Innovative Ageing: Today's Need

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The population of the aged is accelerating world wide. It is estimated that between 2015 and 2050, the proportion of the world's population over 60 years will nearly double (from 12% to 22%). As per 2011 census, the aged in India constituted 8.6 percent of the total population (8.2% of the total number of males and 9.0% of the total females). It is expected that by 2020 the number of people aged 60 and above in the world will outnumber children below 5 years and India alone will have 16 percent of the world's aged population.

The rising trend in ageing population all over the world is of concern to every nation to be able to look after its elderly population and to educate them for a healthy and active ageing. It is a beneficial process because as one grows older, one can draw upon the vast knowledge, skills, wisdom, and expertise gained through experience and contribute in many ways to their families and communities. But it is based heavily on one factor: health, the valuable asset for quality of life. If people stay in good health, their ability to do the things they value will have few limits. Therefore it is essential to ensure that the older people have opportunities to remain active. WHO Brasilia Declaration on Ageing (1996) states that healthy older persons are a resource for their family, community and the economy. The more active they are, the more they can contribute to society.

Objectively ageing is a universal process that begins at birth and is specified by the chronological age criterion. Based on the socio economic situation in India, 60 years is considered as cut off point for defining old age. Subjectively ageing is marked by changes in behaviour and self perception and reaction to biologic changes. Functionally ageing refers to the capabilities of the individual to function in society. Based on the functional ability, the old age is divided chronologically young old (60-74 years), middle old (75-84 years) and old- old (above 85 years).

Changes with Ageing

Ageing is a gradual lifelong biological process common to all living organisms. As biological process, ageing brings number of changes which are genetically programmed. The ageing process varies from individual to individual. Some look younger than their chronological age while others are not so. As the individual grows old and older, the following changes occur in the body due to the biological factors within the individual, outside external environment and the kind of his life style.

Physical changes: These include graying of hair, loss of teeth, loss of subcutaneous fat, weakening of muscles, loss of bone tissues, difficulty in control of body temperature, night cramps, osteoarthritis causing pain and immobility. There is reduction in cardiac output, lung vital capacity, slowing down of digestive process, alteration in functions of endocrine system, decreased brain and kidney size resulting in related problems.

Psychological and mental changes: Psychological changes of normal ageing include loss of self esteem, acceptance or non-acceptance of physical changes, depression, decline in memory, intelligence, sensory changes causing inaccurate communication, sleep disruption etc.

Sociological changes: These include reduced income, change in life style, widowhood, loss of family members and friends, failed relationship, social isolation etc.

Spiritual changes: These include increased religious attitude and feeling, decreased participation in religious services due to functional disability, lack of company, lack of money etc.

Though these changes appear inevitable, these can be prevented or delayed by regulated life style, nutrition, habits, exercise and by retaining autonomy and social support. WHO defines active ageing as "the process of optimising opportunities for health, participation and security to enhance quality of life as people age". Healthy and Active ageing means retention of physical, physiological, psychological and social fitness to its maximum and to lead a normal life as possible like in earlier life; being mobile, coping well with physical, mental, social and spiritual activities of daily life; enjoying sound and fulfilling life; being productive and contribute to family and community; and ability to function independently within a given social setting.

Socialisation for active ageing: Socialisation plays an important role in maintaining the quality of life

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as one ages. Older people with strong social networks seem to have protection against cognitive decline, self-reported disability, higher quality of life, longer and healthier life compared to those with little social support. Socialisation stimulates multiple body systems including cognitive, cardiovascular, neuromuscular and immune system and facilitates moderated blood pressure, improved memory, physical activity, nutritional intake, reduced depression & chronic pain and Improvement in relationships.

Tips for Improving Socialisation

Creating age friendly environment: Local community leaders and people can develop age-friendly community centre to provide services that will enable older people to be socially active in development programme such as health education, literacy drive, child welfare and development, mass education etc. Events such as yoga, games, trips, career guidance for youngsters, arranging talks/seminar/ workshop on improving the quality of life etc. can be organised. Participation of older people in these programmes helps to ease their transition of ageing.

Learning new skills: As we age, we need to be involved in learning new abilities and seeking brain stimulation. Learning a different language is a good exercise for our mind. Playing challenging games such as brain teasers, cards and mathematical puzzles, learning to use social networking in the computer, internet surfing, stimulate the brain and help to remain active in the old age.

Engagement in part time job: Engaging in any part time job helps to continue the social interaction as one ages. Helping others by volunteering time is one of the best ways to feel better and expand the social network. This will not only ease the economic situation but also keep the older person to be engaged in some occupation.

Attending places of worship: By attending religious places the older people are imbued with sense of purpose besides opportunities to find support groups. Reading religious books stimulates the mind and reduces stress.

Taking care of pets: A pet provides the older person a company and walking a dog can be a good exercise and a great way to meet many people. Studies indicate that pet owners remain engaged socially, have less depression, suffer less loneliness, feel more secure, have more motivation for constructive use of time and require less medication than non-pet owners.

Face to face contact: Limiting the time staying alone and inviting the loved ones to visit older persons or keeping them in touch with older persons over the phone or email will improve socialisation.

Positive body image: Research has shown that many older people avoid social interaction because of poor body image. Individuals who are overweight may be self-conscious or embarrassed, and therefore less likely to engage in their social networks. Compliments and positive comments can boost the self-esteem of older people. Discouraging them from fretting over their appearance may help them avoid becoming self-conscious to the point that they avoid social interactions.

Encouraging hearing and vision test: Older people with untreated hearing and sight problems may avoid social situations because of difficulty in communication. Hence it is essential to treat their hearing and vision problems treated to improve their social contact.

Making adaptive technologies available: Adoptive technologies such as walker, hearing aids help older people to compensate for age-related deficiencies that can impede social interaction. Facilitating the use of adaptive aids can make it possible for older people to have active and involved social lives.

Dining with others: The act of eating with others is inherently social. Encouraging older people to share a meal with others whenever possible will not only promote better nutrition but also their socialisation.

Preventive and promotive aspects of health of older persons: To maintain health, wellbeing and quality of life in old age, one has to have physical, mental and social fitness to its maximum so that he or she can function independently. To promote health and wellbeing, the following practices need to be adopted.

Good nutrition: Aged people have a caloric requirement 10-15 percent less than adults. To maintain the optimal weight they need to take low fat, moderate carbohydrate and high protein diet. Excessive intake of salt, sugar and fried items need to be avoided. They should avoid regular use of laxatives, instead add more fibres in diet. Adequate intake of leafy vegetables, milk and adequate water and fluid should be ensured. Antioxidants like vitamin A precursors (beta carotene, carotenoids, retinoid) vitamin C & E should be taken liberally to act as antioxidants.

Regular exercise: Physical activity and movement helps to improve blood circulation and maintains normal function. Regular exercise in the form of walking (30 minutes/day) is recommended. It prevents constipation, bone loss and fractures, promotes good sleep and prevents over weight, blood pressure,

blood sugar and cholesterol. It also improves sense of wellbeing and self-esteem, delays depression and social interaction. Aerobic, muscle strengthening exercises such as Yoga not only increases flexibility and strength of musculo-skeletal system but also very effective in delaying onset of various chronic diseases like atherosclerosis and ischaemic heart diseases and respiratory diseases.

Adequate sleep: Adequate sleep (at least 5-6 hours/ day) is essential to promote physical and mental health of the elderly persons. Prolonged sleep loss effects work performance, family life and quality of life. To sleep better the elderly people should practice regular sleep schedule; unwanted noise and light in bed room to be reduced; room temperature of the bedroom should be comfortable; beverages that contain caffeine need to be avoided in the night, a glass of warm milk may be helpful; dinner should be taken at least 2-3 hours before sleep; daily regular exercise may be helpful.

Personal cleanliness: Personal cleanliness such as regular brushing of teeth, cleaning the mouth, frequent washing of hands, taking daily bath. Wearing clean clothes, regular nail cutting, hair cleaning etc is essential for healthy ageing. *Bowel movements:* Bowel movements should be ensured at fixed regular timings during the day. Constipation is a common problem in old age. High roughage diet and exercise will help moving the bowels regularly and prevent constipation. *Meaningful activities:* Involvement in activities such as gardening and hobbies is essential for their mental health. *Economic security:* The major cause of debilitation in old age is financial worry. Because of fear of potential cost of major illness, elderly cut short their expenses on food. There is a need for income security and accessibility of health care services for elderly people. *Independence:* The elderly people need to take own decision and manage their life even when they have limitations and disability to meet their self-respect. *Companionship:* The elderly need companionship and social interaction for expression and response. Supportive relationship is essential for them to maintain their physical and mental health. *No substance abuse:* Tobacco use in the form of smoking, chewing or snuffs should be avoided. Alcohol intake need to be avoided or restricted to 2 oz /day.

Prevention of accidents: Vehicular accidents are more common in elderly due to age associated impaired vision, hearing loss, slow responsive reflexes and impaired locomotion; falls are also common causes of morbidity and mortality among elderly people due to impaired vision and age related disequilibrium. Falls can result in hip fractures, broken bones, and head injuries. Even falls without a major injury can cause an older adult to become fearful or depressed. Residence should have adequate lighting, non-skid floors especially at kitchen and washroom, hand rails in staircase and toilets. *Avoidance of hazardous situations:* Walking or driving in wet or icy conditions should be avoided. Road crossing in congested area should be done very carefully or with help if available. *Prevention of infection:* Most infections that result in morbidity and mortality in elderly people can be prevented by immunisation and chemoprophylaxis. Preservation of physical activity by regular exercise, adequate nutrition, maintaining personal hygiene and elimination of smoking are essential to prevent infection.

Need for Lifestyle Changes

Lifestyles have become increasingly unhealthy in modern stressful society. Addictions, tensions and sedentariness are common. To have a healthy and active ageing it is essential that smoking should be strongly discouraged as it contributes to disorders of lungs, heart, brain peripheral blood vessels and diseases like cancer; consumption of chewable and other forms of tobacco and excessive use of mouth freshners like various masalas should also be avoided; excessive alcohol intake leads to liver diseases, stomach ulcer, nutritional deficiency, heart ailment, dependency and social problems; fatty, fried, sugary and excessive salt food items; prolonged fasting and overeating to be avoided; harmful environment such as poor housing structure and overcrowding increase the risks of accidents and transmission of infectious diseases and indoor air pollution which causes negative impact on health. These need to be avoided.

Active Mental Stimulation for Healthy Ageing

Involvement in activities such as physical and mental exercises, games, socialisation etc. can help keep their mind sharp and alert. Studies have shown that the brain remains capable of learning and retaining new facts and skills throughout life, especially for people who get regular exercise and frequent intellectual stimulation.

Despite individual differences, some cognitive abilities continue to improve well into older age, some are constant, and some decline. **Semantic memory** is the ability to recall concepts and general facts continues that improve for many older adults. For example, understanding the concept that clocks are used to tell time. **Procedural memory** is the memory of doing things, such as how to tell time by reading the numbers on a clock stays constant as one ages.

Episodic memory captures the "what," "where," and "when" of our daily lives, and tends to decline somewhat over time like the older persons arrive at the grocery store and have trouble remembering why they are there? Researchers tell that memory loss can be improved simply by socialisation, getting moving, brain training, staying optimistic, sense of control and confidence in memory exercises. The following are the ways to improve the mental fitness of older people. Distractions that divert the attention of older people need to be avoided.

Some tips for active mental stimulation of elderly persons include using mind exercises such as remembering the grocery list that triggers memory; keeping up social life, and engaging in plenty of stimulating conversations; reading newspapers, magazines and books; playing 'thinking' games like scrabble, cards, crossword puzzles, word games; learning a new language or taking a course on a subject that interests the older person; cultivating a new hobby like music, gardening, reading religious books, knitting etc.

Doing regular exercise in three 10-minute blocks to improve oxygen supply to the brain, memory, reasoning abilities and reaction times; using the opposite or non-dominant, hand for tasks such as eating, brushing teeth, dialling the phone, using the mouse on a computer etc. to arouse the mind; incorporating as many of the five senses as possible into everyday activities; watching 'question and answer' game shows on television, and playing along with the contestants; Performing meditation and regular relaxation; regular intake of diet rich in vitamin C & E, flavonoids and antioxidants such as green leafy vegetables, coloured fruits like oranges, mango, nuts, fish and soya which are good for the brain.

Alleviation of Gloom and Mental Agony in older persons

Adjustment to retirement, loss of income, limited mobility, coping with change in role function, loss of friends and family members etc. make the older person feel isolated and lonely. Long-term activation of body's stress response impairs the immune system's ability to fight against disease and increases the risk of physical and mental health problems such as disability and difficulty in carrying out activities of daily living, decreased sense of well-being and satisfaction with life. These psychological characteristics can be controlled by older people by believing in their ability to cope up with the situations. Their self-belief can have positive effect on their mental as well as physical health.

Health Benefits of Laughter

The humour and laughter is one of the easy, cost effective, less time consuming remedy to experience healthy aging. These improve the immune system, heart functioning, and mental health, among other benefits. During times of stress, cortisol, a hormone secreted by the body suppresses the proper functioning of the immune system thus making humans more inclined to become sick. Research has found that laughter can remove some of the negative effects of stress.

Laughter relaxes the whole body. A good, hearty laugh relieves physical tension and stress, leaving our muscles relaxed for up to 45 minutes after. Laughing does not have to be genuine. Fake laughter will also cause the body to respond as if the laughter is real. It decreases stress hormones and increases immune cells and infection-fighting antibodies, thus improving our resistance to disease.

Laughter triggers the release of endorphins, the body's natural feel-good chemicals. Endorphins promote an overall sense of well-being. Laughing also can have an anaesthetic-like effect on the body, suppressing physical pain and discomfort for up to two hours following a hearty chuckle. Laughter is an instant stress buster, which helps to reduce the risk factors.

Laughter protects the heart. Laughter improves the function of blood vessels, lowers blood pressure while increasing blood flow and oxygen intake which can help protect us against a heart attack, stroke and other cardiovascular problems.

Laughter improves the wellbeing. 15 minutes of laugh is equal to the benefit of two hour sleep, 15 minutes laugh adds two days life span. It stimulates the brain, respiratory, nervous, hormonal and muscular system. Laugh increase the secretion of serotonin in brain which is essential for the uplift of mood. Laughter provides good exercise to organs and enhances blood supply.

Laughter increases longevity. Research indicates that laughter consistently demonstrate the connection between laughing and longevity.

Laughter helps to remove the space between people, makes them feel more connected and part of a group. Healthy laughter helps to reduce tension, promotes cooperation, decreases loneliness and helps restore balance and vitality. Good humour and laughter programme should definitely be encouraged in leisure time.

Tips to start laughing for a healthier life: Smile; Seek out any laughter that you hear; Avoid negative

thoughts; Spend time with people who have a great sense of humour; Lighten up and loosen up; Try to be like a child; Find ways to cope with stress; Make it a habit to laugh every day; Learn humour; Practice your sense of humour.

Conclusion

Ageing is inevitable, but it can be delayed by regulated life style, nutrition, habits, exercise and by retaining autonomy and social support. Socialisation, humour and laughter are the easy, cost effective remedy to experience healthy aging.

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