

Keto Metabolic™ Exogenous Ketones

DESCRIPTION

Keto Metabolic™ from Douglas Laboratories® offers a blend of ketogenic mineral compounds to support exogenous ketone production for healthy brain function, weight management† and athletic endurance. The refreshing strawberry-lemonade flavor can be mixed with water or preferred beverage to deliver 10g of beta-hydroxybutyrate per serving.‡

INDICATIONS

- Supports ketosis for brain fuel, satiety and metabolic energy‡

FUNCTIONS AND MECHANISMS OF ACTION

Ketone bodies are produced from acetyl-CoA, mainly in the mitochondrial matrix of liver cells when carbohydrates are so scarce that energy must be obtained from the breakdown of fatty acids. Ketones are then transported from the liver to other tissues, where acetoacetate and β-hydroxybutyrate can be reconverted to acetyl-CoA to produce energy. The presence of ketones in the blood is known as ketosis. Nutritional ketosis is a result of a diet with 60-70% of energy needs coming from fat, 25-30% from protein, and 5-10% coming from carbohydrates. Beta-hydroxybutyrate (BHB), the main ingredient in Keto Metabolic™, is one of three endogenously produced ketone bodies, but it can also be taken orally as an exogenous ketone supplement. When ketones are abundant in the blood, such as during caloric restriction or a ketogenic diet, the brain can obtain up to 60% of its energy from their oxidation. It has been shown in animals that ketone bodies can also replace glucose as a cellular signal in the central nervous system. Ketones cross the blood-brain barrier and have been shown to be neuroprotective, promoting oxidative defense, enhancing mitochondrial respiration and cerebral blood flow.‡

There is clinical evidence that ketogenic diets are also effective for weight management†. In a randomized, controlled, crossover trial involving 15 healthy subjects, consumption of ketogenic esters after an overnight fast resulted in significantly decreased ghrelin, glucagon-like peptide 1 (GLP-1) and peptide tyrosine (PYY), compared to dextrose control. Subjects also reported decreased hunger and desire to eat. Research studies involving athletes also have indicated that ketones increase fat oxidation in the muscle during exercise, acting as an alternative fuel, even in the presence of carbohydrate and insulin. Additionally, they have been associated with decreased plasma lactate concentrations, suggesting support for athletic endurance and muscle comfort.‡

FORMULA (#57739P)

1 scoop (15 g) contains:

Calories	5
Total carbohydrate	1 g
Calcium (from calcium beta-hydroxybutyrate).....	600 mg
Magnesium (from magnesium beta-hydroxybutyrate)	350 mg
Sodium (from sodium beta-hydroxybutyrate).....	900 mg
Beta-Hydroxybutyrate (from a blend of calcium beta-hydroxybutyrate, magnesium beta-hydroxybutyrate, and sodium beta-hydroxybutyrate)	10 g
Other ingredients: citric acid, natural strawberry and lemonade flavors, malic acid, purified stevia leaf extract.	

Non-GMO, Gluten-free

SUGGESTED USE

As a dietary supplement, take 1 scoop daily dissolved in 8-10 oz of water or other liquid, or as directed by a health professional.

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SIDE EFFECTS

No adverse side effects reported.

STORAGE

Store in a cool, dry place. Keep out of reach of children.

REFERENCES

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For more information on Keto Metabolic™ visit douglaslabs.com

† Provides weight-management support as part of a healthy lifestyle with a reduced-calorie diet and regular exercise.

‡ These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.