# KetoBrain Energy 300g

Ketogenic mineral blend to support healthy brain function, weight management<sup> $\dagger$ </sup>, and athletic endurance<sup> $\dagger$ </sup>

#### INDICATIONS

- Ages 18 and up
- Cognitive support<sup>\*</sup>
- Weight management support<sup>™</sup>
- Athletic endurance support<sup>\*</sup>

### BENEFITS

- Supports healthy brain function, weight management<sup>1</sup> and athletic endurance<sup>1</sup>
- Designed to be used in combination with a lowcarbohydrate ketogenic diet and/or to support brain and muscle function<sup>‡</sup>

## FEATURES

- 10 grams of beta-hydroxybutyrate per serving
- Convenient, great-tasting strawberry-lemonade powder formula for easy dispensing
- Part of the PureLean® product line
- Made with high-quality vegan ingredients backed by verifiable science

#### VERIFIABLE SCIENCE

Ketones are important respiratory fuel created from fatty acids and act as the main reserve fuel for the brain when glucose is low or in times of very high energy demand, such as a low-carbohydrate diet, prolonged exercise, or lactation. In fact, 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. This condition, known as nutritional ketosis, can be maintained for years, and is guite different from metabolic acidosis/pathological ketosis, which can arise in type I diabetes due to severe insulin deficiency. Ketones do cross the blood-brain barrier and have been shown to be neuroprotective, promoting oxidative defense, NAD+/NADH ratio, and enhancing mitochondrial respiration.<sup>1</sup> In addition to acting as an energy source for the brain, ketones also enhance cerebral blood flow.<sup>2</sup> In a human intervention study involving 20 elderly subjects and young controls, administration of 30 g MCT to increase ketone concentration resulted in an increased overall brain energy metabolism by 3%, without altering brain glucose consumption.<sup>3</sup>

It has been shown in animals that ketone bodies can also replace glucose as a cellular signal in the central nervous system.<sup>4</sup> Fasting in humans is associated with an increase in ketones.<sup>5</sup> Conversely, administering ketones directly into the brain of rats results in body weight loss without changing food intake, nor affecting blood glucose levels or liver glycogen levels.<sup>6</sup> Subcutaneous injections result in decreased food intake, specifically targeting a decrease in meal frequency and the time between meals.<sup>7</sup> 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 a dextrose control. Subjects also reported decreased hunger and desire to eat.8 Research studies involving athletes indicate that ketones also increase fat oxidation in the muscle during exercise, acting as an alternative fuel, even in the presence of carbohydrate and insulin. Additionally, they result in decreased plasma lactate concentrations, suggesting support for athletic endurance and muscle comfort.9<sup>+</sup>

## SUGGESTED USE

Add 1 serving to 8 oz. of water, milk or juice. Shake or stir until dissolved.

#### STORAGE

Store in a cool, dry place.

#### WARNING

If you are pregnant or lactating, have any health condition or are taking any medication, consult your health professional before use.

## SOURCE

- Beta-hydroxybutyrate is synthetic
- Calcium and magnesium are naturally derived from elemental ore
- Citric acid and malic acid are derived from corn dextrose fermentation

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## KetoBrain Energy 300g

Ketogenic mineral blend to support healthy brain function, weight management<sup>†</sup>, and athletic endurance<sup>‡</sup>

#### NOTES

Size 9cc scoop Bottle count 300 g Serving size 2 rounded scoops (approximately 15 g) Order code KBE3 Bottle size 19 oz

#### REFERENCES

- 1. Xin L, et al. Front Nutr. 2018 Jul 12;5:62.
- 2. Svart M, et al. PLoS One. 2018;13(2): e0190556.
- 3. Croteau E, et al. J Alzheimers Dis. 2018;64(2):551-561.
- 4. Newman JC, et al. Trends Endocrinol Metab. 2014, 25(1):42–52.
- 5. Reichard GA, et al. J Clin Invest. 1974;53 (2):508–515.
- 6. Langhans W, et al. Physiol Behavior. 1983; 31(4):483-46.
- 7. Rossi R, et al. J Vet Med A Physiol Pathol Clin Med. 2000;47(1):9.
- 8. Stubbs BJ, et al. Obesity (Silver Spring). 2018 Feb;26(2):269-273.
- 9. Cox PJ, et al. Cell Metabolism 2016, 24, 256–268.

## SUPPLEMENT FACTS

Add 1 serving to 8 oz of water, milk or juice. Shake or stir until dissolved. Serving size: 15 g (2 scoops)

Servings per container: 20

Two rounded scoops (approximately 15 g) contain:	
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	10 q

(from a blend of calcium beta-hydroxybutyrate, magnesium

\_\_\_\_\_beta-hydroxybutyrate, and sodium beta-hydroxybutyrate) Other ingredients: citric acid, natural strawberry and lemonade flavors, malic acid, purified stevia leaf extract

Order

Code

KBE3

KetoBrain Energy Quantity 10.6 oz (300 g)

<sup>†</sup>Provides weight management support as part of a healthy lifestyle with a reduced calorie diet and regular exercise.

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