

CHAPTER 235 Sahaja Yoga for Management of Stress & Life Style Diseases

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ABSTRACT

The changes of rapid globalization are putting heavy stress on people and taking a heavy toll of their health and lives. Only a century ago the primary threats to human life were infections, but now days most humans die of diseases like diabetes heart attacks and stroke in which stress plays a major role. Diseases like angina, heart attack and diabetes which only struck in elderly age groups are now claiming, as their victims, as young as 30 yrs old. It may not be an easy task to change the present day stressors of competitive, aggressive fast paced lives, but certainly a change can be brought in an individual's perceptions and coping abilities to combat negative effects of stress on health and diseases. In fact, new research reveals that simple 20 minutes of Sahaja Yoga meditation a day now can keep you free of stress.

INTRODUCTION

When stress takes hold, the brain is bathed in chemicals; the sympathetic nervous system gets a jump-start. Glucose and fats flood the bloodstream and our cardiovascular and respiratory systems rev up, all to give us the armaments we need to deal with the stress. These changes would make sense if we were running for our lives or rescuing our child from a fire. But when everything from taxes to television news triggers a reactive response, stress becomes toxic. As it is not possible to change the style or pace of our modern life, we need to discover suitable mechanisms to cope with daily stress.

Psychological stress plays an important role in the causation of essential hypertension, which is one of the most important public health problems in developed, and developing countries. Recently, it has been reported that emotional stress and anxiety can precipitate overt ischemic heart disease and cause sudden death. Modulation of stress can in turn lead to improvement in numerous life style diseases like, diabetes, hypertension, ischemic heart disease and host of other psychosomatic diseases, the proof of which already exists in scientific literature.

At present considerable evidence exists for the place of mind body medicine in maintaining and improving psychological health. Ten million American adults now say they practice some form of meditation regularly, twice as many as a decade ago. "For 30 years meditation research has told us that it works beautifully as an antidote to stress," says Daniel Goleman, author of *Destructive Emotions*. "But what's exciting about the new research is how meditation can train the mind and reshape the brain.

Sahaja Yoga is a unique form of meditation technique

developed by Dr Nirmala Devi Srivastava, (Hon PhD in Cognitive Science from Romania University), popularly known as Shri Mataji Nirmala Devi in the year 1970. Through this process, an inner transformation takes place by which one becomes energized and de-stressed. It offers a practical method of understanding your own energy system and tapping into this powerful force. Scientific studies have proved beyond doubt that SYM (sahaja yoja meditation) acts by reducing sympathetic activity (Stress) and promoting parasympathetic activity (Relaxation).

Studies comparing experienced SY meditators compared to controls or short-term meditators have demonstrated physiological changes during meditation suggestive of a wakeful hypo metabolic state that is characterised by decreased sympathetic nervous activity, important for fight and flight mechanisms involved in stress reactions, and increased parasympathetic activity, important for relaxation and rest. Sahaja Yoga Meditation, has been shown to reduce autonomic activity in short- and long-term practitioners compared to controls. This included a reduction in heart, respiratory and pulse rates, systolic blood pressure and oxygen metabolism, and reduction of urinary vanilly mandelic acid (VMA) a break down product of Stress Hormone Adrenalin and increases of Skin Resistance¹ reflecting a de stressed state. These physiological alterations are indicators of deep parasympathetic activation and therefore physiological relaxation that have been related to stress relief and may have a role in the prevention of stress-related illness, most notably, hypertension and other cardiovascular diseases. Electro-physiological (EEG) studies comparing the brain activation of long-term Sahaja Yoga practitioners have been able to find specific brain activation patterns corresponding to a relaxed state of mind & subjective feelings of happiness and have also shown on sophisticated EEG studies of better interconnectivity of different brain regions^{2,3} An interesting study investigating the neural correlates of emotional reactivity of long-term Meditators compared to controls showed reduced psychological, physiological and electrophysio-logical reactivity to stressful stimuli, providing for the first time in the World the neurophysiologic evidence to support the hypothesis that Sahaja Yoga Meditation leads to "detachment" and greater emotional resilience to stressful life events.⁴

Rigorous randomized trials on SY Meditation using active control groups have demonstrated significant effects on depressive mood and work stress in full-time workers.⁵ In other studies, on SY Meditation, promising effects have been shown in depression & anxiety,⁶ on enhanced Quality

1070 of life⁷ and on improving Psychological health in a diverse group of population consisting of different nationalities and age groups.⁸ In fact, the same physiological effects achieved with Sahaja Yoga Meditation in healthy individuals, could also be achieved in patients with asthma, hypertension, epilepsy and Diabetes, after few weeks of Meditation training, which furthermore were related to the significant reduction of Blood pressure, attacks of epilepsy & asthma & improvements in Diabetes Control & ADHD in children.^{6,9,10,12,13-16}

Two large controlled studies recently completed in the Physiology & Medicine Department of MGM Institute of Health Sciences, Navi Mumbai by the authors on effects of Sahaja Yoga meditation on endothelial function, oxidative stress, serum cortisol, perceived stress levels and HRV found a very significant improvement in heart rate variability, endothelial function and serum cortisol levels and found significantly decreased oxidative stress and perceived stress levels in long term Sahaja Yoga meditators as compared to general healthy population who were not practicing any meditation.¹⁷

- **Perceived Stress:** PSS is the most widely used scale for assessing stressfulness of events, physical and psychiatric diseases and stress management programs. Meditation not only improves one's subjective ability to cope, but also one's behavioral ability to cope through reduced reactivity to external stimuli and quicker response to stressor. In our study the perceived scores in SYM group were significantly less compared to that in the Non Yoga healthy group. Thus it was clearly evident that the SYM group was overall all less stressed and their Perceived stress levels were found to be lower in as compared to non yoga group.
- **Serum Cortisol levels** (a biological marker of stress) was measured in the long term SY meditators and compared it to the Healthy non meditators. Most previous studies have found that urine and plasma cortisol levels are decreased during meditation. This release of cortisol in response to an acute stressor is believed to be involved in promoting survival functions, such as increasing blood pressure and blood sugar levels and promoting analgesia. However, despite their protective effects during times of stress, chronic elevations of glucocorticoids can have damaging effects on the body over time, particularly when acute responses to stress becomes chronic. In our study SYM Group showed lower Cortisol levels. Higher serum Cortisol values in the Non Yoga group indicated higher stress levels in them.
- **ENDOTHELIAL FUNCTION:** Nitric oxide is a soluble gas continuously synthesized by the endothelium. This substance has a wide range of biological properties that maintain vascular homeostasis. Diminished nitric oxide bioactivity may cause constriction of coronary arteries during mental stress and exercise and can contribute to

provocation of myocardial ischemia in patients with coronary artery disease. In the present study, Serum Nitrite was measured in both the groups for an indirect assessment of Nitric Oxide (NO) levels in the body. NO levels correlate very well with the endothelial function of the body. Our study showed, that the Mean value of Serum Nitrite in SYM Yoga Group were significantly more than in the Non Yoga Group. This indicated a Better Endothelial Functioning in The long term Sahaja Yoga Meditators.

HEART RATE VARIABILITY

The heart is also where researchers discovered the body's best biological indicator of stress: heart rate variability. Heart rate variability is the cutting edge of current cardiology research. In essence, HRV provides a picture of the interplay between the sympathetic and parasympathetic branches of ANS. Cardiovascular disease (CVD) is the leading cause of death and disability worldwide. Autonomic imbalance, characterized by a hyperactive sympathetic system and a hypoactive parasympathetic system, is associated with various pathological conditions. Over time, excessive energy demands on the system can lead to premature aging and diseases. Therefore, autonomic imbalance may be a final common pathway to increased morbidity and mortality from a host of conditions and diseases, including cardiovascular disease. Substantial evidence exists to support the notion that decreased HRV precedes the development of a number of risk factors. Studies have shown that Work stress has shown to decrease HRV, which is in itself is a major risk factor for cardiovascular morbidity and mortality. The effects of modifiable risk factors might be prevented or minimized by engaging in behaviors that might increase HRV. In healthy individuals, acute increases in HF-HRV generally occur in response to positive-emotion induction, relaxation and meditation. Our study showed the mean LF/HF ratio of the SYM Group was significantly lower than the Non Yoga Group. The lower LF/HF ratio in Yoga Group indicated a better Sympathovagal Balance in Yoga subjects. Also higher levels of HF which were recorded in the Yoga Group Indicated a Parasympathetic Dominant (Relaxed) State in Sahaja Yoga Meditation Subjects. It is now amply clear that autonomic imbalance might be the final common pathway linking a host of disorders and conditions to death and disease. Thus, changes in Life style & behaviors like incorporating Sahaja Yoga Meditation in daily life can alter this autonomic imbalance toward a more salubrious profile may serve to prevent or at least minimize the effects of certain factors on the risk for cardiovascular disease and death.

HOW YOGIC MEDITATION REDUCES STRESS?

The Possible Mechanisms, Mammals, including humans, have over millions of years evolved the ability to deal rapidly and reflexively with perceived threats to survival and this ability has conferred a considerable survival advantage to this group of animals. In humans however, the same stress response can be triggered in situations

which, while they do not necessarily threaten survival, occur fairly frequently. Such a typical situation is in the daily live hassles as meeting deadlines. Repeated activation of the stress response is thought to result in dysregulation of physiology which leads to the body's own survival mechanisms and this in turn damages health.

One very popular view is that the physiological changes achieved by SYM are characterized by the relaxation response—Psychophysiological studies of Sahaja Yoga, suggest that in reality it does elicit a relaxation response. It is hypothesized that this subtle energy (kundalini) actualizes in limbic system of the brain and therefore by its effects on the limbic system, it modulates the emotional response of an individual. Also limbic system has rich connections with hypothalamus and through this route it exerts its effect on autonomic nervous system. The limbic system also acts on the HPA axis and there by modulates the release of various hormones released in response to stress. Modulation of Stress can in turn lead to improvement in numerous life style diseases like, Diabetes, Hypertension, Ischemic Heart disease and host of other psychosomatic diseases, the proof of which already exists in scientific literature

Sahaja Yoga Meditation is now a central feature in corporate wellness and youth development programs globally and is increasingly being prescribed by doctors as a part of Holistic health recommendations. It is non intrusive and self regulating in nature. SYM has been extensively researched upon in India and abroad It is taught free of charge at all the Sahaja Yoga Centers in more than 157 countries around the world. For her significant contribution to understanding of subtle energy systems H.H Shri Mataji Nirmala Devi received numerous Awards and recognition from around the Globe. She has received United Nations Peace Prize and has been twice nominated for Nobel Peace Prize. The simple technique of Sahaja Yoga can be learnt free from internet also. For learning Sahaja Yoga Meditation or for any more information visit site -www.freemeditation.com, or write to doctorsandeeprai@gmail.com

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