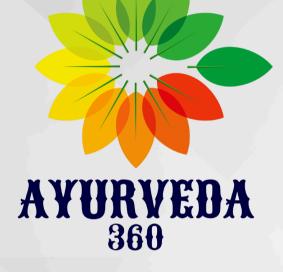
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Critical Examination of *Gramyaahara* as an Etiological Factor in Metabolic Disorders: The Role of *Rasayana* Therapy in Mitigation

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Abstract

Introduction:

Gramyaahara denotes poor-quality dietary habits. These habits contribute to toxin accumulation, chronic diseases, and depletion of vital body components, adversely affecting overall health and quality of life. *Ayurveda*, an ancient medical science, advocates holistic well-being through dietary guidelines and lifestyle management strategies.

Materials & Methodology:

This study explores *Ayurveda* concepts related to *Gramya Ahara*, *Rasayana* therapies discussed in *Pranakamiyadhyaya*, and *Ayurveda* dietary principles. Primary sources include classical *Ayurveda* texts, particularly *Acharya Caraka's* discussions on *Nityasevaniyadravya* (~beneficial foods) and *Viruddhahara* (~incompatible diet).

Results:

Patterns of *Gramyaahara* lead to toxin accumulation, resulting in *Dhatukshaya* (~tissue depletion), *Ojokshaya* (~loss of vital energy), and *Indriyadaurbalya* (~weakness of senses). *Rasayana* therapies are identified as potential interventions for disorders arising from these habits.

Discussion & Conclusion:

Ayurveda emphasizes balanced nutrition, Nityasevaniyadravya (~proper food combinations), and avoidance of incompatible foods (~Viruddhahara) to maintain health and prevent lifestyle-related

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disorders. Awareness and adherence to *Ayurveda* principles can promote longevity and enhance overall well-being by addressing dietary and lifestyle factors contributing to chronic illnesses and premature aging.

Keywords: Gramyaahara, Rasayana Therapy, Premature Aging, Indriyadaurbalya, Lifestyle Disorders

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INTRODUCTION

Ayurveda is a holistic health science that focuses on the well-being of individuals through both preventive and curative measures. It places equal importance on Ahara (~dietary habits) and Vihara (~lifestyle choices). The main goals of Ayurveda are to prevent diseases and promote overall health, covering both the prevention and treatment of health issues. In today's world, people often find it hard to maintain a healthy lifestyle due to negligence, busy schedules and responsibilities. As a result, they suffer from many diseases as described by Acharya Caraka in the Gramyaahara section of Cikitsasthana within Rasayanacikitsa, especially Prankamiyam under the subchapter.

Conceptual Understanding of *Gramyaahara*

Gramyaahara is a type of diet mentioned in *Pranakamiyarasayanadhyaya*. The word "*Gramya*" means "originating from the village" and refers to the dietary habits of a community. The etymology of the word *Gramya* is '*Grama Bhaavarthe Vaa Yat*'. This means that which originated from *Grama* (~village) is called *Gramya*. The *Nirukti* of the word *Grama* is '*Gramam* Janapadasyarthe.[1].

Gramyaahara are mentioned below:

Amla (~Sour), Lavana (~Salt), Katu (~Pungent), Kshara (~Alkaline), Shushka Shaka (~Dry leafy vegetable), Shushka Mamsa (~Dry meat), Tila (~Sesamum), Pishta Anna (~flour preparations), Viroodha Shuka Dhanya & Shami Dhanya (~Sprouted grains), Nava Shuka Dhanya & Shami Dhanya (~Use of grains which have not crossed one year / newly yield grains), Viruddha Ahara (~Incompatible food), Asatmya Ahara (~food which is not accustomed), Abhishyandi (~food having the property of obstructing the channels), Klinna (~Soaked more in water), Guru (~Heavy to digest), Puti (~Putrefied), Paryushita crossed 12 (~Stale or hours after preparation).

Impact of Gramyaahara on health

Consuming *Gramyaahara* on regular basis can disturb all the *Dosha* (~body energies), leading to issues like muscle relaxation, joint looseness, blood impurities, excessive fat, immature bone marrow, reduced semen production, and *Oja* deterioration. They are analysed in Table 1 in detail.

System/Structure		Impact & Analsysis
Whole Body	Muscle Relaxation and Joint Looseness:	This can affect physical stability and mobility.
Circulatory System	Accumulation of toxins in Blood	This can impair circulation and overall cardiovascular health.
Adipose Tissue	Excessive Fat Accumulation	This can contribute to obesity and related metabolic disorders such as Diabetes Mellitus & Hyperlipidemia.
Bone Marrow	Immature Bone Marrow	It can potentially affect the production of healthy blood cells and compromising immune function.
Fertility	Reduced Semen Production	This is one of the major causes of primary & secondary infertility in recent times.
	Decreased Vitality	A diet lacking in essential nutrients can result in decreased overall vitality, affecting physical stamina and resilience.
Immunity	Increased Susceptibility to Illnesses	Immuno-compromised conditions such as allergic manifestations to more severe communicable conditions may be seen in people with poor diet.
Neurological effect	Memory Loss and Reduced Intellect	Impact on cognitive function, leading to memory loss, reduced intellectual capacity, and difficulty concentrating can be a major effect.
	Symptoms of Physical and Mental Distress:	 Individuals consuming improper foods may experience various symptoms: Tiredness: Lack of energy and persistent fatigue. Depression: Mood Swings Sleep Disorders: Difficulty falling asleep or disrupted sleep patterns. Lack of Enthusiasm: Reduced motivation and interest in activities.
Concept of Metabolic Disorders		body's ability to process nutrients and
Metabolic disorders encompass a		a regulate metabolism. These disorders can
broad category of conditions that affect the range from genetic conditions to acquired		

Table 1: Impact of Gramyaahara on health

conditions such as type 2 diabetes mellitus. They typically involve disruptions in enzymatic activity, hormonal regulation, or nutrient absorption, leading to various health complications.

Lifestyle plays a pivotal role in the development and management of metabolic disorders. Factors such as diet, physical activity levels, stress, and sleep patterns significantly influence metabolic health. Poor dietary choices, sedentary habits, and high stress levels can contribute to weight gain, insulin resistance, dyslipidemia, and hypertension,key components of metabolic syndrome, a cluster of conditions that increase the risk of cardiovascular disease and type 2 diabetes.

today's society, In metabolic disorders are on the rise due to several interconnected factors. The prevalence of sedentary lifestyles and increasingly caloriedense, nutrient-poor diets has contributed to a global epidemic of obesity, which is a major risk factor for metabolic disorders. Urbanization and technological advancements have led to reduced physical activity levels and increased consumption of processed foods high in sugars, unhealthy fats, and salt. These dietary and lifestyle shifts, coupled with genetic predispositions

and environmental influences, have created a perfect storm for the escalation of metabolic disorders worldwide.

Ayurveda highlights the importance of *Ahara* (~diet), *Nidra* (~sleep), and *Brahmacharya* (~celibacy) for a healthy life.[2] Improper dietary habits and lifestyles are major contributors to lifestyle disorders. Rapid urbanization and globalization in India have led to an increase in lifestyle disorders, with urban people leading less active lifestyles and having more exposure to unhealthy products and technologies

Premature Aging as a result of Metabolic Changes

Premature aging is highly stressful for individuals today. Among all the Nav Karana Dravya, Kala is the most important and potent, as it includes all creation in itself as well as it affects all creation in a clockwise manner, and human beings are no exception.[3], [4] Kala interacts with a human from conception till death and this time period called is Avu (~lifespan). Acharya Sushruta has described that Jara is a natural phenomenon of the human body. It is classified as kalaj Jara and akalaj Jara. Many people try to delay aging and stay fit. Environmental changes, unhealthy diets, and various addictions make

this worse. There is no direct reference of causative factors of aging in Vrihattrayi. Only Rasa Vagbhatta has quoted some factors as a causative of aging. Pantha (~excessive walking or travelling), Shita (~excessive cold food or spoiled food), Kadanna (article food devoid of nutritional properties), Vayovriddha Yoshita (~aged women), and Manasa Pratikulata (~unfavorable condition of mind) are the five reasons of premature aging described by Rasa Vagbhatta [5] Premature aging can be prevented if Ayurveda principles are strictly followed. Ayurveda was introduced to help people enjoy a long and healthy life.[6] Aging is a natural process.[7] Ayurveda views these unpleasant states as diseases because they cause suffering.[8]

Promotion of *Svasthasya* (Health) through *Rasayana*

equilibrium, the *Agni* (~digestive capacity) is in a balanced state, in addition to the *Dhatus*(~body's tissues) and *Mala*(~waste products) being in balance. Health also includes mental & spiritual well-being as it states that the *Mana*(~mind), *Indriya* (~sense organs), and the *Atma* (~person's soul) must be also in a *Prasanna* (~pleasant state). When a person is balanced in all of those areas, he or she is considered healthy by Ayurvedic standards.[9]

Svasthasya Urjaskar is again of two Rasayana (~Rejuvenation types i.e., therapy) and Vajikarana (aphrodisiac treatment).[10] Ayurveda classics describe that maintaining health and delaying aging involves following daily and seasonal regimens, practicing appropriate dietary habits (~Dvadasha Ashana Pravichara), and adhering to good moral conduct (~Sadvritta & Achara Rasayana).

A healthy person as someone whose *Doshas* (~mind-body constitution) are all in

Acharya Charaka has recommended the following foods to be consumed daily:

- *Shashtika Shali* (~rice): A variety of rice that matures in 60 days. It is considered light and easy to digest, providing balanced nutrition.
- *Godhuma* (~Wheat): Known for its nourishing properties and is a staple in many diets. Provides energy and supports overall health.
- *Yava* (~Barley): Helps in maintaining digestive health and is beneficial for metabolic processes. Light and easy to digest, making it suitable for regular consumption.

- *Mudga* (~Green Gram): A type of pulse that is high in protein and easy to digest. Supports *muscle* development and overall growth.
- *Saindhava* (~Rock Salt): A natural form of salt that aids in digestion and maintains electrolyte balance. Considered pure and beneficial for health.
- Amalaki (~Indian Gooseberry, Emblica officinalis): Rich in Vitamin C and antioxidants.
- Supports immunity, digestion, and overall health.
- Antariksha Jala (Rainwater): Considered the purest form of water. Promotes hydration and *detoxification*.
- *Ghrita* (~Ghee): Clarified butter that is highly nourishing and beneficial for digestion. Supports mental clarity and overall strength.
- *Godugdha* (~Cow Milk) Known for its nourishing and strengthening properties. Supports growth, bone health, and immunity.
- *Madhu* (~Honey): Has antibacterial properties and is a natural sweetener. Promotes digestion and has various therapeutic benefits.
- Jangala Mamsa (~Meat of Animals Dwelling in Arid Climates): Considered light and easy to digest compared to meat from other sources. Provides high-quality protein and essential nutrients.

Digestion & Metabolism	Foods like <i>Shashtika Shali, Yava,</i> and <i>Mudga</i> are easy to digest and promote healthy metabolic processes.	
Nourishment & Strength	Foods such as <i>Godhuma</i> , <i>Ghrita</i> , and <i>Godugdha</i> provide essential nutrients that support overall body strength and development	
Detoxification& Immunity	<i>Amalaki</i> and <i>Madhu</i> are rich in antioxidants and other beneficial compounds that help in detoxifying the body and boosting immunity.	
Balanced Nutrition	The combination of these foods ensures a balanced intake of carbohydrates, proteins, fats, vitamins, and minerals.	

Table 2: Importance of *Nityaprayunjeetadravya*

Medicines having Rasayana Impact

Rasayana medications as described in Ayurveda texts, exhibit a wide range of

beneficialproperties,includingimmunomodulatory,anabolic,andantioxidantcharacteristics.Threetypesas

per Dalhana's opinion probably based on the utility of Rasayana. Kamya : which is further divided into two: a) Pranakamiya which increases the lifespan. b) Medhakamya- which increases the cognitive abilities of mind and c) Shreekamya-which increases the wealth of life. Medical research has also highlighted their adaptogenic properties, which help the body adapt to stress and restore balance. Naimittika, Rasayana drugs, such as Shilajatu, Bhallataka, and Tuvaraka, are specifically indicated for various diseases. Ajasrika, Particular diets, including the daily intake of milk, ghee, and other nourishing foods, promote health and increase strength. Most Rasayana Dravya (substances) possess either Madhura Rasa (sweet taste) or Vipaka (sweet post-digestive Madhura effect). These properties contribute significantly to their therapeutic benefits. Impact of Rasayana Dravya on health:

- Increase the production of vital bodily tissues like *Rasa* (plasma), *Rudhira* (blood), *Mamsa* (~muscle), *Meda* (~fat), *Asthi* (~bone), *Majja* (~marrow), *Ojas* (~vital essence), and *Sukra* (~reproductive tissue).
- Promote longevity and vitality.

- Soothe and enhance the function of the six sense organs.
- Improve strength, complexion, and skin quality.
- Support healthy hair growth and improve voice quality.
- Increase overall body strength and provide a calming, invigorating, and nourishing effect.
- Promote body mass and ensure stability and resilience.
- The preventative nature of *Rasayana Dravyas*, which boost immunity and significantly contribute to increased lifespan and overall well-being.

Rasayana medications exhibit immunomodulatory, anabolic. and antioxidant properties. The main rasayan drugs mentioned under the Prankamiya rasayana are Amalaki, pippali, vidanaga, nagbala, bala & bhallataka yogas. and also it is mentioned that people who will take any of these rasayana will live upto 100 years without Jara.[11] These Rasayana can be advised for patients of all age groups, with consideration given to their Bala (~strength).

Out of those, the most prominent drug used is *Amalaki (Lnn. Embilica officianlis)* used in maximum preparation of *Rasayana* in classical text. Some *Rasayana* as per text are as follows:

- Triphala Rasayana
- Amalaka Rasayana
- Amalaka Lehya
- Amalaka Churna
- Chyavanprasha
- Vidanga Avalehya

Effects of herbal preparation using most prominently used *Rasayana* drugs are as follows:

Amalaki is widely used in Ayurveda preparations for its ability to enhance defences against diseases. It plays a beneficial role in managing degenerative diseases such as cancer, diabetes, liver disorders, ulcers, anemia, eye diseases, and heart problems. Amalaki is also a key ingredient hepatoprotective in and rejuvenating formulas. Amalaki fruit is a rich source of vitamin C and low molecular weight hydrolysable tannins. These components make Amalaki an excellent source of antioxidants. Tannins like emblicanin-B (33%), emblicanin-A (37%), punigluconin, and pedunculagin together protect against oxygen radical-induced hemolysis of peripheral blood erythrocytes. As a natural antioxidant, Amalaki promotes

healthy eyes, and the growth of hair, nails, and skin. It balances Jatharagni (digestive capacity) and builds Ojas (bodily strength, vigor, energy, and ability) to support a healthy immune response. Amalaki pacifies Vata, Pitta, and Kapha, specifically alleviating Pitta. Additionally, it rejuvenates all the tissues in the body and builds Ojas, which is the essence of immunity and youthfulness.[12] Amalaki Rasayana is classified under Vayasthapana Rasayana, known for promoting longevity, preventing ill health, and blocking geriatric symptoms. Phyllanthus emblica (P. emblica) is a rich source of beneficial compounds such as ellagic acid. gallic acid, quercetin, kaempferol, emblicanin. flavonoids. glycosides, proanthocyanidins, and vitamin C.[13]

Pippali (Piper longum) Acharya Charaka in Vimanasthana has elucidated Yogavahi karma of pippali due to this special property it is used in various formulations as a medicine and adjuvant. In Su.S.Ch.26 where Dravyas of Virudha Virya are mentioned, Katu Rasa dravyas are described as Avrishya Dravya but Pippali and Sunthi are exceptions to them.

Vidanga (Embelia ribes): Vidanga has multiple effects like Analgesic, antioxidant,

antibacterial and highly effective in antidiabetic, antihelminthic, anticancer, antihyperlipidemic, wound healing activities. [14]

Bhallataka (Semecarpus anacardium) is used for various medicinal properties after purification. The fruit and nut extract shows various activities like antiatherogenic, antiinflammatory, antioxidant, antimicrobial, anti-reproductive, CNS stimulant, hypoglycemic, anticarcinogenic and hair growth promoter. More efforts are needed to study the traditional uses of the plant and the subsequent validation of activity and the mechanism of action.[15]

Nagbala (Sida humilis Cav.) is a single drug Rasayna mentioned in Brihattrayi. They had used Nagbala in both preventive aspects i.e Rasayna Cikitsa and curative aspects i.e. treatment of various diseases. Also it is used as Naimittik Rasayana in Kshata and Kshaya. Sushruta Samhita mentioned it in Sarvopaghatashamaniya Adhyaya which

DISCUSSION

Rasayana therapy, as described in Ayurveda, helps to establish youthfulness (~Vayasthapana), increase life span (~Ayushkara), enhance intelligence (~Medha), and improve strength (~Bala), while also aiding in suggests its property in healing diseases. Charak *Samhita* had mentioned its specific details about collection administration etc points towards its vital place in *Rasayana Cikitsa*.[16]

Bala (Sida Cordifolia Linn.) in different Vedas and Samhitas we find it's different to indicate Vishaghna, Brihmana, Kantikarka, Grahi, Vrishya, Ojhovardhaka, Balya, Rasayan properties.[17]

Dietary Considerations in *Rasayana* Therapy

The importance of avoiding certain dietary and lifestyle practices during *Rasayana* therapy is pointed out. *Gramyaahara* (~village food) such as dry vegetables, sesame powder, and sprouted grains, as well as excessive sleep, alcohol, anger, and greed, can lead to diseases due to *Dosha-Dushya Sammurchana* (vitiation of doshas and bodily tissues). Hence, these should always be avoided during *Rasayana* therapy.

disease prevention. Akalaja jara (~premature aging) can be prevented through the application of *Rasayana Cikitsa* and adherence to daily & seasonal regimens (~*Dinacharya* and *Ritucharya*) and *Ahara Vihara* as mentioned in Ayurveda.

The Madanpala Nighantu lists a total of 33 drugs with Rasayana properties. Most Rasayana drugs possess Madhura Rasa (~sweet taste) and Sheeta Veerya (~cooling potency), along with Guru (~heavy) and Snigdha (~unctuous) qualities. These drugs act on Agni (~digestive fire), Doshas (~bodily humors), and Dhatus (~tissues) to exhibit their pharmacological properties. For example, Pippali acts on Agni, Haritaki acts on Doshas, and Shatavari acts on Dhatus.[18]

Recent studies have established a link between lifestyle disorders and lifestyle, dietary habits and psychological factors, and they play a significant role in the manifestation of diseases. Hence there is a need for understanding the concept of 'Gramva Ahara-Vihara'. By inclusive utilization of Ahara, i.e., Mithya Ahara & Hita Ahara and Vihara, which are conducive to our *Prakriti*, does help in preventing the diseases from the milder form to the most complicated diseased conditions like Cancer, CVD, CAD etc [19] A review comments to assess the evidence

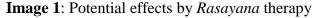
available regarding the impact of dietary recommendations against NAFLD, highlighting the effect of macronutrient diet composition and dietary patterns in the management of NAFLD.[20

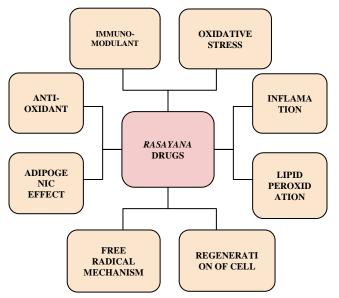
The antioxidant action of *Rasayana* herbs can be attributed to several mechanisms:

- Scavenging of Free Radicals: *Rasayana* herbs neutralize free radicals directly, reducing oxidative stress. Compounds like vitamin C in *Amalaki* and withanolides in *Ashwagandha* act as scavengers of free radicals.
- 2. Enhancement of Endogenous Antioxidant Systems: These herbs boost the activity of the body's own antioxidant enzymes. For instance, *Amalaki* has been shown to enhance the activity of superoxide dismutase and catalase, thus improving the body's natural defense mechanisms.
- 3. Reduction of Lipid Peroxidation: *Rasayana* herbs protect cell membranes from oxidative damage by inhibiting lipid peroxidation. This action is crucial for maintaining cellular integrity and function.
- 4. Anti-inflammatory Effects: Chronic inflammation is closely linked to

oxidative stress and aging. Many *Rasayana* herbs possess antiinflammatory properties, reducing the levels of pro-inflammatory cytokines and thereby mitigating the damage caused by oxidative stress.

5. DNA Protection and Repair: Oxidative stress can cause significant





It is increasingly recognized that many modern diseases are due to "oxidative stress," resulting from an imbalance between the formation and neutralization of free radicals. These free radicals are produced as byproducts of normal metabolism and due to radiation exposure to and certain environmental pollutants. Highly reactive, radicals damage free can cellular components and are implicated in various damage to DNA, leading to mutations and cellular aging. *Rasayana* herbs like *Brahmi* help in protecting DNA from oxidative damage and may promote the repair of damaged DNA.

diseases. Under normal circumstances, free radicals are neutralized by efficient systems in the body, including antioxidant enzymes (such as superoxide dismutase, catalase, and glutathione peroxidase) and nutrient-derived small molecule antioxidants (such as vitamin E, vitamin C, carotenes, flavonoids, glutathione, uric acid, and taurine). In healthy individuals, a delicate balance exists between free radicals and antioxidants.[21] However, in certain pathological conditions like diabetes and in critically ill patients, oxidative stress can cause antioxidant levels to fall below normal. In such cases, antioxidant supplements are expected to be beneficial.

Some *Rasayana* herbs and formulations have shown potential for telomere protection and DNA repair activities. Telomere shortening is identified as a key factor accelerating cell ageing and promoting degenerative processes. Given the limited efficacy of conventional drugs as anti-ageing modulators, there is an increasing interest in natural products and traditional medicines for their potential to arrest or delay ageing.[22]

CONCLUSION

Ayurveda offers profound insights into maintaining health and preventing lifestyle-related disorders through principles of Ahara (~diet) and Vihara (~lifestyle). The concept of Gramya Ahara as described in Ayurveda texts highlights the detrimental effects of improper dietary habits and lifestyle choices on physical, mental, and emotional well-being. For healthy individuals, as a preventive measure against certain diseases, the best approach is to regularly consume an adequate amount of antioxidant-rich foods or herbs. Amalaki, rich in vitamin C and antioxidants like emblicanin and flavonoids, is widely used in Ayurveda to boost disease defenses and manage degenerative conditions. It promotes healthy eyes, skin, hair, and immune response while balancing Vata, Pitta, and Kapha. Amalaki Rasayana supports longevity and prevents geriatric symptoms. Dietary considerations during Rasayana therapy include avoiding Gramya Ahara to

Dosha-Dushya prevent Sammurchana. These include increased susceptibility to diseases, premature aging, and diminished quality of life. Ayurveda stresses upon the importance of maintaining balance in diet and lifestyle to preserve *Ojas* (~vital energy) and promote longevity. In Pranakamiya Rasayana, the benefits are for those desiring Pranakamah (~vital health). he explained the procedure of Rasayana therapy which is like holy nectar, which is correlated to another nectar, cherished by the devas, incredible possessing and mysterious benefits. It promotes longevity of life, provides health, sustains age, alleviates excessive sleep. drowsiness, exertion. exhaustion, lassitude, and emaciation. It restores Tridoshika balance, brings stability, alleviates muscle laxity, ignites digestive fire. and imparts excellent luster, complexion, and voice.

Amalaki (Phyllanthus emblica) enhances disease defenses and is beneficial for conditions like cancer, diabetes, liver disorders, ulcers, anemia, eye diseases, and heart problems. Rich in vitamin C and tannins, it is a potent antioxidant that promotes healthy eyes, hair, nails, and skin, balances digestive fire, and supports immunity. *Pippali (Piper longum)* is used for its property of enhancing the effectiveness of other medicines. *Vidanga* (*Embelia ribes*) has analgesic, antioxidant, antibacterial, antidiabetic, antihelminthic, anticancer, antihyperlipidemic, and wound healing properties. *Bhallataka (Semecarpus* **References:**

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