

International Research Journal of Ayurveda & Yoga

Vol. 4 (12), 125-130, December, 2021

ISSN: 2581-785X; <https://irjay.com/>

DOI: <https://doi.org/10.47223/IRJAY.2021.41219>



Importance of *Medhya Rasayana* Drugs Used in the Treatment of Mental Stress.

Shambhu P. Patel¹, Sunil Kumar², Sujit kumar³, Sandeep Aggarwal⁴

1. Assist. Professor, Dept. of Dravyaguna, Vivek College of *Ayurvedic* Sciences & Hospital, Bijnor, UP.
2. HOD & Professor, Dept. of Dravyaguna, Vivek College of *Ayurvedic* Sciences & Hospital, Bijnor, UP.
3. Assist. Professor, Dept. of Kriya Sharir, Vivek College of *Ayurvedic* Sciences & Hospital, Bijnor, UP.
4. Principal & Professor, Dept. of Kayachikitsa, Vivek College of *Ayurvedic* Sciences & Hospital, Bijnor, UP.

Article Info

Article history:

Received on: 11-10-2021

Accepted on: 03-12-2021

Available online: 31-12-2021

Corresponding author-

Dr. Shambhu P. Patel Assist. Professor,
Dept. of Dravyaguna, Vivek College of
Ayurvedic Sciences & Hospital, Bijnor,
UP.

Email: drshambhu.patel@gmail.com

ABSTRACT:

Medhya Rasayana is an *Ayurvedic* nootropic herb or drug that improves memory and cognitive functions. *Ayurvedic* nutrients such as *Medhya Rasayana* help with memory, retention and recall. *Medhya Rasayan* is made up of *Mandukparni* (*Centella asiatica*), *Guduchi* (*Tinospora cordifolia*), *Yasthimadhu* (*Glycyrrhiza glabra*) and *Sankhpushpi* (*Convolvulus pluricaulis*), as defined by *Acharya Charaka* in *Chikitsasthan* 1:3/30. Stress is a social condition that affects nearly everyone at some stage in their lives. It is caused by being under so much mental or emotional strain. Stress is not a disease in and of itself, but it can lead to severe illness if left untreated, so it's crucial to consider stress symptoms early on. *Ayurveda* has a long history of stress control. One of the most effective *Ayurvedic* formulations or supplements is "*Charaks Medhya Rasayana*," which enhances intellect, memory, knowledge, imagination, learning abilities and executive functions among other things. Furthermore, these vitamins enhance immune system functions and increase immunity. These herbs have the ability to have these effects on the human brain because of their inherent properties. Furthermore, we should take simple steps to alleviate discomfort, such as improving our lifestyle and doing yoga.

Keywords: *Ayurveda*, *Medhya Rasayana*, Memory enhancer, Mental stress.

INTRODUCTION

Life is made up of the body, senses, spirit, and reincarnating soul. "Body, mind, and spirit are like a tripod of life; the earth stands by their combination; everything abides in them," reads the *Sutrasthana* of the *Charaka Samhita*, a popular *Ayurvedic* classic. *Ayurveda*, or "science of living," is the world's oldest medical

philosophy, having origins in the *Rig Veda*¹, one of the world's oldest sacred texts dating back over 6,000 years. *Ayurveda* is the most sacred science of creation, offering benefits for humans on Earth and in the afterlife. The science of mind and behaviour is known as psychology. The study of conscious and unconscious events, as well as feelings and ideas, is included in psychology. *Ayurveda*'s deepest thinkers were likely the first to describe the mind-



This work is licensed under a CC BY 4.0 License

body connection in depth. They claimed unequivocally that the mind and body are two distinct things. The term *Manas* is derived from the *Dhatus* and it denotes the process through which we gather information and things, which is referred to as *Mana*².

AIM & OBJECTIVE

To evaluate the effect of *Medhya Rasayana* Drugs over human body.

MATERIAL AND METHOD

The material related to *Medhya Rasayana* collected from different articles, literature, *Samhitas*, *Nighantu*'s, authentic websites etc.

Stress:

Stress is related with the *Manovaha* and *Nadivaha strotas* in *Ayurveda*. Stress has a key role in a variety of human diseases and psychiatric disorders. Stress refers to a person's physical, behavioural, and emotional stressors or pressures. Stress is the wear and strain on our thoughts and bodies as we strive to cope with our always changing circumstances. There are other words for stress, such as anxiety, tension, and others. A psychosocial stressor is defined as "any life event or life change that may be associated temporally (and presumably causally) with the beginning, incidence, or worsening of a mental disorder."³

In 1936, Hans Selye invented the term "stress," which he defined as "the non-specific reaction of the body to any request for betterment." In an attempt to generalise his animal tests to humans so that people might comprehend what he meant, he described stress as "the rate of wear and tear in the body."

Depending on the element of interpretation, human stress reactions indicate personality differences as well as physical strength or fitness. Stressors have an impact on mood, well-being, attitudes, and overall well-being. Acute stress reactions in young, stable persons are frequently robust and have no detrimental consequences for their health. If the threat is persistent, the long-term impacts of stresses will affect health, especially in elderly or sick persons. The association between psychosocial stressors and disease is influenced by the existence, number, and prevalence of psychosocial stressors, as well as an individual's biological sensitivity (i.e., biology, constitutional variables), psychological resources, and developed coping practises. Psychosocial interventions have been found to be useful in the treatment of stress-

related disorders and may have an impact on chronic disease development.⁴

Mechanism of Action of Brain Degradation:

The brain experiences several changes as it matures on genetic, cellular, systemic, and functional levels. Neural cells may experience neurodegeneration. Degeneration of neurons, reduced synthesis of neurotransmitters such as glutamate, acetylcholine, and dopamine, resulting in plaques and tangles, and deposition of lipofuscin (yellow-brown pigment granules left over after lysosomal digestion) in nerve tissue, culminating in nerve breakdown Vitamin B group deficiencies (vitamins B protect brain function by regulating energy metabolism), high levels of inflammatory cytokines, high creative proteins, and a deficiency of dietary anti-oxidants such as Acetyl-L carnitine, which delay the onset of age-related cognitive decline and improve overall cognitive function in the elderly, are all linked conditions that speed up the process of brain ageing. Hyperglycaemia damages the hippocampus, raising the risk of Alzheimer's disease. They're all linked to the oxidative processes that occur in the human body.⁵

These are many therapeutic and medicinal formulations motioned in *Ayurveda* to restore the memory and brain. Some of the *Rasa*'s are considered very effective in this process.

Finding of Medhya Rasayana

Ayurveda gives a list of plants recognised for their nootropic action as well as their multi-dimensional value in diverse circumstances. The current work is a review to update information on the pharmacological characteristics, primary chemical ingredients, therapeutic activities, preclinical research, safety, and likely mode of action of the selected plants from the ayurvedic pharmacopoeia. Concurrently, it allows for further study and standardization on nootropic plants.

Medhya Rasayana:

Properties and actions of ingredients of Medhya Rasayana

1. **Mandukparni (Centella asiatica (L.) Urb.):** '*Medhya rasayanas*' are plants that have a calming effect on the mind, according to Acharya P V Sharma. *Mandukparni*, *Guduchi*, *Yasthimadhu* and *Sankhpushpi* are nervine tonics, which strengthen the mind and nourish the nervous system. These drugs work as specific molecular nutrients

for the brain, promoting better mental health and reducing behavioural disorders.⁶ *Medhya Rasayanas* increase brain biochemical nourishment, resulting in mental calmness, attention and enhanced memory. *Asvagandha*, *Brahmi* and *Sankhpushpi* have a slight sedative effect as a side effect. Other like *Vacha* *Acorus calamus* has a slight stimulant effect.⁷

Medhya Rasayana is a form of *Rasayana* that uses a mixture of herbs to rejuvenate the brain. *Medhya Rasayana* operates on three facets of our nervous system, according to *Ayurveda*: *Intelligence (Dhi)*, *Retention (Dhrti)* and *Recall (Smriti)* *Mandukparni* is an important plant in *Ayurveda* because it acts as an antioxidant, lowering the effects of oxidative stress both in vitro and in vivo.⁸ Saponins (also known as triterpenoids) are the main active ingredients of *Mandukparni*. These include asiaticosides, madecassoside, and madasiatic acid, which have a trisaccharide moiety connected to the aglycone asiatic acid. *Mandukparni* helps dendritic arborization and elongation while also protecting neurons from apoptosis. Several studies have demonstrated that the whole extract of *Mandukparni*, as well as particular chemical components, can protect against a variety of neurological illnesses.⁹

2. ***Guduchi (Tinospora cordifolia (Willd.) Hook.f. & Thomson)***: Since time immemorial, *Guduchi* has been an effective drug in Indian medicine. Alkaloids (berberine, magnoflorine, palmatine, tinosporin), glycosides hormones, phenolic compounds and polysaccharides are all contained in the stem. This plant's leaves are high in protein, as well as calcium and phosphorus. It has been discovered to have potent anti-oxidant properties. It has been shown to enhance Monoamine oxidase (MAO-A and MAO-B) functions, which have been linked to increased levels of brain monoamines and antidepressant activity.

3. ***Yasthimadhu (Glycyrrhiza glabra L.)***: In *Ayurveda*, *Yasthimadhu* is a very essential herb, its roots and rhizomes have preliminary free radical scavenging, cerebral ischemia and antioxidant ability. *Glycyrrhiza glabra* L. roots contain several active compounds, including flavonoids, such as liquiritin, rhamnoliquiritin, liquiritigenin, prenyllicoflavone A, glucoliquiritin apioside, 1-methoxyxyphaseolin, shinpterocarpin, shinflavanone, licopyranocoumarin, glisoflavone, licoaryl coumarin, and coumarin-GU-12, and saponins, namely, glycyrrhizin (60-times more sugary than sugarcane).^{10,11} Glabridin activates the BAX proteins, which block caspase activation and neuronal apoptosis by

inhibiting caspase activation¹².

4. ***Sankhpushpi (Convolvulus pluricaulis Choisy)***: *Sankhpushpi* is a common plant in dry areas of India. The principal phyto-constituents in *Sankhpushpi* include kaempferol, -sitosterol, N-hexacosanol, taraxerol, taraxerone, delphinidine, and hydroxy-cinnamic acid.^{13,14} It has been shown to have anxiolytic, memory-enhancing, and mood-elevating qualities, as well as the capacity to halt brain ageing. *Sankhpushpi* has been demonstrated to help with brain cell regeneration and dendritic arborization, which is the neuronal foundation for greater learning and memory. It may also help to avoid neuron cell body changes in specific brain areas.¹⁵

Table 1 depicts botanical names, family, *Ayurvedic* properties (*Rasa*, *Guna*, *Virya*, *Vipaka*), synonyms and acting role in aging brain of four herbs which used in *Medhya Rasayana*.^{16,17}

DISCUSSION

Medha refers to memory and/or retention, whereas *Rasayana* refers to a medicinal treatment or preparation that, when followed on a regular basis, will improve nutrition, health, memory, intelligence, immunity, and hence lifespan. *Medhya Rasayana* is a mixture of four medicinal herbs that can be taken alone or together. They are *Mandukparni (Centella asiatica Linn.)*, *Yasthimadhu (Glycyrrhiza glabra Linn.)*, *Guduchi (Tinospora cordifolia (Willd) Miers)*, and *Shankhpushpi (Convolvulus pluricaulis Choisy)*, all of which have a wide variety of uses in various systems. However, in fact, a small number of other medications used for the same purpose are specified elsewhere in the *Ayurveda* ancient texts. *Medhya Rasayana* can be taken alone or in combination with other herbs. This report aims to provide an update on these medications. The evidences presented are largely facts from animal model or bioactive principle research, with some preclinical work on the human system thrown in for good measure.

CONCLUSION

Ayurveda can help people cope with mental stress in a variety of ways. The *Medhya Rasayana* aids in improving intelligence, memory, and recollection. *Medhya Rasayana* not only helps to rejuvenate the nervous system, but it also helps to extend life and is capable of healing a variety of diseases. It also helps to increase overall immunity, metabolism, skin lustre, and expression (voice).

Acknowledgements:- Nil

Conflict of Interest – None

Source of Finance & Support - Nil

REFERENCES

1. Sharma PV, Das B. *Charaka Samhita*, Text with English translation. Chaukhamba Orientalia. 2000.
2. Tiwari SK, Pandey YK. *Ayurvedic* Drugs in Prevention and Management of Age-Related Cognitive Decline: A Review. *IJPSDR* 2012;4(3): 183-190.
3. Dash VB, Junius A. A hand book of *Ayurveda*. New Delhi: Concept Publishing Company. 1883; pp. 11-14.
4. Schneiderman N, Ironson G, Siegel SD. Stress and health: psychological, behavioral, and biological determinants. *Ann Rev Clin Psychol*2005; 1: 607-628.
5. Morgan A K, Grey matters: does Bacopamoniieri improve memory performance inolder persons, master’s thesis. New SouthWales: Southern CrossUniversity; 2006.23
6. Sharma PV. *Dravyagunvigyanan*. Varanasi: Chaukhambabharti academy. 2011.
7. Tripathi JS. Dimen- sions of SattvavajayaChikitsa (*Ayurvedic- Psychotherapy*) and their Clinical Applications. *AAM*. 2012; 1(1-2): 31-38.
8. Suhakar SD, Padhi SS, Lavekar GS. Role of *Ayurveda* in Mental Health: An appraisal of CCRAS. 2009.
9. Seshadri M, Shivakumar, Kavita MB. MedhyaRasayana in an Ageing Brain. *IAMJ* 2013; 1(4): 1-5.
10. Biondi D.M., Rocco C., Ruberto G. New dihydrostilbene derivatives from the leaves of *Glycyrrhiza glabra* and evaluation of their antioxidant activity. *J. Nat. Prod.* 2003;66:477–480.
11. Badr S.E.A., Sakr D.M., Mahfouz S.A., Abdelfattah M.S. Licorice (*Glycyrrhiza glabra* L.): Chemical composition and biological impacts. *Res. J. Pharm. Biol. Chem. Sci.* 2013;4:606–621.
12. Upadhyay A, Kumar K, Kumar A, Mishra H. *Tinospora cordifolia* (Willd.) Hook. F. and Thoms. (Guduchi) Validation of the *Ayurvedic* pharmacology through experimental and clinical studies. *Int J Ayurveda Res* 2010; 1(2): 112-21.
13. Billore, K. V., Yelne, M. B., Dennis, T. J., Chaudhari, B. G. (2005). *Database on medicinal plants used in Ayurveda (Vol. 7)* (New Delhi, India: Central Council for Research in *Ayurveda* & Siddha).
14. Amin, H., Sharma, R., Vyas, M., Prajapati, P. K., Dhiman, K. (2014). Shankhapushpi (*Convolvulus pluricaulis Choisy*): Validation of the *Ayurvedic* therapeutic claims through contemporary studies. *Int. J. Green Pharm.* 8, 193–200. doi: 10.4103/0973-8258.142666
15. Zhu Z, Li C, Wang X, Yang Z, Chen J, Hu L, Shen X. 2, 2', 4'-Trihydroxychalcone from *Glycyrrhizaglabra* as a new specific BACE1 inhibitor efficiently ameliorates memory impairment in mice. *J Neurochem* 2010; 114(2): 374-385.
16. Kumar N, Singh AK (2013) Medhya dravya in *Ayurveda*- a critical review. *International Ayurvedic Medical Journal* 1: 1-4. 35.
17. Malavika S, Shivakumar, Kavita MB (2013) Medhaya Rasayana in an ageing brain. *International Ayurvedic Medical Journal* 1: 1

How to cite this article: Patel S.P, Kumar S, Kumar S, Aggarwal S “Importance Of *Medhya Rasayana* Drugs Used In The Treatment Of Mental Stress.” *IRJAY*. [online]2021;4(12);125-130. Available from: <https://irjay.com>; Doi:-<https://doi.org/10.47223/IRJAY.2021.41219>



Photo 1 *Centella asiatica* (L.) Urb.



Photo 2 *Tinospora cordifolia* (Wild.) Hook. f. & Thomson



Photo 3 *Glycyrrhiza glabra* L.



Photo 4 *Convolvulus pluricaulis* Choisy

Table 1. Ayurvedic properties of Medhya drugs & Acting Role in aging brain.^{16,17}

Medhya drugs	Botanical name & Family	Properties				Synonyms	Role in aging brain
		Rasa	Guna	Virya	Vipaka		
<i>Mandukaparni</i>	<i>Centella asiatica</i> (Apiaceae)	<i>Tikta</i>	<i>Laghu</i>	<i>Sita</i>	<i>Madhur</i>	<i>Manduki, Twastri, Divya</i>	Reduces brain regional lipidperoxidation (LPO) and protein carbonyl (PCO) levels by stimulating neuronal dendritic development.
<i>Guduchi</i>	<i>Tinospora cordifolia</i> (Menispermaceae)	<i>Tikta, Kasaya</i>	<i>Guru, Snigdha</i>	<i>Usna</i>	<i>Madhur</i>	<i>Amrita, Madhuparni</i>	Strong free radical scavenging properties against reactive oxygen and nitrogen species, lowering iNOS gene expression, reducing thiobarbituric acid reactive compounds, and raising reduced glutathione catalase.
<i>Yastimadhu</i>	<i>Glycyrrhiza glabra</i> (Fabaceae)	<i>Madhur</i>	<i>Guru, Snigdha</i>	<i>Sita</i>	<i>Madhur</i>	<i>Madhuyasthi, Mulethi</i>	Preliminary free radical scavenging by spatial learning and passive avoidance
<i>Shankhaphospha</i>	<i>Convolvulus pleuricaulis</i> (Convolvulaceae)	<i>Tikta</i>	<i>Snigdha, Picchil</i>	<i>Sita</i>	<i>Madhur</i>	<i>Ksheerpushpi, Mangalyakusuma</i>	Reduces brain regional lipidperoxidation (LPO) and protein carbonyl (PCO) levels and improves anti-oxidant status by promoting neuronal dendritic development.