



NOTION OF JARA IN AYURVEDA

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ABSTRACT

Humanity has always been interested in maintaining and enhancing youth and increasing longevity by slowing down or preventing the ageing process. Five percent of people on the planet will be over 65 by 2030. Numerous health issues come with growing older, and research on the population suggest that the elderly will require three to five times as many healthcare services as people in their early years. Experts in ageing conduct research centered on strategies for delaying the ageing process by disrupting its natural progression. Among the interventions are body part cloning, restricted food intake, and anti-ageing medications to prolong youth and postpone biological ageing. One of the most respected mind-body-spirit medical systems in the world, Ayurveda, presents several theories regarding the ageing process. This medical approach offers treatments for "healthy ageing" to extend life expectancy and promote optimal health via living in balance with the natural world.

KEYWORDS :**INTRODUCTION**

Ageing is the culmination of all physiological alterations that eventually cause an individual to pass away. It can also refer to a steady functional reduction in physiological function and a drop in fertility with age, or it can be defined as the intrinsic, inescapable, and irreversible age-associated loss of viability that makes us more vulnerable to various diseases and mortality.⁽¹⁾ Human ageing is unquestionably linked to a variety of physiological and cellular alterations that restrict our ability to operate normally and increase our risk of dying. There are two primary types of ageing: Chronological Ageing, which describes an individual's true age expressed in years, months, and days. This is an inevitable, irrevocable, and unstoppable aspect of ageing. The second factor is physiological/biological ageing, which describes how a person develops and changes according to certain cellular or molecular characteristics.⁽²⁾

Ageing is caused by alterations on the cellular level, such as decreased stem cell proliferation in many tissues, build-up of free radicals and toxic protein aggregates, accumulation of senescent cells that cause inflammation, and compromised mitochondrial function. Early indications of ageing are linked, at the genomic level, to telomere shortening, defective DNA repair processes, and a build-up of DNA mutations.

Reason for accelerating ageing

Although ageing is an inevitable process, there are strategies to lessen or postpone its harmful effects. This include researching ways to slow down ageing at the cellular, genetic, and/or other levels as well as determining whether any of the aging-related factors listed above can be treated with appropriate medication. Scholars put up a minimum of seven intricately linked mechanisms that facilitate the ageing process, so offering a structure for identifying programme intermediaries and potential treatment options. Understanding these variables that also contribute to age-related illnesses will be useful in the search for anti-ageing drugs.⁽³⁾ Among these, metabolism has generated a great deal of interest, and scientists have been attempting to determine why calorie restriction increases the lifespan of mice and other animals. Reduced oxidative damage may arise from burning less calories, or on the other hand, a deficiency in nutrients may set off defence mechanisms that keep the organism from deteriorating. Numerous molecular pathways that control metabolism have been identified by researchers. One day, without sacrificing food intake, these pathways' specific products could be modified through appropriate medication-

based therapies to replicate the long-lasting benefits of calorie restriction in humans.⁽⁴⁾

Ayurveda and science of aging

Jara, also known as *Vardhakya* (ageing), is the state of having aged due to wear and tear. Ayurveda says that ageing, or Jara, is a natural occurrence, just like hunger, thirst, or sleep. According to Charaka's doctrine of natural destructions (*Swabhavoparamavada*), death after birth is a state of natural flow, therefore while there is a cause for a being's appearance, there is no cause for its cessation. Four entities are indicated by the term Jara:

- *Nityaga*, which means continuity of consciousness;
- *Dhari*, which indicates the factor preventing the body from *Jara/aging*;
- *Jeevitam*, which implies the act of maintaining life; and
- *Anubandha*, which indicates the body's transmigration.⁽⁵⁾

As such, factors impacting *Shareera* (physical), *Indriya* (emotional), *Satwa* (psychological level), *Agni* (metabolism), and *Bala/Ojas* (immunity) all have an impact on *Jara* (aging). Furthermore, an individual's ageing process is also influenced by *Parinama* (cellular transformation), *Sharira vridhikara bhavas* (genotypic and phenotypic features), and *Garbhahinivrittikara bhava* (pregnancy-induced foetal development and alterations).⁽⁶⁾

Decay is a part of *Jara*, and it shows up as a variety of degenerative alterations. These changes are not pleasant even though they are a natural part of ageing (*Kalaja Vridhdhavastha*).⁽⁷⁾ The Ageing process that causes mental and physical suffering is triggered by misusing the five senses (*Pancha Tanmatras*), bringing in disharmonious impressions through the five sense organs (*Pancha Inanendriyas*), and making poor decisions that encourage unhealthy transformation of the body and mind (*Parinama*).⁽⁸⁾ Illnesses of the mind and body impair *dhatu-samyak* (homeostasis), which leads to *Akalaja vridhdhavastha* (pathological ageing).⁽⁹⁾ *Dhatu-samyak*, a condition of equilibrium of proper anatomical, biochemical, physiological, mental, and spiritual well-being, is maintained in a holistic manner by Ayurveda.⁽¹⁰⁾

A healthy state in Ayurveda refers to a balanced state (*Sama*) of tissue (*Dhatu*), energy systems (*Dosha*), heat of transformation (*Agni*), and metabolic wastes (*Mala*).⁽¹¹⁾ The following are some of the key elements influencing Jara/healthy ageing:

First is Kala Parinama (time and transition) encompasses all

creation, it is one of the most significant and powerful factors influencing Jara, or ageing.⁽¹²⁾ The term describes the changes in our bodies and minds that come with ageing and time. Disharmonious alterations and harmful transformations can be brought on by being out of balance with nature's rhythms and cycles, which leaves the body susceptible to illness and premature ageing.⁽¹³⁾ Ayurveda categorises Vaya in different life stages: childhood (*Bala*, up to age 16), adolescence/teenage (*Vivardhamana*, 16–20 years of age), youth (*Youvana*, 20–30 years), matured individual (*Sampoornata*, 30–40 years), aged individual (*Parihani*, 40–60 years), and older adults (last stage of life—*Jirna* or *Vridhdhavastha*).⁽¹⁴⁾ The lifestyle chosen at each step of this growth has a significant impact on the aging process because of the different changes in the body that occur during these phases of life due to the influence of *Kala*.

Prakriti is next factor which referred as an individual's biological composition, which includes their anatomy, physiology, and psychology. Every person has a *Prakriti* that is specific to them and represents their innate strengths and weaknesses, immunity, metabolism, mental health, and proclivities.⁽¹⁵⁾ As a result, *Prakriti* assesses a person's potential for change on a mental, emotional, and physical level due to interactions with both internal and external factors that all impact the aging process.⁽¹⁶⁾

Cellular lifespan is determined by *Doshas* or biological energy systems. *Vata* is the energy of movement and directs all biological activity and life activities. Metabolism and digestion are governed by *Pitta*. The building and lubricating energy of *kapha* gives the body its physical form, structure, and the smooth operation of all its parts. It also governs anabolism. The state and interactions of the *Doshas* within the body directly influence health and illness, which in turn accelerates or slows down the aging process.⁽¹⁵⁾ A balanced *Dosha* can be achieved by a good diet, regular exercise, and a peaceful lifestyle, guaranteeing a long and healthy life.⁽¹⁷⁾

Diet, or *Ahara*, is another significant component that affects aging and Jara. A discordant lifestyle combined with an unsatisfactory food (*GramyaAhara*) can cause the vitiation of one or more of the three *Doshas*, resulting in pathological alterations and a shortened lifetime. Unhealthy eating habits encompass a variety of behaviors, such as mistimed meal scheduling, eating late into the night, making poor food selections, consuming stale, processed, or overly refined food, eating cold food, dining in a noisy setting, and eating while under stress.⁽¹⁸⁾

Acharya is Another essential factor in the aging process is the physiological machinery known as *achara* (routines), which governs the circadian rhythm or the 24-hour body clock. Ayurveda offers a number of instructions regarding how the biological clock functions.⁽¹⁹⁾ These recommendations cover things like the best times to go to bed and wake up, breathing exercises, bowel movements, baths, massages, exercise, food, studying, travel, and other activities. Ayurveda suggests leading a balanced and healthful lifestyle in order to preserve the circadian rhythm's synchronicity, which promotes immunity, vigor, and good health—all of which postpone biological aging.⁽¹⁹⁾

Jatharagni is the symbol for all bodily metabolic processes and acts as the primary digestive fire. This covers the processes of digestion, cellular metabolism, sense perception, thinking processes, and the processing of emotional and mental impulses. When *Jatharagni* is too weak, food digestion is hampered, which leads to malabsorption and toxin buildup (*Āma*). Overuse of *Jatharagni* can cause tissue degeneration by burning off the related tissues. Hence *Jatharagni* affects the ageing process.⁽²⁰⁾

Factor to delay the Kalaja jara

Restoring the natural balance and simultaneous functioning of all systems at the level of the body, mind, and emotions is the justification for such a comprehensive therapeutic intervention. The overall strategy is a tailored and unique method that encompasses all therapeutic procedures to improve the patient's lifespan and consists of the following:

Dincharya maintenance

In *Ayurveda*, three types of regimen are explained for maintain the health- *Dinacharya*, *Ratricharya*, and *Ritucharya*. *Dincharya* rules cover everything like wake and sleep times, bowel movements, personal grooming, massages, mindfulness exercises, food etc. 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 season. Different day and night regimen are told to maintain health in different season. These *Ayurvedic* ideas about daily routines have had a significant impact on health studies and have contributed to the development of the rapidly expanding subject of chronobiology. The significance of routines, biological clocks, and circadian rhythms and their involvement in aging, well-being, and morbidity are only now being recognized by scientists. Time-bound habits have been shown to extend longevity and improve health, according to researchers investigating chronobiology.

Panchakarma for maintain health

Ayurvedic panchakarma therapies, which include periodic detoxification, purification, and rejuvenation, are highly recommended because they nourish and strengthen the deeper tissues (*Dhatus*) and alleviate age-related health problems. Therapies including oleation and fomentation are crucial because they counteract the dryness and coldness associated with aging, which is caused by *Vata*. Through improved lymphatic drainage, panchakarma treatments guarantee quick blood circulation, steady cerebral blood flow, and the removal of harmful materials.⁽²¹⁾ A recent investigation of panchakarma's effects on cells found modifications to a number of metabolites in numerous pathways.⁽²²⁾

Ashtang Yoga

Regular yoga, meditation, and pranayama (breath exercises) practice can slow down the aging process. Through *Ashtang* yoga, the body, mind, and emotions are more properly coordinated, and oxygenated blood is more easily transported to different organs and bodily tissues. By maintaining the body's equilibrium on all levels—physical, mental, and emotional—these activities promote longevity in health.⁽²³⁾

Sadvritta

Examining one's values, interpersonal interactions, and social behavior is made possible by *sadvritta*. Maintaining the harmony between a person's body and mind and enhancing mental health are two benefits of cultivating these moral practices. One of those moral practices is the provision of selfless service or activity without any personal expectation in return for the assistance. To be selfless, one must provide any service without expecting anything in return and must not be impacted by the service's outcome.⁽²⁴⁾ Regardless of the result, the person must also develop a loving attitude toward the unselfish work. *Sadvritta* (moral behavior and ethical practices) help to maintain body-mind balance, prevent mental illnesses, and navigate the obstacles that come with growing older.

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, 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. Unfortunately, these Ayurvedic ideas of aging have been reduced to a conceptual model due to a lack of comprehensive safety and efficacy research or proof-of-concept experiments. Therefore, a combinatorial strategy that combines the finest of contemporary medicine with Ayurvedic principles will guarantee prolonging life for an extended period.

REFERENCES

1. Medawar P.B. 1952. An unsolved problem of biology.
2. Jia L., Zhang W., Chen X. Common methods of biological age estimation. *Clin Interv Aging*. 2017;12:759-772
3. Kennedy B.K., Berger S.L., Brunet A., Campisi J., Cuervo A.M., Epel E.S. Geroscience: linking aging to chronic disease. *Cell*. 2014;159:709-713
4. Ramis M.R., Esteban S., Miralles A., Tan D.X., Reiter R.J. Caloric restriction, resveratrol and melatonin: role of SIRT1 and implications for aging and related-diseases. *Mech Ageing Dev*. 2015;146-148:28-41.
5. Dornala S.N., Dornala S.S.N. GERIATYUTRICS-ayurvedic perspective of senescence and rejuvenescence. *Ayushdhara*. 2016;3:574-583.
6. Devi D., Srivastava R., Dwivedi B.K. A critical review of concept of aging in ayurveda. *Ayu*. 2010;31:516-519.
7. Burdak S.L., Gupta N. A review of preventive health care in geriatrics through ayurveda. *Int J Ayurvedic Med*. 2015;6:100-112.
8. Vivek A. An ayurvedic insight towards ageing with its preventive measures. *Int J Res Ayur Pharm*. 2013;4:31-33.
9. Ninivaggi F.J. vol. 6. Rowman & Littlefield Publishers, (A comprehensive guide to traditional Indian medicine for the west-health and the disease Process-1), Inc; 2010. p. 136
10. Purvya M.C., Meena M.S. A review on role of prakriti in aging. *Ayu*. 2011;32:20-24.
11. Garg K.G., Meenakshi S., Ramesh K. Medical and socio-economic problems of old age people and their management. *Int Ayurvedic Med J*. 2015; 3:165-175.
12. Dwivedi K.K., Paul M., Behere P.B., Singh R.H. The concept of aging in ayurveda. *Anc Sci Life*. 1993;12:377-387.
13. Singhal A., Gupta K. Process of ageing - an ayurvedic perspective. *J Ayurveda Integr Med Sci*. 2016;1:78-82.
14. Devi D., Srivastava R., Dwivedi B.K. A critical review of concept of aging in ayurveda. *Ayu*. 2010;31:516-519.
15. Ninivaggi F.J. vol. 3. Rowman & Littlefield Publishers, Inc; 2010. pp. 59-85. (A comprehensive guide to traditional Indian medicine for the west-anatomy).
16. Samarakoon S.M., Chandola H.M., Ravishankar B. Effect of dietary, social, and lifestyle determinants of accelerated aging and its common clinical presentation: a survey study. *Ayu*. 2011;32:315-321.
17. Burdak S.L., Gupta N. A review of preventive health care in geriatrics through ayurveda. *Int J Ayurvedic Med*. 2015;6:100-112.
18. Myles I.A. Fast food fever: reviewing the impacts of the Western diet on immunity. *Nutr J*. 2014;13:61.
19. Chavan S.O., Patil R.Y. Approach towards life style modification plan as per ayurveda and modern technique for prevention of geriatrics. *Int Res J Pharm*. 2013;4:12-15.
20. Gond P., Kumar J., Byadgi P.S., Singh L. Importance of agni and its impact on human body. *Int J Pharm Med Res*. 2015;3:186-190.
21. Bredesen D.E., Rao R.V. Ayurvedic profiling of alzheimer's disease. *Altern Ther Health Med*. 2017;23(3):46-50.
22. Peterson C.T., Lucas J., John-Williams L.S., Thompson J.W., Moseley M.A., 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
23. Halpern M. vol. 14. Lotus Press; 2011. pp. 169-188. (Healing your life-lessons on the path of ayurveda-the healing rhythms of daily life).
24. Tawalare K.A., Nanote K.D., Gawai V.U., Gotmare A.Y. Contribution of ayurveda in foundation of basic tenets of bioethics. *Ayu*. 2014;35:366-370.