fed Milk Protein	✔	
Suitable for Lactose Intolerance	✔	✔

*Nutritional values subject to change and may vary by flavor. Visit https://orgain.com/collections/products for full nutritional information per product.
+Formulation associated with digestive tolerance[2]

> “In Nashville, our professional hockey team stocks our coolers with Orgain shakes. We chose them not only because they meet our needs, but because “organic” and “grass fed” were important to our players trying to leverage everything they can to achieve peak performance. It makes them feel well cared for, and that we are prioritizing their nutrition as a team. Not to mention, they won the taste test when we shopped shakes.”
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> **Mari-Etta, Professional Sports Nutrition Consultant**

Post-Performance Nutrition

Clinical studies show that consuming approximately 0.2-0.5 grams of protein per kilogram (0.1 – 0.25 grams per pound) of bodyweight, or up to 40 grams of protein, post-exercise can lead to increased muscle protein synthesis as well as improved nitrogen balance.[3,4] For optimal results, high quality protein containing at least 10-12 grams of essential amino acids should be consumed within 2 hours post-exercise.[4]

Branched-chain amino acids (BCAAs) are essential amino acids – leucine, isoleucine, and valine – that support muscle protein synthesis. Intake of BCAA favors post-exercise muscle recovery and may improve muscle function.[5] Leucine, in particular, may help play a role in stimulating muscle anabolism and may help athletes recovering from injury and avoid declines in muscle mass.[6,7] According to the International Society of Sports Nutrition, athletes need approximately 700-3,000 milligrams of leucine every 3 to 4 hours throughout the day.[8] BCAAs are found naturally in both animal protein sources like chicken, tuna, beef, dairy and eggs, as well as vegetarian sources like pea protein, brown rice protein, chia seed protein, and tofu.

Phytonutrients may also help enhance muscle recovery, due to their antioxidant properties and ability to help modulate inflammation.[9] Research suggests consuming polyphenol-rich foods, juices, and concentrates may also reduce muscle soreness.[10] Orgain® offers several products to support athletes with post-training recovery.

Nutritional Attributes* (Click on product images to learn more about each product.)	 **Orgain® Sport Protein Powder**	 **Orgain® Organic Nutrition™ Shake**
Protein to Support Muscle Recovery	✔	✔
Naturally Occurring BCAAs+	✔	✔
Organic Fruit & Vegetable Powder Blend Containing Naturally Occurring Phytonutrient	✔	✔

*Nutritional values subject to change and may vary by flavor. Visit https://orgain.com/collections/products for full nutritional information per product.

+Sport Protein Powder contains 5,700 mg BCAAs, 2,600 mg of which coming from leucine. Organic Nutrition Shake contains 4,230 mg BCAAs, 1,910 mg of which coming from leucine. These figures represent typical Amino Acid profile for one serving.

> “For athletes and active individuals with busy schedules, Orgain Sport Plant Protein Powder is a great staple pantry item. Recovery happens around the clock, so it’s a tasty way to obtain 30 grams of high quality protein either after a workout, or whatever time of day is most difficult to keep up with protein needs. Myself and my clients love to add this powder to oatmeal for a quick breakfast, blend into smoothies any time of day, or mix it in with a favorite energy ball recipe for an on-the-go snack.”
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> **Kelly, Sports Nutrition & Performance Dietitian**

Hydration

The goal of hydration during exercise is to address sweat loss whereas after exercise, the goal is to rehydrate and restore fluid balance.[1] Individuals can monitor their hydration status by comparing their pre and post-workout weights. This is important because acute changes in body weight can usually reflect changes in body water. A loss of 1 kilogram of body weight (2.2 pounds) represents approximately 1 liter (33 ounces) of sweat loss. The goal during exercise is to limit body fluid deficit to <2% of body weight and to consume 0.4 - 0.8 liters of fluid per hour. After exercise, the goal is to restore 125 – 150% of fluid deficit by consuming 1.25 - 1.5 liters of fluid per kilogram of body weight.[1]

In addition to water, sweat contains substantial amounts of sodium, with lesser amounts of potassium, calcium, and magnesium. Research shows that rehydration with a blend of electrolytes and carbohydrates can improve athletic performance by and optimizing water absorption.[11] Orgain offers Hydro Boost to support hydration needs before, during and post exercise.

Nutritional Attributes* (Click on product image to learn more about this product.)	 **Orgain® Hydro Boost Powder**
Helps Quickly Restore Electrolytes	✔ 1,770 mg electrolytes / serving (5x more than traditional sports drinks+)
Made to Meet WHO◊ Guidance for Fast Rehydration	✔ Contains sodium, glucose & citrate to help optimize electrolyte and water absorption

*Nutritional values subject to change and may vary by flavor. Visit https://orgain.com/collections/products for full nutritional information per product.
+Orgain Hydro Boost powder has 1,770mg electrolytes vs. the leading sports drink which has 350mg electrolytes per 12 fl oz.
◊World Health Organization



Joint Health

Collagen peptides have risen in popularity for hair, skin, and nail health. This protein can also play a role in building stronger supporting structures in tendons, ligaments, bones, and connective tissue. Strong evidence suggests that consuming 5-15 grams, roughly 60 minutes before training, per day of collagen peptides with 50 milligrams of vitamin C can improve joint pain and functionality. Collagen consumption should take place ~60 minutes prior to exercise in order to maximize collagen synthesis.[11,12,13] Orgain® offers Collagen Peptides to support joint health.

Nutritional Attributes* (Click on product image to learn more about this product.)	 **Orgain® Collagen Peptides Powder**
Collagen to Support Joint Health	✔ 20g type I & III collagen / serving

*Nutritional values subject to change and may vary by flavor. Visit https://orgain.com/collections/products for full nutritional information per product.

Plant-Based Performance

Many athletes are moving towards a plant-based eating pattern, whether for their health or for the planet. Studies indicate a plant-based diet can result in increased lean body mass and reduced body fat, increased VO_2 max, improved glycogen storage, increased oxygenation of tissues, and reduced oxidative stress and inflammation.[14]

A well-planned plant-based diet can support athletic performance. However, athletes should be thoughtful about the type and amount of protein consumed to support muscle protein synthesis. Plants also tend to have lower amounts of essential amino acids, including BCAAs, so choosing protein supplements that have protein sources labeled as concentrates, isolates or include a blend of plant-based proteins is recommended for training or competition.[15,16,17] Orgain® is proud to offer options for athletes seeking plant-based products to support their performance.



Nutritional Attributes* (Click on product images to learn more about each product.)	 **Orgain® Sport Protein Powder**	 **Orgain® Organic Protein™ & Superfoods Plant-Based Protein Powder**
Plant-Based Protein Blend with Complete Amino Acid Profile+	✔ 30g plant protein / serving	✔ 21g plant protein / serving
Certified Plant-Based	✔	✔

*Nutritional values subject to change and may vary by flavor. Visit https://orgain.com/collections/products for full nutritional information per product.
+Contains all 9 essential amino acids.

> "Orgain's plant-based product line has been a game changer in helping us provide adequate recovery nutrition to our athletes with dairy allergies and/or GI conditions that limit their ability to consume whey products. The complete amino acid profile gives us confidence that they are recovering adequately post-workout."
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> **Beth, Sports Nutritionist**

Disclaimer: This guide is for informational purposes only and is not intended to be medical advice. The material presented in this guide, and displayed on the associated webpage(s), is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified healthcare provider with any questions you may have regarding a medical condition or treatment and before undertaking a new nutrition and/or health regimen.

The Orgain® products featured in this guide are those suggested by Orgain® and/or those used most commonly amongst clinicians for individuals in this specific population.

Testimonials in this guide are created from unpaid Orgain® Healthcare Ambassadors.

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