



CONCEPT PAPER ON HEALTHY AGING

***Gowtham Dev and Dr. Vinny Narayan**

Research Coordinator, Centre for Gerontological, Studies, Kerala University of Health Sciences, India
Quality Manager, Sitaram Ayurveda Pharmacy Ltd, India

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ABSTRACT

Aging begins before birth and continues throughout life at different rates, in different races for different individuals and for different tissues of the body. Explaining why ageing occurs is a solution to the longstanding enigma of the role of senescence in nature and even after half a century of progress, the solution continues to unfold slowly but steadily. The healthcare professionals must prepare themselves to equip the above 50 years citizens to achieve healthy aging in a systematic fashion. Although we do not have a comprehensive protocol that suits all sections of the society, there are some common elements that need to aware off which is discussed in detail in this

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INTRODUCTION

Healthy aging may be defined as; (i) development and maintenance of optimal physical, mental and social well-being and function in older adults (West Virginia Rural Healthy Aging Network West Virginia Rural Healthy Aging Network, 2006), (ii) optimising opportunities for good health, so that older people can take an active part in society and enjoy an independent and high quality of life (Nnni Oljemark, 2006), (iii) maintenance of positive subjective well-being, good physical, social and mental health and continued involvement in one's family, peer group and community throughout the aging process (http://www.bcrpa.bc.ca/recreation_parks/active_communities/documents/Active_Aging_Lit_Review.pdf) and (iv) activities and behaviours which aim to reduce the risk of illness and disease, and increase physical, emotional and mental health during the ageing process.⁴ According to Ayurveda, the aging (Jara) is a natural phenomenon like hunger thirst and sleep. Etymologically, the term Jara has been derived from Panini's Sanskrit and this term is indicative of loss in period of life span. In this stage dhatu, virya, indriya bala and utsaha decrease day by day. Alopecia wrinkling of whole body, cough and breathlessness are general symptoms and ultimately ending up with the failure of all activities (Tiwari, 2009).

***Corresponding author: Gowtham Dev,**
Research Coordinator, Centre for Gerontological, Studies, Kerala University of Health Sciences, India.

Aging begins before birth and continues throughout life at different rates, in different races for different individuals and for different tissues of the body. It involves two opposite processes that simultaneously come into operation i.e. growth and atrophy (Dwivedi, 1993). Explaining why ageing occurs is a solution to the longstanding enigma of the role of senescence in nature and even after half a century of progress, the solution continues to unfold slowly but steadily. Now, it is an accepted reality that aging need not be a burden and that elderly also can make valuable and important contributions to society. They can also enjoy a high quality of life, provided there is an adequate planned preparation for healthy aging (Kirkwood, 2002). Positive ageing is a term used to describe the process of maintaining a positive attitude, feeling good about yourself, keeping fit and healthy, and engaging fully in life as you age, and keeping wellness as an objective. There are seven dimensions of wellness defined as the full integration of states of; (i) physical, (ii) mental, (iii) emotional, (iv) social, (v) environmental, (vi) occupational and (vii) spiritual well-being (Hales, 2005). In the current view, ageing results from the principles that the force of natural selection declines with age, and longevity requires investments in somatic maintenance and repair that must compete against investments in growth, reproduction and activities that might enhance fitness (Van Beek, 2016). The general principle of aging is that there will be loss of tissue at every system and organ level. At a conceptual level, it is useful to regard this loss of tissue mass

as coming about through interactions between intrinsic (genetically determined) factors and extrinsic factors in environment and lifestyle (Dodds, 2017). Ageing is partly under the control of genetically determined processes. The most likely explanation lies with the disposable soma theory of Kirkwood and Rose, with a reasonable postulate that ageing is due to the accumulation of damage and that rate of ageing will be determined by the effectiveness of systems of damage control through prevention, detection, and repair or replacement. Epidemiological studies and some experimental evidence suggest that; (i) intrauterine and early infancy environments can set metabolic patterns that affect susceptibility to disease in middle life, (ii) in later life, exercise can improve muscular function in women, and giving up smoking can improve the course of coronary artery disease and (iii) drug treatment of high blood pressure can reduce the risk of stroke up to at least the age of 85. There are clinical examples to show that the nature and magnitude of extrinsic influence on ageing depend on intrinsically determined susceptibility like; (i) genes are thought to determine the effect of dietary salt intake on blood pressure, (ii) susceptibility to the ill effects of smoking and alcohol also probably has genetic determinants and (iii) affluent lifestyle may particularly enhance the incidence of diabetes and cardiovascular disease in people carrying 'thrifty genes' originally selected for their benefit in surviving periods of famine (Barker Hypothesis) (Grimley Evans, 2000).

Supporting Healthy Aging: We cannot change our genes, however through immunization programs, screening for diseases and lifestyle changes, one can reduce our risk for some of the diseases and conditions that become more likely as we age (Kowald, 2016). Hence, the healthcare professionals must prepare themselves to equip the above 50 years citizens to achieve healthy aging in a systematic fashion. Although we do not have a comprehensive protocol that suits all sections of the society, there are some common elements that need to be highlighted.

- **Immunizations:** As per the U.S. Center for Disease Control and Prevention recommendation (2014) adults are advised to have the following immunizations; (i) herpes zoster (shingles) vaccine for people ages 60 and over, even if they have had an attack of shingles earlier in life (ii) human papillomavirus vaccine for aged 19-26, particularly for those at high risk (iii) hepatitis A virus and hepatitis B virus vaccines, if one did not get them as a child, and if at particular risk for this infection (iv) haemophilus influenzae, type b, vaccine, if at particular risk for this infection (v) influenza vaccine, every year (vi) meningococcal vaccine if at particular risk for this condition (vii) pneumococcal pneumonia vaccine, if in the 19-64 age range and at risk for pneumococcal infection (viii) tetanus, diphtheria and pertussis (one shot on one occasion), and then tetanus and diphtheria every 10 years (ix) varicella (the virus that causes chickenpox and zoster, also called shingles), if one did not get this vaccine as a child (Susanna Esposito, 2016).
- **Screening tests:** Screening tests can detect diseases at early and at potentially curative stages however, the potential benefits of screening tests and procedures decline as one get older. A screening test for a particular disease may not be necessary if the risk of getting that disease is very low or if one is unlikely to accept treatment for that particular disease or if it would not extend, enhance life or make it more comfortable (Alexey Moskalev, 2017).
- **Healthy Eating:** Irrespective of the eating habits so far those above 50 need to regulate the diet reducing sugar, fat, milk, salt etc. and promoting eating of fruits and vegetables, that can help us stay strong and healthy and also provide the essential nutrients. Folate, a vitamin B found in spinach and asparagus is necessary for the health of our cells and helps to prevent anaemia and changes to DNA that could lead to cancer. The vitamins E and C can also reduce the risk of cancer and heart disease, apart from boosting the mental ability and preventing dementia (Luigi Fontana, 2015).
- **Good Oral health:** Regular dental check-up is a must particularly after the age of 50 years. Apart from poor nutrition due to lack of teeth, poor dental hygiene and chronic inflammation caused by gum disease have been linked to a number of health problems including Alzheimer's disease and heart disease (José Leopoldo Ferreira Antunes, 2016).
- **Maintaining a healthy weight:** Monthly weighing after the age of 50 is a must, as people who are obese or overweight are at increased risk for high blood pressure, diabetes, heart disease, arthritis-related disabilities and some kinds of cancers (Jose Lara, 2015). Irrespective of their weight, the elderly should have a healthy diet and regular isotonic exercise like jogging, brisk walking, swimming etc. for maintaining a weight appropriate to age and height.
- **Preventing Sarcopenia:** A major component of age-related weakness and frailty is gradual loss of muscle tissue (sarcopenia). Sarcopenia is the gradual loss of muscle tissue, resulting in decreased strength and 2% of skeletal muscle mass is lost each year after the age of fifty. It also increases the risk of frailty and falls and in turn, hospitalization in elderly. As the age advances, the role of preventive physiotherapy is to help recondition muscle strength, restore movement, balance and function. Resistance training has an important role in prevention and treatment for sarcopenia. It improves muscular fitness by exercising a muscle or a muscle group against resistance, improve function, increase quality of life and reduce likelihood of falls (Walston, 2012).
- **Giving up smoking:** Persons at all ages, especially those above 50 should quit smoking, as it significantly increases the chances of having a stroke and developing lung and other cancers like emphysema, chronic bronchitis, chronic obstructive pulmonary disease (COPD), heart attacks and peripheral vascular disease (Louise Lafortune, 2016).
- **Drinking in moderation:** Those aged above 50, should stay away from heavy drinking, however there need not be any compulsion to stop if they can limit themselves to one or two drinks and that help them to relax easily.²⁰ However there could be difference of opinion about this in the scientific world and general public. (Since, there is no proven evidence on relationship between healthy aging and alcohol usage, this should be considered only as a view point of the author of the article).
- **Maintaining a normal range of blood pressure:** Even after the age of 50, blood pressure could be maintained below 130/90 mmHg, if not 120/80 mmHg, as it helps to reduce the risk of stroke that can lead to dementia or the Alzheimer's disease, apart from movement disability. High blood pressure damages blood vessels that increase

one's risk of stroke, kidney failure, heart disease or heart attack and this is particularly important for post-menopausal women (Adam Harvey, 2015).

- **Keeping cholesterol level controlled:** Although it is not necessary to be unduly perturbed by excess of cholesterol levels, attempts should be made to keep cholesterol level to ideally less than 200 mg/dL, because of the potential risk for heart disease and stroke. As it rises with age and women's levels tend to rise after they have reached the stage of menopause, follow a healthy diet and maintain physical activities as part of daily routine after the age of 50 years (Mark, 2012).
- **Keeping mentally active:** As memory related issues are likely to crop up after the age of 50, try to keep mental agility, by engaging in mentally stimulating activities other than routine job.²³ Some ways to keep ourselves mentally fit are by either solving a puzzle, learning a new musical instrument, reading a challenging book, playing a board or card game, attending a lecture or play, or writing a short story etc. and in short find new ways of engaging our mind
- **Reducing stress levels:** The hormones released during stressful times can not only affect our body functions, but also memory, learning and can lead to anxiety and depression.²⁴ Stress is an inherent part of professional and personal life and age of 50 may be a land mark to sit back and think do I need to be so hard on myself, family and colleagues. This may be the time to start enjoying the fruits of our labour and initiate relaxation methods like yoga, meditation, music, gardening etc.
- **Avoiding falls:** As there is an increasing risk of falls after the age of 50, due to emerging problems like sarcopenia, balance and co-ordination problems, poor vision and hearing etc. one need to start taking precautionary measures like wearing seatbelt/helmet/proper shoes/spectacles/hearing aids etc. as appropriate to the need (Emily Kwan, 2014).
- **Staying connected socially and spiritually:** By age of 50, one has achieved the stages of Maslow's hierarchy of needs (Lisa F Carver, 2016) like biological needs, safety needs, love and belonging and self-esteem and now is the time to aspire for self-actualization, becoming more of a 'giving type' person than a 'taking type' person, with an urge to contribute socially and engage in spiritual activities.

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