



Review Article

AYURVEDIC APPROACH IN NUTRACEUTICALS W. S. R. TO RASAYANA

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ABSTRACT

The roots of the concept of Nutraceuticals and functional foods can be traced to the ancient Ayurvedic system of health care. The concept of *Rasayana* or Rejuvenation therapy is a part of eight clinical specialities of Ayurveda. The concept of promotion of health through *Rasayana* is based on *Ayurveda* pathophysiology and its understanding of health and physiological system imbalances that lead to disease development. The word *Rasayana* is composed of two words 'Ras' + 'Ayan'. The means by which one gets the excellence of *Rasa* (the nourishing fluid which is produced immediately after digestion) is *Rasayana*. These *Rasa* nourishes our body and stimulates the immunity of the body and keeps us healthy. The Ayurvedic texts describe a set of rejuvenative measures i.e., *Rasayana* which are claimed to act as micronutrients offering protection from external and internal stressors.

This ancient understanding is being reintroduced as Nutraceuticals. Nutraceuticals are natural, bioactive materials that provide demonstrated physiological benefits or reduce the risk of chronic diseases, above and beyond their basic nutritional function. This concept of promoting health and preventing disease through nutrition and special nutritional preparations has been used for millennia in *Ayurveda*.

The term 'Nutraceutical' was coined by Stephen L. De Felice, in 1989. The word is a portmanteau of 'Nutrition' and 'Pharmaceutical' and refers to extracts of foods claimed to have a medicinal effect on human health. Consumers' demand for quality of life has fueled the nutraceutical revolution and seeking complementary or alternative beneficial products. The association of nutraceuticals with traditional medicine brings the long standing consumer acceptance. In this review article Nutraceuticals and *Rasayana* in *Ayurveda* have been correlated and discussed.

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INTRODUCTION

Ayurveda "Science of life" comes from the ancient Indian system of health care focused on views of man and his illness. In *Ayurveda*, positive health means metabolically well balanced human beings, which offers a complete system to live a long healthy life ("Science of longevity") through diet and nutrition.

The physical body is the product of diet and sensory inputs (i.e. lifestyle). Similarly, all ailments are the product of faulty dietetics and lifestyle, wholesome and unwholesome diet and lifestyle are fundamentals of health and disease [*Charak Samhita Sutrasthan 28/45*].^[8] This statement on food reflects the critical importance of food and lifestyle on one's health. This ancient understanding is being reintroduced as "Nutraceuticals" by present day health care providers. They recognize the fact that our heavily processed

food supply, coming from crops grown with chemical fertilizers, pesticides, herbicides and often genetically modified seeds, lacks sufficient nutrients necessary for optimum health.

Nutraceuticals are natural bioactive materials that provide demonstrated physiological benefits or reduce the risk of chronic diseases, above and beyond their basic nutritional function. The term "Nutraceutical" was coined by Stephen L. De Felice, in 1989.

The roots of the concept of nutraceuticals and functional foods can be traced to the ancient *ayurvedic* system of health care. In *Ayurveda* it is stated that, the diet which besides providing basic nutrition to the body, helps to maintain healthy state of the body and

prevents the occurrence of diseases, should be consumed [*Charak Samhita Sutrasthan 5*].^[9]

The concept of *Rasayana* or rejuvenation therapy is a part of the eight clinical specialities of *Ayurveda*. The Ayurvedic texts describe a set of rejuvenating measures i.e. *Rasayana* which are claimed to act as micronutrients offering protection from external and internal stressors. This *Rasayana* can be correlated with the concept of Nutraceuticals which is gaining more popularity more recently. The association of nutraceuticals with traditional medicine brings the long standing consumer acceptance.

Aim And Objectives

1. To provide details about the *Rasayana*.
2. To explain the *Ayurvedic* approach in Nutraceuticals.
3. To correlate and discuss Nutraceuticals and *Rasayana*.

Materials and methods

1. References of *Rasayana* have been collected from the classical books of *Ayurveda*.
2. All the data is compiled, analyzed and discussed through and in depth understanding about Nutraceuticals and *Rasayana* from books and other authentic sources.
3. *Ayurvedic* approach in Nutraceuticals and *Rasayana* as nutraceuticals have also been compiled in this review.

Rasayana

Rasayanatantra deals with the methods to maintain youthfulness, to increase longevity, intellectual capacity, and physical strength as well as to enable the person to be free from disease [*Sushruta Samhita su. 1/7*].^[4] The therapy that helps to retard aging and disease is called as *Rasayana* [*Sushruta Samhita su. 4/13*].^[4]

Rasayanatantra consists of an amplification and synergy of the natural nutraceutical potential of certain plants and food products and related measures that are supposed to retard aging and to impart longevity, improve immunity and body resistance against disease, improve mental faculties, and add vitality and luster to the body.

These *Rasayanas* are individualized and are age, tissue and organ specific. The *Rasayana* therapies are aimed at bringing a state of equilibrium of *doshas*, *agnis*, *dhatu*s, *malas* and sensory and physiological system functioning, along with spiritual and mental well being. In other words they are designed to bring about balanced functioning of spirit, mind and body in the context of given environment. Besides promotion of mental and physical health and rejuvenation potential, *Rasayana* therapy affords a preventive role

against the entire range of diseases through improved immunity and other physiological system functions. Thus *Rasayana* is the central consideration in *Ayurvedic* geriatrics.^[5]

Classification of Rasayana^[4]

Depending on the need and feasibility of a client, the *Rasayana* therapy can be categorized in the following manner:

A] Per method of use

- *Vatatapika Rasayana*, or outdoor practice.
- *Kutipraveshika Rasayana*, or intensive indoor regimen using a specially designed *Trigarbha Rasayana Kuti* or Therapy chamber.

B] Per scope of application

- **Kamya Rasayana** – For promotion of health of the healthy, further subcategorized as,
 - **Shri kamya**: to promote luster and beauty.
 - **Prana kamya**: to promote longevity.
 - **Medha kamya**: to promote mental competence.
- **Naimittika Rasayana**, to impart biological strength in a person with disease.
- **Adjunct Rasayana**, which is non recipe rejuvenative regimen to be practiced alone or as an adjunct for all forms of *Rasayana* therapy, remedies and recipes as follows:
 - **Achara Rasayana**: healthy rejuvenative lifestyle and conduct.
 - **Ajastrika Rasayana**: daily dietary *Rasayana* approach, consuming *satvik*, nourishing elements of diet, such as *Ghrit*, milk, fruits vegetables etc.

Mode of Action of Rasayana^[5]

All *Rasayana* measures and remedies produce their effect in the spirit-mind-body system through one or some combination of the following three modes.

- **At the level of Rasa**, by acting directly as a nutrient for the plasma.
- **At the level of Agni**, by promoting the enzymatic systems of the body with positive digestive and metabolic functions.
- **At the level of Strotas**, i.e. microcirculatory and macrocirculatory channels, by inducing a *strotoprasadana* effect, i.e. improving the competence of the inner transport system, microcirculation and tissue perfusion.

By acting through the above modes, *rasayanas* establish a positive nutritional status in the body and help in healthier tissue formation, mental power and long life.

Following table shows the comparison of the effect of *Rasayana* given in the *Brihatrayee* [7]

Effect of <i>Rasayana</i>	Acharya Charaka	Acharya Sushruta	Astanga Hridaya
<i>Arogya</i>	+	-	+
<i>Deerghaayu</i>	+	+	+
<i>Tarunyavaya</i>	+	+	+
<i>Smriti</i>	+	-	+
<i>Medha</i>	+	-	+
<i>Prabha</i>	+	-	+
<i>Varna</i>	+	-	+
<i>Swara</i>	+	-	+
<i>Dehabala</i>	+	+	+
<i>Indriyabala</i>	+	-	+
<i>Vaksiddhi</i>	+	-	+
<i>Pranati</i>	+	-	+
<i>Kanti</i>	+	+	+
<i>Viryra</i>	-	+	-
<i>Odarya</i>	-	+	-
<i>Vrishyula</i>	-	-	+

Ayurvedic Approach in Nutraceuticals

The science of food and nutritional in Ayurveda was so developed since Ayurveda has a unique concept in *Ahara*, which is not at all similar to modern view, but has a holistic approach including certain host factors, considering best in all medicines. The *Pathya-pathya*, *Hita-ahita*, *Satmya-asatmya* are based on individualistic approach. Apart from this *Rasayana* is the most advanced form of preventive application specific to disease, age, climate etc. which is similar to current nutraceutical practice.^[1] The extent of research done on the subject of Nutraceuticals with wide acceptance of its role either by their immunity boosting property or by their antioxidant properties of most of the drugs either herbs or minerals or combination of both, which thereby helps in maintaining a healthy body and curing diseases are because of oxidative stress.^[7]

Since principles of both are complementary to each other and work together would yield better result especially in present era. Demand for quality of life has fuelled the 'nutraceutical revolution' and seeking traditional or alternative beneficial products. The association of nutraceuticals with traditional medicine brings the long standing consumer acceptance. *Ayurveda* plays a great emphasis on the quality of nutritious food for ^[1]:

1. Preventing the degenerative changes caused by ageing (*Rasayana*)
2. Post illness nutrition (*Balya*)
3. Enhancing the immunity (*Vyadhikshamatva*)
4. Maintaining the vitality (*Vajikarana*)

Rasayana as a Nutraceutical ^[1]

Rasayana have their origin in plants and minerals and have played important roles in health promotion and maintenance in *Ayurveda*. Traditionally *Rasayana* drugs are used against a plethora of seemingly disease disorders with no pathophysiological connection according to modern medicine. *Rasayana prayoga* in an appropriate condition will give better result since it will work at the level of *Dhatu*. *Rasayana* therapy is born to mankind. Different *Rasayana* has been explained in the classics which are helpful not only to preserve the health but also to get rid of diseases. for example, the drug *Amalaki Rasayana* is used as traditional medicine since time immemorial for their unique properties like anti- ageing etc. ^[3] So we can say *Rasayana* drugs act at the sub cellular level. This can be compared with anti oxidant, regenerative, immune modulatory and adaptogenic actions in modern parlance. We can thus, understand that *Rasayana* are those drugs or substances which not only helps in treating a disease, but can also be helpful in preventing a disease. And on this basis they can be compared with the term Nutraceuticals. Examples of some of the *Rasayanas* are given below.^[1]

- *Chyavanprasham* (for general health and prevention of respiratory disorders).
- *Brahma Rasayana* (for protection from mental stress)
- *Narasimha Rasayana* (for vigor and vitality)
- *Phala Ghrita* (for reproductive health)
- *Arjuna Kshirapaka* (for cardio protection)
- *Rasona Kshirapaka* (for cardio protection)
- *Shilajatu Rasayana* (for diabetes mellitus)

DISCUSSION

Among other approaches to prevent diseases, *Rasayana* as nutraceutical plays an integral role. Preventing and retarding the onset of diseases has become a more attractive and cost effective strategy in the medical arena. Here *Ayurveda* provides holistic and better drug delivery system for dietary supplements and nutrients, which is proven individualistic protocol since long time. Here we can apply the nutraceutical potential of *Rasayana* as preventive, palliative, rejuvenating and health promoting measures.

Rasayana can be operationally defined as nutritive that initiate the maximum outpouring of *Ojas* throughout the entire body and mind. *Ojas* is an invigorating spiritual essence and is the subtle foundation of immunity, and *Ayurveda* holds that creating and maintaining *Ojas* is of central importance to health and wholeness.^[5]

When digestive processes break down, *Dhatu*s and *Malas* are not formed correctly, and another entity *Ama* associated with all manner of ill health, invades the body & mind. In a sense the polar opposite of *Ojas*, *Ama* damages the system and lessens the integrated coordination of spirit mind and body. *Rasayana* are intended to convert directly to *rasa*, bypassing ordinary digestive steps. In so doing, they do not produce *Ama* and start the unfolding of *Dhatu*s in the best possible manner so that as much *Ojas* as possible can emerge. If *rasa* is the base of the Ayurvedic nutrition pyramid, *Ojas* could be the pinnacle. *Rasayanas* ensures the royal path from *rasa* to *Ojas*.^[5] We can thus, understand that *Rasayana* is not a drug therapy but is a specialized procedure practiced in the form of rejuvenative recipes, dietary regimens and special promoting conduct and behavior.

CONCLUSION

Holistic considerations and personalized dietary planning constitute the basic features of the *Ayurvedic* concept of nutrition, which will provide optimal health and disease prevention. The *Rasayana* procedures and recipes are of great value in promotive, preventive and therapeutic aspect of health care. In a larger sense our health and behavior are expressions of our genes, designed to work in

harmony with the natural environment. *Rasayanas* have their origin in plants and minerals and have played import roles in health promotion and maintenance in *Ayurveda*. The association of nutraceuticals with traditional medicine is bound to bring the long lasting consumer acceptance. When supported by current modern medical research, the acceptance is whole hearted. Nutraceuticals is a connecting link where both the system of medicines should shake their hands with enduring hardcore research and mutual acceptance of both the systems.

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