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## Review Article

### RASAYANA: TRANSCENDING AGE

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#### ABSTRACT

The concept of 'Rasayana' was among the Astangaayurveda as evident from Ayurvedic texts which serves the principle "Swasthasya swasthya rakshanam aaturasaya vikara prashmanum ch" as advocated by both Acharya Charaka and Sushruta when they stated the aim of Ayurveda. Further, acharya Sushruta defines Rasayana Tantra as "Rasayantantrum nama vayasthapanam ayurmedhabalkaram rogaapharansamartham ch" which means, the branch of Astangaayurveda where all types of methods which maintains longevity, enhance intelligence and mental strength, and increase immunity against various disorders. The word Rasayana is composed of two words "Ras" and "Ayana" which refers to nutritional essence and its transportation throughout the body for its efficient assimilation into the body. Also, Rasayana use increases the essence of each Dhatu by acting as a source of vital nutritional supplement. Being naturally rich in antioxidants Rasayanas increase the immunity of a person which keeps him away from opportunistic diseases. Above all the rejuvenating properties of Rasayanas are held in high esteem in Ayurvedic texts which are capable of not only keeping aging at bay but have also proved very effective as supportive therapy in many chronic diseases and as adjuvant to chemotherapy. A number of herbs have been ascribed with properties of Rasayana in Ayurvedic literature as Guduchi, Triphala, Madhuyashti, Shankhpushpi, Jyotishmati, Brahmi, Mandookparni etc. The use of these herbs as Rasayana transcends ages, for Rasayanas have been described for all age groups in Ayurveda. The aim of this review paper is to bring into light certain such herbs which since time immemorial have been employed as Rasayanas and hold promise in today's health scenario more than ever.

**Keywords:** Rasayana, immunity, antioxidants, adjuvant, nutrition, rejuvenation etc.

#### INTRODUCTION

'Rasayana' is amongst the Astangaayurveda, the eight divisions of Ayurveda as advocated in various Ayurvedic texts. As others it was propounded to serve the fundamentals of Ayurveda, i.e. "Swasthasyaswasth rakshamanum aaturasaya vikarum prashmanum ch" as set out by the pioneers of Ayurveda, acharya Charaka (Charaka Samhita Chikitsasthana 30/26 p.587)<sup>1</sup> and Sushruta (Sushruta Samhita Sutrasthana 1/22 p.4).<sup>2</sup> Acharya Sushruta further defines Rasayana Tantra as "Rasayantantrum nama vayasthapanayurmedhabalkaraam rogaapharansamartham ch" (Sushruta Samhita Sutrasthana 1/15 p.4)<sup>2</sup> which means that branch of Astangaayurveda where all measures which help in promoting longevity, enhance intelligence and mental strength and increase immunity against various disorders are elucidated. The Rasayana therapy endeavours to preserve good health thus ensuring longevity by optimizing the cellular level nutrition. Sushruta has defined a swastha pursha (healthy man) as one who has equilibrium of the doshas (sama dosha), normal functioning of agni (sama agni), normal state of seven dhatus (sam dhatu), normal excretion of waste products (sam malkriya) as well as a blissful state of atma (Soul), the indriyas (or sense organs) and mana (or

mind) (Prasanatamendriya Mana) (Sushruta Samhita Sutrasthana 15/48 p.64).<sup>2</sup> The word Rasayana is composed of two words "Ras" and "Ayana" which refers to nutritional essence and its transportation throughout the body for its efficient assimilation into the body. A plentiful Rasa (rasa means first dhatu or the nourishing fluid which is produced instantly after digestion of food) holds promise of an impeccable nutritional state which is essential for increased vitality, prevention of aging (jara), immunity against diseases and for prompt mental functioning. Rasayana agents act by various modes such as 1) Direct enrichment of the nutritional quality of rasa (i.e. the nutrient pool of plasma). (2) Improving pertinent functionality at the level of dhatus (the various tissues of body). (3) Promoting the competence of ayanas or srotas (the bio transport pathways) in the body leading improved dhatus poshan or tissue perfusion and optimum bioavailability of nutrients to the tissues.

#### Benefits of Rasayana Therapy

Acharya Charaka (Charaka Samhita Chikitsasthana 1/1/7-8 p.5, 1/2/3 p.21)<sup>1</sup> and Vagbhata (Astanga Hridayam Uttaratanttra 39/1-2 p.1183)<sup>3</sup> described various benefits of rasayana therapy as - enjoying long healthy life, enhances

intelligence, memory, strength, youth, lustre, sweetness of voice etc. or simply, enhancing physical and mental vigour lifelong. Also, Rasayanas improve metabolic processes, which results in apposite biotransformation and produces the best-quality bodily tissues. Rasayana therapy is basically targeted towards the daily wear and tear the human body suffers in the course of routine life and also the unwanted ill-effects of infirmities afflicted during the same. Ayurveda, true to its nature of being the science of life has throughout propounded the factors favourable and unfavourable towards a healthy lifestyle (Charaka Samhita Sutrasthana 1/41 p.13).<sup>1</sup> Unacknowledgement of rules of daily living as prescribed by Ayurveda, not only accentuates aging but also predisposes to various lifestyle disorders. Acharya Sharangdhara has clearly stated that Rasayana includes use of certain dravyas as Rudanti, Guggul, Haritaki etc. prevent early aging (jara) and guard against opportunistic infections as well (Sarangdhara Samhita Poorvakhand 4/13 p.48).<sup>4</sup> Similar description is found in Bhaishajyaratnavali (Bhaishajyaratnavali Rasayanaprakaran 73/1 p.1102).<sup>5</sup> Overall, in Ayurvedic texts, Rasayanas have been mentioned as a set of rejuvenating measures which aim towards a youthful rich life free of disease and infirmity. A number of other Rasayanas aimed at enhancing the composition or functionality of particular tissues have also been mentioned for example medhya rasayana for optimum mental vigour (Shankhpushpi, Ashwagandha, Brahmi, Mandookaparni), dristiprada rasayana for maintaining the visual acuity (e.g. Jyotishmati, Chakshusya) etc.

### Rasayana Use and Age

Both Acharya Sushruta (Sushruta Samhita Chikitsasthana 27/3 p.120)<sup>2</sup> and Vagbhata (Ashtanga Hridayam Uttarantra 39/3 p.1183)<sup>3</sup> counsel that Rasayana should be used in early and or middle age: 'Purve vayasi madhye va.' Acharya also advised not to use Rasayana without body purification i.e. detoxification, to be undertaken by Panchkarma methods. The Rasayana dravya are advised for use, according to vata, desha, kala, satmya, prakriti, agnibala etc.

### Classification of Rasayanas

According to Acharya Charaka:

- Kutipravesika (indoor regimen): while using this method, patient has to stay in a specially designed cottage or kuti for the whole duration of this therapy (Charaka Samhita Chikitsasthana 1/1/16-20, p.7-8).<sup>1</sup>
- Vatatapika rasayana (outdoor regimen): While undertaking this mode of rasayana therapy, a person can carry out his daily routine (Charaka Samhita Chikitsasthana 1/1/16, p.7).<sup>1</sup>
- Achara Rasayana (code of conduct) - Acharya Charaka (Charaka Samhita Chikitsasthana 1/4/30-35, p.58)<sup>1</sup> described it in detail in Rasayana chapter. Aim is to follow a particular code of conduct in routine life, which attains good mental and spiritual health. After following this, person can be kept away from anxiety, stress, and thereby from all diseases etc.

According to Acharya Sushruta (Sushruta Samhita Chikitsasthana chapter 27-30, 120-132)<sup>2</sup>:

- Sarvopaghatashamaniya (rasayana formulation which counteract various diseases process)
- Medhaayushkamiya (rasayana which increase intellect and longevity)

- Svabhavavayadhipratishedhaniya (means delaying onset of svabhavika disease)
- Nivrittasantapiya rasayana (means which clears all type of santapa (dukha or diseased state))

According to the health status of the patient/person (rogi-awastha) (Charaka Samhita Chikitsasthana 1/1/4 p.3)<sup>1</sup>:

- Rasayanas which are used even in good health as they promote and maintain the health of a person i.e. "Swasthasyaorjaskara".
- Rasayanas used in case of diseased states as they have restorative properties in certain diseases i.e. "Kinchitartasya roganut".

This fact has been reinforced by Dalhana in his commentary on Sushruta, where he classifies Rasayanas as – (1) Kamya rasayana, used during health (2) Naimittika rasayana for diseased person (Sushruta Samhita Chikitsasthana Dalhana 27 p.121).<sup>2</sup>

### Rasayana use in Pediatric Age-group

Two very important properties of Rasayana therapy i.e. its potency to increase the essence of bodily Dhatus and another to enhance immunity are very useful in terms of paediatric medicine. A number of such Rasayana herbs find mention in Ayurveda. These Rasayanas promote growth and development of children and have been advocated to be used since very young age as infancy known as Ksheerap kala in Ayurveda. As the immunological system of children is not yet fully developed as in an adult, hence they are more prone to opportunistic infections. For protection of children against such life threatening infectious diseases, Ayurveda has advocated a preventive measure in form of Rasayana therapy for children as well. Different acharyas have specified various Rasayana yogas (formulations) for the pediatric age group. Some of these are -

- Acharya Charaka: Mahapaishachik ghrita (ghrita means clarified butter made from cow's milk) (Charaka Samhita Chikitsasthana 9/45-48, p.319)<sup>1</sup> use enhance intelligence and memory as well as helpful in growth and development with effective in disorders. Brahmi ghrita (Charaka Samhita Chikitsasthana 10/23, p.332)<sup>1</sup> etc.
- Acharya Sushruta described following formulations (containing gold) which provide general immunity, body resistance, helpful in growth and development (Sushruta Samhita Sharirsthana 10/72-74, p.84).<sup>2</sup> These are: (1) Svaran bhasm with kushtha (*Saussurea lappa*), vacha (*Acorus calamus*), madhu (honey) and ghrita. (2) Svaran bhasm alongwith brahmi (*Bacopa monnieri*), sankhpuspi (*Convolvulus pluricaulis*), with honey and ghrita. (3) Svaran bhasm, arkpushpi, vacha, honey and ghrita. 4) Svaran bhasm, khaidarya, sweta durva, ghrita.
- Vagbhata prescribed following yoga: Sarshvata ghrita (Astanga Hridayam Uttarantra 1/45, p.885)<sup>3</sup> combination of vacha and savarna bhasma with honey and ghrita, (Astanga Hridayam Uttarantra 1/47, p.885),<sup>3</sup> etc.
- Kashyapa prescribed following yoga: Shuddh Swarn (in small quantity) has given with honey and ghrita to the newborn results in promotion of health, growth, complexion and strength (immunity). Panchgavya ghrita, Brahmi ghrita, Abhaya ghrita, Samvardhana ghrita (effective in children with delayed milestones) (Kashyapa Samhita Sutrasthana, Lehaadhyaya, p.4-6).<sup>6</sup>

**Rasayana use in Adult Age-group**

As the aim of Rasayana therapy is to promote good health, enhance immunity and to rejuvenate, it can be used successfully in adult age group and has a very good supportive role in Geriatric medicine. Acharya Charaka counsels various Rasayana yogas and dravyas in Charaka Samhita Chikitsasthana's first chapter having four subparts which include Rasayana formulations for health promotion and cure in certain diseases as - kustha, gulma, shosha, pandu, arsha, hridroga, shavsa roga etc. Acharya Charaka also described 'Acharya rasayana' (Charaka Samhita Chikitsasthana 1/4/30-35 p.58)<sup>1</sup> which is aimed at optimum mental, spiritual and social health, very important aspects of overall well-being of an individual. Formulations such as Brahmarasayan, Chyavanprasha, Amalaka Rasayana, Bhallataka Rasayana, Lohadi-rasayana, Endriarasayana, Pippali rasayana, Triphala rasayana, Shillajit Rasayana etc popular amongst Ayurvedic physicians even today also find mention in the same chapter (Charaka Samhita Chikitsasthana 1:1-4 p.1-64).<sup>1</sup> While Acharya Sushruta has discussed Rasayana in Chikitsasthana in four separate chapters (Sushruta Samhita Chikitsasthana 27-30 p.120-32).<sup>2</sup> Sushruta has described rasayana herbs such as Gambhari, Brahmi, Bakuchi, Mandookparni, Somarasa etc. Acharya Vagbhata, on the other hand, describes Rasayana in Uttaratantra (Astanga Hridaya Uttaratantra 39 p.1183-1206).<sup>3</sup> These Rasayanas are for exclusive use in adult age-group and are found to be very beneficial as well. Thus in adult age group Rasayana use can serve various purposes as delaying aging, improving mental functions, prevention of opportunistic infections, supportive therapy in certain chronic disorders and as adjuvant therapy in case of chemotherapy. Nowadays Rasayana drugs are used mainly as immunity enhancing methods. As we know that inherent property of body to fight against infectious agents is called immunity. Various studies (experimental and clinical research) regarding herbs mentioned in ancient Ayurvedic texts have indicated significant results of Rasayanas in activating macrophages, modulating cytokine network etc. have been documented. Rasayana dravya have also found to have beneficial physiological effects on different organ system of body thus hepatoprotective, immunomodulator, adaptogenic, antimicrobial, antiseizure property, hematoprotective etc. properties of Rasayana have been documented as well. A few such studies depicting beneficial effects of Rasayana herbs are presented forthwith:

**Amalaki (*Emblica officinalis*)**

*Emblica officinalis* is probably one of the most renowned herbs in the Indian traditional medicine system, Ayurveda. The extract of *Emblica officinale* showed many medicinal properties which was proved by various experimental and clinical studies e.g. anti inflammatory potential,<sup>7</sup> anti tumour activity,<sup>8</sup> immunomodulatory activity,<sup>9</sup> antioxidant activity,<sup>10</sup> antimicrobial activities<sup>11</sup> etc.

**Guduchi (*Tinospora cordifolia*)**

Acharya Charaka advised this herb for promoting memory (medhya), increasing strength, digestive fire, longevity and curing various diseases (Charaka Samhita Chikitsasthana 1/3/30-31).<sup>1</sup> *Tinospora cordifolia*'s medicinal property reported in various studies are as antioxidant activity,<sup>12</sup> antimicrobial activity,<sup>13,14</sup> anthelmintic activity,<sup>15</sup> immunomodulatory activity<sup>16</sup> etc.

**Mandookparni (*Centella asiatica*)**

*Centella asiatica* showed cognitive enhancing effect,<sup>17</sup> neuroprotective effect<sup>18,19</sup> and anti anxiety effect<sup>20</sup> in experimental trails.

**Brahmi (*Bacopa monnieri*)**

*Bacopa monnieri* reported memory enhancer<sup>21-23</sup>, neuroprotective<sup>24</sup> and improves cognitive functions.<sup>25</sup>

**Ashwagandha (*Withania somnifera*)**

*Withania somnifera* is well known for its medicinal activity in Ayurveda and recent studies also proved its effectiveness on various body systems e.g. antimicrobial activity<sup>26</sup>, immunomodulatory activity<sup>27</sup>, anti-oxidant effect<sup>28</sup>, hepatoprotective effects<sup>29</sup> and anti-depressant effects.<sup>30</sup>

**Jatamansi (*Nardostachys jatamansi*)**

*Nardostachys jatamansi* showed neuroprotective effect,<sup>31</sup> antipsychotic activity<sup>32</sup> and improvement in learning and memory<sup>33</sup> etc.

**Jyotismati (*Convolvulus pluricaulis*)**

*Convolvulus pluricaulis* showed neuroprotective property in wistar rats,<sup>34</sup> enhance learning and memory.<sup>35</sup>

**Haritaki (*Terminalia chebula*)**

*Terminalia chebula* showed antimicrobial properties<sup>36</sup>, antioxidant effects<sup>37</sup> and antidepressant activity.<sup>38</sup>

**Neem (*Azadirachta indica*)**

*Azadirachta indica* showed antimicrobial activity<sup>39</sup> and anti-hyperglycaemic potential<sup>40</sup> during different trails.

**Madhuyasthi (*Glycyrrhiza glabra*)**

*Glycyrrhiza glabra* is a valuable medicine used from ancient times in various diseases and showed antioxidant activity and hepatoprotective effect,<sup>41</sup> antimicrobial activity<sup>42</sup> and improving learning.<sup>43</sup>

**Baheda (*Terminalia bellerica*)**

*Terminalia bellerica* showed anti hypertensive effect<sup>44</sup>, antidepressant-like activity<sup>45</sup> and antioxidant activity.<sup>46</sup>

**Sunthi (*Zingiber officinale*)**

*Zingiber officinale* reported anti-inflammatory and analgesic properties,<sup>47</sup> hepatoprotective activity,<sup>48</sup> improves cognitive<sup>49</sup> and memory function<sup>50</sup> etc.

**Kantkari (*Solanum xanthocarpum*)**

*S. xanthocarpum* showed hepatoprotective effect<sup>51</sup>, anti-asthmatic property<sup>52</sup> and antioxidant activity.<sup>53</sup>

**Bhumayaamlaki (*Phyllanthus niruri*)**

*Phyllanthus niruri* showed antimicrobial Effect<sup>54</sup>, antioxidant activity and hepatoprotective potential<sup>55</sup> and antidiabetic potentials.<sup>56</sup>

**Lavang (*Syzygium cumini*)**

*Syzygium cumini* showed anti-inflammatory activity<sup>57</sup>, antimicrobial activity<sup>58</sup> and anti-diabetic activity.<sup>59</sup>



**Rasona (*Allium sativum*)**

*Allium sativum* reported anti-diabetic and hypolipidaemic properties<sup>60</sup>, anti-atherosclerotic<sup>61</sup> and immunomodulatory effects.<sup>62</sup>

**Vacha (*Acorus calamus*)**

*Acorus calamus* showed antimicrobial effect<sup>63</sup>, anticonvulsant activity<sup>64</sup> and analgesic activity.<sup>65</sup>

**Manjistha (*Rubia cordifolia*)**

*Rubia cordifolia* showed anti-viral activity<sup>66</sup>, neuroprotective activity<sup>67</sup> and gastro protective effect.<sup>68</sup>

**Pippali (*Piper longum*)**

*Piper longum* noticed anti-inflammatory activity<sup>69</sup>, anti-tussive activity<sup>70</sup> and anti rheumatoid activity.<sup>71</sup>

**CONCLUSION**

Rasayana thus forms a very important division of Ayurveda which clearly has an important role in the wholesome development of a person and is also a resource of preventive medicine. Drugs (bhesaja), diet (ahara) and achara (ideal lifestyle) which promote longevity by preventing diseases and delaying aging are forms of Rasayana therapy. Rasayana dravyas influence the various aspect of body e.g. Dhatu, Agni and Srotasas and ojus etc. The pharmacological properties of many Rasayana herbs have been explored in recent years through diverse scientific studies which have brought into light the primeval expounded benefits of Rasayanas. Augmented by modern day scientific research, evidence based Rasayana therapy can prove to be a much sought-after herbal therapy for overall well-being and a wholesome long life.

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