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EFFECTS OF HIBISCUS AND LEMON VERBENA POLYPHENOLS IN OVERWEIGHT VOLUNTEERS: THE ROLE OF APPETITE RELATED HORMONES

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Introduction: Obesity has become a major global health problem with epidemic proportions. Calorie restriction, physical exercise or psychologic supports have failed to achieve efficient long-term weight loss maintenance or metabolic control. Plant-derived polyphenols have shown potential to alleviate obesity-related pathologies by a multi-targeted mechanism in animal models and human intervention studies.

Materials & Methods: A dietary supplement based on a combination of *Lippia citriodora* (LC) and *Hibiscus sabdariffa* (HS) polyphenolic extracts was assayed in a double blind and placebo-controlled intervention study with 54 overweight volunteers having an isocaloric diet for two months.

Results: The results showed an improvement of decreased hunger and appetite compared to the placebo group. These satiety changes in the intervention group correlated with a reduction in circulating resistin and normalization of leptin expression, while regulating ghrelin levels. A positive perception of the consumer's health status was reflected using the SF-36 questionnaire. Contrary to the weight regain effect expected upon calorie restriction, we observed that plant polyphenols increased anorexigenic hormones (GLP-1) and decrease orexigenic hormones (ghrelin), leading to the compensation between hunger and energy expenditure and narrowing energy gap.

Conclusions: Although further research may be required, we propose that the polyphenolic combination may be used for weight management by increasing long-term weight loss maintenance through the modulation of appetite biomarkers.

Biography

Marina Boix Castejón is a PhD student at the Miguel Hernández University. She has graduated in Human Nutrition and Diabetics, has a Master's Degree in Clinical and Community Nutrition and Expert Course in Sports Nutrition from the University of Alicante, Spain.

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