

The 12th Anniversary
India-Japan Fest



BICON-2017
 OCTOBER 11-14, 2017



Work, Stress and Health

Advances in Scientific Meditation and Stress Coping
 Department of Science and Nursing



Organised & Sponsored by :



BIYANI GROUP OF COLLEGES
 Approved by AICTE & Affiliated to RTU, UOR, RUHS
 Sector No. 3, Vidhyadhar Nagar, Jaipur, Rajasthan (India)

In collaboration with :



www.byaniconference.com

Acem
 Principal

Kanoria PG Mahila College
 JAIPUR

Advances in Scientific Meditation and Stress Coping

**The 12th Anniversary
India-Japan Fest**



BICON-2017



The Proceedings of Conference
Volume - III

Work, Stress and Health

Advances in Scientific Meditation and Stress Coping

October 13, 2017

ISBN : 978-93-83462-94-0

Organized by :



**Biyani Group of Colleges
Department of Science and Nursing
Jaipur, India**

12th Biyani International Conference (BICON-17)

ISBN: 978-93-83462-94-0

Seen
Principal
Kanoria PG Mahila Kalyan Adyapeya
JAIPUR

Herbal Adptogens in Countering Stress

Ritu Jain

Department of Botany, Kanoria P.G. Mahila Mahavidyalaya, Jaipur

Abstract

Stress is reaction of mind and body to be prepare for emergent threat, whether emotional or physical. Stress is impacting life globally due to increased life pressure related to work, relationship, global competition and interaction. Stressed social system, absence of fallback mechanism and individualistic approach is compounding problem. The rising cost of medication, induced side effects and heavy post traumatic care has renewed interest towards alternative system of treatment such as Ayurvedic, Chinese, Yunani, Tibbi health care system which have heavy reliance on herbal treatment.

Introduction

Stress is not a modern life phenomenon. It is a way by which body responds to an emergent threat perception real or imaginary. Defense mechanism kicks in to respond to the situation to put body in 'fight or flight' mode. Stress is not always malefic. In situation it is desirable to extract performance, being alert and focused and meet the challenges. However, the nervous system is not well adept in differentiating between nature of threat i.e. emotional or physical. Low threat triggers and delayed shutoff causes constant status of alert in body, causing chronic stress, manifesting in many physical and mental problems such as anxiety, depression, irritable behavior, hypertension, digestion upset, fatigue, pain, heart problems etc. The pathway of stress and anxiety is not well understood and phenomenon is still being researched. However, many researches have attributed stress and anxiety to release of many neurotransmitters such as serotonin, dopamine and gamma-aminobutyric acid (GABA) etc, but no conclusive evidences have emerged so far [1-3]. Behavioral Therapy and psychological counseling appears to be more effective. Some, inhibitors, beta blockers and anti depressants are commonly prescribed however their efficacy is suspect and also have some serious side effects. [4-9]. The cost and length of treatment coupled with the debilitating side effects have caused deviation from established medicine systems to alternative therapies. Over the years there is significant increase in interest in use of natural herbs as alternative and complementing therapy in treating stress related problems. [10-14]. In last 15 to 20 years there have been many clinical trials to study efficacy of these natural remedies. Some of natural herbals studied in clinical trials and used in alternative therapies are described herein.

Withania somnifera

Withania somnifera also known as *Physalis somnifera* commonly known as Aswagandha or Asangdh in India is known adptogen from Indian medicine system. It is also some times termed as Indian Ginseng due to its medicinal properties. It has shown anti stress effects in experimental animal studies [15-16]. Withanolides, a sterol structure is considered as a candidate for adptogenic effect. Administration of *Withania* acted against the changes associated with stressful conditions manifested effects are faster recovery after stress, increased endurance etc [17-19].

Rhodiola rosea

It is also known as Roseroot Stonecrop, Arctic Root, Golden Root, Rosavin, Rhidola, Aaron's rod, and *Rhodiola*, Rhizome. It is commonly found in arctic regions of asia and Europe. It is perennial and fleshy-succulent plant of Crassulaceae family. It contain six bioactive substances, Tyrosol, Salidroside, Rosavins, Rosavins, Procyanidins And B-Sitosterol [20]. The extract of rosea is found to alleviate chronic stress induced symptoms in animal studies. It also found to increase endurance and [21] effective in reduction of fatigue and increase in concentration in randomized double blind human study.

Eleutherococcus senticosus

It is also known as Serbian Ginseng due to its similar medicinal properties. However it is from different family Araliaceae, and is also called as Siberian Elcuthero. This herb has been reported in various Russian studies where it is being used extensively. In human studies conducted in Russian region it was found to have positive impact on mental performance and work quality in stressful conditions [24].

Passiflora incarnata

Passiflora incarnata commonly known as passionflower also referred to as Flower of Five Wounds, Maracuja, Apricot Vine, Passion Vine etc. *Passiflora incarnata* has tradition and history of use as medication for treatment of anxiety and restlessness, a manifestation of stress disorder. It is well accepted traditional medication in almost all parts of the world, including India, USA, France etc. Human trials shown that efficacy of the passion flower extract is comparable to a prescription benzodiazepine drug oxazepam [29-31].

Piper methysticum

Piper methysticum, also known as Kava Kava, is being used as a potent drink through centuries for reducing anxiety, restlessness. Although it is anxiolytic but it is not having side effects of

sedation or mental impairment [32-33]. In clinical studies its extract was found to be comparable with prescription medicine such as benzodiazepines and tricyclic antidepressants with benefit of lesser side effects and enhanced performance.

Hypericum perforatum

Hypericum perforatum (St John's wort), is a perennial shrub native to India, Australia, North and South America, Europe. It has been traditionally used as medicine in treating wide range of ailments. Its extract is derived from flowering tops. It makes a person feel good and elevated, thus free from stress. The extract contains bioactive substance Hypericin which is an anthraquinone derivative and has antidepressant properties. Human trials have shown to have activity profile similar to placebo. It has been permitted to treat anxiety, depression and sleep disorders in Germany [34]. It has been observed that herbal derived extracts are useful in treatment of stress and stress related ailments such as anxiety, depression, fatigue, restlessness, sleep disorders etc. However, the mechanism of such effects is not well understood. Besides, the actual compound manifesting the effect is difficult to pinpoint. It may be due to synergistic effect of many phytochemicals found in the herbs. The efficacy, replication and causal effects are required to be studied in clinical trials so as to arrive at certainty in therapeutic process.

Reference:

1. Christmas, D., Hood, S., Nutt, D.: Potential novel anxiolytic drugs. *Curr Pharm Des* 2008, 14:3534-3546.
2. Furmark, T: Neurobiological aspects of social anxiety disorder. *Isr J Psychiatry Relat Sci* 2009, 46:5-12.
3. Ballon D: *Anxiety Disorders: An Information Guide* Toronto, Canada: Centre for Addiction and Mental Health 2008.
4. Davidson JR: Pharmacotherapy of generalized anxiety disorder. *J Clin Psychiatry* 2001, 62:46-50.
5. Davidson JR: First-line pharmacotherapy approaches for generalized anxiety disorder. *J Clin Psychiatry* 2009, 70:25-31.
6. Cascade E, Kalali AH, Kennedy SH: Real-World Data on SSRI Antidepressant Side Effects. *Psychiatry (Edgmont)* 2009, 6:16-18.
7. Gunnell D, Saperia J, Ashby D: Selective serotonin reuptake inhibitors (SSRIs) and suicide in adults: meta-analysis of drug company data from placebo controlled, randomised controlled trials submitted to the MHRA's safety review. *BMJ* 2005, 330:385.

□□□