

“ Ayurveda: A New Horizon For Healthy Ageing”

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ABSTRACT:

Ageing is related with changes in unique organic, physiological, ecological, mental, conduct, and social procedures. Some age-related changes are benevolent, for example, turning gray hair. Others bring about decreases in capacity of the faculties and exercises of day by day life and expanded vulnerability to and recurrence of malady, fragility, or incapacity. Truth be told, propelling age is the significant hazard factor for various interminable illnesses in people. Constantly 2020, the World will have more than one billion individuals matured 60 and over, and more than 66% of them will live in the developing nations.

Ayurveda has a comprehensive methodology toward every one of the tragedies of man and aging is one of these. It is delegated one of the common and *Yapya* (palliative) illnesses. It is the way toward getting old and rotting. In the *Ayurvedic* writings, a far reaching depiction has been given of aging. *Ayurveda* has an engaged part of medication called *Rasayana* (Rejuvenation) which solely manages the issues identified with maturing and techniques to counter the equivalent. Geriatrics or *Jara-chikitsa* or *Rasayana* in *Ayurveda* is a technique to control/slow down/capture the ageing procedure in the person during the degenerative stage in one's life. The point of this calculated article is to assemble and reconsider the different standards identified with various parts of (*Jara*) ageing.

Key words: -. Ageing, Ayurveda, Yapya, Jara-chikitsa, Rasayana.

Introduction:

According to data from World Population Prospects: the 2019 Revision, by 2050, one in six people in the world will be over age 65 (16%), up from one in 11 in 2019 (9%). By 2050, one in four persons living in Europe and Northern America could be aged 65 or over. In 2018, for the first time in history, persons aged 65 or above outnumbered children under five years of age globally. The number of persons aged 80 years or over is projected to triple, from 143 million in 2019 to 426 million in 2050^[1]. WHO defines Healthy Ageing^[2] “as the process of developing and maintaining the functional ability that enables wellbeing in older age”. Functional ability is about having the capabilities that enable all people to be and do what they have reason to value. This includes a person’s ability to:

- meet their basic needs
- to learn, grow and make decisions
- to be mobile
- to build and maintain relationships

- to contribute to society

Most of existing definitions are based or extend classical definition developed by Rowe and Kahn^[3] which stated the successful ageing as a balance of three components: absence of disease and disease-related disability, high functional capacity, and active engagement with life^[3,4]. Some researchers, as well as older people themselves, suggest that the presence of any chronic disease is not clearly related to healthy ageing, because most of older respondents have some disease and they are “used to” inconvenience related to this disease. The problem might be more visible if the disease strongly influences on everyday activities, or may be source of pain or some psychological disorders^[5,6].

Aim: -

1. To explore and re-evaluate the various *Ayurvedic* concepts and principles related to age and ageing.
2. To explore the relationship between ageing and *Doshas - Agni – Dhaatu – Prakriti* etc.
3. To explore the different treatment modalities described for ageing in *Ayurveda*.

Materials and Methods:-

Materials related to *Jara*, Ageing, *Vaya*, and other related topics have been collected. The main *Ayurvedic* texts used in this study are *Charak Samhita*, *Sushruta Samhita*, *Ashtang Samgraha*, *Ashtang Hridaya*, *Bhava Prakash*, and *Sharangdhar Samhita* etc. We have also referred to the modern books and searched various websites to collect information on the relevant topics.

DETERMINANTS OF HEALTHY AGEING:

Healthy ageing depends on genetic, environmental and behavioural factors, as well as socioeconomic status. Although some of the variations in older people's health are genetic, much is due to people's physical and social environments – including their homes, neighborhoods, and communities, as well as their personal characteristics – such as their sex, ethnicity, or socioeconomic status. These factors start to influence the ageing process at an early stage. The environments that people live in as children – or even as developing fetuses – combined with their personal characteristics, have long-term effects on how they age. Maintaining healthy behaviors throughout life, particularly eating a balanced diet, engaging in regular physical activity, and refraining from tobacco use all contribute to reducing the risk of non-communicable diseases and improving physical and mental capacity. Strength

training to maintain muscle mass and good nutrition can both help to preserve cognitive function, delay care dependency, and reverse frailty^[7].

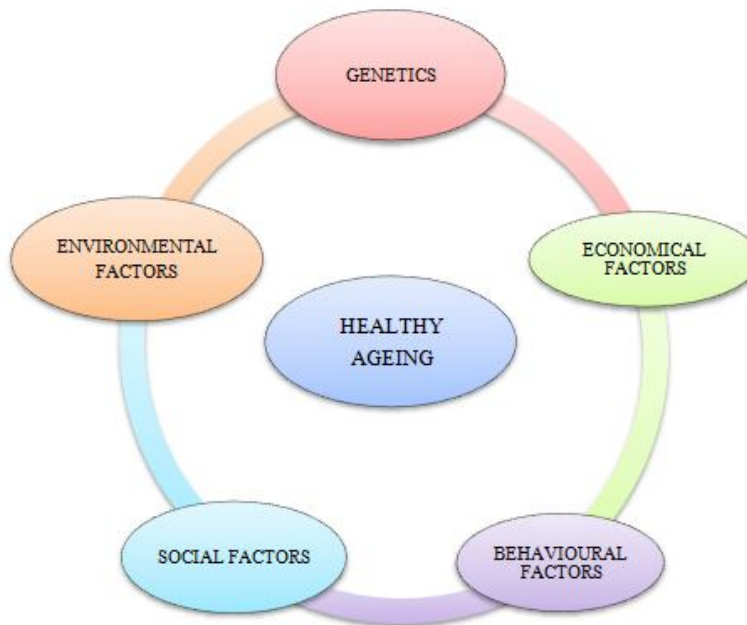


Fig. 1: Determinants of Healthy Ageing

As per Ayurveda the determinants of health are biological, ecological, medical, psychological, socio-cultural, spiritual and supernatural factors, all interdependent and wired together by the common concept of relationship. The harmonization and combination of these determinants in a complex system allows the rise of what is distinguished as health.

Ayurveda describes health as *swastha*, a sanskrit term meaning “stability in the true self”, a state of complete, balanced, physical, mental and spiritual well-being^[8,9]. *Ayurveda* is a traditional healthcare system affording creation of positive health and enforcing total quality life issues. The exceptional wellbeing appraisal approach of *Ayurveda* - through individual constitution assurance which thinks about body, mind, conduct, condition, profound mentality may prompt progressively viable techniques of anticipation that will improve life quality, limit drugs use (maintaining a strategic distance from costly reactions) and decrease incessant maladies social expenses.

Concept of Vaya (Age) & Jara (Ageing) in Ayurveda:-

Vaya is defined as the state of body corresponding to the length of time that has passed since birth. Vaya (Age) is one of the ways to achieve the knowledge regarding Ayu (span of life) besides other tools^[10].

Age is broadly divided into three stages *Bala* (childhood), *Madhya* (middle age) and *Jirna* (old age).

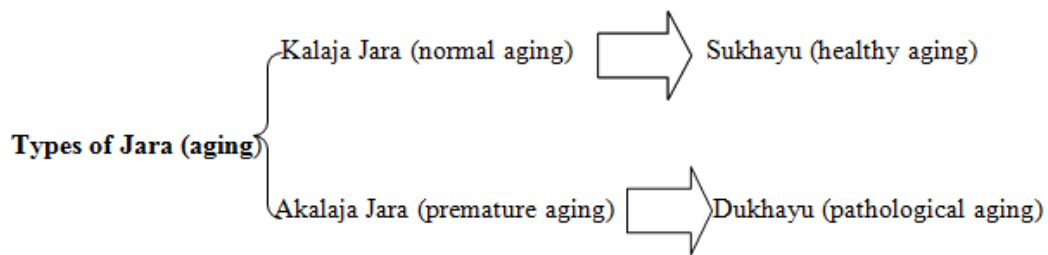
Table 1: Vaya according to various Ayurvedic Scholars^[11,12,13,14]

Scholar	<i>Bala</i> (Early Young Age)	<i>Madhyama</i> (Middle Age)	<i>Vridhdha</i> (Old Age)
Charaka	Up-to 30 years <i>Aparipakva dhatu</i> (Immature stage)–upto16 years <i>Vivardhamana dhatu</i> (Growing stage) –upto30 Years	30- 60 years	60- 100 years
Sushruta	Up-to 16 years <i>Kshirapa</i> (Milk Consumption- Up-to 1 year) <i>Kshirannada</i> (Milk & Solid-1 to 2 years) <i>Annada</i> (Solid Food – 2 to 16 years)	16- 70 years <i>Vridddhi</i> (Growth Phase- 16 to 20 years) <i>Yauvana</i> (Youth &Adolescence – 20 to 30 years) <i>Sampurna</i> (Mature Stage- 30 to 40 years) <i>Parihani</i> (Degenerative Phase – 40 to 70 years)	after 70 years
Vagbhata	Up-to 16 years	16-70 years	after 70 years
Vridhdha Vagbhata	Up-to 16 years	16 - 60 years <i>Youvana</i> (Youth &Adolescence – 16 to 30 years) <i>Sampoornata</i> (Mature Stage – 30 to 40 years) <i>Parihani</i> (Degenerative Phase – 40 to 60 years)	after 60 years

Charaka defines the *Vaya* as a factor which depends upon the *Kala Pramana Vishesha* i.e., quantum of time duration while *Arunadatta* defined it as time bound changes occurring in the body^[15]. *Ayurveda* deliberates on the process of ageing and sequential senile changes in different ways in different contexts such as *Balyavastha*, *Madhya avastha* and *Vridhdhavastha*

hallmarked by *Kapha*, *Pitta* and *Vata* activities respectively. *Vata* is the drying and decaying force and is the master *dosha* in the ageing process.

Jara (Ageing) means to become old by the act of wearing out or it is also known as “*Vardhakya*” meaning increasing age^[16]. In *Atharaveda* *Jara* has been mentioned as *Svabhavik Vyadhi* like hunger, sleep and death. *Acharya Sushruta* also mentioned *Jara* as *Svabhava-Bala-Pravitra vyadhi*^[17]. It is divided in two types i.e. *Kalaja Jara* and *Akalaja Jara*^[18].



Kalaja implies the one which happens opportune. Consequently appearance of sign and symptoms of ageing at a specific planned age is considered as *Kalaja Jara* for example normal ageing. There is a feeling that this kinds of maturing is unavoidable and there are no causative components exist all things considered to avoid its event, thus it is also known as "*Parirakshana Krita*" that implies it happens even by following preventive social insurance measures. *Akalaja* implies one which happens less than ideal. Subsequently appearance of sign and manifestations of ageing preceding planned age is considered as *Akalaja Jara*. This kind of maturing is obtained one. Henceforth known as "*Aparirakshana Krita*" that implies it happens by following ill-advised human services measures. The individual who will pursue carefully the social insurance estimates like, *Dinacharya*, *Rutuchrya* and *Hitavastu Sevana* and so on, he will go to accomplish the *Kalamratyu* for example senescence pursued by death at a specific planned time in his life expectancy, such kind of ageing is considered as *Sukhayu/Niyatayu*. The way toward maturing will be quickened in people who pursue the inappropriate medicinal services measures and an individual are inclined to have "*Akalamrutyu*" i.e., senescence pursued by death preceding the calendar age. Such sort of ageing is considered as *Dukhayu/Aniyata-Ayu* (pathological ageing/unscheduled ageing).

Role of Dosha-Dhatu-Agni-Ojas-Prakriti in Ageing:-

The *Tridoshas* (*Vata*, *Pitta* and *Kapha*) are the most significant factors in the upkeep of good health and during childhood *Kapha dosha*, in the middle age *Pitta dosha* and in the old age *Vata dosha* is said to be transcendent. The properties of *Vata dosha* are mentioned as *ruksha*,

laghu, sheeta, khara and vishada. So *Vata dosha* essentially, decreases luster of skin and body strength, causes dryness as well as hastens Aging process. Aside from doshas, *Agni* additionally has a significant impact in Aging process. The base of all the digestive fire in the body is *Jathragni*^[19]. *Jatharagni* fills in as the portrayal for every single metabolic capacity in the body. This includes the digestive function, cellular metabolism, sense perception, thought function and transformation of mental and emotional impressions^[20]. On the off chance that *Jatharagni* is excessively powerless; the assimilation of nourishment is undermined bringing about mal absorption and aggregation of poisons (*ama*). If *Jatharagni* is too strong, it burns out the associated tissues resulting in tissue degeneration. Thus, the state of *Jatharagni* influences the ageing process. *Agni* is answerable for the change of dietary substances into tissue components. In mature age, predominance of *Vata dosha* prompts *vishamagni* which influences the processing and cause undernourishment of the tissues. This leads *dhatwagnimandya* in the elder people^[21].

Due to *dhatwagnimandya* *poshak dhatu* formation gets influenced and causes a reduction of *dhatu* in old age. As a result of which, the essence of all *dhatu*s, *Oja* is decreased, which is liable for *Sharira Sthairya* i.e. compactness of body elements. *Oja kshaya* prompts the molecular & cellular injury which exceeds their repair capacity and further quickening the Aging process ultimately ending in death^[22].

Prakriti chooses the status of soundness of an individual. It is plainly demonstrated in writings that way of life, nourishment and different exercises ought to be arranged inverse to *Prakriti* for the support of wellbeing. Along these lines, *Prakriti* likewise influences and chooses the quality and pace of ageing. Every one of the constitutions having *Pitta* prevalence tend to endure less than ideal with ageing in light of the fact that *Pitta* synergistically affects the way toward maturing because of its *ushna, tikshna, amla, sara, katu gunas* which quickens the procedure of digestion. In one study related with *prakriti* and ageing it was seen that that the *pitta* transcendence *prakriti* type people have high basal metabolic rate (BMR) and vitality utilization prompting tissue annihilation and untimely maturing and normal life expectancy, while *kapha* prevalence *prakriti* type tend to postponed sign of ageing and longer life span^[23].

Factors that affect Jara:-

1) **Svabhava (Natural Factors)**^[24]- According to *Acharya Charaka* in his *Svabhavaparama vada* explained that the process of degeneration occurs due to *Svabhava* (natural process).

2) **External factors**^[25] - life span of a person depends on two factors namely *Daiva* (unknown factor, deeds of previous life) and *Purusha Karana* (deeds of present life).

3) **Kala (time)**^[26] - *Kala* plays significant role in ageing process. All things in the world undergo several changes before complete destruction. This is called as *Parinama* which is taking place under the influence of *Kala*. Thus it can be say that *Jara* is also the result of *Kala Parinama*.

4) **Shareera Vruddhikara Bhava–Abhava**^[27] – There is description of some of the factors which promote growth whereas the absence representing the senescence. These are *Kala Yoga* (time), *Sabhavasamsiddhi* (natural phenomenon), *Aharasaustava* (food which is taken) and *Avighaata* (absence of devastating causes). The gradual reduction or lack of the above factors may lead to reduced growth of a person there by ageing occurs.

Natural Bio-Loss in Ageing as Per Ayurveda:-

The *Sharangadhara Samhita* and *Astanga sangraha*, describes the sequential bio-loss occurring during different decades of life due to process of ageing. *Sharangadhara* is having similar view as mentioned in *Astanga sangraha* with mild modification considering maximal life span of 120 years in place of 100 years.

Table 2: Showing Natural Bio-Loss as per Ayurveda^[28,29]

Natural Bio-Loss		
Decade of Life	(As.Sangraha Sha. 8/25)	(Sha.Samhita Pu. 6/19)
1 st (0-10 Years)	<i>Balya</i> (Childhood)	<i>Balya</i> (Childhood)
2 nd (11-20 Years)	<i>Vridhhi</i> (Growth)	<i>Vridhhi</i> (Growth)
3 rd (21-30 Years)	<i>Chavi</i> (Complexion)	<i>Chavi</i> (Complexion)
4 th (31-40 Years)	<i>Medha</i> (Intellect)	<i>Medha</i> (Intellect)
5 th (41-50 Years)	<i>Tvak</i> (Skin properties)	<i>Tvak</i> (Skin properties)
6 th (51-60 Years)	<i>Shukra</i> (Reproduction)	<i>Drishti</i> (Vision)
7 th (61-70 Years)	<i>Drishti</i> (Vision)	<i>Shukra</i> (Reproduction)
8 th (71-80 Years)	<i>Karnya</i> (Hearing)	<i>Vikrama</i> (Valour)
9 th (81-90 Years)	<i>Buddhi</i> (Reasoning capacity)	<i>Buddhi</i> (Reasoning capacity)
10 th (91-100 Years)	All Sensory and motor function	<i>Karmendriya</i> (Motor function)
11 th (101-111 Years)		<i>Cheta</i> (mind)
12 th (111-120 Years)		<i>Jivita</i> (life)

Preventive – Restorative – Therapeutic Measures:

Ayurveda has a broad spectrum of preventive, restorative and therapeutic measures for combating the Aging and age related disorders. *Ayurveda* advocates wonderful approach to delay Kala-jara (natural Aging) and to avoid *Akala-jara* (Premature Aging). *Ayurveda* gives primary importance to preventive health care.

For healthy life and as a preventive measure (Preventive as well as Restorative) *Ayurveda* advocated to follow the principles of *Swasthavritta* in form of-

- *Dincharya* (Daily regimen), *Ratricharya* (Night regimen), *Ritucharya* (Seasonal regimen), for ex. *Abhayanga*^[30] (body massage), *Nasya*^[31] (oily nasal drops), Regular expulsion of vitiated *Dosha* according to *Ritu* (season) by *Panchakarma*^[32] etc.
- Proper use of *Tryopastambha* (diet, sleep, and coitus)^[33]
- To follow the principles of code of conduct (*Sadvritta*- The path of ethical, social, mental, moral and physical conduct)
- To bear *Dharniya vega* (suppressible urges) and to expel *Adharniya vega* (un suppressible urges) as mentioned in *Ayurveda*^[34]
- Regular use and practice of preventive and promotive /Restorative *Rasayana* in form *Ajsrika- Kamya* and *Achara Rasayana*.

Ajsrika Rasayana^[35] -It can be used daily as diet for ex. *Dugdha* (Milk) and *Ghrita* are common

Ajsrika Rasayana

Kamya Rasayana^[36] – It is used to serve a special purpose in life. It is of three types –

- *PranaKamya* – Promotes vitality and longenity.e.g. *Amalki*, *Haritaki* etc.
- *MedhaKamya* – Promotes intelligence and memory e.g. *Brahmi*, *Vacha*, *Sankhpuspi* etc.
- *Srikamya* – Promotes complexion e.g. *Guduchi*, *Amalaki*, *Ashwagandha* etc.

Achara Rasayana^[37] (Psycho-socio-behavioral and humanistic approach) - Mode of living behavior and conduct

Therapeutic / Curative Measure: *Ayurveda* offers multi-dimensional approach for the prevention of early ageing and management of old age related disorders. As a therapeutic measures following drugs and procedures should be adopted-

- Use of Rasayana therapy in form of **Naimittika Rasayana**- It is a type of rasayana therapy utilized for specific curative purpose. It hastens the recovery from prevailing diseases. The chief purpose of this rasayana is to cure specific diseases and restoring the body's health through determined procedures e.g. *Tuvaraka* and *Shilajatu* for *Kustha* and *Prameha* respectively
- Use of **Vayasthapan drugs**- Specialized Rasayana drugs that reverse degenerative changes, increase life span with quality health^[38]. Ten Vayasthapan drugs which can be used for anti-ageing purpose are - Amrita (*Tinospora cordifolia*), Abhaya (*Terminalia chebula*), Dhatri (*Embilica officinalis*), Rasna (*Pluchea lanceolata*), Shveta (*Alpenia galanga*), Jeevanti (*Leptadenia reticulata*), Atirasa (*Asparagus racemosus*), Mandookaparni (*Centella asiatica*), Sthira (*Desmodium gangeticum*) and Punarnava (*Boerhavia diffusa*)^[39].
- Use of **Panchakarma therapy** (detoxification) is effective in cleansing of body toxins, plays a pivotal role in Aging. The detoxification process is necessary for eliminating the toxic waste from the organic system and thereby assuring smooth and natural organic function. Panchakarma procedures should be administered with great precaution and after careful monitoring of the general health and accompanying diseases in the elderly. Vamana (medical emesis) and virechana (therapeutic purgation) especially of mridu type and matra basti (therapeutic oil enema) are best suited for old aged individuals. Palliative measures like shirodhara and shirobasti are useful in anxiety, tension headache, insomnia, psychiatric and neurodegenerative conditions. Periodical use of panchakarma therapy helps in overall maintenance of physical fitness and promotion of health.
- Use of **Sattvajaya Chikitsa**^[40] (Control of mind from unwholesome objects) It is a specialized type of treatment influencing the psychological aspect of body. As we know that stressful environment and disturbed mind adversely affect the health which may lead to ageing before time so to prevent as well as to cope up with this condition, it's a unique concept of Ayurveda.

Discussion & Conclusion:

Aging is a continuous, innovative and inevitable phase of human existence. According to Ayurveda swabhava and kala are chargeable for the Aging. In old age vatadosha is physiologically in a dominant condition and rasadidhatus are in a poor state. Ayurveda advocates a super technique to delay Kala-jara (natural Ageing) and to avoid Akala-jara (premature Ageing). Rasayana specifically deals with the science of nutrition, geriatric

care and rejuvenation. Rasayana remedy consists of healthful food plan, healthful life-style, practices of yoga, time to time Panchakarma and use of various natural vayasthapana drugs. Rasayana is the measure with the aid of which one receives Rasa, Raktadi dhatus in its first-class circumstance, which establishes the age (Vayasthapana), will increase the life span, intelligence and power as well as it enables the man or woman to take away the diseases. Ayurveda provides elaborative description about ageing. The signs and symptoms of the jara-awastha (old age) stated in Ayurveda texts resembles with the troubles of antique age of present cutting-edge ideology. Geriatric problems are nice confronted with the aid of preventive measures than curative ones through the ancient science. General awareness need to be created amongst people regarding these preventive factors and diverse rasayan modalities must be included in exercise. This will pass an extended manner in increasing the happiness quotient of our populace.

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