

AN AYURVEDIC PERSPECTIVE OF NUTRACEUTICALS W.S.R. TO PANDU
(ANEMIA)

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ABSTRACT

Ayurved is an ancient science that emphasizes the concepts of proper nutrition, and functional food for the prevention as well as management of a wide range of disorders. *Ayurveda* has considered food (*Ahara*) as a chief drug (*Mahaushadhi*) and believes that health is the product of nutrition. *Acharya Kashyapa* has termed it as '*Mahabhaishaja*' and explained that there is no medicine like *Ahara*. *Ahara* is such a medicine that alone can make people healthy. Consumers' demand for quality of life and complimentary or alternative products has fueled the 'Nutraceuticals' revolution. 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 roots of Nutraceuticals can be traced to *Ayurveda* as the science advises a wide range of food preparations that can be consumed daily for improving quality of life by offering protection from external & internal stressors. *Pandu* (Anemia) is one of the major healthcare issues worldwide. Posed lifestyle changes are associated with drastically increased risk of chronic illness & diseases, posing a substantial healthcare & financial burden to society globally. An association between food habits & the individual lifestyle with anemia or *Pandu* has been manifested. In *Pandu* (Anemia), there is a process of breakdown or loss of ability to function efficiently of body tissues like *Rasa-Rakta*, *Meda Dhatus*, *Srotas* like *Annavaha*, *Rasavaha*, *Raktavaha*, and these major biological activities are replenished by intake of food. *Ayurveda* references that the 'Living body is formed by food' and also, considers a wholesome diet as powerful as medicine. Taking into consideration body, mind, and spirit as well as rejuvenation, *Ayurveda* emphasizes '*Rasayana*' as the primary method of maintaining health and vigor for preserving harmony in the three

physiological dimensions i.e., Doshas. This article details and proposes the role of nutraceuticals, and the various food preparations which can be consumed by people suffering from *Pandu* (Anemia) as nutraceuticals or functional food with an *Ayurvedic* view. Review of all literature regarding *Rasayana*, *Ahara*, *Pathya*, and Nutraceuticals aspects in *Ayurved* classical texts as well as all available scientific publications. All the data is compiled, analyzed, and discussed in the *Ayurvedic* view and nutraceuticals.

Keywords: Nutraceuticals, *Pandu*, Nutrition, *Ahara*, food supplements, *Rasayana*, *Pathya-Apathya*.

INTRODUCTION

Hematological ailments include a wide array of chronic diseases comprising a complicated etiology. Globally, a huge community of all ages suffers from anemia or *Pandu* annually. A nutrient-deficient diet may lead to disturbances in the systems of the body. A diet that provides basic nutrition to the body, helps to maintain the health of the body and prevents the occurrence of the disease should be consumed. 'Nutraceutical' is a food or a part of a food substance that claims health benefits that mainly includes prevention of the disease. 'Stephen Defelice' placed the term 'Nutraceutical' which was coined by combining the terms nutrition and pharmaceuticals in 1989.⁽¹⁾ He stated that Nutraceutical is any substance that is a food or a part of food and provides medical or health benefits including the prevention and treatment of disease.⁽²⁾ Nutraceuticals improves the immune system function and also reduces the side-effects and healthcare cost. They range from dietary nutrient supplements to genetically designed foods, herbal products, beverages, soups, vegetables, fruits, and processed foods like cereals, etc.^(3,4) The nutraceuticals can be classified on the basis of-

- a) **Natural sources** i. e. the product can be obtained from plants like cabbage, tomato, and animals like fish oil, minerals like selenium, iron, calcium, etc., and microbes like lactobacillus in yogurt (*Dahi*).⁽⁵⁾
- b) Based on **chemical constituents** or **pharmacological conditions of the product** i.e., Potential (plant) and Established Nutraceuticals (poly vitamins).^(6,7,8,9)

Nutraceuticals of the natural source are widely used^(10,11)

1. **Dietary fiber** (beans, fruits) - Amaranth is a good source of fiber along with iron and manganese, so recommended for *Pandu*.⁽²¹⁾
2. **Probiotics** (yogurt, *Takra*)⁽¹³⁾ - Curd is used in preparations like *Changerighrita*, *Panchagavyaghrita*, *Dashmoolaghrita*, and *Balataila*. *Ayurveda* suggests Buttermilk as a significant probiotic. It is attributed with rejuvenating properties, so used in preparations as an ingredient & adjuvant. Replacing milk with yogurt in the diet can help with lactose intolerance.⁽¹⁴⁾ Fermented dairy products are thought to balance *Agni* i.e., a biological force, and enhance the value of Nutraceuticals. '*Takrarishta* is one of the probiotics in *Ayurvedic* fermented biomedicines '*Asava-Arishta*'.⁽¹⁵⁾
3. **Prebiotics** -apples, asparagus, bananas, onions, garlic, whole grain wheat, almonds, and *Triphala* are rich sources of prebiotics.^(13,16)
4. **Polyunsaturated fatty acids** i.e., PUFA foods (olive oil, walnuts, flaxseed, sunflower seeds)⁽¹⁷⁾
5. **Antioxidants vitamins** (vit. C from *Amla*, spinach, citrus foods, vit. B from milk, yogurt & dairy products, beans, asparagus, meat & fish)⁽¹⁸⁾
6. **Polyphenols** (coffee, tea, spinach, berries) - Polyphenols, the medicinal property present in green tea have been exhibited that reduces UV light and induce oxidative stress & immunosuppression.⁽¹⁹⁾
7. **Spices** (garlic, turmeric).^(9,16,20)

Ayurveda has always given importance to a particular diet in the prevention & treatment of diseases even in 1000 B.C. The people in India have taken herbs and herbal formulations as a part of their daily food supplements because of their cultural beliefs and

experiences for a long era. *Ayurveda* has mentioned the daily consumption of specific food products such as *Ghee*, and milk to rejuvenate the body. ^(21,22,23)

Aajasrikam Ksheer- Ghritabhyasadhikam⁽²⁴⁾ The types are done according to the **purpose**, and this is elaborated under the heading of

i) ***'Aajasrik Rasayana'*** is one of the types of *Rasayana* which is indicated for general health. Other types are,

ii) ***'Naimittik'*** i.e., promoter of specific vitality in specific diseases. It hastens the recovery from prevailing diseases. *Naimittik Rasayana* further classified in

a) *Ahara Rasayana*, b) *Vihara Rasayana* and c) *Achara Rasayana*.

iii) ***'Kamyā'*** for vitality, intellect, etc. ⁽²⁵⁾

According to the **contents of *Rasayana***, the classification is as follows,

1. ***Aajasrik Rasayana*** (Dietary *Rasayana*),

2. ***Aachar Rasayana*** (Conduct *Rasayana*).

The usage of Nutraceuticals as advocated by *Ayurveda* can also be classified depending on the age of the individual, the season of consumption, time of consumption, physiological condition, and according to the target organ. ⁽⁷⁴⁾ The classification depends upon

Rasayana/drugs working on 'Dhatu', In the case of *Pandu* (Anemia), '*Rasa-Rakta-Meda*' *Dhatu* along with (*Shukra*) '*Aartav*' *Dushti* is regulated by using the drugs working on it. *Rasa Dhatu*, *Draksha*, *Kharjura*, and *Kashmari* play an important role. *Amalaki*, *Palandu* and *Lauha* are important for *Rakta Dhatu*. *Meda Dhatu*, *Haritaki*, *Guggulu*, and *Amruta* have a beneficial role. In the improper functioning of *Medodhatwagni*, curd becomes a choice as it influences *Dhatwagni*⁽¹⁴⁾. *Shukra Dhatu* promotes drugs like *Atmagupta*, *Majja*, and *Vasa* while *Ashoka*, and *Lodhra* are beneficial on *Aartava*. *Ayurveda* has advised the '*Masanumasik Paricharya*' for *Garbhini* to enhance the *Dhatu Vardhana* in '*Antenatal Care*'^(25,26,27). Especially in the first month, the '*Kalal*' form of *Garbha* requires nutrition for making a balance of *Rasa*, *Rakta*, and *Mansa Dhatu*. During the first three months, maternal *Rasa Rakta Dhatu* is used for foetal growth, and in the second trimester, foetal

Dhatu formation takes place, so *Ayurveda* suggests diet to boost this formation like milk, *Ghrita*, *Jangal Mansa*, and *Mansa Rasa*^(28,29). The various aspects of the body like *Dhatu*, *Agni*, *Srotasa* and *Ojus* are influenced by *Rasayana Dravyas*. *Rasayana* promotes nutrition by direct enrichment of the nutritional quality of '*Rasa*' means nutritional blood or one gets the excellence of '*Rasa*' (the nourishing fluid which is formed immediately after digestion). It promotes nutrition through '*Agni* improvement' i.e., digestion, metabolism as well as the competence of *Srotas* i.e., microcirculatory channels in the body⁽³⁰⁾.

It works at the level of *Dhatu* in the following way –

1. Improving the nutritional value of the '*Rasadhatu*' in turn by *Dhatu Poshana* improvement i.e., '*Dhatuwardhaka*'. E.g., *Dugdha*, *Ghrita*, *Shatavari*⁽³¹⁾.
2. By improving '*Agni*' in the body i.e., *Agnivardhaka*, and consequently responsible for proper '*Dhatunirmana*'. E.g., *Chitraka*⁽³²⁾.
3. *Srotoshodhana* in the body improves *Dhatu Poshana Kriya*. E.g., *Guggulu*.

An individual is also endowed with psychic excellence along with boosting the immune system (*Ojus*). *Rasayana* is a rejuvenator, and nutritional supplement & possesses antioxidant activity. They give rise to the formation of different free radicals by antagonistic action on the antioxidative stressors. *Ayurveda* mentions the three biological forces '*Vata*', '*Pitta*', and '*Kapha*' in their equilibrium state are responsible for healthy, structural & functional setups. The predominant *Kapha* is responsible for promoting growth & development through anabolic activities. *Pitta* helps to maintain the higher metabolic rate and ensures increased productivity/ performance while *Vata* is responsible for catabolism, wear & tear process, and degenerative changes. While advocating Nutraceuticals, it is important to focus on these points which *Ayurveda* emphasizes more^(33,34,35).

Rasayana used according to the 'Prakruti',

- i. *Vata Prakruti*— *Bala*, *Ghrita*,
- ii. *Pitta Prakruti*— *Amalaki*, *Shatavari*,
- iii. *Kapha Prakruti*— *Pippali*.

Rasayana used according to the 'Srotasa'⁽³⁶⁾

- 1) *Annavaha Srotas- Panchakol, Kapardik, Shankha-bhasma,*
- 2) *Rasavaha Srotas- Kharjur-Manth, Laja-manda, Guduchi,*
- 3) *Raktavaha Srotas- Ghrita, Lauha-Bhasma,*
- 4) *Medovaha Srotas-Guggulu, Shilajatu,*
- 4) *Shukravaha Or Artava-vaha Srotas- Dugdha, mineral like Vanga.*

Rasayanas according to the ‘diseases’ like *Hrudroga- Shaliparni, Arjuna* while in *Pandu Vyadhi*, Use of *Lauha* is recommended.⁽³⁷⁾ The Medieval period i.e., 8th-16th century A.D. was the golden period of intellectual activity for *Ayurveda*. ‘*Lauhadi Rasayana*’, ‘*Pippali Rasayana*’, *Haritaki* and *Amalaki Rasayana*, *Shilajit Prayoga* are recommended in *Pandu Vyadhi*.⁽³⁸⁾

Different *Rasayanas* for *Pandu Vyadhi* according to different *Samhitas*-

Sr.no	Samhita/Samhitakara	Rasayanas
1	<i>Chakradutta</i>	<i>Ksharbhavit Pippali R, Loha R, Yogaraja R</i> ⁽³⁹⁾
2	<i>Vangasena Samhita</i>	<i>Loha R, Somraji R, Tamra-Amruta R, ShivaGutika, Madhu Haritaki, Shveta Avalguja Rasayana, Abhraka Kalpa, Gandhaka-Rasa Parpati,</i> ⁽⁴⁰⁾
3	<i>Gadanigraha</i>	<i>Pippali Kalpa</i> ⁽⁴¹⁾
4	<i>Rasaratna Samuchaya</i>	<i>Triphala R, Ashwagandha R, Kshudra Haritaki Lehya, Panch Loha R, Shatavari R, Kamala villas Ras</i> ⁽⁴²⁾
5	<i>Basava Rajiyam</i>	<i>Maha Vangaswara Ras, Pancha Loha Rasayana, Purna Chandra Rasa.</i> ⁽⁴³⁾

Rasayana has a comprehensive influence on the body & mind resulting in physical, physiological, and psychological improvement of an individual with aging prevention, mental faculties improvement, and immunity development. Similarly, In ‘*Bhagvat Geeta*’, *Ahara* is differentiated under ‘*Satvik*’, ‘*Rajasik*’, and ‘*Tamasik*’ *Ahara*, and the responses of these *Ahara* on the body are recognizable^(44,45) *Ayurveda* includes the different classes of *Ahara* like eating and drinking items, wholesome and unwholesome diet i.e., ‘*Pathyapathya*’⁽⁴⁶⁾ ‘*Ashta Vidh Ahara Vidhi Vishesh-Aayatanani*’ i.e. disciplines of eating, ‘*Dwadasha Ashana Pravicharana*’, Incompatible diet i.e., ‘*Viruddha-Ahara*’⁽⁴⁷⁾, ‘*Satmya-Asatmya*’, age, ‘*Agni*’ (digestive power), *Koshta* i.e., digestive system, psychosomatic constitution i.e., ‘*Prakriti*’, ‘*Shad-rasatmaka*’ *Ahara*, Seasonal diet i.e., ‘*Rutu*’ as well as the diet related to the disease and their stages. *Agni* is the prime determinant of the quantity of food⁽⁴⁸⁾. ***Aaharamatratu Agnibalapekshini***
Ayurveda has given prime importance to all the components of a balanced diet as well as the classification of food i.e., ‘*Ahara-Varga*’ similar to

the food classification stated in nutrition i.e., proteins, fat, carbohydrates, vitamins, minerals, etc⁽⁴⁹⁾.

Keeping the philosophy of focus on prevention, food is classified into twelve *Ahar- varga*^(30,50) like ‘*Shukadhanya*’ (cereals), ‘*Shamidhanya*’ (pulses), ‘*Mansavarga*’ (Meat), ‘*Phalavarga*’ (fruits), ‘*Shakavarga*’ (vegetables), ‘*Jalvarga*’ (water), ‘*Dugdha-varga*’ (milk & milk products), ‘*Madyavarga*’ (beverages), *garlic-onion-radish-lime* in ‘*Harita-varga*’, ‘*Ikshu-varga*’ (products of sugarcane), ‘*Krutanna varga*’ (food formulations), ‘*Aharopyogi Dravye*’ i.e., Adjuvant of food like oil (*Taila*), ghee (*Ghrita*), salt, cumin (*Jeera*), ginger (*Ardraka*), pepper (*Marich*), Asafoetida (*Hingu*) for making the food tasty, appetizer and alleviates *Vata*, *Kapha*, foul smell^(51,52).

Acharyas in *Ayurveda* also gave importance to and classified the *Ahara* according to the

Origin (animal/plant),

Effect wholesome/unwholesome (*Hitkar/Ahitkar*),

Use solid/ semi-solid/ liquid i.e., *Bhakshya/ Lehya/ Paan*,

Taste (*Shad-Rasa i.e., Madhur, Katu, Amla, Lavana, Tikta, Kashay*),

Quality (*Gunās like Guru, Laghu etc*)⁽⁵³⁾.

In *Pandu Vyadhi*, there is *Agnivardhaka*, *Tridosahara* & '*Yogavahi*' as well as a source of beta carotene & vit. E, *Ghrita* preparations of '*Dadima*', '*Pathya*' (*Haritaki*), '*Aardraka*', '*Draksha*', and '*Haridra*' are advised.⁽⁵⁴⁾ Use of '*Beetroot*' (*Beta vulgaris L. ssp. vulgaris*) and prickly pear (*Opuntia elatior Mill.*) is beneficial as a haematinic agent and responsible for erythropoiesis⁽⁵⁵⁾. *Acharyas* have mentioned '*Basella Rubra*' i.e., '*Upodika* in *Shaka Varga*, is a source of calcium, iron, and ascorbic acid and used for *Pandu/Anemia*^(56,57,75).

Ayurveda has an interesting verse or *Shloka* regarding the importance of the wholesome diet in therapeutics i.e., *Pathya*⁽⁵⁸⁾

Pathye Sati Gadartasya Kim Aushadh Nishavane / Pathye Asati Gadartasya Kim Aushadh Nishevana||
(*Vaidya Jeevana: 1/10*).

Pathya i.e., the wholesome diet has been indicated in the treatment of every disease. It is compatible with bodily channels and the mind. There is no need for medicine for the one who follows a proper diet and there is no use for medicine for the one who doesn't take food. The variation in the *Matra* (dose/quantity), *Kal* (time), *Utpatti* (origin), *Karya* (action), *Bhumi* (soil), *Samprapti* (pathology), body, and *Dosha* have a major role in *Pathya-Apathya*⁽⁵⁴⁾

Acharya Charaka has given a list of wholesome food that can be taken regularly including *Shastishali* (rice ripens in 60 days), *Mudga* (*Vigna Radiata*), *Saindhava* (Rock salt), *Jangala Mansa* (meat of animals of arid, desert land), *Dadima* (*Punica Granatum*), the seed of the *bamboo* tree, *Amalaki* (*Phyllanthus Emblica*),

Barley (*Hordeum Vulgare*), *Vegetables* includes *Mandukaparni* (*Centella Asiatica*), *Vastuka*, (*Chenopodium album*), *Chili* (*Capsicum Annum*), *Sunishannaka* (*Blepharis edulis*), *Tanduliyaka* (*Amaranthus spinosus*) along with rain water, milk, honey and *Ghee*⁽⁵⁴⁾.

The food to be not taken i.e., unwholesome food are *Vallura* (dried meat), *Shushka-Shaka* (dried vegetables), diseased animals meat, *Koorchika* (boiled buttermilk), *Kilata* (coagulated milk), fish, curd, *Masha* (black gram)⁽⁵³⁾ In *Pandu Vyadhi*, old rice, *Yava*, *Wheat*, *Yusha* of *Moong-Masoor-Toor Dal*, *Mansarasa* of *Jangle* animals are recommended. *Patola*, *Tarun Kadali Phalam*, *Guduchi*, *Jivanti*, *Tanduliyakam*, *Punarnava*, *Dronpushpi*, *Lasundwayam*, *Pakwamram*, *Bimbi*, *Gomutram*, *Takram*, *Ghrutam*, *Navneetam*, *Tailam*, *Sauvirakam*, *Tushodakam*, *Navneetam*, *Gandhasara*, *Haridra*, *Nagkesharam*, *Yavkshar*, *Lauhabhasma*, *Kashayadravyam*, *Kumkumam* are some '*Pathya*' *Dravyas* described in *Samhitas*⁽⁷⁷⁾.

Raktasruti, *Dhumpanam*, *Vegdharanam*, *Panch-Shakam*, *Ramatham*, *Ambupanam*, *Pinyaka*, *Sura*, *Sarshapam*, *Tambulam*, *Divaswapa*, *Tikshna-Lavan*, *Guruannam*, *Vidahi Anna*, *Viruddhashanam* are listed in '*Apathyam*' of *Pandu Vyadhi*⁽⁷⁷⁾.

Some important formulations of *Pathya Kalpana* are '*Manda*', '*Peya*', '*Vilepi*', '*Yavagu*', '*Yusha*', '*Krushara*', '*Anna*', '*Takra*', '*Dadhi*' *kalpanas*, '*Mansa-rasa*', '*Khada-Kambalika*', '*Raga shadava*'. Here, *Ayurveda* has given importance to calorie intake along with supplementation like some '*Sansarjan Krama*' *Kalpanas*. They all are *Agnivardhaka*, *Vatanulomaka*, refreshing, and strength increasing^(22,59,60,61).

<i>Peya</i>	More liquid and a small quantity of rice	Fewer carbohydrates
<i>Vilepi</i>	More rice, less liquid	More carbohydrates
<i>Akruta Yusha</i>	Pulses without salt & fat	Protein (vegetable source)
<i>Kruta Yusha</i>	Pulses with salt & fat	Protein with fat
<i>Akruta Mansa Ras</i>	Fat within Mansa, animal protein	Protein with fat
<i>Krita Mansa Ras</i>	Fat, animal protein, supplement fat & salt	More protein & fat

Sugarcane Molasses is a potential dietary supplement in the management of ‘*Pandu*’ as it contains iron & absorption enhancers like sulfur, and copper which makes it a potential dietary supplement for anemia. Evaporated Sugarcane juice (*Rapdura*) plays an important role in improving hemoglobin levels⁽⁶²⁾.

Some ‘*Gud*’ (**Jaggary**) preparations along with other drugs like *Sunthi*, and *Haritaki* are very useful. *Gudarishtha*, *Jeevaniya Ghrita*, and *Maha Mayara Ghrita* are some examples of Guda Preparations. Ayurvedic preparations of **garlic, Cajamusujan plant, F. xanthoxyloides root, Khayasenegalenis, and Cissus populnea** have a major role in sickle cell anemia⁽⁶³⁾.

Millets like *Sorgham*, *Ragi*, rice, *Rajgira* (*Amaranthus*), Foxtail Millet, and Proso Millet are rich in B complex, iron, phosphorus, potassium, fiber-rich as well as are nutritious, non glutinous, non-acid forming food i.e. soothing, cost-effective, and the bioavailability of iron can be improved through processes of soaking, germination, decortications & fermentation which can be effective in reducing anemia⁽⁶³⁾. ‘**Lycopene**’, a carotenoid, red pigment present in fruits like watermelon, cherry, papaya, guava, grapefruit, carrots, and tomatoes is a useful antioxidant and offers tremendous nutraceutical opportunities⁽⁶⁴⁾. Curcumin present in ‘*Curcuma Longa*’ is used as a dietary supplement. Fenugreek extract, moringa leaf extract, *Tulsi*, *Amla*, *Ashwagandha*, and turmeric **extract supplements** are used in capsule forms. Palletization forms like *Ashwagandha* pellets, ginger pellets, cur cumin pellets, lycopene, pellets, and piperine pellets are available in the market^(65,66). **Pure and natural oils** like coconut oil, black seed oil, *Neem* oil, and peppermint oil are available. In such a way, Ayurvedic supplements are used for antioxidant effect, immunomodulatory effect, and rejuvenation when included in the diet like cur cumin from turmeric, piperine from black pepper, and gingerol from ginger. They are rich in **phytonutrients, carotenoids, phenols, polyphenols, alkaloids, and flavonoids**.

Some Ayurvedic Nutraceuticals^(49,67,68) –

- i. ***Chyavanaprasha*** A vit c rich formulation & antioxidant, good for general health and the prevention of respiratory disorders⁽⁶⁹⁾.
 - ii. ***Brahmya Rasayana*** for protection of mental stress.
 - iii. ***Phala Ghrita***- it is meant for reproductive health.
 - iv. ***Narsimha Churna***- For vigor & vitality. In *Pandu*, it improves digestion and *Rasa-Raktadi Dhatu Dushhti* subsequently increases blood⁽⁷⁰⁾.
 - v. ***Rasona Ksheerapaka***- It is cardio-protective and effective in different cardiac ailments⁽⁷¹⁾.
 - vi. ***Shilajatu Rasayana***– is used for diabetes mellitus⁽³⁴⁾.
 - vii. ***Arjuna Ksheerapaka***- *Arjuna* has ‘*Hridya*’ *Prabhava* & *Raktaprasadana* property, hence alleviating anemic conditions or *Pandu Vyadhi*.
 - viii. ***Triphala Rasayana***– *Haritaki* is consumed after digestion of food, *Bibhitaka* is consumed before food, and *Amalaki* after food i.e., used according to time of consumption. *Acharya Chakradutta* advice *Triphala Rasayana* to take in the following manner—1 *Haritaki* in the morning (i.e., empty stomach), 2 *Vibhitaki* fruits before a meal, and 4 *Amalaki* fruits after supper with honey & *Ghrita*⁽⁷²⁾.
 - ix. ***Shatavari Ghrita***– It improves lactational inadequacy in lactating mothers. ‘*Dashmoola Ghrita*’ is advocated for facilitating the involution of the uterus to its normal size⁽⁷³⁾.
 - x. ***Brahmi/Vacha***- With honey to improve the memory of the child⁽³⁵⁾.
 - xi. ***Rutu Haritaki***- A unique nutraceutical based on seasonal variation. Use of *Haritaki* with different drugs in different seasons. *Haritaki* is used with *Sharkara* in *Sharad Rutu*, with *Sunthi* in *Hemant Rutu*, with *Madhu* in *Vasant Rutu*, and with *Guda* in *Grishma Rutu*⁽³⁵⁾.
- ‘***Bhallataka Rasayana***’ is also used according to season i.e., not to be used in the summer season^(35,68).
- ‘***Oushadha Kanji***’ is a popular medicated food preparation in the rainy season to prevent loss of appetite.

Grueling preparations along with some ash or raw drugs for specific diseased conditions. A confection of rose petals & sugar is employed as a cooling agent, which subdues the vitiation of *Pitta Dosha*. '*Ardraka Paka*', a ginger-based confection preparation made up of ginger, sugar, salt & lemon, is used as an aid for digestion. Confection of *Bael* fruit is also beneficial for the GI tract. Similarly, the consumption of grated garlic, fresh ginger, and fresh turmeric rhizome with lemon & salt is used to aid digestion⁽⁷⁶⁾. **Musli Pak and Ashwagandha Leha** are some examples of nutraceuticals. In Pandu, '*Abhayavaleha*' or '*Agastya-haritaki Rasayana*' similar to '*Chyavanaprasha*' is indicated⁽⁷⁷⁾.

CONCLUSION

The valuable herbal molecules with high potential in the cure and prevention of life-threatening diseases & lifestyle-related disorders are provided by nature. Nutraceuticals have proven such health benefits and their consumption will keep diseases at bay and allow humans to maintain overall good health. Nutraceuticals promote optimal health, longevity, and quality of life. *Ayurveda* has a very thorough description considering all the possible factors affecting the nutritional quality of food, and nutrition of the body in health & disease. *Ayurveda* also advocates diet, dietary combinations, food processing & cooking rules regarding intake of nutrients for proper nutrition, incompatible diet, etc. *Rasayanas* have a multi-angled approach and take care of body, mind, and spirit also, augmented by modern scientific research and thus affecting the total well-being of an individual. *Pathya Kalpana* covers all the nutritive values by providing food of all six tastes i.e., '*Shad-Rasa*', and acts over both body & mind. *Ayurveda* advocates many combinations and single drug preparations for the maintenance of wellbeing. The majority of the population is unaware of many factors regarding anemia, and dietary supplements like iron, folic acid, and vitamins. *Ayurveda* implements all such requirements by multi-angled '*Ahar-Kalpanas*' and becomes helpful in the improvement of health,

prevention, and treatment of the disease *Pandu/Anemia*.

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