# C8 Max MCT Powder

## DESCRIPTION

C8 Max from Douglas Laboratories<sup>®</sup> is a novel medium chain triglyceride (MCT) powder that delivers 10 g of MCT with 95% caprylic acid (C8) triglycerides. This high C8 concentration is shown to increase ketone levels better than standard MCTs. This neutral tasting powder easily mixes into beverages and food for an extra boost of fatty acids in the diet to enhance ketone production and support cognitive function or weight management. <sup>‡</sup>

### **INDICATIONS**

- Cognitive function<sup>‡</sup>
- Supports ketone production and weight management<sup>‡</sup>

# FUNCTIONS AND MECHANISMS OF ACTION

The liver is capable of metabolizing mobilized fat to produce ketones that can be used by the mitochondria as an ATP substrate and may be more efficient than glucose. Medium-chain triglycerides (MCTs) include a glycerol backbone attached to three fatty acids ranging in length from 6-12 carbons. These triglycerides are naturally found in coconut oil, palm kernel oil, and dairy fat, mainly as C8 (caprylic acid) and C10 (capric acid). MCTs can produce high levels of  $\beta$ -hydroxybutyrate (BHB), which is a ketone body that is transported to other tissues and converted to acetyl-CoA to produce energy for the brain and muscles. C8 is more ketogenic than the longer-chain triglycerides due to its unique absorption and metabolic characteristics. Aside from conditions that involve energy restriction, the most common way to induce controlled dietary ketosis is with medium-chain triacylglycerols (MCT).

Ketones that cross the blood-brain barrier have been shown to be neuroprotective, promoting oxidative defense and enhancing mitochondrial respiration and cerebral blood flow. In a human intervention study involving 20 elderly subjects and young controls, administration of 30 g MCT increased ketone concentration and overall brain energy metabolism by up to 9% without altering brain glucose consumption. Additional research has shown that compared to placebo, MCT supplementation can yield higher ketone levels, which has been associated with greater improvement in paragraph recall (cognitive testing). ‡

The use of MCTs in weight management<sup>+</sup> has been shown to be an effective supplement during energy restriction and fat metabolism. MCTs provide 10% lower energy density than long-chain fats, yet seem to enhance satiety more effectively. A study on appetite and food intake in overweight men demonstrated that post-prandial consumption of 20 g MCT resulted in a lower rise in triglycerides and glucose (*P*=0.066) and a higher rise in peptide YY compared to long-chain triglycerides.<sup>‡</sup>

C8 Vantage<sup>™</sup> contains 95% pure C8 triglycerides while standard coconut oil contains only 3% caprylic acid, and typical MCTs contain only 55% caprylic acid. In a recent study, C8Vantage<sup>™</sup> compared the ketogenic effect of coconut oil, 3% tricaprylin, 5% tricaprin, regular MCT oil and C10. Plasma ketone levels were 400% higher than the coconut oil value, 255% higher than pure C10 and 21% higher than the regular MCT value over an 8 hour post-prandial period. C8 Vantage<sup>™</sup> contains plant-based pea protein and tapioca fiber as the combined carriers, supplying 1 g of soluble fiber. It is suitable for all consumers including vegans and vegetarians.<sup>‡</sup>

# SOURCING

Sustainably sourced natural palm kernel oil.

# FORMULA (#57743P)

1 scoop (14.5 g) contains:

# C8 Max

MCT Powder	
Calories	
Total fat	10 g
Saturated fat	10 g
Dietary fiber	
Protein	1 g
Medium Chain Triglycerides (C8Vantage™)	
[Supplying 95% caprylic acid trigylcerides (C8)]	-
Other ingredients: pea protein and tapioca fiber	
Non-GMO, Gluten-free	

C8 Vantage<sup>™</sup> is a trademark of NNB Nutrition

### SUGGESTED USE

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

# SIDE EFFECTS

No adverse side effects reported.

### STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

### REFERENCES

Taylor M.S., et al. J Biol Chem. 2013, 2288;32211-32228. Reger, M.A., et al. Neurobiology of Aging. 2014, 25;311, 314. Vandenberghe, C. et al. Curr Dev Nutr. 2017 1(4), e000257 Khabbush A., et al. Epilepsia. 2017, 58(8), 1423. J.D. McGarry, D.W. Foster, Ann. Rev. Biochem, 1980, 49:395-420. Courchesne-Loyer, et al. Nutrition, 2013, 29(4), 635-640. St.-Onge, M.PM., et al. *Eur. J. Clin., Nutr.*, 68(10), 1134-1140. Takeuchi, H., et al. Asia Pac J Clin Nutr, 17 (Suppl1) 20-323. Eyres L, Eyres MF, Chisholm A, Brown RC. Nutr Rev 2016;74:267-80.

#### For more information on C8 Max MCT Powder 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.

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