



Role of Beta-Cryptoxanthin and High-Protein Diet in Combating NAFLD

Zhiyu Kang*

Department of Food Science and Technology, Zhejiang University of Technology, Hangzhou, China

*Corresponding Author: zhiyu kang, Department of Food Science and Technology, Zhejiang University of Technology, Hangzhou, China; E-mail: kangzhiyu@zhe.cn

Received date: 21 February, 2024, Manuscript No. JFND-24-135394;

Editor assigned date: 23 February, 2024, PreQC No. JFND-24-135394 (PQ);

Reviewed date: 07 March, 2024, QC No. JFND-24-135394;

Revised date: 13 March, 2024, Manuscript No. JFND-24-135394 (R);

Published date: 20 March, 2024, DOI: 10.4172/2324-8661.1000397

Description

Beta-cryptoxanthin supplementation and an energy-restricted high-protein diet have emerged as promising interventions for overweight or obese individuals with Non-Alcoholic Fatty Liver Disease (NAFLD). This combination therapy aims to improve metabolic syndrome markers and liver health in affected individuals. By exploring the impact of beta-cryptoxanthin supplementation and the high-protein diet in this population, we can gain valuable insights into novel approaches for managing NAFLD and associated metabolic complications.

The prevalence of NAFLD has been steadily increasing, paralleling the rise in obesity and metabolic syndrome worldwide. NAFLD is characterized by the accumulation of fat in the liver, leading to inflammation and liver damage. Individuals with NAFLD often present with metabolic abnormalities, including insulin resistance, dyslipidemia, and obesity, collectively termed metabolic syndrome. Addressing these interconnected factors is crucial for managing NAFLD and reducing the risk of progression to more severe liver conditions.

Beta-cryptoxanthin, a carotenoid with antioxidant properties often found in fruits and vegetables, has shown potential in alleviating oxidative stress and inflammation associated with NAFLD. When supplemented in conjunction with an energy-restricted high-protein

diet, beta-cryptoxanthin may offer synergistic benefits in improving metabolic parameters and liver health. This randomized controlled trial investigates the efficacy of this combined dietary approach in overweight or obese individuals with NAFLD, aiming to provide evidence-based insights into its effectiveness.

The energy-restricted high-protein diet utilized in this study is a strategic dietary intervention that aims to induce weight loss and optimize metabolic function. By restricting energy intake and emphasizing high-quality protein sources, such as lean meats, dairy products, and legumes, this diet promotes satiety, preserves lean muscle mass, and supports metabolic processes. Combined with beta-cryptoxanthin supplementation, this diet offers a comprehensive approach to address the multifaceted aspects of metabolic syndrome in individuals with NAFLD.

The randomized controlled trial involves a cohort of overweight or obese adults with confirmed NAFLD, who are divided into groups receiving different interventions: beta-cryptoxanthin supplementation with the energy-restricted high-protein diet, the high-protein diet alone, beta-cryptoxanthin supplementation alone, or a control group following a standard energy-restricted diet. Various metabolic parameters, oxidative stress markers, inflammatory cytokines, and liver function tests are assessed at baseline and after the intervention period to evaluate the impact of the dietary strategies on participants' health.

Preliminary findings from the trial suggest that the combination of beta-cryptoxanthin supplementation and the energy-restricted high-protein diet leads to significant improvements in metabolic syndrome markers among overweight or obese individuals with NAFLD. Reductions in oxidative stress, inflammation, and improvements in antioxidant capacity are observed in the intervention group compared to the control group. These results highlight the potential of dietary interventions incorporating beta-cryptoxanthin and a high-protein diet in mitigating metabolic disturbances and supporting liver health in individuals with NAFLD.

In conclusion, the utilization of beta-cryptoxanthin supplementation and an energy-restricted high-protein diet presents a promising approach for managing metabolic syndrome and improving liver health in overweight or obese individuals with NAFLD. This novel dietary intervention strategy underscores the importance of personalized nutrition therapies in addressing the complex interplay between diet, metabolism, and liver function. Further research and long-term studies are essential to elucidate the sustained benefits and clinical implications of this combined dietary approach for individuals with NAFLD and metabolic syndrome.

Citation: Kang Z (2024) Role of Beta-Cryptoxanthin and High-Protein Diet in Combating NAFLD J Food Nutr Disor 13:2.