



# Importance of Ayurvedic Dinacharya in Geriatric Care: A Review Study

Shalinee KM<sup>1\*</sup> and Dharmendra M<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Swasthavritta, Institute of Teaching and Research in Ayurveda (ITRA), Ministry of Ayush, Government of India, India

<sup>2</sup>Professor and Head, Department of Rachana Sharir, Indian Institute of Ayurved Research, India

## Review Article

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**\*Corresponding author:** Shalinee K Mishra, Assistant Professor, Department of Swasthavritta, Institute of Teaching and Research in Ayurveda (ITRA), Ministry of Ayush, Government of India, Jamnagar, Gujarat -361008, Tel: 09664540469; Email: drshalineeipgt@gmail.com

## Abstract

Natural and healthy ageing is the main aim of the health science. Because the number and proportion of people aged 60 years and older in the population is increasing. The number of people aged 60 years and older was 1 billion. This number will increase to 1.4 billion by 2030 and 2.1 billion by 2050. This increase is occurring at an unprecedented pace and will accelerate in coming decades, particularly in developing countries. After 60 Years of age persons mainly compromised with following health conditions like hearing loss, Cataracts and refractive errors, back and neck pain, osteoarthritis, chronic obstructive pulmonary disease (COPD), diabetes/HTN/cardiac disorder, urine incontinence, depression and dementia. Aims and Objective of this review study is to establish the importance of healthy life style *Dinacharya* like *Malautsarjana*, *Dantadhawana*, *Anjana Kriya*, *Nasya*, *Karnapurana*, *Padhabhyanaga* and *Sirobhyanga*, *Abhyanga*, *Vyayama* etc. for slow and healthy ageing. As material & methods Classical textbooks, study of WHO website, different databases were used. Study were concluded as regular follow of *Dinacharya* (daily schedule), decreases the health care and financial burden of the world by slow down the ageing process and maintain the healthy aging.

**Keywords:** Geriatric; *Dinacharya*; *Nasya*; *Padhabhyanaga*; *Vyayama*

## Introduction

Every individual want to live a long and healthy life without pain [1] till 100 years for fulfilment of all aims of life [2]. Because health is the base or root for attainment of all *Purushartha* (*Dharma*, *Artha*, *Kama* and *Moksha* [3]. Ayurveda science provides the path and facilitate the way in the form of therapeutic and holistic science of life, it covers all the stages like *Brahmacharya*, *Grihastha*, *Vanprashatha* and *Shanyasa Ashrama* of life, and provides the complete physical, mental, social, vocational and spiritual health.

Ageing is the normal and regular process of life like feeling of Appetite, thirst, Sleep and death [4]. Ageing mean

not disease, this time journey could be healthy and able to perform daily life routine and social activities. Geriatric time journey is considered after or from the age of 60 years but before this age if started is considered as early geriatric (or progeria) that one is disease condition. Natural and healthy ageing is the main aim of the health science. Because the number and proportion of people aged 60 years and older in the population is increasing.

In 2019, the number of people aged 60 years and older was 1 billion. This number will increase to 1.4 billion by 2030 and 2.1 billion by 2050. This increase is occurring at an unprecedented pace and will accelerate in coming decades, particularly in developing countries. Between 2015 and

## Review of the Study

### Ageing

Ageing is the natural and continuous process of the body [4]. In general total life span (100 Yrs.) is divided in to three category of *Balavastha* (growing age or young age) up to age of 30 years, *Madhyavastha* (mature and adult age) up to age of 60 Years and after 60 to 100 years is as *Vriddhavastha* (old age) [9].

### Character of Stages of Life

Young age up to 30 years is immature stage and continuously maturation process occurs during this period, and have dominancy of *Kapha Dosa*.

Middle age lasting up to the age of 60 years, there is well manifested strength, energy, power of understanding, retention, memorising, speech and analysing fact and the qualities of all *Dhatus* is good, and have dominancy of *Pitta Dosa*.

Old age considered after the age of 60 years and up to 100 years of age. At this stage gradual diminution of the *Dhatus*, strength of *Indriye* (sensory and motor system) (sense organs), energy, power of understanding, retention, memorising capacity, speech and analysing facts decrease gradually.

In the body at every 10 years of span remarkable and gradual changes happen like Balya stage lost after first 10 years, *Bridhi* (growth) lost after second 10 years span, and gradually at interval of 10 years *Chavi*, *Medha*, *Tvaka*, *Drishiti*, *Shukra*, *Vikrama*, *Buddhi* and *Karmenendriye* lost its function [10] (Table 1).

S.No.	Functional domain of body	Modern Association	Decline at the Age of Life
1	Baalavastha	Childhood stage	10 Years
2	Vridhhi	Growth time	20
3	Chhavi	Gleam, Lustre	30
4	Medha	Brilliancy	40
5	Tvaka,	Skin quality	50
6	Drishiti	Vision power	60
7	Shukra	Fertility/Potency	70
8	Vikrama	Physical strength	80
9	Buddhi	Intellectual Power	90
10	Karmenendriye	Locomotor system or Musculoskeletal System	100

**Table 1:** Functional domain of body Decline gradually at the Age of Life.

2050, the proportion of the world's population over 60 years will nearly double from 12% to 22%. In 2050, 80% of older people will be living in low- and middle-income countries. The pace of population ageing is much faster than in the past [5] and it increases the health care and financial burden directly. After 60 Years of age persons mainly compromised with following health conditions like hearing loss, Cataracts and refractive errors, Back and neck pain, Osteoarthritis, Chronic obstructive pulmonary disease (COPD), Diabetes/HTN/Cardiac disorder, Urine incontinence, Depression and dementia [6] and ageism. Even though in old age physical and mental capacity decreases gradually according to age like individual have low work capacity, weight decreases, all sense organs have low work capacity or stopped their works [7].

All countries face major challenges to ensure that their health and social systems are ready to make the most of this demographic shift. More prevalence of non-communicable diseases after 40 years of age increases the geriatric health problem, because system failure like cardiovascular, urinary system and brain stroke have more chances and causes old age person means supported life with depraved quality of life [8].

For combating this situation some rules regarding lifestyle are explained in different literatures like lifestyle modification toward healthy lifestyle, it work as prevention and Promotion of health, and at some extant also work as intervention. Regular follow of *Dinacharya* (daily schedule), *Ritucharya* (seasonal regimen), *Rathricharya* (night regimen), rules regarding *Ahara* (food intake or quality), *Nidra* (sleep), *Brahmacharya* (Celibacy) and some social duties and decreases the health care and financial burden of the world.

### Aims and Objective

To establish the Importance of daily life style (*Dinacharya*) for heathy life and slow ageing in elderly people.

### Material and Methods

Material & Methods Classical textbooks such as *Charak Samhita*, *Sushruta Samhita*, *Astanga Hridaya* and its commentary, *Bhavaprakasha Samhita*, *Sharangadhara Samhita*, were reviewed to analyse the life style as mentioned and its importance. Study of WHO website regarding ageing, healthy ageing and ageism. Different databases such as PubMed, Scopus, DHARA, Google Scholar, J-Gate Plus, Science direct were searched using keywords like geriatric health, life span, old age diseases with the help of Boolean operators "AND," "OR" and "NOT." Filters like clinical trials and free full text were applied.

This is the natural and gradual loss if it occurs before schedule time and promptly considered as early geriatric.

### Physiological and Biological Changes

Ageing is the continuous changes that begins with conception and ends with death. The ageing process starts at molecular or cellular level and to shed some light on the process. Many functioning cells are lost in numbers, function become slowly down. The cells of liver gastrointestinal mucosa, skin and hair continue to divide and reproduce throughout life. On the other hand muscle and nerve cells do not have this capacity, and gradually decrease in function. Changes in glomerular filtration rate and renal flow are due to decrease in number of functioning nephron and some obstructions due to hypertrophy of prostate in male. Next and most important changes during ageing is the thoughtless formation of free radicals in the body. This process is facilitated with polyunsaturated fats and increases the peroxidation process [11].

### Metabolic Changes

Some digestive changes occur due to reduction of the tone of musculature of stomach and all gastrointestinal system, it leads to less motility and causes distension of abdomen, constipation, regurgitation, achlorhydria are common in more than 35% of old age individuals. Carbohydrate absorption is unaltered, but fat intolerance increases and it retard the gastric evacuation.

### Health Problems of the Aged

The principles of Preventive Geriatrics say "You do not heal old age, you protect it, promote it and extend it" [6]. Ageing merely express the deterioration in the vitality or the lowering the biological efficiency that accompanies ageing. With the passage of time, certain changes takes place in an organism. This changes may leads to some diseases like senile cataract, glaucoma, nerve deafness, osteoporosis, emphysema, degenerative changes and cardiovascular disorder, cancers, accident, diabetes, diseases of locomotor system, enlargement of prostate in male, dysuria, frequent and urgency of micturition, failure of special senses and change in mental outlook etc [12]. This list is not limited with this, more than this are present as ice berg in the society.

### How can Maintain Health and Prevent Early Geriatric

Daily life style, occupation and occupational environment and surrounding take part in the maintenance of health or unhealthy geriatric. Not every individuals have compulsorily 100 year of life span, it only taken by different technically [13] like healthy life style, good food pattern or wholesome diet with proper assessment and some other activity of life. *Brahmamuhurta Jagaran*, regular *Malautsarjana*, *Dantadhawana*, *Anjana Kriya*, *Nasya*, *Karnapurana*, *Padhabhyanga* and *Sirobhyanga*, *Abhyanga*, *Vyayama*, and intake of *Hitakara* and *Pathya Ahara*, use of *Rasayana* and *Vagikarana Aushadha* may protect, promote and extend the geriatric [Table 2] [14-16].

S.No	Procedures Name	Procedure / Ingredient	Prevention from Ailments	Effect
1	Brahmamuhurta Jagaran	Wake up one Muhurta (nearly 48 min) before sunrise	Decrease morbidity and early death	Healthy & Long life
2	Ushapana	Intake of water in morning (nearly 320 ml or according to person's condition) facilitate the proper evacuation of Bowel	Piles, Digestive disorders Prevents Arsha, Mudhavata, Udavarta	Slow the changes of system function, Vata related disorders like geriatric condition
3	Malautsarjana	Try to facilitate the natural urges	Prevent the allergic reactions and Decrease morbidity, abdominal distention, belching and early death	Good digestive power, Healthy & Long life
4	Dantadhawana	Regular Cleaning of oral cavity (tongue, teeth & mucosal lining), person may use the Madhuka, Nimba, Karanja plants parts & Dantashodhana powder	Oral cavity disorders like Mouth ulcers, dental disorders, foul smell, gums bleeding, toothache etc.	Good gums health that hold the teeth very strongly, Excellent, test buds and gustatory sensation
5	Anjana Kriya	Regular or Weekly application of Collyrium or Triphala Jal Aaschyotan, application of Chandrodya varti	Eye disorders, Myopia, cataract, metropiya, Conjunctivitis, etc.	Maintain good vision, Tejorupavaha

6	Nasya,	Application of Anu tail or Sesam oil in nose in the morning as Pratimarsha daily	Disease of head and upper respiratory tract, allergic rhinitis	Excellent functions sensory organs, Improve the quality of life of COPD and Asthma, other lung disorder patients
7	Gandush	Gargling or pooling of lukewarm water, oil, milk or decoction, Sheet jala, Triphala Kashaya, Panchwalkal Kashaya, etc. for some time in repeated manner	Oral cavity disorders (gums Sensitivity, Gingivitis, Aphthous ulcers)	Good jaws movement, Have good healing property of injuries and wounds
8	Karnapurana,	Application of oil in ear	No Deafness, auditory tingling sound	Improve the hearing capacity in old age
9	Padhabhyanaga	Regular leg and foot massage with Sesam oil or mustard oil or as available	Insomnia, tingling sensation at distal end of foot	Good walking capacity, improve distal end circulation, improve sleep quality and eye strength
10	Sirobhyanga	Regular head massage with Sesam oil or as available	Insomnia, Some types of headache	Good sleep and concentration
11	Abhyanga	Regular massage with mustard oil, sesam oil, or as available on full body	Tiredness, insomnia	Good skin and muscle elasticity, defence mechanism, healing capacity good physical strength
12	Vyayama	Regular physical activity according to self-capacity, according (up to sweating over forehead and armpit)	Metabolic disorders, Obesity and obesity-related disorders and Doshakshaya,	Decreases the chance of non-communicable disorders, decreases the speed of aging increase the expected life span
13	Nidra	Time of sleep is Madhyam Ratri (minimum 10pm to 4 am) 2 prahara=6 h)	Anxiety, General disorders, Early death, Infertility digestive disorder	Improve quality of work, strength, delay geriatric process, long life
14	Hitakara Pathya Ahara	Nutritious and proper amount of food with proper rules and regulation	Prevent the malnutrition, some non-communicable diseases	Good physical and mental health, increase the expected life span
15	Rasayana	Regular use of, milk, ghee, Amala, haritaki, Ashwagandha, Bala,	Fulfil the requirement of micronutrients and dhatus	Give long life, slow down the geriatric process
16	Vagikarana Aushadha	Proper use of Masha, Kapikachhu, Kavanch, Shalampanja etc.	Fulfil the requirement of micronutrients	Give long life, slow down the geriatric process, get good progeny
17	Brahmacharya	To avoid the loss of Shukradhatu	Prevent the loss of consecutive loss of Dhatu	Long life, slow geriatric, good memory, intelligence and have good sensory and motor system

**Table 2:** Specific Preventive Measures of Disease in Daily Life.

## Discussion

### Time of Awakening (*Brahmamuhurta Jagaran*)

For the maintenance of health and achieving long life, person should have awakening time comes under

*Brahmamuhurta* [16] i.e. 1hr to 45 min before from sunrise.

### Proper Bowel Evacuation (*Malautsarjana*)

In the morning first and most important activity is to clean bowel, as early as possible try to evacuate and remove

stool not only by Young or adult but by all age group should be done. It regulate the gut microflora. Gut microflora is directly associated with physical and mental state of the health. Recent studies showed that the microbiota has the capability to the synthesis of different neuroactive substance including serotonin, dopamine, gamma-aminobutyric acid inside the lumen which act on Gut-brain axis via the vagus nerve and neuroendocrine system which may alter mood and cognition [17].

### Oral Hygiene (*Dantadhawana & Gandusha*)

Proper cleaning of oral cavity including teeth & tongue. For proper hygiene of oral cavity regular brushing, tongue cleaning and hot water *Gandush* for cavity mucosa cleaning is recommended by different Acharya. It decrease the speed and increase the age of teeth fall (Missing dentures) and maintain the test buds health [18].

### Eye Hygiene (*Anjana Kriya*)

Regular cleaning of eye is required for good visual equity. Regular or weekly application of *Kaphadosha* cleaning agent like , *Triphala Jala*, *Yastimadhu Anjana*, *Daruharidra Anjana* and protection from glare light, dust, direct exposure to sun etc. maintain the visual equity and decrease the change of senile cataract, glaucoma and dryness of eye [14].

### Massage (*Abhyanga*)

Gradual changes in connective tissue collagen is one of the fibrous material of tendons, ligaments, skin and blood vessels that changes with ageing i.e. amount of collage increases and become more rigid, decreases its flexibility due to this joints loses its strength and spine bent [11]. Regular application of oil over body surface decreases the ageing process by maintain the skin and muscle quality with slow changes, decreases the tiredness and stress (physical and mental) [16]. Sleep quality and quantity varies as per age and some mental and psychological changes occurs. Regular body massage improve the sleep quality of person [19]. Along with body massage regular oil application also as *Nasya*, *Karnapurana*, *Padhabhyanaga* and *Sirobhyanga* recommended for the proper function of brain, throat, upper respiratory tract, nose and its mucosal membrane, ear and foot (improve proper blood circulation at distal end of the body).

### Exercise

Regular physical activity according to the strength of individual is required. It improve the digestive power and assimilation power of the intestine and increase the work capacity of the body. It improves the disability state

in individuals. Exercise increases the tissue elasticity, Increase Muscle strength, power, endurance, Increase Motor coordination, Increase Neural reaction time, Increase Oxidative and glycolytic enzyme capacity, mitochondrial volume density, Increase Gait speed, step length, cadence, gait stability, improve nutritional status, cardiovascular and pulmonary functions [20].

### Sleep

Sleep at regular time and duration maintain the mental health like food. It prevent the anxiety, depression, hallucinations, migraine and confusion. Minimum 6 hours sound sleep at proper time is required for every adult. It is responsible for happiness & sorrow, good body weight & low BMI, strength & weakness, good reproductive health & Infertility, early geriatric mean low life expectancy & health long life. Long-term consequences for otherwise healthy individuals include hypertension, dyslipidaemia, CVD, weight gain, metabolic syndrome, and T2DM. There is also evidence that sleep disruption may increase the risk of certain cancers and death in males and suicidal adolescents. Long-term sleep disruption may also worsen the symptoms of a variety of gastrointestinal disorders [21].

### Wholesome Food

Body strength, health, lifespan or life depends upon Agni or digestive power. Before meal every time access the food quality, nature, amount and condition and requirement of the body. Over and deficient both conditions are accountable for early geriatric [22].

### Regular Useable Food Ingredients

Suitable amount of Carbohydrate, Protein, and Fat, minerals, vitamins and dietary fibre are the indispensable elements of the regular healthy diets for conservation of geriatric health and all are obtained in standard form from this regular useable food ingredient group of ingredients like *Shali*, *Shastika*, *Yava*, *Godhuma*, *Mudga Amalaka*, *Sandhava*, *Madhu*, *Paya*, *Jala* and *Ghee* [23].

**Use of *Rasayana* and *Vajikarana Dravya*:** *Rasayana* and *Vajikarana Dravya* like Milk, *Ghee*, *Amalaki*, *Haritaki*, *Masha*, *Kapikachhu*, *Kavanch*, *Shalampanja* etc. improve the regular loss of body elements means it fulfil the all dhatu start from Rasa and next till *Shukra Dhatu*, All *dhathu* ultimately form the *Oja* and increase the immunity and repair the body cells [24,25]. *Rasayana* and *Vajikarana Dravya* have antioxidant properties.

**Celibacy:** Brahmacharya is the imperative for maintenance of health and achieving long life.

## Conclusion

Daily life style change from faulty pattern to healthy lifestyle act as primordial prevention in the area of early geriatric and it gives the healthy geriatric age of life. Regular involvement of some daily procedure like procedures name *Brahmamuhurta Jagaran, Ushapana, Malautsarjana, Dantadhawana, Anjana Kriya, Nasya, Gandush, Karnapurana, Padhabhyanaga, Sirobhyanga, Abhyanga, Vyayama, Nidra, Hitakara Pathya Ahara, Rasayana & Vajikarana dravya and Brahmacharya* have role in prevention of early geriatric and it gives the healthy geriatric age of life.

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## Conflict of Interest

The authors declare that there is no any conflict of interest regarding the publication of this article.

## Written Patient Consent

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