

ElectroGenic

Metabolic Electrolytes & Ketones

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ElectroGenic, a blend of electrolytes and exogenous ketones, enhances optimal physical and mental performance. This combination of essential minerals and ketones balances electrolytes, while promoting both cellular metabolism and ketosis.



Metabolism



Gut



Cardio



Brain

Health Indications

- Support Ketosis
- Replenish Electrolytes
- Boost Mental Performance
- Enhance Physical Performance
- Support Bone Health
- Achieve Weight Management Goals
- Protect Against Neurodegenerative Decline
- Preserve Cardiometabolic Homeostasis

Instructions For Use

Mix 1 scoop in your choice of liquid, diluting as preferred. Use daily or as directed by your health care professional. Increase the amount of water you drink each day while taking this product.

****Individual needs may vary; please consult your practitioner before altering the prescribed doses or protocols.****

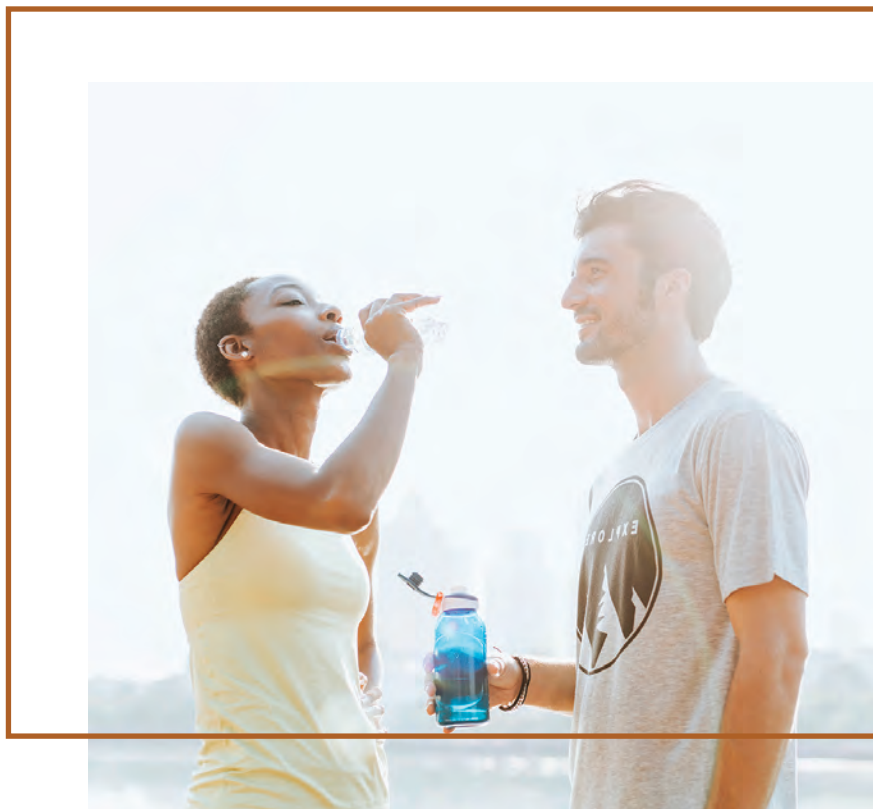
Product Description

Ketosis is a metabolic state in which the body shifts from using glucose as its primary energy source to using ketones, which are produced from the breakdown of fats. This process occurs when carbohydrate intake is significantly reduced, leading to lower insulin levels and depletion of glycogen stores in the liver. In response, the liver converts fatty acids into ketone bodies, such as β -hydroxybutyrate, which are then released into the bloodstream and used by various tissues, including the brain, as an alternative fuel source. Ketosis is a natural adaptation that allows the body to maintain energy production during periods of fasting, low-carb diets, or intense exercise, ensuring that vital organs and muscles continue to function efficiently even when glucose availability is limited.



The benefits of ketosis extend across various aspects of health and performance. In this metabolic state, the body efficiently burns fat for fuel, which can aid in weight loss and fat reduction, especially in stubborn areas. Ketosis also helps stabilize blood sugar levels, reducing insulin spikes and improving insulin sensitivity, which benefits metabolic health. Ketones provide a steady, sustained energy source for the brain, enhancing mental clarity, focus, and cognitive function. Additionally, they have anti-inflammatory and neuroprotective properties, potentially reducing the risk of neurodegenerative diseases. For athletes, ketosis or ketone supplementation can improve endurance by providing a reliable energy source that spares muscle glycogen, enhancing physical performance and recovery. Research shows that supplementing with ketone bodies can be beneficial for the same reasons as staying in a ketogenic state, though it may be less potent.¹

Alimentum Labs' ElectroGenic aims to provide flexibility and ease of access for those seeking the health benefits of a ketogenic diet. ElectroGenic can be used by both individuals who have been in a ketogenic state for an extended period of time and those who are just starting out. Ketone supplementation with ElectroGenic can ease the transition into ketosis and help avoid the discomfort often associated with entering a ketogenic state. In addition to being a convenient source of ketones, ElectroGenic thoughtfully includes nutritional ingredients that support the genes involved in managing ketosis, as well as addressing common nutritional gaps and electrolyte imbalances found in low-carb, high-fat diets.



Key Elements and Features of ElectroGenic

Support a Ketogenic Metabolic State

Supplementing with exogenous ketones can support a ketogenic metabolic state by providing an immediate source of ketones. The transition into ketosis can take time, and during this period, energy levels may fluctuate. Exogenous ketones can help bridge this gap by supplying the body with ketones directly, enhancing energy availability, and potentially reducing the symptoms of "keto flu." Additionally, they can help maintain ketosis even if carbohydrate intake is slightly higher than usual, thus supporting metabolic flexibility and aiding overall adaptation to a ketogenic state.

Protect Cardiometabolic Health

Taking exogenous ketones can protect cardiometabolic health by providing a steady source of ketones, which helps stabilize blood sugar levels and reduce insulin resistance, both of which are key factors in metabolic health. By lowering glucose and insulin spikes, exogenous ketones reduce the strain on the cardiovascular system, potentially decreasing the risk of heart disease. Additionally, ketones can improve mitochondrial efficiency, leading to better energy production and reduced oxidative stress, which are both beneficial for heart health. This supplementation helps maintain a metabolic state that contributes to overall cardiometabolic protection.

Replenish Electrolytes

Consuming electrolytes is crucial during ketosis because the ketogenic diet can lead to increased excretion of electrolytes like sodium, potassium, and magnesium due to reduced insulin levels and decreased carbohydrate intake. This loss can lead to imbalances and symptoms like muscle cramps, fatigue, dizziness, and the "keto flu." Replenishing these essential minerals through electrolyte supplementation helps maintain proper hydration, nerve function, and muscle contraction, ensuring the body adapts smoothly to ketosis while avoiding common discomforts associated with electrolyte imbalances.

Enhance Cognitive and Physical Performance

Exogenous ketones can protect the brain and enhance both cognitive and physical performance by providing a readily available, efficient energy source. Ketones can cross the blood-brain barrier, offering an alternative fuel to glucose, which is particularly beneficial during periods of low carbohydrate intake or energy deficits. This can lead to improved mental clarity, focus, and cognitive resilience. Additionally, exogenous ketones help reduce oxidative stress and inflammation in the brain, potentially protecting against neurodegenerative diseases. Physically, ketones provide sustained energy, enhancing endurance and performance, especially during high-intensity activities, by sparing muscle glycogen and improving recovery.



Gene Spotlight

Numerous genes work together to control the metabolic changes that occur due to fasting, dietary changes, food consumption, and energy expenditure. ElectroGenic was formulated to support the proper expression of these genes during ketosis or ketone supplementation.

Genetic Interactions

***PPAR* α (Peroxisome Proliferator-Activated Receptor Alpha) Gene**

The *PPAR* α gene plays a role in regulating metabolism by modulating the expression of other genes involved in lipid metabolism and ketogenesis. Optimizing the function of this gene is crucial for proper adaptation to fasting, ketogenic diets, and maintaining a ketogenic state.^{2,3}

***SLC16A1* (Solute Carrier Family 16 Member 1) Gene**

The *SLC16A1* gene, also known as Monocarboxylate Transporter 1 (*MCT1*) gene, produces an enzyme that is responsible for transporting circulating ketones from the bloodstream to the brain where it can be utilized for energy production. The expression of *SLC16A1* is regulated by the *PPAR* α gene.^{2,3}

***OXCT1* (3-oxoacid CoA-transferase 1) Gene**

The *OXCT1* gene encodes an enzyme known as succinyl-CoA:3-ketoacid CoA transferase, commonly referred to as the SCOT enzyme. This enzyme contributes to the breakdown of ketones in order to produce energy when glucose levels are low in the body.⁴

***HMGCS2* (3-Hydroxy-3-Methylglutaryl-CoA Synthase 2) Gene**

The *HMGCS2* gene encodes an enzyme that is expressed in the mitochondria. This enzyme is responsible for converting acetyl-CoA to ketone bodies, a critical step of ketogenesis. These ketone bodies can then be utilized for energy by various tissues and organs in the body.⁵

How ElectroGenic Works

ElectroGenic offers a balanced blend of ketone bodies bound to various forms of electrolytes to support ketosis, energy production, neurocognitive function, physical performance, and cardiometabolic health. It also includes amino acids that aid in maintaining healthy weight and metabolic function. This refined formula provides the support needed for maintaining ketosis and achieving overall wellness goals.



Key Ingredients

Beta-Hydroxybutyrate (BHB) Ketone Bodies (Calcium BHB, Magnesium BHB, Sodium BHB, Potassium BHB)

Supplementation with ketone bodies has been shown in multiple studies to help protect the brain from cognitive decline and may even offer protection against Alzheimer's disease. Ketone bodies help protect the brain by maintaining balanced energy levels in the brain tissues, regulating ion channels and equilibriums in the brain, and mitigating inflammation and plaque formation associated with Alzheimer's disease. Additionally, research shows that ketone bodies can improve cognitive function in *APOE4* carriers with Alzheimer's disease.⁶ Ketone bodies have also been shown to induce brain-derived neurotrophic factor (BDNF) expression, which in turn enhances cognitive function and is critical for neuroprotection.⁷ These ketone bodies act as powerful epigenetic modulators and cellular signaling molecules in a variety of pathways such as histone binding, lipid metabolism, sirtuin activity, and more.⁸ Furthermore, ketone supplementation has also been linked to reduced or eliminated need for diabetes medications, weight loss, and lower blood pressure.⁹ When metabolic changes occur due to fasting or a ketogenic state, such as increased circulating ketone bodies and reduced glucose levels, the expression of *PPARα* is increased to manage ketosis effectively.¹⁰

Ketone Salt Electrolytes (Calcium, Magnesium, Sodium, Potassium)

Proper electrolyte supplementation is critical during ketosis and while taking ketone bodies. By providing the salt forms of ketone bodies bound to electrolyte ions, ElectroGenic includes built-in electrolyte support.¹¹ ElectroGenic specifically provides a higher proportion of potassium to ensure a proper electrolyte balance and reduce the risk of hypertension. Consuming more potassium than sodium can help balance blood pressure and protect cardiovascular health.¹²

Taurine

Taurine is a semi-essential amino acid that is crucial for the metabolism of fats, as it aids in converting bile acids into their proper form. Research shows that taurine supplementation may help with visceral fat loss.¹³ Taurine has also been shown to improve cognitive function.¹⁴ Additionally, when taurine is supplemented alongside a low-calorie diet for weight loss, it improves lipid profiles and metabolic risk factors more effectively than the diet alone.¹⁵ Furthermore, it is also reported that taurine can increase the expression of the *PPARα* gene.¹⁶

L-Alanyl-L-Glutamine

L-Alanyl-L-Glutamine is a stable form of glutamine that has been shown to enhance exercise performance and hydration levels. Additionally, it has also been reported to improve cognitive function and the efficiency of electrolyte and fluid absorption in the intestine.^{17,18}

Apple Cider Vinegar

Apple cider vinegar is made by fermenting apple juice and is believed to offer various health benefits. A clinical study demonstrated that consuming apple cider vinegar alongside a moderate calorie restriction improved multiple health makers related to obesity, including reduced body weight, BMI, and visceral fat levels. This study also showed improved lipid profiles and a reduced appetite.¹⁹

Trace Minerals Magnesium Mix

Magnesium is the most abundant cation, or positively charged element, within human cells. It is critical for a majority of the biochemical reactions that take place in the body, including energy production, neurological function, muscular performance, lipid metabolism, and bone development.²⁰ ElectroGenic contains a healthy amount of magnesium to support these physiological functions, especially during a ketogenic state, where important elements like magnesium are often depleted.

Warnings/Contraindications

When used as directed there are no known contraindications for ElectroGenic.

******It is always recommended that you consult your practitioner prior to adding any new supplement to your regimen if you are pregnant, breastfeeding, experiencing renal failure, undergoing an organ transplant(s), managing diabetes with insulin, or are taking medication(s) for any pre-existing conditions******

Safety

All ingredients are tested before use for:

- Pathogenic microbial contaminants
- Heavy metals and/or chemical contaminants
- Purity

Additional Information

- Gluten Free
- Dairy Free
- Vegan
- No Sugar
- Non-GMO
- cGMP Facility



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