WOMEN’S NUTRITION AND HEALTH
key points for a healthy life

ALL OVER PROTECTION FOR THE SKIN
. . . from within

IMPLEMENTING AN EFFECTIVE CLEAN LABEL STRATEGY for food supplements

Probiotics and cardiovascular health
Capsaicinoids... a naturally functional choice for weight management

Capsaicinoids' Beneficial Effects for Weight Management

This process was observed by Bloomer and colleagues who saw a significant increase in plasma free fatty acids and glycerol compared to placebo following a low dose administration of an encapsulated form of capsaicinoids (Capsimax®) in conjunction with exercise. Through this pathway it is suggested that fat oxidation increases due to the catecholamine response favoring lipid oxidation and increases in energy expenditure have been observed between capsaicinoid treatment and a shift towards fat utilization at rest.1

Capsaicinoids may play a role increasing thermogenesis, the production of heat that occurs in all tissues. Thermogenesis is, essentially, a process by which usable cellular energy normally used to convert adenosine triphosphate (ADP) to adenosine triphosphate (ATP – the body's energy molecule) is "wasted" and dissipated as heat. This process is known as "uncoupling" and is regulated by uncoupling protein-1 (UCP1) and activated by increased cellular levels of free fatty acids as occurs during capsaicinoid consumption.14 Increased thermogenesis has been shown to raise resting energy expenditure by approximately 50 kcal/day and augment metabolic rate in conjunction with exercise and calorie-restricted dieting and exercise,28,16,17,18

Reductions in body fat have been observed with dosages of capsaicinoids between 2-10 mg/day.15 Increased fat oxidation associated with capsaicinoid intake has been shown to reduce visceral adipose tissue and augment circulating free fatty acids and glycerol to fuel beta-oxidation and gluconeogenesis.16

By Hector Lopez, M.D., CSCS, FAAPMR

Appetite is defined as the desire to consume food, and is regulated by a complex system involving hormones, the nervous system, control, lipolysis and thermogenesis. However, because of capsaicinoids’ intense heat their use in formulas has been limited. Capsimax® overcomes the barriers to using capsaicin extract. A naturally-dereconcentrated, capsaicin extract that leaves no exposed capsaicinoid layer, Capsimax® mitigates the intense heat experienced when ingesting uncoated capsaicin and capsaicin extracts. Thus, this patented technology allows manufacturers and consumers greater flexibility to use this active ingredient in a tablet, capsule or powdered drink mix.

References

13. Inoue N, Matsunaga Y, Satoh H, Takahashi M. Enhanced energy expenditure have been observed between capsaicinoid treatment and a shift towards fat utilization at rest.5,14 Increased thermogenesis has been shown to raise resting energy expenditure by approximately 50 kcal/day and augment metabolic rate in conjunction with exercise and calorie-restricted dieting and exercise,28,16,17,18

Worldwide, it is estimated that over 50% of adults 18 years and older are either overweight or obese, and while dietary modification and exercise should be the first line defense for weight management, the use of dietary ingredients may prove to be an effective adjunct therapy. Certain bioactive components found within some commonly consumed foods appear to have promise. Specifically, capsaicinoids, the active compounds in red hot peppers, are dietary agents that may be effective agents for weight management.

By Hector Lopez, M.D., CSCS, FAAPMR

Capsaicinoids now... nutraceuticals now...
Hector Lopez, M.D., CSCS, FAAFPMP
Dr. Lopez is a board-certified specialist in physical medicine and rehabilitation, with concentration in spine, sports and musculoskeletal medicine. He also has post-graduate training and research experience in nutritional biochemistry, endocrinology & metabolism, and exercise physiology. An active researcher, speaker, author, and clinician, he is recognized for uniquely integrating the best available methods and staying on the very forefront in the fields of musculoskeletal medicine, endocrinology and metabolism, regenerative medicine, exercise, and nutritional science. Dr. Lopez has been a founding partner and director of several integrative orthopedic, spine, and sports medicine facilities. He is currently principal and chief medical officer of The Center for Applied Health Sciences — an inter-disciplinary clinical research organization that validates and substantiates the safety and efficacy with a focus on elevating the science of dietary supplements/ingredients, natural products and medical foods. Dr. Lopez is also co-founder of Supplement Safety Solutions, LLC (SSS)—a nutravigilance, quality assurance, medical monitoring, adverse event and regulatory compliance consulting company. In addition, he is a consultant to professional athletes (NFL, NBA, MLB, NHL, UEFA/FIFA Soccer) and to the nutritional supplement industry as product developer, research advocate, and safety and regulatory expert. He has also started a new intellectual property discovery, incubation, and IP development company whose goal it is to bring novel, bioactive compounds to the dietary supplement and natural products space grounded in science and safety.

OmniActive Health Technologies (www.omniactives.com) offers a range of quality ingredients, which are innovative and scientifically validated for dietary supplementation, nutritional fortification, functional food/beverage, coloring, flavor enhancement and personal care applications. The company addresses complex challenges for customers in the dietary supplement, food and beverage space using technology-driven, sustainable solutions with application support within a global regulatory framework. Whether looking for a new ingredient to add to a finished product, or an ingredient solution to enhance an existing ingredient, you will find unmatched innovation at OmniActive.

Core products include carotenoids, plant extracts and specialty functional ingredients. OmniActive leverages international R&D strengths to deploy an array of state of the art manufacturing technologies in extraction, purification, isolation and delivery of nutritional actives. The company’s manufacturing operations are located at multiple sites in India and are cGMP and HACCP system compliant.


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