Check for updates

Journal of Ayurveda and Integrated Medical Sciences

2025 Volume 10 Number 7 JULY



www.maharshicharaka.in

Role of Ayurveda in Graceful Ageing: A Review

Verma S^{1*}, Deshmukh PN², BK Sevatkar³, Appu A⁴, Acharya A⁵

DOI:10.21760/jaims.10.7.26

- 1* Sudeeksha Verma, Post Graduate Scholar, Department of Rog Nidana Evam Vikriti Vigyana, National Institute of Ayurveda Deemed to Be University (De Novo), Jaipur, Rajasthan, India.
- ² Prashant N Deshmukh, Assistant Professor, Department of Rog Nidana Evam Vikriti Vigyana, National Institute of Ayurveda Deemed to Be University (De Novo), Jaipur, Rajasthan, India.
- ³ BK Sevatkar, Professor, Department of Rog Nidana Evam Vikriti Vigyana, National Institute of Ayurveda Deemed to Be University (De Novo), Jaipur, Rajasthan, India.
- ⁴ Athira Appu, Post Graduate Scholar, Department of Rog Nidana Evam Vikriti Vigyana, National Institute of Ayurveda Deemed to Be University (De Novo), Jaipur, Rajasthan, India.
- ⁵ Achyut Acharya, Post Graduate Scholar, Department of Rog Nidana Evam Vikriti Vigyana, National Institute of Ayurveda Deemed to Be University (De Novo), Jaipur, Rajasthan, India.

Since time immemorial, humanity has been concerned with developing and preserving youthful vigor, and extending longevity by stopping or delaying the aging process. Every individual is now looking forward to a youthful, productive lifespan of 100 or more years filled with unlimited health and opportunity. Ageing is a multi-dimensional process of physical, psychological and social change. According to Ayurveda, Jara (ageing), being a Swabhavabala Pravritta Roga, occurs due to Vyadhi-Hetu called Kala/Parinam. Ageing cannot be prevented but it can be made graceful by means of Ayurveda. The different modalities have been explained in Ayurveda to counter the problems in ageing. These modalities include the Dinacharya (Abhyanga, Udhvartana etc.), Ritucharya, Sadvritta, Yoga and Pranayam, Rasayana & Vajikarana. Ayurveda have also emphasized in its Upasthambas, the importance of Ahara, Astavidha Ahara Visheshayatan which emphasizes the importance of diet on aging process. Specific Aushadha Vargas like Vayasthapana, Jeevaniya, Brimhana, and other group of drugs are available, which maintain youthfulness. This review explores various aspects of Ayurveda for healthy aging so as to create an optimal health and lengthen an individual's health span by living in harmony with nature.

Keywords: Jara, Ageing, Swabhavabala Pravritta Roga, Vayasthapana

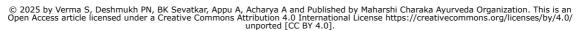
How to Cite this Article To Browse **Corresponding Author** Sudeeksha Verma, Graduate Scholar, Verma S, Deshmukh PN, BK Sevatkar, Appu A, Post Acharya A, Role of Ayurveda in Graceful Ageing: A Department of Rog Nidana Evam Vikriti Vigyana, National Institute of Ayurveda Deemed to Be Review. J Ayu Int Med Sci. 2025;10(7):174-180. University (De Novo), Jaipur, Rajasthan, India. Available From Email: 269verma@gmail.com https://jaims.in/jaims/article/view/4535/

Manuscript Received 2025-05-17 Review Round 1 2025-05-27 Review Round 2 2025-06-07 Review Round 3 2025-06-17 Accepted 2025-06-25

Conflict of Interest None Funding Nil Ethical Approval Not required Plagiarism X-checker 11.32

Note







Introduction

Population ageing is the 21st century's dominant demographic phenomenon. According to data by 2050, one in six people in the world will be over age 60.[1] Ageing comes under the names of Jaravastha, Jara in Ayurveda. Jaravastha or ageing is the state where all the body activities slow down due to the weakening of the Dhatus of the body and decrease in Virya, Indriya Bala and Utsaha. "अनायासेनमरणंविनादैन्येनजीवनं" which states life without dependence and death without discomfort. Ageing is accompanied with a variety of difficulties, social, mental and health challenges which encourage the ageing person to make effort to age slowly and gracefully. Holistic approach of Ayurveda can play a major role in promoting healthy life span.

Aim and Objectives

- 1. To discuss concept of ageing as per Ayurveda.
- 2. To review and discuss different modalities for graceful Ageing as per Ayurveda.

Materials and Methods

This review presentation is based on various Ayurvedic texts such as Charak Samhita, Sushruta Samhita, Ashtang Sangraha, Ashtang Hridaya, Bhava Prakash, and Sharangdhar Samhita, available commentaries. We also searched and referred various articles and papers to collect the relevant information on the topic.

Ayurveda outlines various modalities to combat ageing issues, including Rasayana, Jatharagni, Sadvritta, Dinacharya and Ritucharya, Sadvritta, Ahara, Dinacharya, Ritucharya, Pranayam and Yoga, Panchkarma and Vyayasthapana drugs. They work together to maintain overall health and combat ageing-related issues.

Rasayana

Rasayana category is ideal for ageing symptoms due to its rich anti-inflammatory, antioxidant, and hepatoprotective properties. Ayurvedic Rasayana medications, including Vayasthapana, Ayushkara, Medhakara, and Urjaskara, maintain body Dhatu equilibrium and contribute to long life, memory, and a healthy physique. Ajasrika Rasayana, a daily rejuvenative dietetic, includes fruits, vegetables, milk, and Ghrita.[2]

Achara Rasayana: Rasayana treatment is not only limited to typical drug therapeutic therapy, but it is kind of specialized methodologies that are normally practiced with help of rejuvenate that promotes healthy behaviors, i.e., 'Achara Rasayana'. Achara Rasayana is code of socio-behavioral conduct, promoting worship, truth-telling, Mantra-Japa, avoiding alcohol, balanced sleep, nourishing diet, meditation, & abstinence from anger, violence, & jealousy[3] reducing stress & promoting blissful life.

Jatharagni

In addition to controlling the process of food digestion, absorption, and assimilation, Jatharagni, or digestive fire, also has a significant impact on an individual's life expectancy and quality of life. The source of all the body's digestive fires is Jatharagni. [4-5] Jatharagni is the symbol for all bodily metabolic processes and acts as the primary digestive fire. Included in this are the processes of digestion, cellular metabolism, sense perception, thinking processes, and the conversion of emotional and mental stimuli. When Jatharagni is too weak, food digestion is hampered, which leads to malabsorption and toxin buildup (Ama). Overuse of Jatharagni can cause tissue degeneration by burning the related tissues. As result, Jatharagniinfluences the aging process.[6-7]

Sadvritta

Stress Reduction: *Sadvritta* emphasizes practices such as meditation, *Yoga*, and *Pranayama*, which are known to reduce stress hormones like cortisol. By cultivating mental calmness and emotional resilience, these practices help in managing stress effectively as individuals age. This, in turn, contributes to better cognitive function, emotional stability, and overall mental well-being.

Emotional Well-being: Practices like mindfulness and cultivating positive emotions are integral to Sadvritta. These practices support emotional balance and help in developing coping mechanisms for life's challenges. As people age, maintaining emotional well-being becomes increasingly important for a fulfilling and contented life.

Balancing *Doshas*: Ayurveda identifies imbalances in the *Doshas* (*Vata, Pitta, Kapha*) as underlying factors in the onset of diseases. *Sadvritta* includes dietary recommendations, daily routines, and seasonal adjustments tailored to individual *Doshic* constitutions (*Prakriti*) and imbalances (*Vikriti*).

Sudeeksha V et al. Role of Ayurveda in Graceful Ageing

By maintaining *Doshic* balance, *Sadvritta* helps prevent the development of chronic diseases associated with aging, such as arthritis, cardiovascular disorders, and metabolic conditions.

Social Connections: Maintaining meaningful social relationships is vital for graceful aging. *Sadvritta* emphasizes the importance of nurturing positive relationships with family, friends, and community members. Social interaction provides emotional support, reduces feelings of loneliness and isolation, and contributes to a sense of purpose and belonging. Active participation in social activities and volunteer work can also promote cognitive function and emotional resilience.

Ahara

The Ayurvedic writings highlight the concept of *Ahara Vihara*, or conscientious eating. Our personality is shaped by what, when, where, and how we consume, according to Ayurveda. Conscious eating, according to Ayurveda, promotes healthy digestion, which quickly and immediately corrects imbalances and, in turn, prevents disease, puts an end to suffering, and slows down the aging process. Because nature has an impact on our digestion, metabolism, and longevity, Ayurveda advises eating a healthful, constitution-specific diet and dining in harmony with it.[8]

The bond with food becomes sacred when one realizes how closely eating connects one to nature. Ahara is referred as "Mahabhaisajya" in Ayurveda, which means "the superior medicine." The nutritional needs of the elderly are different from those of average adulthood.

Aged people are increasingly susceptible to malnutrition as they age, including *Manoavasada*, poor dentition, and poor digestion. When food is consumed in the right amounts, it gives a person strength, a healthy complexion, and a happy existence without interfering with normalcy.

To prevent diseases in Swastha Purusha and to cure diseases in Atura, our Acharya's explained many dietetic principles; Ashtavidh Ahara Vidhivishesha Ayatana, Dwadasha Ashana Pravicharana, Sapta Vidhi, Viruddha Ahara Ahara, Ahara Parinamakarabhava, Shadrasatmaka Ahara, Bhojana Vidhi, Bhojanottara Vidhi, Bhojanopayogi Patra, Ahara Varga, Hita & Ahitha Dravya. Ahara contributes to healthy living and longevity by following aspects:-

- **Dosha Balancing**: According to Ayurveda, the three *Doshas* (*Pitta*, *Kapha*, and *Vata*) must be in harmony for graceful aging. *Ahara* is one among the *Tryastambh* and has the power to calm or aggravate these *Doshas*. *Vata Dosha* naturally tends to grow with age, resulting in diminished tissue function, stiffness, and dryness. Aging gracefully can be facilitated with a diet rich in nourishing and moisturizing foods (such as cooked grains, soups, and healthy oils) that balance *Vata Dosha*.
- Maintaining Tissue Health: As we age, our body's tissues (*Dhatus*) become less intact and healthy. To support the strength and nourishment of these tissues, Ayurvedic dietetics recommends foods rich in healthy fats (like ghee), proteins (like mung beans and tofu), and whole grains.
- **Digestive Fire (***Agni***):** Ayurveda places great emphasis on maintaining strong digestive fire (*Agni*) throughout life. *Ahara* should support *Agni* to ensure efficient digestion and metabolism. As we age, *Agni* becomes more important to maintain. Ayurveda suggests eating warm, cooked foods that are easier to digest and help maintain *Agni*. This promotes proper digestion, nutrient absorption, and waste product elimination.
- Individual Constitution (*Prakriti*): Ayurveda holds that every individual has a distinct constitution (*Prakriti*) that dictates the best foods and lifestyle options for them. *Ahara* should be customized based on *Prakriti* in order to preserve equilibrium and avoid imbalances that hasten the aging process.

Nidra (Sleep)

In Ayurveda, sleep, or *Nidra*, is one of primary pillars of health & is just as crucial to maintaining healthy health span as nutrition. Age, way of life, daily schedule, food, & surroundings can all have an impact on sleep. [9-11] Ayurveda warns that irregular sleep patterns can be crippling since they can accelerate aging proc. by causing pathological diseases linked to aging. Studies show that getting too little sleep can mess with circadian rhythms, which can lead to bad health consequences like obesity, heart disease, & cognitive decline. In addition to interfering with circadian rhythms, poor sleep quality also increases the risk of metabolic disorders like diabetes, obesity, and cardiovascular disease.

Dinacharya and Ritucharya

Dinacharya is Ayurvedic regimen of right living is aimed at maintaining health and achieving a long, active life. Charaka Samhita, states "तस्याशिताद्यादाहाराद्वलंवर्णश्च वर्धतेयस्य ऋतु सात्म्यंविदितं चेष्टाहार व्यपाश्रयम्" which means 'the strength and complexion of the person knowing the suitable diet and regimen for every season and practicing accordingly are enhanced.[12]

Ayurveda suggests three daily routines of self-care (morning, noon, and night) for optimal health and longevity. These rules cover everything like wake and sleep times, bowel movements, personal grooming, massages, mindfulness exercises, food, job, and travel at all hours of the day and night. It specifies the best times to sleep, wake up, take care of your teeth, and take care of your skin, ears, nose, and eyes. Along with these routines, there are Yoga, breath work, massage, and bowel habits. These daily rituals were promoted to help prevent any acute or chronic illnesses that have a negative impact on aging, as well as to preserve the synchrony of circadian rhythms with time of day, night, and seasons (Dinacharya, Ratricharya, and Ritucharya, respectively),[13-16] following these routines help in longevity by following ways -

Maintaining Circadian Rhythms: As individuals age, disruptions in circadian rhythms can become more common, leading to issues such as fatigue, disorientation, and sleep disorders. *Dinacharya* emphasizes the alignment of daily activities with natural biological rhythms, particularly focusing on waking up and going to bed at consistent times. By establishing a regular sleep-wake cycle, individuals can stabilize their circadian rhythms, improve sleep quality, and enhance overall energy levels during the day.

Promoting Quality Sleep: Adequate restorative sleep is essential for health and wellbeing, especially as we age. Dinacharya includes practices that promote good sleep hygiene, such as going to bed early, winding down before sleep with calming activities like meditation or reading, and avoiding stimulating activities and screens close to bedtime. These habits help mitigate sleep disorders promote insomnia and deeper, rejuvenating sleep, which is crucial for cognitive function, mood regulation, and physical health in older adults.

Optimizing Nutrition:

nutrition is another Proper cornerstone Dinacharya that supports graceful aging. Ayurveda recommends eating meals that are nourishing, digestible, and tailored to individual constitutional needs (Doshas). This approach includes consuming a variety of fresh, seasonal foods that provide essential nutrients, antioxidants, and phytonutrients. Avoiding heavy, processed, and excessively spicy foods helps maintain digestive health, which can decline with age. By supporting optimal digestion and nutrient absorption, a balanced diet contributes to sustained energy levels, immune function, and overall vitality as individuals age.

Physical Activity and Exercise: Dinacharya advocates for regular physical activity as a means to maintain strength, flexibility, and cardiovascular health throughout life. For graceful aging, Ayurveda recommends exercises that are gentle yet effective, such as yoga. These activities not only improve physical fitness and mobility but also promote joint health, balance, and coordination, reducing the risk of falls and injuries. Regular exercise supports healthy aging by enhancing muscle tone, bone density, and overall functional capacity, enabling individuals to maintain independence and quality of life as they grow older.

Management: Chronic Stress stress can exacerbate the effects of aging, contributing to conditions like hypertension, cardiovascular disease, and cognitive decline. Dinacharya integrates stressreducing practices such as meditation, deep breathing exercises (pranayama), and mindfulness techniques. These practices promote relaxation, reduce cortisol levels, and enhance resilience to stressors. By cultivating a calm and balanced mind, individuals can improve sleep quality, immune function, and emotional well-being, contributing to graceful aging and overall longevity.

Personal Hygiene and Self-Care: Dinacharya emphasizes the importance of personal hygiene and self-care practices that support physical health and well-being. This includes daily routines such as oral hygiene, skincare, and grooming rituals, which help prevent infections, maintain skin health, and enhance overall cleanliness. Taking care of one's appearance and physical condition boosts self-esteem and confidence, contributing to a positive self-image and sense of well-being in older age.

Pranayama and Yoga

Pranayama helps to procure oxygenated blood to various organs and body tissues. Pranayama helps to improve bio-energy and proper conjugation of respiratory and nervous system.[17] Yoga is beneficial in the prevention and control of common health and emotional problems that are linked with old age. The aging process can be postponed by engaging in daily yoga, meditation, and pranayama (breath exercises). The findings of a meta-analysis study unequivocally demonstrate that the afore mentioned yoga techniques improve cardiovascular and respiratory health, increase muscular strength and body flexibility, and facilitate recovery from addiction, reduce chronic pain, stress, anxiety, and depression, promote general well-being and quality of life, and improve sleep patterns.[18,19] These combined practices promote appropriate body, mind, and emotion synchronization, remove waste, and make it easier for oxygenated blood to reach different organs and body tissues. These routines maintain mental, emotional, and physical equilibrium, which promotes a longer lifespan.

Panchakarma

Ayurvedic Panchakarma therapies, which include detoxification, periodic purification, rejuvenation, are highly recommended because they nourish and strengthen the deeper tissues (*Dhatus*) and alleviate age-related health problems. Therapies including Snehan and Swedan are crucial because they counteract the dryness and coldness associated with aging, which is caused by Vata. Through enhanced lymphatic drainage and overall vigor, panchakarma therapies provide quick blood circulation, continuous cerebral blood flow, and the efflux of toxic matter in older persons.

A study conducted explored altered metabolomic profiles after a Panchakarma-based Ayurvedic intervention in healthy individuals revealed that in comparison to as well as other metabolites such the control group, Panchkarma group shows significant reductions in 12 phosphatidylcholines, amino acids, biogenic amines, acylcarnitines, glycerophospholipids, and sphingolipids. substantial changes in plasma metabolites are in line with host metabolism and gut microbiota metabolic shifts that support overall health may contribute to healthy aging and longevity and could be beneficial in age-related diseases.[20,21]

Vayasthpana Drugs

Dalhana has explained the Acharya word "Vayasthpana" by giving its two meanings of "Vayasthapana": It enables the person to live a full life span of 100 years. It makes the man to live young for a long period thus prevents the Jara.[22] Charak mentioned Aacharya Vayasthapana Mahakashaya Dravyas in Sutra Sthana and said the drugs which prevents ageing process is known as Vayasthapana.

अमृताऽभयाधात्रीमुक्ताश्वेताजीवन्त्यतिरसामण्डूकपर्णीस्थिरापुनर्नवा इति दशेमानि वयःस्थापनानि भवन्ति" ॥**[23]**

A clinical study on 50 male volunteers aged 45-55 years using Vayasthapana drugs, a compound of 8 herbs mentioned by Acharya Charaka, in capsule form. The study assessed biochemical investigations, Hamilton Anxiety Rating Scale, and physical and mental health parameters before and after the trial. Result of studies reveal significant anti-oxidant activity, improved body moderate joint pain relief, muscle cramp relief, appetite loss, constipation relief, anxiety relief, stress reduction, and increased Hb%, RBC, and total proteins.[24]

These drugs postpone Kala Jara and prevent Akala Jara by acting in accordance with their Rasa, Guna, Virya, Vipaka, and Prabhava. According to current researches, these Vayasthapana medications also demonstrated a number of other qualities, including immunomodulation, anti-stress, anti-inflammatory, detoxification, antioxidant, anti-ulcer, depressant, antifungal, antiseptic, and antimicrobial qualities. Therefore, it is advised to investigate and utilize the Vayasthapana medications demonstrate their effectiveness in aging.

Conclusion

Ayurveda offers tried-and-true remedies for aging in a healthy way and views aging as a normal and unavoidable process. Living in harmony with nature, the environment, universal consciousness, and one's own constitution are the tenets of Ayurveda. Therefore, in order to age healthily, a person must adopt harmonious impressions, adopt routines and healthy lifestyle habits that support overall wellbeing, and promote the transformation of the body and mind through harmonious decisions and deeds. Numerous factors have been explored that increase an individual's aging factor.

These include environmental substances, such as pollution micro pollutants, which increase oxidative stress and inflammation in the body in humans. These side effects can occasionally be so severe that they raise the likelihood of developing health issues like neuro-inflammation, neurodegeneration, and other cellular degenerations in the body. The importance of sleep in Ayurveda cannot be overstated. A person must adhere to a regular sleep schedule and get enough sleep each day. It can't be achieved by rewarding yourself once a week for the entire week; it needs to be avoided. The body's aging factors are also influenced by a proper regimen. Numerous factors have been explored that increase an individual's aging factor. These include environmental substances, such as pollution micro pollutants, which increase oxidative stress and inflammation in the body in humans. These side effects can occasionally be so severe that they raise the likelihood of developing health issues like neuroinflammation, neurodegeneration, and other cellular degenerations in the body. Ayurveda says that it is crucial to take sleep into account. A person must stick to their sleeping schedule and make sure they get enough sleep each day. It can't be achieved by rewarding yourself once a week for the entire week; it needs to be avoided. The human body and its aging elements are also influenced by appropriate routine factors. Unmanaged stress, worry, and despair in daily life is one of the biggest causes of premature aging. Anger throws off these entire cycles and causes the body's processing and functions to perform incorrectly. Food consumption, or Aahar, is another important component that has a big impact on how well the human body functions. Given that metabolism has a major role in delaying the aging process, Aahar gains significance in and of itself. Researchers will always be interested in ageing and its reserves since, in the modern world, ageing is a hot topic for discussion.

References

- 1. United Nations. Ageing [Internet]. New York: United Nations; [cited 2025 Aug 3]. Available from: https://www.
- un.org/en/sections/issuesdepth/ageing/ [Crossref] [PubMed][Google Scholar]
- 2. CCRS. Ayurvedic management of select geriatric disease conditions. New Delhi: Central Council for Research in Ayurvedic Sciences; 2011. p. 14 [Crossref][PubMed][Google Scholar]

- 3. Babu G. Role of Achara Rasayana in Chittodvega. PubMed. 2007 Apr. [Crossref][PubMed][Google Scholar]
- 4. Tripathi B, editor. Charaka Samhita. Varanasi: Chowkhamba Surbharati Prakashan; 2007. Chapter 6. [Crossref][PubMed][Google Scholar]
- 5. Agrawal AK, Yadav CR, Meena MS. Physiological aspects of agni. Ayu. 2010;31(3):395–8. [Crossref] [PubMed][Google Scholar]
- 6. Bijita C, Basumatary K. Concept of jatharagni in Ayurveda with special reference to enzymes. Int J Appl Ayurved Res. 2016;2(9):1133-40. [Crossref] [PubMed][Google Scholar]
- 7. Gond P, Kumar J, Byadgi PS, Singh L. Importance of agni and its impact on human body. Int J Pharm Med Res. 2015;3(3):186–90. [Crossref][PubMed] [Google Scholar]
- 8. Nagaraj K, Rateesh CT, Pratibha K. Concept of relationship between jatharagni, pitta, dhatwagni an appraisal. Int Ayurvedic Med J. 2014;2(9):1076–9. [Crossref][PubMed][Google Scholar]
- 9. Rao RV. Ahara-Vihara: the yoga of healthy eating. Ayurveda J Health. 2015;13:35–6. [Crossref] [PubMed][Google Scholar]
- 10. Rao RV. Sleep: a pillar of life. Ayurveda J Health. 2014;12:15–6. [Crossref][PubMed][Google Scholar]
- 11. Watson NF, Badr MS, Belenky G, Bliwise DL, Buxton OM, Buysse D, et al. Joint consensus statement of the American Academy of Sleep Medicine and Sleep Research Society on the recommended amount of sleep for a healthy adult: methodology and discussion. Sleep. 2015;38(8):1161–83. [Crossref][PubMed][Google Scholar]
- 12. Halpern M. Healing your life: lessons on the path of Ayurveda—the healing rhythms of daily life. Vol. 14. *Twin Lakes: Lotus Press; 2011. p.169–88 [Crossref][PubMed][Google Scholar]*
- 13. Yadavaji Trikamji Acharya, editor. Charaka Samhita with Ayurveda Deepika Teeka of Chakrapanidatta. Varanasi: Chaukhamba Surbharati Prakashan; 2016. Sutrasthana, Chapter 6, Shloka 3. [Crossref][PubMed][Google Scholar]
- 14. Devi D, Srivastava R, Dwivedi BK. A critical review of concept of aging in Ayurveda. Ayu. 2010;31(4):516-9. [Crossref][PubMed][Google Scholar]

Sudeeksha V et al. Role of Ayurveda in Graceful Ageing

- 15. Burdak SL, Gupta N. A review of preventive health care in geriatrics through Ayurveda. Int J Ayurvedic Med. 2015;6(2):100–12. [Crossref] [PubMed][Google Scholar]
- 16. Singh K. Yogic lifestyle and geriatric care: a review article. Int Ayurvedic Med J. 2017;5(3):263-8. [Crossref][PubMed][Google Scholar]
- 17. Vivek A. An Ayurvedic insight towards ageing with its preventive measures. Int J Res Ayur Pharm. 2013;4(1):31–3. [Crossref][PubMed][Google Scholar]
- 18. Woodyard C. Exploring the therapeutic effects of yoga and its ability to increase quality of life. Int J Yoga. 2011;4(2):49–54. [Crossref][PubMed][Google Scholar]
- 19. Brown RP, Gerbarg PL. Yoga breathing, meditation, and longevity. Ann N Y Acad Sci. 2009;1172:54–62. [Crossref][PubMed][Google Scholar]
- 20. Peterson CT, Lucas J, John-Williams LS, Thompson JW, Moseley MA, Patel S. Identification of altered metabolomic profiles following a Panchakarma-based Ayurvedic intervention in healthy subjects: the self-directed biological transformation initiative (SBTI). Sci Rep. 2016;6. [Crossref][PubMed][Google Scholar]

- 21. Rao RV. Ayurveda and the science of aging. J Ayurveda Integr Med. 2018;9(3):225–32. doi: 10.1016/j.jaim.2017.10.002. PMID: 29276113; PMCID: PMC6148064 [Crossref][PubMed][Google Scholar]
- 22. Sharma PV. Dravyaguna Vijnana. Vol. 2. Reprint ed. Varanasi: Chaukhamba Bharti Academy; 2006 [Crossref][PubMed][Google Scholar]
- 23. Sastri SN, editor. Charaka Samhita (Vidyotini Hindi Commentary). Vol. 1. Varanasi: Caukhambha Bharati Academy; 2011. Sutrasthana, Chapter 4, Shloka 50. p.98 [Crossref][PubMed][Google Scholar]
- 24. Reddy DVG, Nisheteswar K. Evaluation of rasayana effect of vayasthapana drugs. Anc Sci Life. 2012;32(Suppl 1):S109. *PMCID: PMC3800862* [Crossref][PubMed][Google Scholar]

Disclaimer / Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of Journals and/or the editor(s). Journals and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.