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File: ■ Holy Basil (*Ocimum tenuiflorum*)

■ Stress
■ OciBest™

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RE: OciBest™, an Extract of Holy Basil, Alleviates Symptoms of Stress

Saxena RC, Singh R, Kumar P, et al. Efficacy of an extract of *Ocimum tenuiflorum* (OciBest) in the management of general stress: A double-blind, placebo-controlled study. *Evid Based Complement Alternat Med.* 2012;2012:894509. doi:10.1155/2012/894509.

Stress is a common problem encountered by mankind in modern-day life and is defined by the American Institute of Stress as "physical, mental, or emotional strain or tension" or "a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilize."¹ Stress is inevitable, but the effects of stress vary with the threshold of individuals. Though there is extensive preclinical evidence and some evidence in Ayurveda that holy basil (*Ocimum tenuiflorum* syn. *O. sanctum*) has been used for adaptogenic/anti-stress activity, genuine clinical data were found to be lacking. This randomized, double-blind, placebo-controlled study sought to evaluate the efficacy of OciBest™ (M/s Natural Remedies Pvt. Ltd.; Bangalore, India), an extract of whole-plant holy basil, in the management of general stress.

Investigators of the study recruited participants in 2 different centers in Lucknow, India between April 2008 and September 2009. Participants suffering from at least 3 of 14 symptoms of stress listed were included. Participants who were unable to give voluntary consent; had a history of significant cardiac, hepatic, renal, brain, or blood-allergic diseases; or were pregnant or breast feeding were excluded. Participants had to be free from physical disabilities and were not to have been using allopathic or herbal medicines, nor could they have been participating in any other clinical trial.

Of the 167 participants screened, a total of 158 were selected for the study. Participants were randomized to 2 groups: to receive either placebo or OciBest, 1 capsule after breakfast and 2 capsules after dinner (total = 1200 mg of actives per day) for 6 weeks. OciBest is an extract of whole-plant holy basil that has the following phytochemical specifications: ociglycoside-I (hydroxychavicol glucoside/4-allyl-1-O-β-D-glucopyranosyl-2-hydroxybenzene; >0.1% w/w), rosmarinic acid (>0.2% w/w), and triterpene acids (>2.5% w/w). On weeks 2, 4, and 6, data were collected on symptoms, reassessment, and compliance. Three patients in the placebo group and 5 patients in the OciBest group were excluded from analysis as they did not turn up for follow-up, leaving a total of 150 patients that were analyzed (placebo, n = 79; OciBest, n = 71).

Participant stress symptom scores were evaluated based on the symptom rating scale. During the 6-week period, participants were asked to grade themselves for all individual symptoms based on the symptom rating scale on week 0 and follow-up on weeks 2, 4, and 6 of the study period. Based on the participant rating, 14 stress symptoms were scored, and the outcome was evaluated.

The authors compared demographic characteristics of all participants at baseline by independent Student's t-test which did not differ significantly in any parameters. As compared to the placebo group, the individual symptom scores of participants in the OciBest group on week 0 did not differ significantly. A decreasing trend in the mean scores of all individual symptom scores was noticed from week 0 to week 6 in the OciBest group. The OciBest treatment group significantly decreased ($P \leq 0.05$) on all the mean symptom scores from week 0 to weeks 2, 4, and 6 except for sexual problems of recent origin at week 2. Mean scores of headache, palpitation at rest, frequent gastrointestinal symptoms, and frequent sleep problems decreased significantly from week 2 to weeks 4 and 6 in the OciBest group; mean scores of forgetfulness, sexual problems of recent origin, quarrelsome behavior, and frequent feeling of exhaustion decreased significantly from week 2 to week 6 in the OciBest group; and mean scores of forgetfulness, sexual problems of recent origin, quarrelsome behavior, frequent feeling of exhaustion, and frequent sleep problems decreased significantly from week 4 to week 6 after OciBest treatment. By study's end, the total symptom scores of OciBest group participants were significantly reduced ($P \leq 0.05$) as compared to placebo. Individual scores for forgetfulness, recent sexual problems, exhaustion, and sleep problems were reduced significantly in comparison to placebo ($P \leq 0.05$) after 6 weeks of OciBest treatment.

The authors conclude that OciBest significantly alleviates stress symptoms, particularly forgetfulness, and stated that OciBest is 1.6 times, or 39%, more effective than placebo in the management of stress symptoms. This study did not report any major adverse events in participants and found the extract to be well tolerated.

Reference

¹The American Institute of Stress. Stress, definition of stress, stressor, what is stress?, Eustress? Available at: <http://www.stress.org/topic-definition-stress.htm>. Accessed on September 7, 2011.

Downloadable PDF available at <http://www.hindawi.com/journals/ecam/2012/894509>.

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