



A REVIEW OF YOGA IN KEY AREAS OF GERIATRIC HEALTH.

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ABSTRACT

Jara indicates the declining phase after midlife i.e. the ageing process. Both *Ayurveda* and *Yoga Shastra* emphasize ways to delay the onset of *Jara* with the goal of long healthy life. *Yoga* may prove beneficial for elderly people, by enhancing strength and flexibility and preventing pain and injuries. Research to understand how *Yoga* works on key areas of geriatric health and promotion of the same at clinic levels is imperative today. This review analyzes how *Yoga* is a key to healthy ageing when implemented through tailor-made preventive and curative approaches. The entirety of *Ashtanga Yoga*, *Hatha Yoga* and its allied forms engages the individual in an all-encompassing approach that spans the dimensions of the human being. It is applicable medically to stabilize imbalance caused by disease at each level: psychological, social, physical, emotional, spiritual. It is essential to study how *Yama* and *Niyama* impact social, emotional and spiritual health in the aged; how *Asana* and *Pranayama* strengthen all systems and delay ageing. This paper explores mode of action of integrated approach to *Yoga* therapy on geriatric health and illuminates how this ageless holistic system emboldens the idea that the twilight years are a time of greater perspective and enlightenment instead of degeneration.

KEYWORDS: *Yoga*, Geriatric Health, *Jara Vyadhi*, *Asana*.

INTRODUCTION

With age one attains many benefits — maturity, grace, wisdom, experience, and perspective; it also presents many challenges. Psychologically and emotionally, elders experience higher rates of depression, anxiety, memory decline. Evidence shows that stress and physical deterioration contributes to the etiology of heart disease, cancer, diabetes, stroke joint stress, osteoarthritis like chronic conditions and diseases.

Geriatrics deals exclusively with the problems of aging and the diseases of elderly. *Acharya Charak* states that *Vruddhavastha* begins at 60 years.^[1] *Acharya Sushruta* and *Vagbhata* mention 70 years and above. However, signs of premature ageing and onset of geriatric diseases is evident today much before these ages. *Jara* is a *Swabhavabala Pravrutta Vikara*. With *Swasthavritta Palana* it is attained at proper age i.e. *Kalaja Jara*. But due to *Aparirakshana Kruta* i.e. improper care and regimen, premature ageing or *Akalaja Jara* sets in.^[2]

“*Yoga*” comes from the root “*Yuj*” symbolizing union of one’s own consciousness with the cosmic consciousness. At a practical level, regular practice of *Yoga* has been evidenced to promote strength, endurance, flexibility and engenders qualities of friendliness, kindness, and better self-control and tranquility. The practice of *Yoga*

produces a physiological state of **rest and relax** (instead of flight-or-fight stress response) stimulating the parasympathetic nervous system^[3] and with that a sense of balance and union between the mind and body can be achieved.

Patanjali Yoga Sutras outlines an eightfold path to enlightenment; from socio-emotional health to physical and mental health, culminating with spiritual salvation.^[4] *Hatha Yoga* enhances the capacity of the physical body through *Asanas* and *Pranayama*. The breathing techniques of *Hatha Yoga* prolong inhalation, breath retention, and exhalation.^[5] It is through the unification of the *Sharira*, *Prana*, and *Mana*, while performing *Asanas* that block in the channels of *Prana* are cleared. Then the system attains balance. This is especially beneficial in elders or those approaching old age as their systems are at the start of degeneration. It is essential for health care professionals to be informed about the approach and impact of geriatric *Yoga*.

AIMS AND OBJECTIVES

- To study mode of action of *Yoga* therapy on key areas of geriatric health
- The merits it provides to the preventive and curative aspects.

MATERIALS AND METHODS

This is a conceptual study based on references garnered from the classic texts, research journals and acclaimed *Yoga* books. The review is also based on experiential observations in practice of *Yoga* therapy for patients and healthy individuals. The data has been summarized in accordance with these observations.

Keyareas - Geriatric Yoga

- Balance and stability
- Flexibility and joint health
- Respiration
- CVS including High blood pressure – regulation of blood pressure
- Digestive disorders
- Memory loss, senility
- Anxiety, elderly depression, Mood disorders
- Mindfulness
- Social, emotional and Spiritual health aspects

Mode of action of Yoga in geriatrics

Balance and stability

These are important as one ages. Several *Asanas* enhance balance by training the body in stability. *Pranayama* helps concentrate the mind which helps attain that physical balance which translates into a stable mind. This results in less incidences of falls and accidents that could lead to other injuries. *Yoga* was also shown to improve gait function and reduce age-related changes in gait among a group of healthy, non-obese elders.^[6]

Flexibility and joint health

Hatha Yoga increases flexibility of tendons muscles and spine. It improves joint mobility through a range of structures poses correcting bad postures and reducing pains, knots stiffness.^[7] Modifications and props are used for restorative *Yoga* for the geriatric age group. Evidence shows benefits of *Yoga* in osteoarthritis, sciatica, spondylosis, lumbar, neck and knee pain, frozen shoulder etc.

Respiration: With age comes respiratory limitations and reduced tolerance to physical exertion. Breath control and prolongation through *Pranayama* enhances respiratory function. *Asanas* specific to opening the chest work on lung expansion, better tone and stretch of intercostal muscles; effective in COPD, Bronchial asthma.^[8] The breath - *Prana* is the foundation of life and holds a central role in *Yoga* practices.

Cardiovascular system

Yoga is shown to enhance cardiorespiratory performance, psychological profile, and plasma melatonin levels and also significantly reduced systolic blood pressure, diastolic blood pressure, mean arterial pressure, and orthostatic tolerance.^[9]

Hypertension can lead to CVD (second leading cause of kidney disease). Recent studies have found that *Yoga* reduces oxidative stress in the elderly. Oxidative stress is

one of the underlying causes of high blood pressure, especially for seniors, which is a strong risk factor for heart attacks.^[10] High blood pressure or simply regulation of blood pressure can be achieved through a set of carefully guided *Asana Pranayama*. *Yoga Nidra* sessions help instantly to balance out blood pressure levels.

Digestive disorders

With age comes deterioration or lags in function of organs and systems. *Asanas* work on gentle stimulation of digestive organs leading to better secretion of digestive juices (*Agnivardhana*), improved bowel movements (*Vatanulomana*). It directs proper and. A combination of *pranayama*, *Asanas* and certain *mudras* and *kriyas* is seen to balance the digestive system and both prevent and treat digestive disorders often faced by the elderly.^[8]

Memory loss, senility: Neuroendocrine research shows that high cortisol (stress marker) exposure of brain increases the risk for cognitive deficits in elders^[11] Chronic stress has detrimental effect on the brain and the autonomic nervous system - increasing the risk for disease. Research shows that *Yoga* may moderate the stress response and improve executive function in older adults.^[12]

Prolonged stress can have a deleterious effect on the brain, reducing ability to think, plan and reason effectively. This is particularly true for the elderly. Studies show that *Yoga* improves memory and brain function in older adults.^[13] It stimulates deep thinking, awakens and sharpens the mind and improves concentration.

Anxiety, elderly depression

Elders often face loneliness, isolation, increased sense of purposelessness, fears, bereavement leading to feeling “useless” and mood disorders. Stress has a negative impact on the immune system.^[14] Here *Yoga* is an excellent non-pharmacological therapy in mental health. It activates the peripheral nervous system stimulating the rest and relax phase in the body. This cultivates a sense of calm and tranquility. *Yoga* can embolden all aspects of the daily routine.

Inspiring Mindfulness

Yoga emboldens mindfulness, self-awareness and self-reflection. This keeps the mind alert and awake, encouraging relaxation and strengthening muscles and joints and helping elders pay attention to their body. They become mindful of not just the body, but also their thoughts and emotions, becoming more connected to the community, and the world around them.^[10] Mindfulness inspires the conscious effort to practice *Yoga* which can slow down the effects of the ageing process.

Social, emotional and Spiritual health aspects

Social health is a very crucial and often overlooked dimension of geriatric health. The *Yamas* are interpersonal conventions and etiquette to inspire a healthy social life. Lack of social communications, companionship and isolation leads to depression, sleep and eating disorders, amongst others, in seniors. *Niyama* inspires good personal health.^[4,15]

Sleep, exercise, healthy eating, social connections and spiritual awareness are necessary to prevent geriatric disorders. In society too we see the elders turning to *Swadhyaya* and *Ishwar Pranidhana* for spiritual awareness and contentment. It works on their psyche to lessen stress and give sense of motivation and peace. With the mind at peace the body systems automatically enter a state of balanced optimal functioning.^[4,8]

The Therapy: IAYT Design of Restorative Yoga

[Integrated Approach to *Yoga* Therapy]

- *Yoga* Philosophy
- *Yama*
- *Niyama*
- *Hatha Yoga Asana*, Modified *Asana*, *Iyengar Yoga*, restorative *Yoga*
- *Pranayama* – count breathing, *Nadishodhana*, *Bhramari*, etc.

- *Pratyahara* - meditation, deep relaxation, *Yoga Nidra*
- *Dharana* and *Dhyana* – modified meditations, *Shatchakra* meditation

Yogasana

Numerous studies show that *Asana*, meditation or a combination of the two can reduce pain and disability while improving flexibility and functional mobility in people with a number of conditions causing chronic pain.^[16,17]

Mode of action: all *Asanas* improve blood flow to the body parts. When an *Asana* is maintained and then released a gush of blood flow to the part improves microcirculation and stimulates the muscles/organs to function better.

Modified or adapted *Yogasana*: *Iyengar Yoga* places an emphasis on standing poses to develop strength, stability, stamina, concentration and body alignment. Props are used to facilitate learning and to adjust poses and instruction is given on how to use *Yoga* to ease various ailments and stressors. There is a range of standing, sitting, lying down and chair *Yoga Asanas*.

Table 1: Asana: examples of their benefits.

Asana	Benefits
<i>Trikonasana</i>	Hip problems, digestive disorders, regulates B.P.
<i>Bhujangasana</i> , <i>ardhachakrasana</i>	spine health, improves blood circulation that weakens with age.
<i>Tadasana</i> , <i>vrikshasana</i>	Balance and mental stability
<i>Shishuasana</i> , <i>suptavirasana</i> , <i>Setubandha sarvagasana with support</i> ;	Stress reduction, calms nervous system
<i>Pavanamuktasana</i>	Relieves flatulence, better bowel movements.
<i>Marjariasana</i> & <i>bitilasana</i>	Reduces spine stiffness that comes with age
<i>Baddha konasana</i>	Bowel movements, hip and pelvis health Reduces joint stiffness and pain
<i>Katichakrasana</i>	Keeps the spine straight, prevent slouching.
<i>Siddhasana</i> , <i>padmasana</i> , <i>vajrasana</i> , <i>sukhasana</i>	Mindfulness, concentration, peace, makes them feel more energetic.

Chair Yoga for senior citizens

Many seniors find this convenient as these *Asanas* can be done while sitting on a chair. Increases flexibility enabling seniors to bend and reach the toes. Neck roll, *Bitilasana*, *Paschimottanasana*, *Uttanasana*, *Utthita Parshva Konasana*, *Ardhamatsyendrasana* and *Virabhadrasana II* are all chair *Yoga Asanas* that have immense benefits.^[18]

Yoga Nidra

Yoga Nidra is one of the most essential part of any *Yoga* practice. As one ages it becomes more vital to embrace its benefits. Even single *Yoga Nidra* sessions are evidenced to reduce hypertension, anxiety, and irritability. Since stress is often at the core of diseases, *Yoga Nidra* can be a suitable process of stress

management and reduction of negative emotional states in order to reduce the burden of disease.^[19]

The multidimensional and individualized approach of IAYT can encourage the body, mind and spirit to achieve balance and harmony while reducing the effects of many age-related issues.

DISCUSSION

Working with older people presents the *Yoga* therapist with a very varied caseload. Social and mental health development can be achieved through *Yama*, *Niyama* and *Yoga* philosophy teachings. Restorative, gentle *hatha Yoga*, *Asana*, *Pranayama* and *Yoga Nidra* build strength, balance, and physical and mental resilience. This prevents premature ageing and manages established geriatric disorders.

State of an individual's mind is crucial to healing. *Yoga* does wonders for the mind what merely popping pills does not.

Yoga is self-empowering; Sustained practice also leads to important outcomes such as changes in life perspective, self-awareness and an improved sense of energy to live life fully and with genuine enjoyment. *Yoga* therapy involves instruction in *Yoga* practices and teachings to prevent, reduce or alleviate structural, physiological, emotional and spiritual pain, suffering or limitations. *Yoga* practices enhance muscular strength and body flexibility, promote and improve respiratory and cardiovascular function, promote recovery from and treatment of addiction, reduce stress, anxiety, depression, chronic pain, improve sleep patterns and enhance overall well-being and quality of life.

CONCLUSION

An integrative approach to *Yoga* therapy, particularly restorative *Yoga*, provides a plethora of advantages to seniors, at both somatic and psychological levels.

The interventional therapy, when made a part of the patient's daily routine, targets key health conditions like anxiety, memory loss, pain, joint stress, imbalance, osteoarthritis, and other physical limitations. It has a very strong role in preventing premature ageing.

The current medical and social conditions demand research on *Yoga* specific for certain geriatric diseases, implementation of *Yoga* for seniors at clinical level, designing programs and promotion of the same at rehabilitation centers, old age homes, senior living communities and assisted living facilities.

The undeniable association between the mental and physical health and inner tranquility that *Yoga* is tailor-made for diminishes the fickleness of the *Mana*, empowers the patient to be his own healer, helping the aged suffer less and live better lives.

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