

Effect of Integrated Approach of Yoga Therapy(IAYT) on Antioxidant Status of Obese Subjects

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ABSTRACT

Background: Obesity is a growing public health concern in modern societies. Physical inactivity and unhealthy diet have been identified as major risk factors for obesity. Abdominal obesity has been suggested to be associated with overstimulation of the hypothalamic pituitary-adrenal (HPA) axis due to chronic stress and altering diurnal cortisol secretion. Abnormal regulation of the HPA axis and perceived stress-dependent cortisol levels are strongly related to perturbations of the endocrine axis as well as abdominal obesity with metabolic abnormalities. Obese patients with BMI above 35 kg/m² show low plasma antioxidants (carotenoids and vitamin E). This may result in increased oxidative stress. Importantly, even short-term yoga based comprehensive lifestyle intervention led to notable reduction in body mass index, blood pressure, and blood glucose with a clinically meaningful improvement in lipid profile.

Methods: 38 male and female subjects in the age group of 18-55 years were selected based on exclusion criteria. Total Antioxidant Status, BMI and lipid profile was estimated before any intervention. They were subjected to Integrative approach of yoga therapy including asanas, pranayama, diet, meditation techniques for a period of 6 to 15 days. After 6-15 days of IAYT, Total Antioxidant Status, SUA, Albumin, BMI, lipid profile and other biochemical variables were estimated.

Results: We observed a statistically significant increase in serum uric acid, AST (Aspartate transaminase), ALT (alanine aminotransferase), Bhramari time and decrease in hip circumference, waist circumference, BMI, Systolic BP, Diastolic BP after 10 days of Integrative approach of yoga therapy. Also, we observed a decrease in FBS, systolic blood pressure, triglycerides and an which is not statistically significant.

Conclusion: Total Antioxidant Capacity would have been significant in the present study if the intervention was for a longer duration. And the anthropometric and certain lipid profile results clearly suggest that Yoga can be used as an adjunct therapy for lifestyle modification and management of obesity and related complications.

Keywords: Asana's, antioxidants, uric acid, Body mass index, AST, ALT, Yoga