

Recipient of Kaviraj Raghunath Maity Memorial Ayureshana Young Researcher Gold Medal**BALANCING HEALTH THROUGH ANCIENT WISDOM: ROLE OF RASAYANA IN ADDRESSING LIFESTYLE DISORDERS**AVISHEK MISHRA¹ AND MAHESH VYAS²

Lifestyle disorders, also referred to as non-communicable diseases (NCDs), have become a major global health concern in the current era of globalization, impacting people of all ages and demographics. According to WHO NCDs kill 41 million people yearly, equivalent to 74% of all deaths globally. Rasayana, a fundamental concept in Ayurveda, can be used to mitigate and prevent epidemics of lifestyle disorders, emphasizing the harmonious balance of mind and body. Literary search was conducted, utilizing classical Ayurvedic literature, the latest texts, and various databases to compile information related to it. Rasayana therapy primarily focuses on enhancing an individual's overall health and well-being. The multifaceted approach of Rasayana plays a significant role in restoring balance and promoting overall health. This review describes the holistic approach of Rasayana and provides a promising avenue for addressing the growing burden of lifestyle disorders. Rasayana's individualized approach, adapted to one's constitution and imbalances, boosts its effectiveness even more.

Introduction

In the present era of globalization, Lifestyle disorders known as Noncommunicable diseases (NCDs) have emerged as a global health concern, affecting individuals across various age groups and demographics. According to WHO NCDs kill 41 million people yearly, equivalent to 74% of all deaths globally¹. Each year, 17 million people die from a Non-Communicable Disease before age 70; 86% of these premature deaths occur in low- and middle-income countries². Long-term exposure to three modifiable lifestyle behaviors, smoking, eating poorly, and not exercising—shares risk factors with lifestyle diseases³.

These behaviors lead to the development of chronic illnesses, including heart disease, stroke, diabetes, obesity, metabolic syndrome, chronic obstructive pulmonary disease, and some types of cancer⁴. According to the ICMR India State-Level Disease Burden Study report “India: Health of the Nation's States”, the estimated proportion of all deaths due to Non-Communicable Diseases (NCDs) has increased from 37.09% in 1990 to 61.8% in 2016⁵. The National Health Mission does recognize that the country is experiencing a rapid health transition with NCDs, including lifestyle diseases such as diabetes, surpassing the burden of communicable diseases in the past decade⁶.

In essence, a person's lifestyle is the result of their physical abilities combined with their psychological functioning; these are manifested in their habits, behaviors, eating habits, and way of living, which are based on the lessons they learned from their early experiences and the imitations of their close friends, family members, and other

¹ PG Scholar, Department of Ayurveda Samhita Evam Siddhant (Ayurvedic Compendia & Basic Principles), AIIA, New Delhi

² Professor & HOD, Department of Ayurveda Samhita Evam Siddhant (Ayurvedic Compendia & Basic Principles), AIIA, New Delhi

Corresponding author's e-mail: mishra.avishek1995@gmail.com

adults. It thus involves an inherent and pure psychological control over the activity of the body and senses. Any lifestyle problem arises from the disruption of initiation, control, and coordination, which causes a derangement in lifestyle. One of the three fundamental causes of all diseases, according to Ayurveda, is “*Prajnaparadha*” (~intellectual blasphemy)⁷. Nowadays, one of the biggest issues the world is dealing with is that individuals are unable to live the healthy and happy lives that they should because of ignorance or as a result of their responsibilities in their personal, social, or professional lives, such as following the laws of dietetics and consuming subpar diets such as *Viruddha*(~antagonistic), *Vidahi*(~substances that produce burning sensation), and *Abhishyandi* foods. These conditions lead to the production of poor-quality *Rasadhatu* (~nourishing fluid), the manifestation of *Strotoavrodha*, which impairs the nourishment of subsequent *Dhatus* (~major structural component of the body) and causes a *Dosha* (~regulatory functional factors of the body) imbalance, making the person more prone to sickness.

Ayurveda is the science of life that deals with every aspect of the health of the individual. It has two main goals i.e. to protect the health of the healthy individual and to cure the disease of the diseased⁸. *Rasayana* is one of the comprehensive branches of *Ayurveda* that includes the specialized use of herbs, herbomineral formulations, dietary articles, and social etiquette along with self-discipline and self-etiquette to achieve the optimal state of the body’s tissues and systems with the least amount of impact from etiological factors⁹. The holistic approach of *Rasayana* plays a significant role against the harmful effects of today’s era. According to *Ayurveda*, *Rasayana* brings about proper nourishment, growth, and enhanced function of all the seven *Dhatus* and thus improves *Ojas* (~excellence of tissues). Rejuvenation therapy affects the body and mind, at the same time it checks the effect of early aging and enhances the body’s resistance to disease¹⁰. *Rasayana* is a modality that provides proper nourishment to each cell or tissue of the body. It normalizes cell functions and preserves health at the molecular level this can either be drug-based, food-based, or non-drug-based. As an immune booster, antioxidant, adaptogenic, and stress-relieving substance, *Rasayana* helps human being to restore their healthy life.

Aim and Objective

To Explore the applicability of *Rasayana* therapy to address lifestyle disorders.

Materials and methods

Details taken from various *Ayurveda* texts, modern literature, journals and review articles about *Rasayana* for a comprehensive understanding of the concept of *Rasayana* and its applicability in the prevention of epidemics of Lifestyle disorders. Literary review was conducted from Ayurvedic texts including *Charak Samhita*, *Sushruta Samhita*, *Astanga Hridaya*, etc., and available commentaries. Databases like Pubmed and Google Scholar were utilized to review the published article. The following keywords such as “Lifestyle Disorders”, “*Rasayana*”, “Prevention” and “*Ayurvedic* principles”, etc. with their corresponding MeSH terms in combination like OR, AND.

Result

The review revealed that the multifaceted approach of *Rasayanaplays* a significant role in restoring balance and promoting overall health. Application of *Rasayana* also provides enough scope for the prevention and management of diseases. *Rasayana* encompasses a range of methods aimed at enhancing the quality of bodily tissues, known as *prashastadhatus*¹¹. These practices aim to promote *Ayu*(~lifespan), *Bala* (~Immunity, strength, physical endurance), *Medha* (~Intelligence), recovery from disease, and *Vayahasthapana* (~prolonging younger age). They are particularly helpful for the primary tissues, or *RasadiDhatu*¹². Based on the *Rogibala*, *Desha* (~habitat), and *Kala*(~time), *Rasayana*’s dosage is then customized¹³. *Rasayana* has several functions, including promoting general health, treating illnesses, and preventing them.

In Classics *Rasayana* is classified into various types according to their benefit, mode of use, etc.: (Fig. 1).

***Naimittika Rasayana (~disease specific Rasayana)*¹⁴**

Certain *Rasayanas* have a unique purpose and are applied to particular illness conditions because they boost a particular immune system or strength to fight a specific ailment. The name *NaimittikaRasayana* is given to such a *Rasayana*. Together with the underlying disease treatment, the tissue-specific *Rasayana* medications can be used to strengthen the tissue and increase its ability to fight off disease, resulting in greater and quicker alleviation as well as a reduced risk of recurrence. As for heart disease *Puskarmula*, *Rasna*, lung-related disorders *Pippali*, eye-related disorders *Triphala*, for neurodegenerative conditions such as Parkinson’s disease, Alzheimer’s disease, and senile dementia *Medhya Rasayana*, etc.

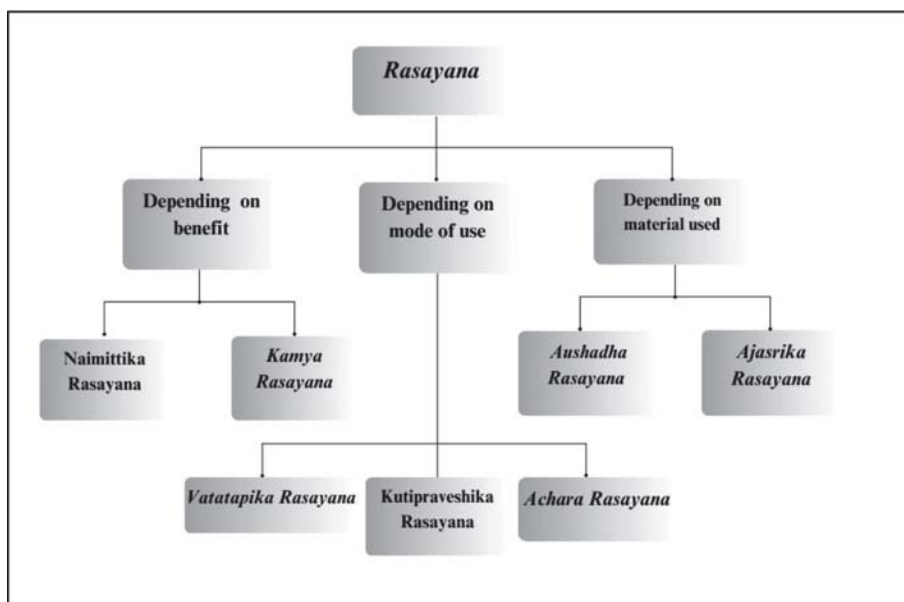


Fig. 1: Classification of Rasayana

Ajasrika Rasayana (~Rasayana for daily use)¹⁵

Uses of food substances regularly for nourishment. Like for Vataja Prakriti Ghrita, Pittaja Prakriti Ksheera, Kaphaja Prakriti Madhu etc. These can be taken individually or together in the early morning. It does vayahsthapana. Rasayana nourishes all the Dhatus and thereby prevents degenerative changes. It helps in preventing diseases and premature aging.

AcharyaRasayana¹⁶ is AdravyabhutaRasayana which explains about behavior of a person that is conducive to the body and mind such as well well-behaved, self-controlled, serving elders, being devoted to holy scriptures, Observing vigil and sleeping in balance, Using ghee and milk regularly, Engaged in japa, cleanliness, Worshipping gods, cow, Brahmanas, teacher, preceptor, elders, etc.

Kamya Rasayana (~as per need or desire)¹⁷

Rasayanas are used to achieve a specific desire and boost body energy, immunity, and general health. Like Pranakamya Triphala Rasayana, Lauhadi Rasayana, For medhakamya Mandukparni, Shankhapuspi, For Srikamya

Amlaki Rasayana etc.

Kutipraveshika Rasayana (~Rasayana therapy by keeping the patient indoor)¹⁸

In this method, Rasayana therapy is conducted in an isolated place to provide a healthy life.

Vatatapika Rasayana (~Rasayana therapy given without any hindrance of normal avocations)¹⁹

Administration of Rasayana without any instructions or restrictions, the individual is allowed to lead a normal day-to-day life and yet take the Rasayana.

Discussion

The greatest difficulty facing humanity today is to survive in this altered environment and keep up with the rapid speed of life since significant changes in the atmosphere, diet, and lifestyle have an impact on human life. Furthermore, the healthcare systems are facing problems from recently discovered pathogens and metabolic illnesses. The common causes of NCDs can be categorized under three main causes according to Ayurveda i.e. Asatmyndriarthasamyoga (~improper use of sensory organs), Prajnaparadha (~intellectual blasphemy), and

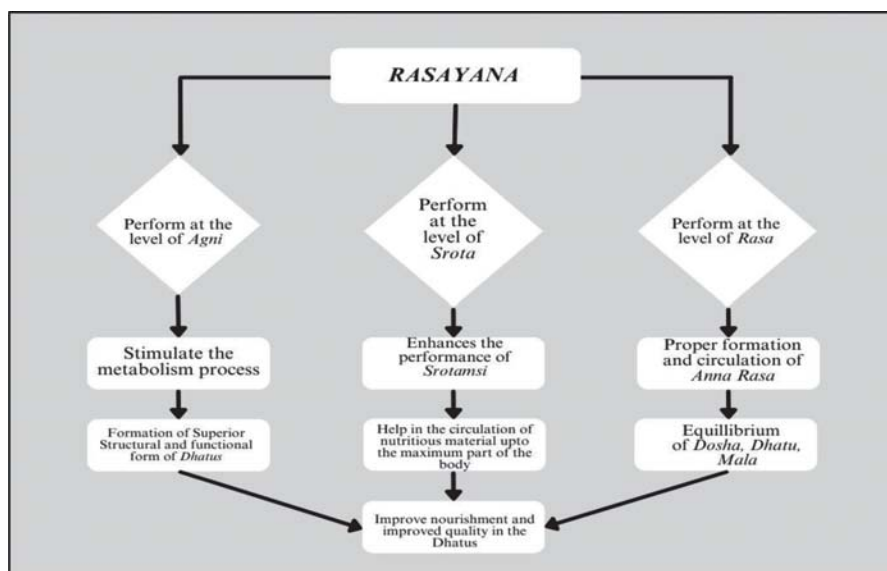


Fig. 2: Mode of Action of Rasayana Drugs

Kala (~transformation attributed to time). To overcome this obstacle, prophylactic usage of *Rasayana* can be introduced.

Rasayana acts at the level of *Agni* (~digestive/metabolic factors), *Srotamsi*, and *Rasa* by directly enriching the nutritional value, improving digestion, absorption, and metabolism leading in turn to improved nutritional status, cleaning, and activating the microcirculatory channel that is *srotoshuddhi* (~cleanliness of *Srotas* or feeling of cleanliness of *Srotas*) leading to improved microcirculation by enriching nutritional quantity of *Poshaka Rasa* most of the *Rasayana* drugs are *Deepana* (~digestion and metabolism-enhancing), *Pachana* (~digestion) and hence improve *Agni*, and promote *Dhatu Poshana*. Promoting competency of *Srotas* leads to better bioavailability of nutrients to tissues and improves tissue perfusion (Fig.2).

Achieving equilibrium, delaying the aging process, and assisting in disease prevention are all possible with *Rasayana*. When one is in good health, *Rasayana* can be thought of as a nutritional dynamic for mental and physical renewal. *Rasayana* may work through a variety of pathways, including immunomodulatory, antioxidant, hemopoietic effect, adaptogenic action, anti-aging, anabolic, nutritional function, neuroprotective, and detoxifying.

The possible mechanisms by which the action of *Rasayana* can be interpreted: (Fig. 3).

a) Anti-oxidant action

Through the application of its antioxidant properties, *Rasayana* prevents tissue damage caused by free radicals. Within the body, biochemical processes produce free radicals and oxidative radicals, which react with biomolecules

to change or harm them. Studies have shown that *Triphala* and *BrahmaRasayana* increase the levels of glutathione and antioxidant enzymes and protect against oxidative stress²⁰.

b) Adaptogenic Action

Rasayan's supplement the body's ability to deal with various stressors. *Rasayana* drugs such as *Chyavanaprasha*, *Triphala*, and *BrahmaRasayana* as well as the plants used in them such as *Withaniasomnifera*, *Emblcaofficinalis*, *Asparagus racemosus*, and *Tinospora cordifolia* also possess these effects²¹.

c) Immunomodulatory Effect

Rasayanas have been shown to have immunomodulating effects; in contrast to conventional drugs, they engage the immune system without changing other fundamental bodily factors. *Triphala* has been reported to possess immunomodulatory activities and to stimulate the neutrophil functions in immunized rats and stress-induced suppression in the neutrophil functions²².

d) Nutraceutical Action

Rasayana provides adequate nutrition to every cell or tissue of the body. They increase plasma nutrient value and thus execute great nutraceutical action.

e) Nootropic Action

Medhya Rasayana has a nootropic effect and is beneficial for brain degenerative conditions including Alzheimer's and senile dementia.

Rasayana also prevents the sickness from progressing and fixes cognitive impairment²³.

f) Geno-protective Action

Damage to DNA and RNA genomes is known as mutation, and it can also lead to deadly illnesses like cancer. By boosting immune responses and DNA tolerance to oxidative stress, *Rasayana*, when administered in its preventive aspect (in early or middle age), may intercept such changes in our genetic pattern²⁴.

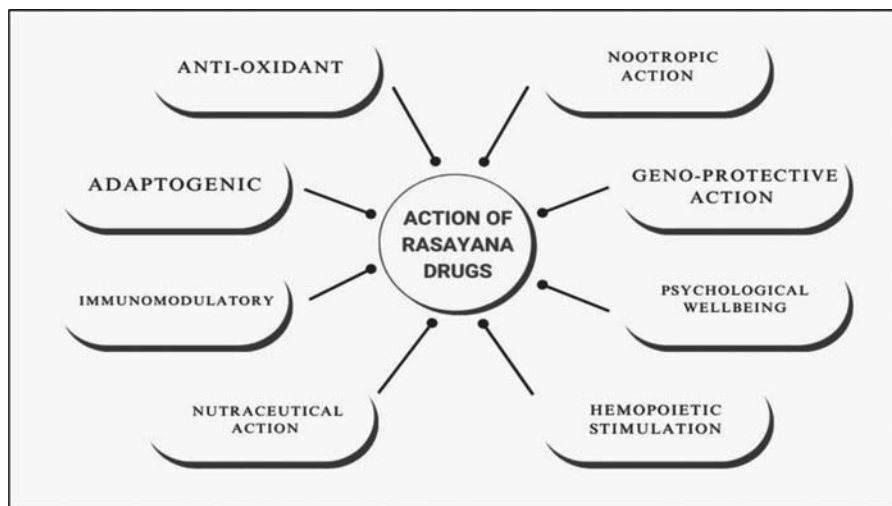


Fig. 3: Possible Pharmacological Action of *Rasayana* Drugs

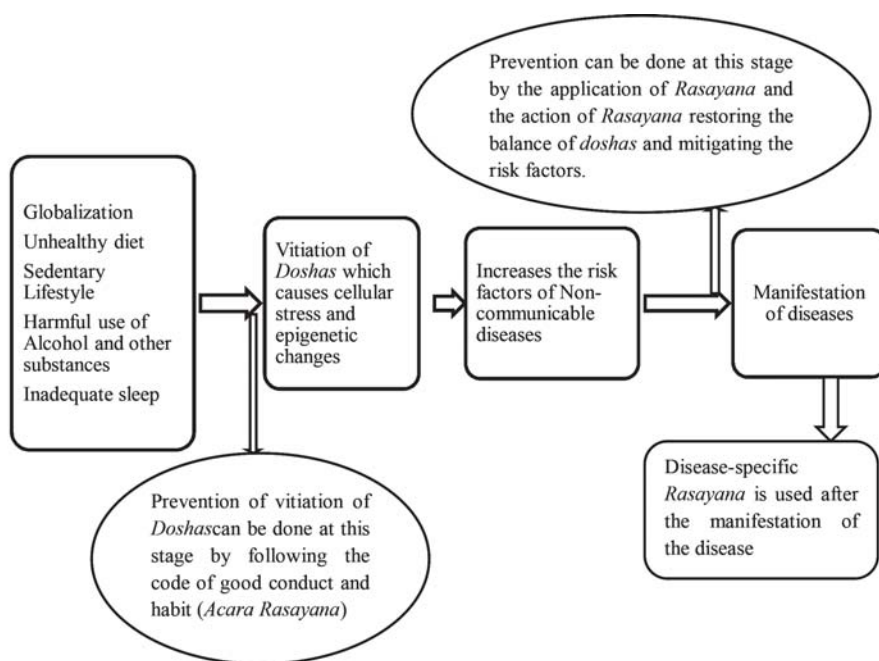


Fig. 4: Prevention of Lifestyle Diseases by Use of Rasayana

g) Psychological Wellbeing

The most effective preventive measures for psychiatric problems are behavioral practices or mental hygiene. *Achara Rasayana*, as previously said, encompasses a variety of behaviors, dos and don'ts that improve an individual's social acceptance. *Achara Rasayana* enhances the psycho-neurohealth of society in this way.

h) Hemopoietic Stimulation

Hemopoietic Stimulation Research indicates that the *Rasayana* medications have a hemopoietic stimulatory effect that counteracts the cytotoxic effects of anticancer medications. *Triphala*, *Brahma Rasayana*, *Narasimha Rasayana*, *Ashwagandha Rasayana*, and *Chayavanprasha* have been observed to attenuate the radiation-induced damage to the hemopoietic system²⁵

Survival in this changed environment and competing with the pace of life is the biggest challenge which can be achieved only through adequate immunity. Nowadays, utilizing *Rasayana* following the circumstances, particularly during the early and middle years, helps to minimize and avoid lifestyle diseases through its different modes of action. The physiological action of *Rasayana* improves the Immunity of an individual, which fulfills the aim of healthy living. *Rasayana* not only works as a drug but also embraces a healthy diet and regimen.

Conclusion

Now in this epidemic situation of Lifestyle disorders, when the world is trying to achieve such medicines that enhance the healthy life of the individual, the role of *Rasayana* in addressing lifestyle disorders is rooted in its comprehensive and holistic approach. *Rasayana* as a specialized branch of *Ayurveda*, focuses on enhancing overall well-being and preventing diseases. When used wisely, it can help lower the prevalence of many illnesses, which will eventually reduce the cost of healthcare. To maximize the potential of the body, the main objective is to nourish, revitalize, and harmonize biological functions. Integrating dietary

guidelines, lifestyle modifications, and the use of *Rasayana* in daily life restores harmony within the body and mind. The potential of *Rasayana* in the current context of increasing lifestyle disorders is very effective. It is a very important perspective expressed in classical treatises and is a boon to the world when administered properly.

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References

1. <https://www.who.int/health-topics/noncommunicable-diseases>
2. <https://www.who.int/health-topics/noncommunicable-diseases>
3. <https://www.un.org/en/chronicle/article/lifestyle-diseases-economic-burden-health-services>
4. <https://www.un.org/en/chronicle/article/lifestyle-diseases-economic-burden-health-services>
5. <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1540840>
6. <https://indianexpress.com/article/opinion/editorials/lancet-study-daiabetes-healthcare-sector-must-step-up-awareness>
7. Yadavji Trikamji Acharya, Charaka Samhita with Ayurveda Dipika Commentary by Chakrapanidatta, Sharirsthana; katidhapurusiya Adhyaya, Chapter 01, Verse 102, Chaukhamba Surbharati Prakasan, New Delhi, Reprint edition (2023),p.297
8. Yadavji Trikamji Acharya, Charaka Samhita with Ayurveda Dipika Commentary by Chakrapanidatta, Chikitsasthana; Rasayana Adhyaya, Chapter 01, Verse 06, Chaukhamba Surbharati Prakashan, New Delhi, Reprint edition (2023), p.376

9. Yadavji Trikamji Acharya Susruta Samhita of Susruta with the Nibandhasangraha Commentary of Sri Dalhanacharya and the Nyayachandrika Panjika of Sri Gayadasacharya on Nidanasthana, Sutrasthana, Vedotpatti Adhyaya, Chapter 01, Verse 7(7), ChaukhambaSurbharatiPrakashan, New Delhi, Reprint Version (2022), p.03
10. Yadavji Trikamji Acharya, Charaka Samhita with Ayurveda Dipika Commentary by Chakrapanidatta, Chikitsasthana; Rasayana Adhyaya, Chapter 01, Verse 07-08, Chaukhamba Surbharati Prakashan, New Delhi, Reprint Edition (2023), p.376
11. K.R. Srikanta Murthy, Ashtangasangraha, Uttarasthana, 2nd Edition, Choukambhaorientalia, Varanasi, 2000;3(460):49/4.
12. Yadavji Trikamji Acharya, Charaka Samhita with Ayurveda Dipika Commentary by Chakrapanidatta, Chikitsasthana; Rasayana Adhyaya, Chapter 01, Verse 07-08, Chaukhamba Surbharati Prakashan, New Delhi, Reprint edition (2023), p.376
13. Yadavji Trikamji Acharya, Charaka Samhita with Ayurveda Dipika Commentary by Chakrapanidatta, Chikitsasthana; Rasayana Adhyaya, Chapter 01, Verse 07-08, Chaukhamba Surbharati Prakashan, New Delhi, Reprint edition (2023), p.376
14. Yadavji Trikamji Acharya, Sushruta Samhita, Nibandha Sangraha Commentary of Sri Dalhanacharya and Nyaya chandrikapanjika on Nidanasthana commentary of Sri Gayadasacharya, Chikitsasthana, Rasayana Adhyaya, Chapter 27, Verse 01, Chaukhamba Surabharati Prakashana, New Delhi, reprint edition(2022), p. 498
15. Yadavji Trikamji Acharya, Sushruta Samhita, NibandhaSangraha Commentary of Sri Dalhanacharya and Nyaya chandrikapanjika on Nidanasthana commentary of Sri Gayadasacharya, Chikitsasthana, Rasayana Adhyaya, chapter27, Verse 01, Chaukhamba Surabharati Prakashana, New Delhi, reprint edition(2022), p. 498
16. Yadavji Trikamji Acharya, Charaka Samhita with Ayurveda Dipika Commentary by Chakrapanidatta, Chikitsasthana; Rasayana Adhyaya, Chapter 01, Verse 35, Chaukhamba Surbharati Prakashan, New Delhi, Reprint edition (2023), p.389
17. Yadav ji Trikamji Acharya, Sushruta Samhita, NibandhaSangraha Commentary of Sri Dalhanacharya and Nyaya Chandrikapanjika on Nidanasthana Commentary of Sri Gayadasacharya, Chikitsasthana, Rasayana Adhyaya, Chapter 27, Verse 01, Chaukhamba Surabharati Prakashana, New Delhi, Reprint Edition (2022), p. 498
18. Yadavji Trikamji Acharya, Charaka Samhita with Ayurveda Dipika Commentary by Chakrapanidatta, Chikitsasthana; Rasayana Adhyaya, Chapter 01, Verse 07-08, ChaukhambaSurbharatiPrakashan, New Delhi, Reprint Edition (2023), p.376
19. Yadavji Trikamji Acharya, Charaka Samhita with Ayurveda Dipika Commentary by Chakrapanidatta, Chikitsasthana; Rasayana Adhyaya, Chapter 01, Verse 07-08, Chaukhamba Surbharati Prakashan, New Delhi, Reprint Edition (2023), p.376
20. T. Yokozaawa, H.Y. Kim, H.J. Kim, et al. Amla (Embllica officinalis Gaertn.) Attenuates Age-related Renal Dysfunction by Oxidative Stress. *J Agric Food Chem.* 2007;55:7744-7752.
21. N.N. Rege, U.M. Thatte, S.A. Dahanukar. Adaptogenic Properties of Six Rasayana Herbs Used in Ayurvedic Medicine. *Phytother Res.* 1999; 13:275-291.
22. I.H. Lin, D.M. Hau, W.C. Chen, K.T. Chen, J.G. Lin. Effects of Glycyrrhizae and Glycyrrhizic Acid on Cellular Immunocompetence of Gamma-ray-irradiated Mice. *Chin Med J.*, 1996; 109:138-142.
23. R. Kulkarni, K.J. Girish, A. Kumar, Nootropic Herbs (Medhya Rasayana) in Ayurveda: An Update. *Pharmacogn Rev.* 2012 Jul;6(12):147-53. doi: 10.4103/0973-7847.99949. PMID: 23055641; PMCID: PMC3459457.
24. R. Sharma, N. Martins, Telomeres, DNA Damage and Ageing: Potential Leads from Ayurvedic Rasayana (Anti-Ageing) Drugs. *J. Clin. Med.* 2020, 9, 2544. <https://doi.org/10.3390/jcm9082544>
25. C.G. Jagetia, Radioprotective Potential of Plants and Herbs Against the Effects of Ionizing Radiation. *J Clin Biochem Nutr.* 2007 Mar;40(2):74-81. doi: 10.3164/jcbl.40.74. PMID: 18188408; PMCID: PMC2127223.