

Tri-Metabolic Control™ Weight Management

DESCRIPTION

Tri-Metabolic Control combines the clinically studied extracts of the *Piper betle* leaf and *Dolichos biflorus* seed plus acetyl-L-carnitine to support three metabolic hormones: adiponectin, leptin, and ghrelin, to help control appetite, satiety and fat metabolism as part of a healthy weight management program.*†

FUNCTIONS

Ghrelin is a peptide hormone that acts on hypothalamic brain cells, increasing hunger, gastric acid secretion and gastrointestinal motility to prepare the body for food intake. Along with synthetic ghrelin mimetics, ghrelin increases body weight and fat mass by triggering receptors in the arcuate nucleus, including the orexigenic neuropeptide Y (NPY) and agouti-related protein (AgRP) neurons.

Leptin, also a hormone, targets receptors in the arcuate nucleus of the hypothalamus to regulate appetite and to achieve energy homeostasis. If a decreased sensitivity to leptin occurs, the result may be an inability to detect satiety despite high energy stores, which could possibly lead to obesity.

Metabolism of intercellular fatty acids is initiated by the hormone adiponectin, which modulates a number of metabolic processes, including glucose regulation and fatty acid oxidation.

These hormones can be inhibited by a chronic secretion of cortisol, especially when a loss of negative feedback in the HPA axis has occurred. Genes that control satiety and metabolic rate, particularly the ADIPOQ, LEPR, FTO, IRX3 and IRX5, PPAR gamma, and MC4R genes can be assessed to improve their gene expression by altering these hormones.

LOWAT® is a patent-pending, fat-tissue targeting ingredient for healthy weight management.* LOWAT consists of *Piper betle* leaf and *Dolichos biflorus* seed extract, which have been traditionally used in Indian culture. LOWAT works by targeting fat formation and accumulation and by increasing fat burning.† *Dolichos biflorus*, also known as horse gram, decreases oxidative stress and supports healthy lipid and glucose metabolism.† *Piper betle* is an ayurvedic herb used for blood sugar support and digestive health.† The combination of the two herbs has also been clinically shown to boost adiponectin by 15% and reduce ghrelin by 17% to support healthy weight management and regulate appetite.*† Study results on LOWAT at 300 mg 3 times daily combined with diet and exercise showed significantly reduced body weight - 9.4 lbs compared to 3.9 lbs, a loss 2.4 times greater than placebo at eight weeks- as well as an improved BMI.†

Acetyl-L-carnitine is a necessary component for fatty acid metabolism and energy production. It is involved in fatty acid oxidation as a shuttle in the mitochondria for fatty acids to be utilized as an energy source. It also may support glucose tolerance, which in turn may support leptin hormone levels and promote satiety.†

INDICATIONS

Tri-Metabolic Control may be useful in individuals actively trying to manage their weight, appetite, and metabolic hormones.*†

FORMULA (#202230)

2 capsules contain:

LOWAT® (*Piper betle* leaf and *Dolichos biflorus* seed)...300 mg

Acetyl-L-Carnitine.....300 mg

Other ingredients: Hydroxypropyl methylcellulose (capsule), cellulose, silica, and ascorbyl palmitate.

LOWAT® is an exclusive trademark of InterHealth N.I.

Tri-Metabolic Control™**Weight Management****SUGGESTED USE**

Adults take 2 capsules before a meal, 2-3 times daily or as directed by a healthcare professional.

SIDE EFFECTS

No adverse side effects have been reported.

STORAGE

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

REFERENCES

Sengupta K, Mishra AT, Rao MK, Sarma KVS, Krishnaraju AV, Trimurtulu . Lipids Health Dis. 2012; 11: 176.

Chatterjee A, Fernandez C, Khandalavala B, et al. Paper presented at: American College of Nutrition 51st Annual Meeting; October 7-9, 2012; New York, NY.

Iossa S, Mollica MP, Lionetti L, Crescenzo R, Botta M, Barletta A, Liverini G. J Nutr. 2002 Apr;132(4):636-42.

Van Weyenberg S, Buyse J, Janssens GP. J Anim Physiol Anim Nutr (Berl). 2009 Apr;93(2):203-8.

Nabasree Dasgupta, Bratati De. Food Chemistry Volume 88, Issue 2, November 2004, Pages 219–224

For more information on TriMetabolic Control visit douglaslabs.com

*As part of a healthy lifestyle involving consistent, moderate dietary restriction 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.

Manufactured by
Douglas Laboratories
112 Technology Drive
Pittsburgh, PA 15275
800-245-4440
douglaslabs.com



© 2016 Douglas Laboratories. All Rights Reserved.

DL202230-0716