Importance and Efficacy of Nutraceuticals in Regulating Appetite and Satiety Signals for Weight Management

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Obesity is becoming a serious health problem around the world and affects the individuals' wellbeing. It can lead to the insurgence of various diseases such as diabetes, hypertension, cardiovascular diseases, and other related diseases. Weight management plays a significant role in maintaining overall health and wellbeing.

In this study, we evaluate a new approach that consists of using nutraceuticals to treat several overweight conditions. Nutraceutical is a marketing term that refers to a pharmaceutical effect derived from a compound or food product that could provide potential health benefits.

We will examine the efficacy how the conjugated linoleic acid (CLA) and saffron extract regulate appetite and satiety to manage weight, CLA and saffron extract are few of the most popular nutraceuticals on the market now. CLA is a mixture of linoleic acid isomers present mainly in dairy products and meat, and it is available in dietary supplements. It has been found that two CLA isomers, the trans-10, and cis-12, have an anti-obesity effect. Researchers have suggested that CLA enhances weight management by increasing lipolysis and fatty acid oxidation in skeletal muscle, reducing lipogenesis, and promoting apoptosis in adipose tissue. Another nutraceutical used in these studies is saffron, obtained from stigma of the plant *Crocus sativus.* Saffron has three key bioactive compounds crocin, crocetin, and safranal. It has been demonstrated that saffron works as an appetite suppressant and works against obesity and related metabolic disorders. Our meta-analysis suggests that both CLA and Saffron can lead to changes in body composition, specifically in BMI, weight, BFM, and WC (Waist circumference).

These findings suggest the possible use of nutraceuticals as an efficacious treatment for weight management. From these analyses we obtained important information that could help individuals how to respond to appetite and satiety signals, and to manage weight loss**.**