



Ageing Without Agony: Certain Hormonal And Nutritional Implication

Abstract

The process of aging is initiated from the moment of birth and continues throughout life. However, during the latter period of life there is a decreased renewal of cells and tissues and hence the effect of aging becomes more obvious. In fact, the state of health and the nutritional status of senior citizen is highly individual. It is the sum total of the physiological and psychosomatic events which have occurred in the person's preceding years the objective of this presentation is to discuss certain important physiological and nutritional aspects which have to be emphasized to make older adulthood a fulfilling period of life. The study encompasses details about the dietary needs to the individual as well as certain psychological readjustments which have to be undertaken by both the individual and those in the immediate vicinity. These factors would have to be actualised and considered to make the twilight years of life more enriched and fulfilling.

Key Words:-renewal, cells, tissues, physiological, psychosomatic, dietary

Introduction

This is ultimate stage of human development where development comes to a halt. in fact, this period is supposed to be a period of decline and degeneration aging is a continuous processes. Traditional, the age of retirements viewed mas the beginning of old age. now that like expectancy has increased age of retirements from job is changing and the cut off points for definition of old age is changing.

By focusing on this periods of like gerontologists are make important

Contributions in clarifying the capabilities of the early increase in life expectancy throughout the world influences the number of people who reach old age to grow substantially. The chronological age of an individual is not the only equating factor with biochemical age which more realistically rehresents the individuals physical and mental profile. The precise roles that nutrition plays in the aging process have not been determined but there is conclusive evidence that nutrition influences the development and course of many chronic and degenerative disease that often accompany ole age.Older adulthood can be certainly a more fulfilling and happy period of life if one is conscious of certain important psychosocial physiological and nutritional changes occurring in one's life.

• Physiological changes –

Normal degenerative changes occurring over the years affect numerous body tissues and physiologic processes.

As a person grows older, some lean bodymass is gradually lost. The following changes in Body composition & protein metabolism are associated with aging:-

There is decrease in the following. Body Protein Mass
Rate of Muscle Protein turnover Rate of whole body protein
turnover Amount of the plasma proteins. Albumins,
Prealbumins

Transfer in, Ceruloplasmin

characteristics of old age:-old age is characteristics by certain physical and psychological changes. These changes have profound effects on personal and social adjustment of elderly people.

- 1.old age is period of decline
- 2.effects of aging have individual difference
- 3.old age is judged by different.
- 4.there are many stereotypes of old people
- 5.social attitudes towards old age.
- 6.the elderly have a minority group status
- 7.aging requires role changes
- 8.poor adjustment is characteristics of old age
- 9.the desire for rejuvenation is very common in old age.

Other prominent changes in the body composition associated with ageing are -

1. Skin :-

is soft and tender due to its elasticity which is attributed to the protein collagen and the moisture content of its cells – Moisture has both water and oil provided by sebaceous glands which lubricate the skin's surface, collagen begins to lose its elasticity due to the decoiling of the proline helix. The condition can be prevented by intake of vitamin C or E and consumption of natural Foods like almonds skin should be protected from sunlight and smoking must be avoided. Mineral deposits laid down on a softer bone matrix. Calcium and phosphorus impart all the strength and hardness and they are being continuously recycled between the bones and the blood. Bone injuries in the first half of life take less than half the time to heal as compared to the 2nd half because it takes 2-3 times as long for calcium and phosphorus to get deposited.

2.EYES AND VISION :-

The lens of the eye a highly elastic, soft, clear tissue begins to lose its elasticity from 12-14 years onwards. At the age of 50 the diameter of the pupils begins to get smaller, allowing less light to,

Table - 1 : Changes in Biologic function between 30 - 70 %

Biologic function	Change
Working capacity	25-30
Cardiac output	30
Maximum heart rate (beats/minute)	24
Blood pressure (mm Hg.)	10-4

Systolic	5-10
Diastolic	5-10
Respiration (%)	
Vital capacity	40-50
Residual capacity	30-50
Body cell Mass (%)	10-15
Total body water (%)	10-15
BMR (%)	8-12
Musculature (%)	
Musculature (%)	25-30
Muscle Mass	25-30
Hand grip strength	10-15
Nerve conduction velocity (%)	2-30
Flexibility	
Bone (%)	
Females	25-30
Males	15-20
Renal function	30-50
Fat and Adipos tissue	25-30

Reach the retina. A whitish circle develops around the cornea called the “arcus senilus” and makes the lens cloudy.

3. LUNGS:-

performance reduces after 20, but air pollution and smoking enhance this reduction carotene found inflammation and reduces the incidence of lung cancer.

4. BRAIN:-

fortunately, the biochemical not change much over time intellectual activity is affected very little by age-related changes. : Use it or lose it” is very true of both brains and brawn. Mental exercise promotes the secretion of endorphins which are necessary for intellectual alertness.

5. KIDNEY FUNCTION:-

As age increase the number of nephrons decreases, Blood flow through the kidneys gradually decreases as does the glomerular filtration rate. These changes after the kidney’s ability to form dilute and concentrated urine and may interfere with the removal of wastes. Elderly persons need sufficient fluid intake to promote adequate kidney function.

6. MOTOR FUNCTION:-

strength decrease with age yet many older people remain physically active. An older person who exercise regularly can eat more without gaining weight. This is significant because basic metabolic rate is thought to decline 8-12 % from 30 to 70 years consequently an elderly person requires fewer calories to maintain his body weight than whom he was younger.

7. CHRONIC DISEASE:-

Elderly people need to cope with certain diseases that limit motor abilities.

Stroke, arthritis and even Parkinson’s disease can make (1) shopping, (2)

Food preparation, (3) Eating, (4) Cleaning up difficult and can lead to additional health problems.

8. FEMALE AND AGEING:-

Menopausal women represent a community on the thres hold of the ageing process. After menopause female show increased susceptibility to slow developing chronic disease status –

- Cardiovascular Disease
- Cancer (lung/Breast most common)
- Diabetes
- **Osteoporosis due to:-**
 - Estrogen deficiency
 - Slight stature
 - Limited lean body mas
 - Smoking
 - Excess alcohol

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Therapy includes

- Estrogen replacement
- Regiment of weight bearing exercise
- Adequate diet.

Changes affecting nutrition:-

Nutritional risk factors increase in the aged due to:-

- (1) physiologic decline,
- (2) Decreased socio economic status,
- (3) Limited food consumption,
- (4) Multitudes of disease processes,
- (5) The therapeutic regimens.

May result in:-

- (1) Impaired immune response,
- (2) Decreased Resistance to infection,
- (3) Retarded wound healing,
- (4) Poor oral health,
- (5) Finally general ill health.

- **ORAL CHANGES :-**

- Loss of teeth, periodontal disease. Ill fitting dentures though not directly a result of ageing occur in persons who previously did not take steps to maintain their oral health.

Factors affecting caries incidence:-

- Amount of Carbohydrate consumed
- Sugar concentration of Food item.
- Physical form of carbohydrate.
- Oral retentiveness (amount of exposure time)
- Length of interval between eating time
- Frequency of eating of meals and snacks
- Sequence of meal consumption.
- Pattern of food consumption.

Four nutrients affect the progress of periodontal disease

(1) Vitamin A,

(2) Folate,

(3) Ascorbic acid,

(4) Consumption of liquid foods rich in sugars further deteriorates dental health.

• SENSORY CHANGES:-

- Since nutrient intake is a cumulative sensitization of all senses, eating becomes less pleasurable than it is earlier in life following
 - Partial loss of taste buds (particularly those which detect sweet or salt)
 - Pleasant smell of many foods is lost partially since ageing reduces olfactory memory and sensitivity.
 - Deterioration of sight & hearing can also influence eating or drinking patterns.

Materials and Methods:-

A descriptive cum action research design was planned for the present research. An aging people interview schedule was prepared to collect the descriptive data i.e., information on existing conditions of aging and for work analysis. Deliberate random sampling technique was used to select the study area and sample. Two villages Randheja and Khanpur Gandhinagar, in Gujarat were selected for the research.

DEVELOPMENTAL TASKS DURING OLD AGE:-

1. Adjusting to decreasing physical strength and health.
2. Adjusting to death of spouse

3. Adjusting to retirement and reduce income.
4. Establishing an explicit affiliation with members of one's age group.
- 5. Establishing satisfactory physical living arrangements.
- 6. Adapting to social roles in a flexible way.

Observation on Controlled group (AGING)

On the whole to complete Contributions in clarifying the capabilities of the early increase in life expectancy throughout the world influences the number of people who reach old age to grow substantially by the aging.

• GASTROINTESTINAL FUNCTIONS:-

- Changes in enzyme activity and gastrointestinal secretion may pose problems with increasing age.
- Achlorhydria is the biochemical insufficiency of gastric HCL associated with old age. Other digestive enzymes which decrease with age are salivary amylase and pancreatic amylase.
- Absorption of Fe^{2+} + Ca^{2+} + vit B¹² may be limited because of limited gastric secretions.
- Flatulence heart burn or gastric distress is attributed to change in gastric motility.
- Medications taken by the elderly also may interfere with utilization of nutrients (The consumption of excessive antacids and laxatives is extremely harmful because they decrease urine excretion leading to Magnesium toxicity)

NUTRIENT REQUIREMENTS:-

Energy	1800 kcal
Vitamin A	800-100 (ugRE)
Vitamin D	5 mg
Vitamin E	8-10 (mg TE)
Vitamin C	60 mg.
Thiamin	10-12 mg.
Riboflavin	12-14 mg.
Proteins	44-56 g.
Ca	800 mg.
P	800 mg.
Mg.	300-350 mg.
Fe	10 mg.
Zn.	15 mg.
•	150 mg.

Previous study

FOODS WHICH ARE KNOWN TO RETARD SENESCENCE:-

- "Your food shall be your medicine", said Hippocrates, father of medicine, several hundred years ago. Down the ages experts in Vedic, Unani and other forms of medicine have repeatedly endorsed that in

Nature's bountiful array of foods. There are several fruits, and vegetables which retard the process of ageing and thus if they are included in the diet ageing can be held at bay.

Indian Gooseberry has raxitalising effects and has in its natural composition such elements which prevent ageing and maintain strength in old age. It is said that the great ancient sage muni chyawan rejuvenated himself in his late 70s and regained his virility by the use of amla or Indian gooseberry.

Amaranth is also useful in prevent premature old age and maintaining healthy bones by regulating the haphazard distribution of calcium and iron in the body. It contains all the essential aminoacids thus it prevents a negative protein and nitrogen balance which accompanies senescence.

Curd has been biochemically associated with longevity and its curative properties are both versatile and valuable. Its therapeutic effects have been traced to Turkey. It is extremely beneficial in gastrointestinal malfunctioning, insomnia, hepatitis, skin disorders and inflammation. Thus curd is an essential component in a senior citizen's diet.

Other foods known for their specific curative properties are:-

Red peas	-	Baldness
Almonds	-	Sexual debility
Dales	-	Cardiological disorders
Lemons	-	Rheumatic affections
Tomatoes	-	Respiratory disorders
Wheat	-	Tooth disorders
Grounel nuts	-	Diabetes
Honey	-	Anaemia
Figs	-	Piles
Beet root	-	Gall bladder disorders

III Psychosocial and economic factors influencing eating Behaviour:-

Older persons are often depicted as senile, debilitated, stubborn,

cranky and socially isolated yet 95 % of the elderly live alone or with relatives. Changes in life style can make the person's attitude towards nutrition better for the better.

- Make arrangements to eat several meals per week with adequate company.
- If eating alone be selective in using the TV/Radio to make the atmosphere pleasant.
- Develop a regular pattern of food intake (small, frequent meals)
- Keep physically active (walking is BEST)
- Avoid relying totally on convenience foods and canned foods.
- Keep serving sizes small.

- Drink plenty of water approximately 2-3 l./day and other fluids and avoid excess salt.
- Eat in a well. It or sunny area Arrange the table/tray attractively.
- Chew food thoroughly and decrease the intake of poorly tolerated foods.

Conclusion:-

The social situation encompassing the aged cannot be ignored especially since it reflects the person's attitudes towards life in general and fitness in particular loneliness. Post retirement blues and a general feelings of inactivity. Can be combated by taking up hobbies more actively. Participating in group activities and making new friends. It is important to occupy oneself to create a feeling of productivity.

If all these aspects are considered and actualized the twilight years can in fact be filled with innumerable survey and bright days.

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