

Sports Performance Protocol

Clinical protocol to support exercise performance and recovery*



Nutrition for Optimizing Exercise Capacity

Exercise serves as a pillar of healthy physiological function and supports disease prevention. Patients who achieve a heightened level of physical fitness may seek additional support to enhance exercise- and sport-related performance. In addition to dietary modifications, supplementation with key nutrients may support advanced levels of cellular energy production, cardiovascular health, muscle strength, and overall physical capacity.

A variety of compounds exhibit clinical benefits for exercise performance:

- **Creatine** has been extensively studied for its ability to promote energy output, help attenuate the effects of exercise-related fatigue, and support muscular contraction and strength.¹ Supplemental creatine helps increase muscle creatine concentrations and promotes faster adenosine triphosphate (ATP) regeneration between high-intensity exercises.^{1,2} Support of these systems may help promote exercise performance and greater training adaptations.¹
- **Magnesium (Mg), sodium (Na), potassium (K), and chloride (Cl)** are electrolytes necessary to maintain proper hydration and promote muscle recovery and athletic performance.^{3,4} Mg, Na, and K all support proper muscle contraction, Mg promotes cardiorespiratory functions, and Na helps to stimulate thirst and water retention.⁵⁻⁸ Electrolyte needs may be elevated in physically active subjects due to increased perspiration and metabolic activity compared to inactive individuals.^{3,6}
- **L-alpha-glycerolphosphorylcholine (GPC)**, an acetylcholine precursor, has been shown to support resistance exercise training and muscle performance by promoting neuro-muscular interactions and supporting healthy exercise-induced growth hormone status.⁹⁻¹²

- **Nitric oxide (NO)** precursors, such as L-arginine, may support athletic performance by promoting vasodilation, blood flow, muscle contraction, oxygen supply to muscles, and glucose uptake.^{13,14} By increasing blood flow to muscles and enhancing ATP production, exercise may be performed at a higher intensity for a longer duration, and muscle contraction may be more efficient, potentially leading to a greater anabolic effect.
- **PeptiStrong™**, plant-based bioactive peptides from the fava bean (*Vicia faba*), have been shown to act on certain pathways in the body to help stimulate muscle protein synthesis.¹⁵⁻¹⁷ A small placebo-controlled study of healthy adult men (n = 30) tested the effect of 2.4 g/day of PeptiStrong™ on muscle health along with resistance exercises over 14 days. The study found promising results that PeptiStrong™ may help increase muscle recovery rate by 144%, help increase athletic performance recovery by 54%, and help reduce muscular fatigue by 47%, supporting muscular endurance.¹⁵
- **L-theanine, tyrosine, and caffeine** may stimulate mental focus and energy, often required during higher-intensity exercise sessions.^{18,19}

This clinical protocol is designed to support exercise performance and recovery in patients seeking enhanced exercise adaptations through evidence-based lifestyle, dietary, and nutrient interventions.*

Diagnostic Biomarkers and Clinical Indicators of Sports Performance

- Lab work can provide insights into training load capacity, exercise recovery, and overall health.
 - Consider assessing micronutrient status, comprehensive metabolic panel, lipid panel, hydration status, muscle status (such as creatine kinase), iron panel, hormonal status (such as testosterone and cortisol), inflammatory markers, and food allergies.²⁰
- **Metabolomics Spotlight** Organic Acids testing
 - Energy metabolism (glycolysis, lactic acid, Krebs cycle, ketones, and fatty acid oxidation analytes)
 - Optimizing protein status and nitrogen balance.
 - The recommended level of protein intake for non-exercising individuals is 0.8 g/kg/day.
 - Avid exercisers, especially those performing high-intensity bouts of resistance training and aerobic activity, require greater amounts, in the 1.2 to 2.0 g/kg/day range.
- Ensure adequate hydration before, during, and after exercise by replenishing the water and electrolytes lost due to sweating. Maintaining electrolyte balance may promote athletic performance and muscle function.^{4,5}

Therapeutic Diet and Nutritional Considerations

- The joint position stand of the Academy of Nutrition and Dietetics (AND), Dietitians of Canada (DC), and the American College of Sports Medicine (ACSM) recommends:²¹
 - Optimizing carbohydrate intake based on exercise intensity and type.
 - Moderate exercise (1 h/day) requires 5 to 7 g per kilogram of body weight per day (g/kg/day).
 - Moderate to high-intensity exercise (1 to 3 h/day) mandates 6 to 10 g/kg/day.
 - Ultra-endurance athletes with extreme levels of commitment to daily activity (4 to 5 h of moderate to high-intensity exercise daily) may need up to 8 to 12 g/kg/day.

Lifestyle Interventions

- Counsel patients on sleep hygiene to optimize circadian rhythm and exercise recovery.
- Consider heart rate variability as a tracking metric to guide the intensity of exercise sessions.

This information is provided as a medical and scientific educational resource for the use of physicians and other licensed health-care practitioners ("Practitioners"). This information is intended for Practitioners to use as a basis for determining whether to recommend these products to their patients. All recommendations regarding protocols, dosing, prescribing and/or usage instructions should be tailored to the individual needs of the patient considering their medical history and concomitant therapies. This information is not intended for use by consumers.

†An IPSOS 2023 survey among US functional medicine practitioners, Designs for Health is their most recommended in an average month and personally most trusted practitioner supplement brand, meaning a brand that is sold by health-care practitioners in their office

Supplement Protocol

Primary Support:



PRE-WORKOUT PROTOCOL

PreTrain NRG™	Mix 9 g (approx. one scoop™) in 8 oz of water and consume 30 to 45 minutes before a workout
GPC Liquid	Take 2 mL (approx. 2 droppers full)
NOx Synergy™	Mix 7 g (approx. one scoop) in 8 to 10 oz of water and consume before workouts that will last longer than 45 minutes

PERI-WORKOUT PROTOCOL

If needed, such as working out for longer than 1 hour or high-intensity training

ElectroPure Hydration™	Mix 1 stick pack (8 g) in 16 to 24 oz of water
Amino Acid Supreme™	Mix 12 g (approx. one scoop) in 8 to 10 oz of water

POST-WORKOUT PROTOCOL

WheyCool™	Based on dietary preference and tolerance, choose one of these and mix approximately 1 to 2 scoops in 8 to 10 oz of water or any other beverage within 60 minutes post-workout
or Phytotein™	
or PurePaleo™	
Creatine Monohydrate Powder	Mix one scoop (5 g) in 8 to 10 oz of water post-workout. It can be combined with your choice of protein powder
Performance Peptides™	Take 4 capsules per day

Secondary Support:

Performance Peptides™ Bar	Take 1 bar per day for extra muscle support in a satisfying high-protein snack, featuring a delicious chocolatey salted caramel flavor*
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For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/api/library-assets/literature-reference---sports-performance-support-protocol-references>

Dosing recommendations are given for typical use based on an average 150-pound healthy adult. Health-care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities, appropriate monitoring, including liver function tests (LFT) is recommended.

For considerations regarding herb-drug and nutrient-drug interactions, please refer to reliable, evidence-based resources such as the Natural Medicine Database or Stargrove MB, Treasure J, McKee DL. *Herb, Nutrient, and Drug Interactions: Clinical Implications and Therapeutic Strategies*. St. Louis, MO: Mosby-Elsevier; 2008.

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