



Review Article

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## AGEING AND RASAYAN – A CONCEPTUAL OVERVIEW

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### ABSTRACT

One of the key characteristics of living things in the biosphere is a continual responsiveness and change in the shape, and maybe the functioning. According to contemporary scientists, the biosphere is an open system that continually interacts with its surroundings. However, responsiveness has inherent characteristics that differ from one organism to another. This starts at conception, continues throughout life, and when it completely stops, the organism dies. Two significant maxims have been delivered by nature over the course of human existence. One is expansion, while the other is a species' ability to reproduce or multiply. Growth guarantees the appropriate maturity for the reproductive period. The creature progresses toward death when the reproductive period is over. Thus, ageing will be strictly measured starting at conception in both a chronological and qualitative sense. One of the eight branches of Ayurveda, Rasayana or Jara Chikitsa, has been widely and successfully used for centuries. Rasayana is utilized as a curative treatment that works despite its primary focus on enhancing health. As a result, it promotes and lengthens life span by both curing diseases and preventing them from returning. In order to combat aging and its consequences, this study will attempt to glean the significance and value of Rasayana Dravyas as well as some theoretically relevant truths.

**Key Words** – *Rasayana Chikitsa, Ageing, Jara Chikitsa, etc.*

## INTRODUCTION

How does one age? What year does aging start? What aspects of cellular structure are impacted by aging? Is aging a necessary part of life? What are the aging changes that lead to an organism's eventual demise? Even now, the questions that plagued ancient civilizations remain unresolved. For any of these queries, we don't even have rudimentary solutions. However, it is crucial to comprehend what is meant by the phrase in order to get toward a knowledge of aging (senescence) in an orderly fashion. This is undoubtedly an adult-specific ailment that, sooner or later, results in mortality.

Senescence could be roughly associated with the passing of time. It is realistic to anticipate that some organs' and the person's overall efficiency will trend downward for humans during their fourth decade of life. Efficiency clearly decreased throughout the fifth decade. As time goes on, a series of senile changes occur, which culminate in mortality in the seventh or eighth decade. However, it happens infrequently, if ever, for senility to be the only cause of death.

The pursuit of Purusartha Catustaya, or Dharma, Artha, Kama, and Moksha, makes leading a healthy and long life extremely important. Living a healthy lifestyle can help one achieve Ubhayaloka Hita (Ihaloka and Paraloka), which is further split into three primary pursuits or aspirations for life: Pranaishana, Dhanaishana, and Paralokaisana. Because the other two may only be attained if and when Prana is persistent, Pranaishana is the *prima vitae*. Chikitsa, which is divided into Bhesaja and Abhesaja, may be used to ensure Dhatusamyata <sup>[1]</sup>. Rasayana and Vajikarana are subclassifications of the Bhesaja type. <sup>[2]</sup> in the Swasthasya Urjaskara category. Both of them play a bigger part in pranaishana since they accomplish both of its goals.

One of the eight branches of Ayurveda, Rasayana or Jara Cikitsa, has been widely and successfully used for centuries. Rasayana is utilized as a curative treatment that works despite its primary focus on enhancing health. As a result, it promotes and lengthens life span by both curing diseases and preventing them from returning.

## REVIEW OF LITERATURE – AGEING – AN AYURVEDA PERSPECTIVE

One of the key characteristics of living things in the biosphere is a continual responsiveness and change in the shape, and maybe the functioning. According to contemporary scientists, the biosphere is an open system that continually interacts with its surroundings. However, responsiveness has inherent characteristics that differ from one organism to another. This starts at conception, continues throughout life, and when it completely stops, the organism dies. Two significant maxims have been delivered by nature over the course of human existence. One is expansion, while the other is a species' ability to reproduce or multiply. Growth guarantees the appropriate maturity for the reproductive period. After the reproductive period is through, the organism deteriorates and eventually dies. Thus, ageing will be strictly measured starting at conception in both a chronological and qualitative sense.

In other words, biological processes that are ongoing throughout a person's lifespan contribute to aging. This ongoing activity is made possible by a constant process of using energy-producing chemicals and preserving them. If a living thing's "soul," or "Cetana," is seen as a type of energy, then "Pravrtti," or "constant activity," may be plainly seen at both the cellular and systemic levels of the cosmos. Our respected Acaryas provided a clear explanation of this in their description of Ayu, which they defined as the unbreakable connection between Sarira, Indriya, Sattva, and Atma.<sup>[3]</sup> Even while aging just affects the physical body or Sarira, other important variables define Ayu in a meaningful way. The body's many behaviors reveal the existence of Atma, the most critical element in maintaining life, without which the body would be deemed dead because no behaviors could be observed.<sup>[4]</sup> These descriptions from the classic texts are given more credence in the context of contemporary explanation.

## **ANABOLISM & CATABOLISM IN AYURVEDA**

Our esteemed academics were well aware of the anabolic and catabolic processes approximately three thousand years ago. Even without the complex tools or fully developed technology of today, they were able to understand these processes.

(1) While mentioning the very definition of Sarira, it has been told that -

शीर्यते अन्नादिभिः इति कायः and शीर्यते अनेन इति शरीरम्

This definition of Kaya, the synonym of Sarira, indicates the underlying anabolic activity whereas the next one i.e., Sarira directs towards the catabolic activity.

(2) Definition of Ayu given in the 1st chapter of Sutrasthana of Caraka Samhita also indicates the same. The synonyms given for Ayu show total body's metabolic activity. <sup>[5]</sup>

### **DHARI: AS PER CHAKRAPANI**

Dhari is a person who maintains the body and prevents it from decomposing. According to this concept, the body is better able to fend against the invasion of infectious organisms, which if left unchecked results in the production of Puti and deterioration. This clearly demonstrates the anabolic processes occurring within the body to maintain body development.

### **JIVITA: AS PER CHAKRAPANI**

Jivita is a person who maintains a healthy and living body by providing it with the right nutrition, which causes the body's functioning to be stable. This suggests that in (normal) physiology, catabolic processes come after anabolic processes rather than the other way around. Therefore, anabolism will be more active throughout childhood; both will be equally active during adolescence, maintaining a healthy condition; and during age, catabolism will predominate, causing a decline in body metabolism. These processes, which are natural occurrences, are the main causes of aging.

The arrangement of the classics Dhari, Jivita, and Nityaga, as well as Sarirarambha and Sariravinasa, indicates that anabolism will unquestionably be replaced by catabolism in the latter stages of life, a truth that our ancient academics already knew at the time.

### **RASAYAN OVER VIEW**

#### **ETYMOLOGY:**

The word Rasayana is formed from two words viz. Rasa and Ayana. The word 'Rasa' is formed from 'Ras Gatau' Dhatu and 'Ac' Pratyaya. Acaryas have given various meanings for Rasa at different contexts.

Some of the common are -

1. Rasa is one that is experienced by Rasanendriya.
2. The one that nourishes Rasa, Rakta, etc. Dhatus (continuously) daily is called Rasa.
3. The essence of the digested foodstuff is known as Rasa.
4. The one that traverses throughout the body due to its liquidity is termed as Rasa.

According to Sabda Kalpa Druma and Vachaspatyam, the term "Ayana" has a number of different meanings. They include a route, a place, a site, a dwelling, a method to enter, an entry, etc. Rasayana refers to the path taken by food's essence to reach every component of the body's tissue in order to nourish and restore it. Famous grammarian V.S. Apte defines Rasayana as "any medicines supposed to prolong life and prevent old age" and "serving as an elixir vita," or "that which gratifies or regales," in his Sanskrit English Dictionary. The word Srotas, which refers to the channels that deliver nutrients to vibrant cellular tissues, has the synonym Rasayani in classical literature.

#### **DEFINITION:**

Rasayana Tantra, according to Susruta, is one that focuses on slowing down the aging process, boosting intelligence and strength, extending life, and treating ailments. According to Dalhana, Vayahsthapana denotes extending life for up to 100 years, whereas Ayuskara denotes extending life for more than 100 years. Others interpret vayahsthapana to imply preserving youth and postponing aging. The same idea is shared by Chakrapani.

**Dalhana** while commenting on Su. Su. 1/6. opines that one which nourishes, Rasa, Rakta etc. Dhatus or the one which stabilises youthfulness and prolongs life with activities through its Rasa, Virya etc. is called Rasayana. <sup>[6]</sup>

**Arundatta commenting** on A.H.U. 39/2, states that Rasayana is one by which Rasa, Raktadi Dhatus get benefited through proper nourishment. <sup>[7]</sup>

#### **Sharangdhar opines that -**

Rasayana is one which wards off Jara as well as vyadhi.

The one which cures Jara and Vyadhi, stabilises youthfulness; increases acuity of chakshu etc. Indriyas; nourishes the whole body and aphrodisiac is known as Rasayana.

**Acharya Charaka** simply defined Rasayana as the means by which an individual gets the excellence of Rasa, etc. Dhatus. Along with physical excellence, psychic excellence like sharp memory etc. are also endowed by this, says Chakrapani. [8]

### **CLASSIFICATION OF RASAYANA:**

**(A) Two types have been mentioned by Acharya Charaka** [9]

(i) Kutipravesika

(ii) Vatatapika

The manner of administration serves as the basis for this categorization. Rasayana is provided in a Kutipravesika while the patient is within a closed Kuti; in a Vatatapika, the patient is outside and exposed to Vata and Atapa. In other words, Vatatapika is an outside administration of Rasayana, whereas Kutipravesika is an inside administration. Similar to Kutipravesika with a little alteration, Dronipravesika requires the subject to live in a Droni (made of Palasa) for six months while adhering to a milk diet. [10]

**(B) Susruta has classified into four types**

(1) Sarvopaghata Samaniya [11]

(2) Medhayuskamiya [12]

(3) Svabhavavaydhi Pratishedhaniya [13]

(4) Nivrtta Santapiya [14]

**(C) Three types as per Dalhana's opinion.** [15]

(1) Kamya

(2) Naimittika

(3) Ajasrika

**This classification is probably based on the utility of Rasayana.**

The three subtypes of Kamya Rasayana are Pranakamiya, Srikamiya, and Medhakamiya Rasayanas, which correspondingly aim to lengthen life and improve cognitive capacities. "Naimittikam Vyadhinimittam" or "Naimittika type of Rasayana" is simply Rasayana that is tailored to a particular illness. The regular use of milk, ghee, and other dairy products is

referred to as "Ajasrikam Ksiraghrtabhyasadikam" (Ajasrika Rasayana) in order to boost the body's immunity.

In order to combat the illness process, Rasayana is addressed in Sarvopaghata Samaniya. One method by which a person might improve his or her intelligence and lengthen their life is medhayuskamiya. The Svabhavavyadhi Pratishedhaniya is one that prevents the development of Svabhavika Vyadhis such as Ksut, Jara, Pipasa, Mrtyu, etc. Nivrtta Santapiya Rasayana restores the bodily and mental abilities after they have been damaged by sickness.

### **AGEING – A MODERN PERSPECTIVE**

Ageing is described in very general descriptive terms as 'a process of adverse progressive change, frequently connected with the passage of time, becoming obvious after maturity, and concluding always in death of the individual', despite the fact that it is very difficult to express in words. However, the generally recognized definition of aging is "the processes that occur throughout life that ultimately change an individual's ability to cope with biological changes."

To put it another way, it is a typical process followed by a gradual change in the body's homeostatic adaptive reactions. It is a general reaction that results in perceptible changes in structure and function as well as heightened susceptibility to illness and environmental stress. Charles Mobbs offers many perspectives notwithstanding the fact that aging and senescence are relative terms: Growing older is a process of slow, natural development that includes growth through childhood, adolescence, and early adulthood before declining in middle and later life.

### **FREE RADICAL THEORY (OXIDANTS)**

Free radicals are atoms, ions or molecules that contain an unpaired electron. Thus, they become electrically charged because number of negatively charged electron does not match with positively charged protons.

A molecule becomes a free radical when one of the electrons in its outer orbit is lost or gained. Actually, the definition of a free radical is "a molecule that can exist independently for a period of time with one or more unpaired electrons." A free radical will grab an electron

from nearby molecules to make a complete pair when there is an electron imbalance. By sacrificing one electron, the donor molecule can also turn into a radical. The ensuing chain reaction can harm cell membranes and cause illness.

In general, the chain of free radical reactions will come to an end when one free radical reacts with another. For aerobic biological processes, oxygen is essential. The mitochondrial cytochrome oxidase system converts about 98% of the oxygen utilized by cells to burn food into water in a healthy individual. Univalent reduction of oxygen transforms the remaining oxygen that escapes from the cell's energy engines into "reactive oxygen species" (ROS).

### **RASAYANA VIS-A-VIS ADAPTOGENS**

The majority of Rasayana medications have been shown to have immunomodulatory, anabolic, and antioxidant characteristics. Recent developments in medical research suggest that these medications also have an additional action known as an adaptogenic characteristic.

### **WHAT IS MEANT BY ADAPTOGENS?**

Adaptogen is a term that was first used in 1947 by Russian scientist Lazarev. He described them as "substances meant to put the organism into a state of non-specific heightened resistance in order to resist stresses and adapt to extraordinary challenges". Generally speaking, adaptogens are a class of medicinally useful compounds that normalize bodily processes, strengthen systems and functions that have been weakened by stress, and act as a shield against a wide range of emotional and environmental pressures.

### **DISCUSSION**

Rasayana holds Jara at bay, gets rid of Daurbalya, heals illnesses, and even defeats Mrtyu so that a person lives a thousand years. The person not only extends his life but also receives salvation. Instead of Pranati, Vrsata was stated in Astanga Samgraha and subsequent classics, indicating that Rasayana can also transmit Vrsya characteristics (A.S. U. 49/3-4). Rasayana may transform a Syama (dark) complexion into a Gaura (fair) complexion, while its removal has the opposite effect. Rasayana prevents aging, treats illnesses, lengthens life, strengthens Caksuradi Indriyas, boosts immunity to diseases, and also serves as Vrsya.



Rasayana medication or the practice of Japa, Tapa, etc. can cure ailments that had even begun to exhibit signals of impending death.

By undergoing Rasayana, the ailments arising as a result of Viruddhasana can be overcome. While explaining Janapadoddhwamsa Vyadhis, Caraka has given that by Rasayana, one can prevent the onset of Maraka Vyadhis. [16]

In Ca. Ci. 1-4-13, a reference is mentioned regarding benefits of Rasayana such as Balya, Jivaniya, Brmhaniya and Vayahsthapana.

Dalhana commenting on Su. Ci. 27/1-2, says that Vardhaka Sthapaka Apraptaprapaka means which increases, stabilises and gives additional endowments.

In this case, Vardhaka is just Ayurvardhaka, or life extension. Sthapaka stabilizes a person's youth by enhancing their health and boosting their body's resistance to disease. Apraptaprapaka entails providing the necessary nutrients in order to grow bodily tissue components, which in turn increases immunity and bestows extra attributes on the individual. These three individuals are all come to support Swasthyaraksana.

Most of the Rasayana Dravyas have either Madhura Rasa or Madhura Vipaka.[17] Such drugs when used give benefits to the body in the form of -

- Increasing Rasa Rudhira, Mamsa, Meda, Asthi, Majja, Ojas and Sukra.
- Increasing longevity.
- Soothen six sense organs
- Promotes strength and complexion
- Improves the integument
- Promotes healthy hairs
- Improves voice
- Increase strength
- Soothen
- Invigorates
- Nourishes
- Promotes body mass
- Gives stability to the body

From the aforementioned lines, it can be seen that the bulk of Rasayana Dravyas have preventative properties that boost the body's immunity and, as a result, increase lifespan.

The classics include numerous references to the therapeutic and health-improving properties of Rasayana. Aindra Rasayana, Pippali Rasayana, Bhallataka Rasayana,<sup>[18]</sup> Ayo Rasayana, <sup>[19]</sup> Tuvaraka Rasayana, <sup>[20]</sup> Madhumeha Rasayana,<sup>[21]</sup> Guggulu Kalpa,<sup>[22]</sup> (in Vatavyadhi), and Nagbala Kalpa (in Ksataksina) are a few of them.<sup>[22]</sup> etc.

The anti-stress impact that adaptogens have on pressures of the noninfectious sort is considered to be a distinguishing feature of these substances. Although immune-stimulating, nootropic, or metabolic effects have also been demonstrated in so-called adaptogens.

By reading the aforementioned pages, it is clear that adaptogens exhibit traits similar to those of Rasayana, such as Dhatuvrddhikara, Medhya, Pustikara, Balada, Dehendriya Drdhikarana, Brmhaniya, and Jivaniya, among others, and help strengthen the body's defence mechanism in order to promote longevity and combat the effects of aging.

## CONCLUSION

The aging process begins at conception and continues throughout life, finally coming to an end with death. A modern perspective on aging shows that there is now no ideal definition available. The most widely accepted hypothesis of aging of the several ones proposed so far is the free radical theory. The body goes through anabolic and catabolic processes, which speed up aging. Even the great sages of our distant past were aware of anabolism, catabolism, and the aging process. Since ancient times, Rasayana has been successfully and widely practiced. It is the ideal body rejuvenator since it has preventative, promotional, and therapeutic effects. In terms of immunostimulants, nootropics, anabolic, tonics, and geriatric treatments, adaptogens are comparable to Rasayana.

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