



MODERN DAY APPLICATION AND PRACTICAL UTILITY OF RASAYANA AS A HERBAL ELIXIR

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Abstract : A philosophical study, a unique method of practice, a traditional pathway to follow and an interesting area to dwell within, is the world of ayurveda considered to be an elixir for life. In this field of traditional science, the unique concept of rejuvenation refers to *rasayana*. It is one of the ancient rejuvenating therapies which is considered to be the “basic immunomodulatory processes of modern times”.

Rasayana and its relevance in other *Vedas* and *samhitas* like *Bhela*, *Kashyapa*, *Sharangadara*, *Chakradatta* have been portrayed. “*Ahara*” as a *Rasayana*, considering *Ajasrika Rasayana* and the *Dravyas* ranging from *Ksheera*, *Ghritha*, *Madhu* to the compound combinations are considered and their practical implications as Nutraceuticals can be put forth. *Lehana* forms and *Swarna prashna* are considered to be the practical application of *rasayana* indeed as a major part of immunization today. Even in diseases like Cancer, Tuberculosis, Rheumatoid Arthritis and the scope of fields of Geriatrics , Genome stability and Stem cell therapy and its implication of antioxidant and radical scavenging effect in them are the modern day clinical application bringing into highlight the usage of *rasayana* . Amidst the field of Alchemy, where the concept of *Ayaskrithi Rasayana* with antioxidant effect for combating diseases is mentioned as a clinical importance. Biological effects like Anabolic, Antistress adaptogenic , Immunomodulatory , Nootropic , Antioxidant , Antiageing and Neuroprotective effects are Multidisciplinary approach of practical and clinical applications of *Rasayana* . Therefore “*Rasayana*” has a wide range of interpretations amidst the modern times through its Replenishing and Nourishing effects.

INTRODUCTION

Amidst the Principles of treatment in *Ayurveda*, “चिकित्सा” the aspect of treatment has been quoted with many synonyms portraying the meaning like व्याधिहर- The means for cure of the disease , पथ्यं - System which is congenial to health , प्रशमनं as one among the pacifying therapy and प्रकृतिस्थापनं – bringing back normalcy of health. Amidst these one of the most important term “भेषज” is being quoted as synonym of health. This भेषज is of two types, स्वस्थस्योर्जस्करं and आर्तस्यरोगनुत् ^[1]

In maintaining the principles of स्वास्थ्यता two major points are, to maintain longevity of healthy life and to increase the principles of health amidst the body and mind. To accomplish this two specific divisions of स्वस्थस्योर्जस्करं exists one being रसायन and the other वाजिकरण ^[2]

Chikitsa refers to bringing back the normalcy of all the *Dhatus* .In this context रसायन is one of the most important application in our day to day activities which helps in maintaining धातुसाम्यअवस्थ . It is a path or a system to acquire रस or adequate nutrition

for the body . It forms one of the special therapy or modality which provides nourishment to each and every cell of the body . This helps in normalizing the cell functions and preserves the health at molecular level.^[3]

RASAYANA TANTRA

The speciality which deals with the methods for maintenance of Youthfulness , procedures done to increase Longevity , Administrations increasing Intellectual capacity and the overall Strength , which makes the patient free from the disease is referred as “रसायनतन्त्र”, where रस are formed from आहाररस and अयन denotes the methods of producing the best quality of seven धातु's within the body . A person can consume रसायन in his युव and मध्य अवस्थ . In this context considering the ages of man , right from the birth uptill death.^[4]

HISTORY OF RASAYANA AND ITS RELEVANCE IN OTHER SAMHITAS

Puranika kala: Purana are supposed to be old literatures delivered by ancient sages based on Vedas. In Garuda Purana vivid description is available from chapters 146 to 200. Agni Purana contains description of *Sidha Aushadhani* and *Sarva Roga harani Aushadhani*. There is description of “*MritaSanjivani*” in *Agnipurana*. Reference is available in *Matsya purana* 3/6-8 that *Acharya Kashayap* gained long life with the administration of *Rasayan* .

The wider explanation of Divine *rasayana* agents like *Soma* are available since then. It has been cherished wish of the human race to achieve a longer life span and to live atleast 100 years for a perfect health. - “जीवेनशरदः शतम” ||

The Rejuvenative programs of Ayurveda: Rhythmic massages that relax each tendon. Medicated baths revitalize every nerve. Diets that restore you to sound health. The rejuvenation programs of Ayurveda are designed to improve your vitality, enhance immunity and increase longevity. Besides, good health goes a long way in bringing out the best in you. Adding a healthy glow to your skin, it will awaken the sleeping beauty within. Adding years to life, and life to your years will be the ultimate benefit of *rasayana*.

Rejuvenation therapy (Rasayana chikitsa): Tones up the skin and rejuvenates & strengthens all the tissues, so as to achieve ideal health and longevity. Increases 'Ojas' (primary vitality) and improves 'Sattva' (mental clarity) and thereby increases the resistance of the body. Includes head and face massage with medicated oils and creams, body massage with herbal oil or powder, by hand, Internal rejuvenative medicines and medicated steam bath. Herbal baths are also used.

Body immunisation and longevity treatment(Kayakalpa Chikitsa): Prime treatment for retarding the ageing process, arresting the degeneration of body cells and immunisation of the system. Includes intake of *Rasayana* (special *Ayurvedic* medicines and diet) and comprehensive body care programs. Most effective for either sex if undertaken before the age of fifty.

Bhela Samhita

There is specific indication of *rasayana* therapy in *Rajayakshma* in this *Samhita*, *Pippali rasyana* and *Pippali vardhamana rasayana* are the contributions in this field. *Rasayana* in the form of *shukra shodhana vasti* are mentioned here too.

Following *rasayana* preparation have been newly told by *Bhela* as,

- *Jivakadi rasayana ghrta*
- *Mahasneha rasayana*
- *Shatavaryadi rasayana vasti*
- *Pancha mulyadi rasayana*
- *Shatapaka sukumara taila*

There is no individual chapter on *rasayana* therapy, but *rasayanas* are described in the chapter naming “*Dirghaayushyopaya*” In the present world industries have prepared formulations with the above basic reference and are in practical usage for Rejuvenating effects.

Kashyapa Samhita

Acharya Kashyapa's view of "Lekhana" and "Swarnaprashana" is in today's trend as Elixir's and Immunity Boosting drops, especially drugs like *Brahmi*, *Lashuna* and compound drugs like *Shatapushpa kalpa*, *Lashuna kalpa* and *MadhuSharkara yoga* are in practice. *Kashyapa* has concentrated on *Kshata Ksheena*, *Kshya* and *Rajayakshma* which can be co-related to Malnutrition disorders and hindered development of child in a general aspect

Here the effects of *Bruhman*, *Balkara*, *Vrishya*, *Varna prasada*, *Ojovardhana*, *Ayushya*, *Smriti medha vrudhikara* and *Vayasthapana* are rendered

Particularly usage of *Samvardhana ghrta* as a *Nitya rasayana*, many rejuvenative therapies are efficient enough in treating Anaemia, Malnutrition and many of the growth and developmental disorders.

Chakradutta

Acharya Chakradutta has enmarked the utility of *Samshodhana Therapy as a Poorva karma* for *rasayana* therapy. He has described popular *rasayana* drugs like *Chyavnaprash*, *Bhallataka yoga*, *Vardhamana Pippali Rasayana*, *Agastya Haritaki*, *Vyagri Haritaki* and *Loha rasayana*

The special usage of *Ritu Haritaki*, *Haritaki* to be used in various seasons with different combinations are specified here. This concept is put into practice in modern view after the manifestation of researches

Yoga Ratnakara

In this text, description of *Haritaki* and *Vardhamana Bhallataka Prayoga* is been emphasized.

Sharangdhara Samhita The unique contribution of Acharya Sharangadhara is *Prayoga of Rasayana* according to decade wise ageing. In the practical implication considering the decades of life particular.

UTILITY OF RASAYANA IN VARIOUS FORMS**1. *Madhu ghrta prashna* at birth – immunomodulatory response**

Immediately after birth there is administration of मधुघृतप्राश्न to the baby starting with the chanting of मन्त्र. These principles of usage of मधु and घृत as a नित्यरसायन has been told in *Sushruta Samhita* which endows a person with good आयु. "लेहनाध्याय", deals with various herbal formulations to boost up intellect and immunity of a child and promote optimum growth and development as well. This ensures *Ayurvedic* Pediatricians to provide prophylactic as well as therapeutic care to growing children. The main intention behind लेहन advising is unperturbed growth and development of a child.

2. स्वर्णप्राश्न In Ayurveda As A Rasayana- The Process Of Immunization In Current Era

It's a unique method of immunization which helps the children to boost up the intellectual power and produces Non-Specific immunity in body to fight against general disorders.

It is also helpful even to the Special children with Autism, Learning Difficulties, Attention Deficit, Hyper Activity and Delayed Milestone. In the modern times people engaging in their busy schedules are experiencing a stress full life leading their future generation in trouble. Due to this children being born are immune deficient and take birth with congenial deformities. In these cases, the concept of प्राश्न as a नित्यरसायन is a positive implication of ancient knowledge. [5].

3. आहार As रसायन – Food And Nutraceuticals Of Present Era

With the gradual development of life, usage of *ahara* and the daily regimes can involve the ancient science in a different way. In this context Acharya *Sushruta* has quoted *Nitya prayoga of Aharaa dravyas* like *Sheetodaka*, *Paya*, *Ksoudra* and *Sarpi*. The combinations of these either all four together, two as permutations or three as permutations during the *Prataha Kala* is said to establish *Ayu* and its *Sthapana*.

In the current day scenario consumption of *jala* in empty stomach, *sarpi* as a whole or with combination and drinking milk is the routine day practice for a balanced diet and regimens. This concept has hence indeed taken up the basic concept of *rasayana* into daily practice.

Similarly *Madhava Nidana* has quoted दिव्यजल, शीतोदक or हंसोदक as the rejuvenating electar which gives strength, increases intellect, light for digestion and as the best रसायन.

4. **Rasayana Dravas In Ahara Varga**

Go-Ghritha is one of the auspicious elixir from the divine source, it is considered to be one form of *rasayana*.

The benefits are quoted as, that which is good for eyes, which increases digestive fire, aphrodisiac and reduces the diseases of *vata* and *kapha*. It increases intellect, renders good complexion and is considered to be enhancing the *ojas* and *shareera*. It is auspicious and *vayasthapaka* and best form of *rasayana* amidst the *ahara varga*.

The formulations used in the current era in treating the disorders of psychological diseases are *Kalyanaka Gritha*, *Panchagavya Gritha*, *Samvardana Gritha*, *Mahakalyanaka Gritha*, *Paishachika Gritha*, and *Hapushadi Gritha*.

Ghee As Nitya Rasayana In Garbhini Masanumasika Parichaya

Ayurveda not only focus on preventive and promotional health but also has strong footing in the field of healthy progeny. *Garbhini paricharya* is essential for safe motherhood and healthy progeny.

Purana Ghritha And Nitya Rasayana

Charaka considers *Purana Gritha* and *Prapurana Gritha*. *Sushruta* considers *kumbha sarpi* to be *Rakshoghna* which protects from all the negative powers on its regular consumption and usage. According to *Yoga Ratnakar*, the ghee which is kept for 100 years Old is *sreshtha*. According to *Chakrapani*, ghee which is kept for 10 years is the best, possessing a good antioxidant activity in the current times. *Mahasarpi*, the ghee which is 100 years old and is considered to be *Timira* and *vata nashaka*. According to *Bhava Prakasha*, *Purana gritha* is the ghee which is one year old and possess the best medicinal value. As a part of *Nitya ashana*, ghee is one of the best **rejuvenators**.

नवनीत / Butter

Bearing the *Madhura rasa* and *Madhura Vipaka* Butter/*Navaneeta* is one of the best elixirs in regular consumption as a food source and as a medical compound.

Vishista yoga in practice include, *Narasimha Ghritha*, *Vasantamalathi Rasa*, *Laghmalini Vasanta Rasa*, *Navaneetavaleha*, *Navaneetadadi yoga*, *Navaneetadi Lepa*.

In the Modern Times usage of *Navaneeta*, that is clarified Butter is utilized by considering its composition of Fatty acids, Lactones, Methyl ketones, Diacetyl and Dimethyl sulfide. Its application along with *Allium sativa* - *Lashoona* in treating clots in brain is put into research activity. *Dh ni* ^[6]

गुड / Jaggery

It is *Vishaghna*, *Mutrasodhana*, *Vrishya*, *Balya* and *Kaphakara*. The *vishista yogas* include *Kalyanaka gritha*, *Gudajeeraka gritha*, *Gudadeepyaka gritha*, *Gudabilva*, *Gudashuntyadi*, *Gudaharitaki*, *Gudadi mandoora*, *Gudamodaka yoga*, *Gudardraka yoga*, *Gudashtaka*, *Pachajeeraka Guda*, *Panchajeeraka paka*, *Pathyadi Guda*, *Gudabahushal guda*.

The usage of *Guda* in Modern practice is in the form of white refined and brown sugar. They are evaluated for their cyto-protectivity and Radical scavenging activity.

Milk

Milk is beneficial for all the living beings because of being *Jatisatmya*. Milk is having many qualities like *Balya*, *Vrishya*, *Medhya*, *Rasayana*, *Ojo Vardhana*

5. **RASAYANA AND NUTRACEUTICALS**

Today's sedentary, stressful lifestyle and urbanization affects the health of human beings worldwide resulting in increased lifestyle-related disorders.

A nutraceutical is demonstrated to have a physiological benefit or provide protection against chronic disease. *Ayurveda* has also stated the same principle as maintenance of health by increasing *swasthyata bhava* and *Ojaskara chikitsa* that means the different

ways by which one can achieve health by maintaining optimum tissues. Thus, it can be stated that primarily *Rasayana* help to attain a healthy state and secondarily it can also be used for the treatment. [7]

APPLICATION OF RASAYANA IN COMBATING DISEASES OF PRESENT ERA

RASAYANA IN CANCER : Administration of *rasayana*'s was found to enhance the proliferation of spleen cells significantly especially in the presence of mitogen. A similar result was also seen with bone marrow cells. However, mitogenic stimulation could not be observed. Esterase activity was found to be enhanced in bone marrow cells indicating increased maturation of cells of lymphoid linkage. Oral administration of *rasayan* significantly increased total WBC count, bone marrow cellularity, natural killer cell and antibody dependant cellular cytotoxicity in gamma radiation (4Gy) expose mice. *Rasayanas* reduced radiation induced peroxidation in liver. *Rasayan avaleha* gave better results in controlling the adverse effect of chemotherapy and radiotherapy such as nausea, vomiting, mucocitis, fatigue, xerostomia, alopecia. [8]

RASAYANA IN TUBERCULOSIS: *Rasayan* compound is beneficial in the management of tuberculosis with anti-Koch's treatment. It significantly decreases cough, fever, dyspnoea, haemoptysis, and increased body weight. [9]

RASAYANA IN RHEUMATOID ARTHRITIS: *Vardhaman Pippali Rasayan* is effective in the management of *Aamavata* (rheumatoid arthritis). A significant decrease in erythrocyte sedimentation rate was also noted. [10]

RASAYANA IN GERIATRICS: In senile memory impairment *Guduchyadi Medhya Rasayana* showed memory enhancement, antistress, antidepressant and anxiolytic properties. [11]

RASAYANA IN INTELLIGENCE: *Centella asiatica* fresh leaf extract showed a significant increase in the dendritic length (intersection) and dendritic branching points in amygdaloidal neuron of the rats, one of the regions concerned with learning and memory.

RASAYANA IN GENOME STABILITY: As per the studies on molecular correlates of genomic stability in rat brain cells following *Aamalaki rasayana* therapy, the result convincingly indicate that, in control animals there was a distinct increase in DNA damage with age in neurons and astrocytes. But the animals treated with *rasayana* showed significantly less DNA damage in brain cell demonstrating beneficial effect of *rasayana* therapy towards maintenance in genomic stability. DNA damage may be proximal cause of aging. [12]

RASAYANA IN STEM CELL THERAPY : Regeneration of tissues after the disease condition like osteoarthritis, age related macular degeneration (AMD), Alzheimer's, injuries, trauma, heart attack, stroke, accident, or aging remains a challenge to modern medicine. Tissue-specific *Rasayanas* could be tried for differentiation of stem cells and regenerate specific tissue of choice. *Rasayanas* known for their tissue specificity could also be tested in stem cells to reveal their differentiation inducing activity. The vitamin C can regulate proliferation as well as differentiation of stem cells depending upon its concentration. *Aamalaki* is rich source of vitamin C and may be acting through similar pathways. *Ayurvedic* preparations like *Rasayanas* could be explored for their role in potentiating stem cells for clinical applications. *Piper longum* volatile oil extract improves the proliferation on mesenchymal stem cell.

Rasayana drugs are rich in antioxidants and are good hepatoprotective, nephroprotective, and immunomodulating agents. It has also been reported that *Rasayanas* have immunomodulatory, antioxidant, and antitumor functions. [13]

RASAYANA IN INFECTIOUS DISEASE: *Rasayan* is used to prevent the infection and to arrest the infective diseases promoting the immunity of the vital essence of the respective body tissue as being affected and break the intensity of the processing of interaction between the microorganism and body resistance with the programmed theism.. The uses of *Embelica officinalis* and *Samacarpus anacardium* enlighten the views of immunopromotion and immunosuppressant quality respectively in different infection. In almost all infective diseases are prevented to the practice of *achar rasayana* as it regulates the neuro transmitters to maintain the psychological threshold so that the individuals are kept themselves alert from the source of infection. [14]

RASAYANA FOR SOCIAL LIFE: In modern civilisation and competitive world the psychological and social life of person is disturbed. The quarrel and crime rate is also significantly increasing. In such conditions incorporation of *Achara rasayan* in lifestyle will definitely helpful for personal as well as social life to control these hazards. [15]

RASAYANA IN ALCHEMY AND MODERN APPLICATIONS

Ayurveda since time immemorial marks for the excellent usage of Herbo, Mineral and Herbo mineral combinations for treating various diseases. *Rasashastra* since 8th century is known as the individualistic section which is making use of the unique combinations.

With this context the usage of *Sukshma churna* of *dhatu* was existing since those days, among which the consideration of *Loha churna*, *swarna churna* and *Tamrachurna* are into practice. With this the invention of *Ayaskruti* and its *prayoga* played a remarkable role in treating diseases and combating the toughest roles of pathology through *Ayaskruti rasayana*.

The rejuvenation effect in the form of **elixir** is well noticed in this field of **alchemy** too through *rasayana*. *Ayaskruti* is an *Ayurvedic* medicine which is used to cure **anaemia**, **weight loss**, **skin diseases** and many more. ^[16]

THE CONCEPT OF ANTIOXIDANTS FROM CONTEMPORARY SCIENCE :

The energy needed for normal functioning of cells from aerobic metabolic reaction is trapped and stored as ATP in the cell. During this process roughly 1-5 % of molecular oxygen gets oxidised to superoxide radicals and other reactive oxygen derivatives such as hydrogen peroxide. These in turn generate Hydroxyl and Peroxyl radicals, These species being highly reactive, attack all cellular components like proteins, lipids and DNA. In the normal course these species are countered both by Enzymatic and Non-Enzymatic reaction.

The accumulation of net damage due to oxidative stress over a period of time is considered responsible for age, related diseases and decline eventually leading to death.

These oxidative stress diseases include Senile Dementia, Alzheimers Disease, Immunity related problems, Cancer, Inflammatory conditions and cardiovascular problems. Here the role of *rasayana* is an important pathway in combating diseases by Rejuvenation therapy. ^[17]

CONCLUSION**RASAYANA AS A MULTI DISCIPLINARY TREATMENT**

Ayurveda is the science that completely focuses on the rejuvenation of the body by nourishment of *rasa-adi dhatu's*. In day-to-day life where stress is the main factor for leading all the disease, *Rasayana* aims on the prevention & cure of physical as well as mental disorders. Due to the free scavenging property i.e. anti-oxidant property of *Rasayana* it gives antiaging effect. It also normalizes cell functions and preserves health at molecular level.

Rasayana tantra is one of the eight most important clinical branches of *Astanga Ayurveda*.

Now at this time, when the world is trying to achieve such medicines that enhance the healthy life of individual, it is our duty to expose out the possibilities of such drugs from *Ayurveda*. It is *Rasayana* drugs which can fulfil this desire of human being. There are lot of *Rasayana* medicine which may ward off the effect of population, aging, malnutrition, disturbed food habit, and obesity. *Rasayana Chikitsa* means rejuvenation therapy helps to enhance; maintain health and to cure disease in individuals. It also improves a person's health mentally and physically. It is widely used for cosmetic purpose like to improve skin texture, healthy hairs, modulates the voice and increases sensing capacity of sense organs. They replenish the vital fluids of our body thus keeping us away from different diseases.

The possible mechanisms of action, by which *Rasayana* can be correlated in terms of modern scenario, are as follows – Antioxidant action, Immunomodulatory Action, Haemopoietic effect, Adaptogenic action, Anti-ageing action, Anabolic Action, Nutritive Action and Neuroprotective action.

Rasayana Therapy is best for Replenishing and nourishing the specific body Elements. Various *Rasayana* can be given more benefits in different decades of life & in healthy persons it can be used without much restriction, as a part of diet and regimen and hence can lead a healthy longer life, Hence its Clinical Application in Modern times is appreciated.

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