



## NUTRACEUTICAL AREAS ARE ESSENTIAL IN GERIATRICS

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### ABSTRACT

**Background:** Aging is an inevitable, complex biological process that is linked to a number of negative health impacts. Geriatrics is a field of study that focuses on providing elderly people with fitness care. Geriatric fitness care is necessary because 8.6% of India's population is over the age of 65. A suitable nutritional complement is required for a speedy recovery from illness.

**Goal:** To explain the importance of dietary supplements in geriatrics.

**Materials and Techniques:** *Ayurvedic* texts had been referred specially commentaries of *Samhita*. Research papers on the following topics on *Rasayana* (Rejuvenation therapy), *Ksheerpaka* (Milk media preparation), *Ghrita* (Ghee), *Pathya Kalpana* (Wholesome balancing), and *Prakshepa dravya* (Fine Powder medicines).

**Results and Discussion:** *Ayurveda* prescribes specific diet patterns in healthy and unhealthy conditions referred to as *Sada Pathya* (ever smart for all) and *Pathya* (good for specific unhealthy condition). This paper focuses on the thought of *Kalpana* (Formulation) as Nutraceuticals in Geriatric age for preventive and healing fitness.

**Conclusion:** In the contemporary self-medication environment, nutraceuticals have a considerable impact on the advancement of treatments.

**Key Words:** *Ayurvedic* Nutraceutical, *Rasayana*, Aging, Geriatrics, and Nutrients.

**INTRODUCTION:** Aging can affect any person in the world. The two core components of ageing are biological and physiological ageing that is caused by advancing age. A significant medical specialty, both in India and internationally, is geriatrics. According to the WHO, old age is defined as 60 or 65 years of age (developed countries).<sup>1</sup> The rhythm of metabolism and the impulse to eat itself have slowed down in the modern age, which has led to a general fall in meal consumption and a corresponding decline in vitamin consumption. Infectious agents are acquired because of lowered immunity with ageing and a lack of micronutrients.

Due to chewing difficulties brought on by tooth loss, less meals are consumed. Meals' nutritional value has been diminished by the use of insecticides, chemical manure, adulteration, and preservatives in farming techniques. Old age was defined by *Acharya Sushruta* as being older than 70 years. *Acharya Charaka* made reference to old age after 60. According to *Acharya Sharangdhara*, the loss of many biological elements during various life stages is noted as a result of ageing. The proper dietary supplements are missing, which is preventing a quick recovery. A nutraceutical is any product with clinical

or fitness benefits, such as the prevention or treatment of disorder, that can be taken as a meal or as a portion of a meal.

One of the *Astangas* of *Ayurveda* is *Jarachikitsa* (Geriatrics), a well-established area of expertise in the practise. It addresses the ailments and problems related to ageing. Geriatric healthcare is known as "*Vridhopacharaneeyam*" in *Ayurveda*.<sup>7</sup> The books of *Bhrihatrayi*, *Bhavprakash Nighantu*, *Sharangdhar Samhita*, *Kaidev Nighantu*, and others provide a wealth of *Ahara* and *pathyapathya* literature. *Avaleha* (semi-solid dosage form), *Asavaarista* (fermented formulations), *Sneha* (oil medication), and *Ksheerpaka* (milk media preparation) are just a few examples of the distinctive medications offered by *Bhaishajya Kalpana* in *Ayurveda*. These medications can be used to treat disease as well as be consumed by healthy people. Food ingredients, such as egg, milk products, fruit juices, animal products, etc., are utilised in both food preparations and for levigating while medications are being made. The *Ayurvedic* concept of nutraceuticals is more expansive than the current concept. *Avaleha* forms of various *Rasayanas*, *Ksheerpaka Kalpana*, preparations for *ghrita*, etc. Today, probiotics are included in medicinal preparations to increase the effectiveness of the drugs. The traditional medical system places more emphasis on the treatment of aging-related diseases. *Ayurveda* offers a wide range of preventive treatments to slow down the ageing process. Nutraceuticals are bioactive and, when taken properly, can benefit the elderly population.

#### AIMS AND OBJECTIVES:

1. To discuss the value of dietary supplements in geriatrics.
2. To support the geriatric components of naturopathic medicine.
3. To describe *Rasayana's*, *Ksheerpaka Kalpana's*, *Pathya Kalpana's*, *Ghrita Kalpana's*, and *Prakshep Dravya's* functions as nutraceuticals.

**MATERIAL AND METHODS:** A scientific review study is carried out on possible herbal formulations which may be considered as nutraceutical in geriatrics. Review of literature regarding *Rasayana*, *Aushadh kalpana*, *Pathya kalpana* was done from classical and current texts. The entire data regarding nutraceuticals and geriatrics is collated and thoroughly discussed.

#### Need of Nutraceutical in Geriatrics: -

During old age, *Vata Dosha* predominates, and all *Dhatu* (Body Tissue), *Veerya* (Potency), *Indriya* (Sense organs), *Ojas* (Immunity), *Bala* (Strength), and *Utsaha* (Activeness) gradually deteriorate, along with hair loss, skin wrinkling, chronic and recurring cough, shortness of breath, inability to perform routine activities, and so on. Changes are occurring at the physiological, psychological, immunological, and cosmetologically levels. Pollution, electromagnetic waves, and other factors have accelerated ageing and degenerative changes. As a result, nutraceuticals can meet the need for micronutrients as well as medicine.

#### Advantages of Nutraceutical in Geriatrics: -

1. Agreeable to the palate or taste.
2. Effectiveness
3. Targeted bioavailability
4. More nutrition in lesser amount
5. More safety

#### Concept of Nutraceuticals in Ayurveda

Nutraceuticals are similar to Ayurvedic principles of *Aahara Kalpana* in that they have proven benefits in managing chronic illnesses. To illustrate, consider the medicated food *Moong-dal-rice (Khichdi)* that is made with *Trikatu* powder. It is mostly given to patients with fever as a nutritional supplement and to stimulate the digestive system when they have *Agni Mandya*. Nutraceuticals and the Ayurvedic ideas of *Hita, Ahita, Satmya, Asatmya*, and *Pathyapathya* can be connected.<sup>3</sup> Condiments like *Ela, Marich, Dhanyak*, and *Haridra* are used wisely, as well as

*Harit Varga Dravya* like *Rason* and *Ardrak*. It increases food digestion, adds micronutrients, and hastens nutritional absorption. Specific preparation techniques, the length of time needed for cooking, the use of medicinal water, the use of banana leaves, particular tools, etc. all boost the nutritional value.

**According to Acharya Charka:** - A diet which besides providing the basic nutrition to the body, help to maintain the healthy state of the body and prevents the occurrence of the disease should be consumed<sup>8</sup>.

**Table 1 Showing Some Examples of Nutraceuticals in Geriatrics in Ayurveda**

SR.NO.	FORMULATIONS	INGREDIENT	BENEFITS
1.	<i>Chyavanprash</i>	<i>Amalaki, Draksha, Ela, Twak, Patra, Madhu, Taila, Ghrita</i>	<i>Amalaki</i> is rich source of Vit.C, Immunomodulatory, cytoprotective, hepatoprotective, hypolipidemic activity <sup>4</sup>
2.	<i>Brahma Rasayana</i>	<i>Haridra, Ela, Taila, Sarpi, Madhu</i>	Antioxidant <sup>5</sup>
3.	<i>Ashwagandha Ghrita</i>	<i>Ghee, Ksheer</i>	nourishes the body and improves strength
4.	<i>Brahmi Ghrita</i>		For memory <sup>16</sup>
5.	<i>Panchagavya Ghrita</i>	<i>Ghee, Ksheer, Dadhi</i>	It is a source of probiotics. Psychological disorders are managed <sup>9</sup>
6.	<i>Pippali Ghrita</i>	<i>Ghee, Godugdha</i>	<i>Pleeha, Yakrudroga, Agnimandya</i> <sup>10</sup>
7.	<i>Shatavari Ghrita</i>	<i>Ghee, Godugdha</i>	<i>Vataja roga, Shwas, Trishna, Raktapitta, Murccha</i> <sup>15</sup>
8.	<i>Shunthi Ghrita</i>	<i>Ghee, Shunthi</i>	<i>Shohta, Grahani</i> <sup>11</sup> , <i>Pandu</i> <sup>12</sup>
09.	<i>Draksha Ghrita</i>	<i>Ghee, Draksha,</i>	<i>Draksha</i> is called <i>Phalottama</i> <sup>[6]</sup> i.e. best among all the fruits. Beneficial in <i>Kamalaroga, Gulma, Panduroga, Jwara, Prameha, Udarroga</i> <sup>14</sup>
10.	<i>Changeri Ghrita</i>	<i>Ghee, Shunthi, Dhanyak, Dadhi</i>	<i>Kapha Vata Roga, Grahani, Arsha, Anaha, Gudabhramsha, Mutrakrucchra</i> <sup>13</sup>
11.	<i>Peya</i>	Rice	Carbohydrates <sup>18</sup>
12.	<i>Vilepi</i>	Rice	Carbohydrates <sup>19</sup>

13.	<i>Anna</i>	Rice	Carbohydrates <sup>20</sup>
14.	<i>Krushra/ Khiccha</i>	Rice, Pulses	Carbohydrate, Protein <sup>20</sup>
15.	<i>Yusha</i>	Pulses, <i>Sunthi</i>	Protein from vegetable source <sup>18</sup>
16.	<i>Mamasarasa</i>	Animal Meat	Protein from animal source, fat <sup>20</sup>
17.	<i>Prakshep dravyas</i>	<i>Twak, ela, patra, nagkeshar, jatiphala etc.</i>	Enhance absorption of nutrients and bioavailability of nutritional <sup>23</sup>
18.	<i>Shilajatu Rasayana</i>	<i>Shilajatu</i>	for diabetes mellitus <sup>21</sup>
19.	<i>Agastya Rasayana</i>	<i>Haritaki, Bilav</i>	For <i>asthma</i> and bronchitis <sup>22</sup>
20.	<i>Amalaki Rasayana</i>	<i>Amalaki</i>	Immunomodulatory and anti-oxidant <sup>17</sup>

**Table 2. Showing Some Single Herbal Examples of Nutraceuticals in Geriatrics**

SR.NO	DRUG	BENEFITS
1.	<i>Turmeric</i>	Anti-cancerous
2.	<i>Clove</i>	Antioxidant
3.	<i>Ginger</i>	Anti-inflammatory
4.	<i>Tulsi</i>	Immunomodulatory
5.	<i>Haritaki</i>	Antioxidant
6.	<i>Amalaki</i>	Anti-inflammatory, Anti -diabetic, Anti-fungal, Anti-viral, Anti-bacterial
7.	<i>Guduchi</i>	Immunity booster, enhances memory, detoxification, antiaging properties, liver function booster, health rejuvenator
8.	<i>Aswagandha</i>	Reduce blood sugar level, anticancer properties, stress and anxiety control, anti-depression, anti-inflammatory, improve brain function and memory.
9.	<i>Vridha daru</i>	Anti-diabetic, anti-microbial, anti-oxidant, anti-inflammatory, control hypertension
10.	<i>Nagabala</i>	Demulcent, anti-acidic, expectorant, Antipyretic, diuretic, aphrodisiac Carminative, cardiac properties
11.	<i>Nagadamana</i>	Anti-inflammatory
12.	<i>Shatavari</i>	Antioxidant, Anti inflammatory Immunity booster, Diuretic Maintain blood sugar, Treat kidney stone Antiaging, Antidepression
13.	<i>Punarnava</i>	Antispasmodic, Antimicrobial Anti-inflammatory
14.	<i>Aparajita</i>	Anti-inflammatory, Improves memory, Detoxifier, Cure neurological disorders
15.	<i>Rasna</i>	Anti-inflammatory, Analgesic
16.	<i>Jivanti</i>	Revitalizing, Rejuvenating, Lactogenic properties, Anticancer property
17.	<i>Mandukaparni</i>	Rejuvenator, Antioxidant, Antibacterial

18.	<i>Shalaparni</i>	Anthelmintic, Anti-catarrrhal, Carminative, Diuretic, Expectorant, Anti-diarrheal
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**DISCUSSION:** The *Ayurvedic* idea of *rasayana* is extremely broad. *Rasayana* bestows strength, vitality, beauty, fine voice, immunity, longevity, and youthfulness. *Rasayana* has an impact on the body, the intellect, and the senses. *Rasayana* consumption inhibits the degenerative changes. *Ksheerpaka kalpana* are tasty, nutritious, and full of lipids, proteins, and calcium. *Ksheerpaka kalpana* keeps a balance between medicinal and nutritious benefits. *Ghrita* increases medication absorption by extracting the medicine's lipid-soluble active ingredient. *Ghee* has healing properties. *Ghrita* preparations have a better flavour and aroma and are more pleasant. The term *Pathya Ahara* may be used to describe nutritional supplements. *Ayurvedic* dietetics or *pathya kalpana* is mentioned for both healthy and ill people. Like *Peya*, *Vilepi*, *Manda* and *Yavagu*, *Ahara Kalpana*. 28 *Aushadh Sidha Yavagu* were prescribed by *Ayurved* for various diseases.

**CONCLUSION:** Nutraceuticals have a significant impact on the development of treatments in the current self-medication environment. As people age, their nutritional requirements could increase or decrease depending on their age. Nutraceuticals made from fruit or plant extracts have been shown in numerous studies to reduce oxidative stress and promote healthy ageing in invertebrate models. As a result, there is an inherent connection between nutrition and ageing. The development of *Ayurveda* will benefit from a greater emphasis on applications in nutraceuticals.

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