Natreon
Trusted Science, Naturally™

Sensoril®
vitalizing mind & body

Name of Study	**A standardized *Withania somnifera* extract reduces stress related parameters in chronically stressed humans - a double-blind, randomized, placebo-controlled study**	**Effects of standardized aqueous extract of *Withania somnifera* on tests of cognitive and psychomotor performance in healthy human participants**	**Evaluation of efficacy and tolerability of an aqueous extract of roots plus leaves of *Withania somnifera* 250 mg twice daily and 125 mg twice daily in subjects with knee joint pain and discomfort**	**Effect of *Withania somnifera* extract on mental stress induced changes on hemodynamic properties and arterial wave reflections in healthy subjects**	**Evaluation of a highly standardized *Withania somnifera* extract on endothelial function and biomarkers of oxidative stress in patients with type 2 diabetes: A randomized, double-blind, placebo-controlled study**	**A comparative study to evaluate the effect of highly standardized extracts of *Phyllanthus emblica* , *Withania somnifera* , and their combination on endothelial dysfunction and biomarkers in patients with type 2 diabetes mellitus**	**Evaluation of the analgesic activity of standardized aqueous extract of *Withania somnifera* in healthy human volunteers using hot air pain model**	**A randomized, double-blind, placebo controlled, crossover study to evaluate the analgesic activity of Withania somnifera (Sensoril®) in healthy human volunteers using mechanical pain model**	**Evaluation of the effect of *Withania somnifera* (Sensoril®) on cold pressor test induced cardiovascular changes in healthy human subjects**
Type of Study	Randomized, double-blind, placebo controlled	Randomized, cross-over, prospective double-blind, placebo controlled	Randomized, double blind, placebo-controlled	Randomized, double blind, placebo-controlled, cross-over	Randomized, double blind, placebo-controlled	Randomized, double blind, placebo-controlled	Randomized, double blind, placebo controlled, cross-over study	Randomized, double blind, placebo-controlled, cross-over study	Randomized, double blind, placebo-controlled
Publication Status	Published - *Journal of the American Nutraceutical Association* , 2008	Published - *Pharmacognosy Research* , 2014	Published - *Journal of Ayurveda and Integrative Medicine,* 2016	Published - *Current Topics in Nutraceutical Research* , 2013	Published - *International Journal of Research in Ayurveda and Pharmacy* , 2014	Published - *International Journal of Pharmaceutical Sciences and Researc,* 2014	Published - *Research Journal of Life Sciences* , 2013	Pending publication	Published - *International Journal of Basic & Clinical Pharmacology* , 2016
Location of Study	India	India	India	India	India	India	India	India	India
Population Studied	Men and women aged 18-60 with mHAM-A scores of 24-42	Healthy male participants aged 20-35 years	Males and females aged 40-70 years meeting ARA functional class I to III	Healthy male participants	Males and females aged 18-65 years with Type 2 diabetes taking a stable dose of anti-diabetic medication	Males and females aged 18-65 years with Type 2 diabetes taking a stable dose of anti-diabetic medication	Healthy male participants aged 18-40 years	Healthy male participants aged 18-40 years	Male subjects aged 20-35
# of Subjects	n = 98	n = 20	n = 60	n = 20	n = 60	n = 30	n = 12	n = 12	n = 20
Duration of Study	60 days	14 days	12 weeks	14 days	12 weeks	12 weeks	2 weeks	2 weeks	14 days
Treatment Groups	•Sensoril® 125 mg daily •Sensoril® 125 mg twice daily •Sensoril® 250 mg twice daily •Placebo	•Sensoril® 250 mg daily •Placebo	•Sensoril® 125 mg twice daily •Sensoril® 250 mg twice daily •Placebo	•Sensoril® 500 mg twice daily •Placebo	•Sensoril® 250 mg twice daily •Sensoril 500 mg twice daily •Placebo	•Sensoril® 500 mg daily •Capros® 500 mg daily •Sensoril® 250 mg + Capros® 250 mg	Sensoril® 1000 mg single dose	Sensoril® 1000 mg single dose	•Sensoril® 500 mg twice daily •Placebo
Primary Outcomes	mHAM-A scores	Performance in psychomotor tests •Finger tapping test (FTT) •Simple reaction test (SRT) •Choice discrimination test (CDT) •Digit symbol substitution test (DSST) •Digit vigilance tast (DVT) •Card sorting test (CST)	mWOMAC scores	•Aortic pressure •Augmentation index •Radial and aortic SBP •Radial and aortic DBP •SEVR	•Change in endothelial function	•Change in endothelial function	Pain threshold time	Pain threshold time Pain threshold force	•Aortic pressure •Augmentation index •Radial and aortic SBP •Radial and aortic DBP •SEVR
Secondary Outcomes	•Serum cortisol •Serum C-reactive protein •Pulse rate •Blood pressure	N/A	•Knee Swelling Index •VAS - pain, stiffness, and disability •Extent of use of rescue medication in treatment groups •Physician Global Assessment scale and tolerability	•hsCRP •MDA •Serum cortisol	•Change in nitric oxide levels, hsCRP, and lipid profile	•Change in nitric oxide levels, hsCRP, and lipid profile	N/A	N/A	N/A
Results	•Sensoril® supplementation significantly improved mHAM-A scores ($p < 0.001$ for all parameters for all dosage groups after 60 days) •Sensoril® significantly decreased serum cortisol and CRP levels	Sensoril® supplementation significantly decreased reaction time in SRT, CDT, DSST, DVT, and CST compared to that of baseline and placebo	**mWOMAC score**: significant reduction •250 mg group ($p < 0.001$) •125 mg group ($p < 0.05$) **Knee swelling index**: significant reduction •250 mg group ($p < 0.001$) 125 mg group ($p < 0.05$) **VAS**: significant reduction in pain, stiffness, disability •250 mg group ($p < 0.001$) •125 mg group ($p < 0.01$ for pain and stiffness, $p < 0.05$ for disability)	•Sensoril® supplementation significantly decreased aortic pressure and augmentation index •Radial and aortic SBP and radial DBP was significantly decreased •SEVR was significantly increased	•Sensoril® supplementation significantly improved endothelial function, biomarkers of oxidative stress (NO levels), hsCRP and the lipid profile	•All treatment groups significantly improved endothelial function and oxidative stress biomarkers	Sensoril® significantly increased pain threshold time compared to baseline and placebo	Sensoril® significantly increased pain threshold time and force compared to baseline and placebo	Sensoril® produced a statistically significant decrease in: •aortic pressure ($p < 0.05$) •augmentation index ($p < 0.001$) •radial systolic blood pressure ($p < 0.05$) •aortic systolic blood pressure ($p < 0.01$) •radial and aortic mean blood pressures ($p < 0.05$) •radial pulse pressure ($p < 0.05$) compared to baseline
Claims	•Sensoril® helps increase resistance to stress, fatigue, and tension •Sensoril® helps counteract the negative effects of stress •Sensoril® helps the body cope with stress	•Sensoril® helps enhance focus and mental stamina •Sensoril® helps promote mental clarity and concentration	Sensoril® supports healthy and flexible joints	•Sensoril® support healthy cardiovascular function •Sensoril® supports a healthy inflammatory response	•Sensoril® supports healthy cardiovascular function •Sensoril® supports a healthy inflammatory resonse	•Sensoril® supports healthy cardiovasuclar function •Sensoril® supports a healthy inflammatory response	Sensoril® improves acute discomfort	Sensoril® improves acute discomfort	•Sensoril® supports healthy cardiovascular function