Psychological Mood State and Biochemical Balance are Improved with Modest Lifestyle Interventions

S. Talbott [1, 3], J. Talbott [1], A.M. Christopulos [2], W. Larsen [2], & V. Jackson [2]
[1] SupplementWatch, Inc., Draper, UT; [2] Treehouse Athletic Club, Draper, UT; [3] LifeVantage Corp, Sandy, UT

PURPOSE: Our objective was to assess changes in Psychological Mood State (vigor, depression, fatigue, irritability, and tension) and Biochemical Profile (oxidative stress, inflammation, glucose, cortisol, and testosterone) in response to a modest lifestyle intervention including a diet, exercise, and herbal supplementation based on traditional Chinese and Indian medicine (TCM and Ayurveda).

BACKGROUND: Chronic stress plays a major role in the pathophysiology of many disease states, particularly psychological disorders including depression, chronic fatigue syndrome, anxiety, fibromyalgia, and burnout. These stress-related changes in psychology may be due to both endocrine and behavioral factors – and may be mediated or attenuated by lifestyle factors including nutrition, exercise, and dietary supplements. Vigor is defined as a 3-tiered sustained mood-state that is characterized by (1) physical energy, (2) mental focus, and (3) cognitive liveliness. Vigor can also be described as the opposite of "Burnout" (physical fatigue, mental exhaustion, cognitive weariness).

METHODS: We report on 153 subjects (103 women/50 men) – displaying moderate levels of psychological stress. We measured endocrine parameters (salivary cortisol to testosterone (C:T) ratio) and Vigor (V, using the Profile of Mood States (POMS) psychological survey) before and after the supplementation intervention. Depending on the cohort, subjects followed one of several different lifestyle intervention periods conducted at different times of the year (January, May, November) and lasting varying amounts of time (24-hour, 6-wks, 8-wks, or 12-wks). Each lifestyle intervention included recommendations for balanced diet (moderate carbohydrate/protein/fat), regular exercise (3-5 d/wk of interval walking), and herbal TCM/Ayurvedic supplements (adaptogens including cordyceps, ashwagandha, rhodiola, ginseng, magnolia bark, red seaweed, licorice root).

RESULTS: Compared to pre-intervention values, post-intervention measurements indicated significant positive changes for a variety of mood state and biochemical parameters. For example, significant changes ($p<0.05$) were found for Cortisol:Testosterone ratio (-15-19%), hsCRP (-20-60%), glucose (-9-15%), Global Mood State (+20-22%), Vigor (+27-29%), Fatigue (-41-48%), Tension (-20-34%), and Depression (-40-52%).

CONCLUSION: These data indicate that factors that are typically disrupted during periods of chronic stress (biochemical profile and psychological mood state) may be positively and significantly impacted by modest changes in diet, exercise and supplementation patterns.

Funding: N/A
Conflicts of Interest: The authors report no conflicts of interest related to this research. S. Talbott is an employee of LifeVantage Corp., and this research was conducted prior to his employment.