

Geriatric Nutrition.

1) Define the term gerontology? ✓

Ans. Gerontology the term gerontology is "The scientific study of old age, the process of ageing & the particular problems of old people."

2) What is xerostomia? ✓

Ans. Dry mouth, or xerostomia, refers to a condition in which the salivary glands in your mouth don't make enough saliva to keep your mouth wet.

3) How much resting metabolic rate decreases through lifespan? ✓

Ans. Resting metabolic rate decreases approximately 15-20% over the life span, ~~primary~~ primarily due to changes in body composition & reduction in physical activity.

4) How do you mean by the term "Geriatric Nutrition"? ✓

Ans. "Geriatric Nutrition" applies nutrition principles to delay effects of aging & diseases, to aid in the management of the ~~the~~ physical, psychological & psychosocial changes commonly associated with growing old.

Importance It gives you energy & can help you control your weight.

① It may also help prevent some diseases, such as osteoporosis, high blood pressure, heart disease type-2 disease diabetes & certain cancers.

② Differentiate the two terms 'Aged' & 'Old age'?

Ans. Ageing is not a disease but a biological process. It is a normal process begins at conception & ends only with death. ~~Individuals~~ Individuals are known to age at different rates. The changes associated with ageing are partly influenced by genetics, race & gender.

Goal of nutritional care should be to help the aged achieve a healthy, purposeful & independent living.

"old age" is best defined as the age of retirement, i.e., 60 years & above. Improvement in healthcare technology has resulted in increased life expectancy, the number of persons in old age has increased.

* Aging has been defined as "a series of time related processes that ultimately bring life to a close".

Persons of 60 years of age & older are defined as elderly by WHO.

Successful aging is said to be multidimensional & has been defined as "encompassing the avoidance of disease & disability, maintenance of cognitive & physical function & sustained social & productive activity."

Pl ✓ Librate the recommended intake of Iron & Vitamin C for women over 60 yrs of age. (according to RDA, 2020)

Ans.

Women	<u>RDA</u>	
≥ 60 yrs	Iron	Vit C.
	19mg.	65mg.

(EAR :- Estimated Average Requirement)

Q. Why should the elderly person consume "Whole wheat chapati" instead of bread?

Ans. Bread is made up of refined flour whereas "Whole wheat chapati" is made up of whole wheat that contains fiber in it. Fiber helps the body to ease pass the stool & prevent constipation & also helps in reducing cholesterol which may reduce the incidence of atherosclerosis. So the elderly person should consume "Whole wheat chapati" instead of bread.

H. Name the nutrient deficiency that causes neurological dysfunction in old age?

Ans. Nutrients:-

- 1) Lack of Niacin has long been associated cause dementia & depression of pellagra. (ARA RA)
- 2) Choline deficiency hampers the synthesis of the neurotransmitter acetylcholine.
- 3) VB₆ & thiamin deficiency associated with CNS problem.

Women who walk or exercise regularly are less likely to experience the memory loss & other declines in mental functions that can come with ageing.

Q1) Recommend four important nutrients for an elderly person suffering from anaemia.

Ans) Four important nutrients are:-
↳ Iron ↳ Vitamin B₁₂ ↳ Folic acid
↳ Vitamin C.

Q2) State two common reasons behind osteoporosis among elderly women?

→ The age at which peak bone mass of population is 25-30 (NIN - 2006-2007). As people age bone breakage (Increase in osteoclast tissue) begins to predominate over the bone formation (decrease in osteoblast tissue) resulting in osteoporosis.

→ In case of women, the cause of osteoporosis may be age related changes such as decreased oestrogen production associated with menopause.

Q3) Write on function of $\omega 3$ fatty acid for healthy aging process?

Ans) ① Elders who take sufficient $\omega 3$ fatty acids have better visual acuity.

② $\omega 3$ -fatty acids may help in conditions such as hair loss, impairment of vision, improper digestion & gas, poor kidney function, tissue inflammation, osteo-arthritis, painful joints & muscles & mental depression.

Q. What are the cause of constipation during old age?
(any two).

Ans. Two cause are:- ① low fluid & fiber intake & depression can result in drier & harder than normal stools.

② Reduced elasticity of intestinal wall muscles affecting peristaltic movement.

✓ write short notes on:-

Q. Briefly discuss the role of antioxidant nutrients in maintaining good health of an elderly person.

→ Oxidative stress promotes the process of ageing.

→ With ageing there is decrease in glucose tolerance. Vc which acts as potential antioxidant plays an important role in preventing complication of diabetes.

→ Free radicals are also cause atherosclerosis. Studies have shown that Vitamin E retards the development of coronary artery disease.

→ Antioxidant also protect lens protein to UV radiation. People with low serum carotenoid levels had more chances of developing cataracts than those with normal levels. So, cataracts can be prevented by making the diet rich in β -carotene, riboflavin & ascorbic acid.

→ ω_3 also acts as an powerful antioxidant, elder who takes sufficient ω_3 fatty acids, have better visual acuity.

→ Persons with high antioxidants intake are less likely to develop certain cancers.

- Antioxidants helps to prevent the damage of collagen fibrous network underlying the skin by free radicals.
- Present evidence shows that 600 g/day of antioxidants such as fruits & vegetables should be taken by the elderly person.

Q1 'BMD' is lowered in old age' — state two reasons.
 ✓ Osteoporosis is a condition where there is loss of "Bone Mineral Density" (BMD) due to various reasons. 'BMD' is going to be lowered in old age people rapidly due to:—

- ↳ Increase in osteoclast tissue cause bone break down
- ↳ decrease in osteoblast tissue cause reduction in bone formation.
- ↳ In case of women, decrease estrogen production associated with menopause.

Why does the digestion of food hampers among elderly?

1. The digestion of food hampers among elderly for various reason:—

- ① Reduced gastric secretion & gastric emptying is common in elderly.
- ② Reduction in intestinal/colon motility & poor muscle tone of abdomen.
- ③ With aging taste & smell activity also decrease thus affecting the appetite of the person & cause reduction of gastric juice secretion.
- ④ Poor chewing capacity due to loss of teeth, cause indigestion & poor absorption of nutrients.

a) "Ageing is not a disease" justify.

Ans) "Ageing" is not a disease but a biological process. It is a normal process begins at conception & ends only with death. Individual are known to age at different rates. The changes associated with ageing are partly influenced by genetics, race & gender.

Hereditary & good nutrition may slow the ageing process so that the individual enjoys physical & mental vigour in his old age.

Goal of a nutritional care should be to help the aged achieve a healthy, purposeful & independent living.

Q "Why should we restrict ~~too~~ fats & sweets?"
— in the diet of an elderly person.

Saturated fat & trans fat should be restricted as it may cause obesity, deposition of cholesterol in arteries which result atherosclerosis, cardiovascular disease, high blood pressure & many other degenerative & obesity related diseases.

Empty calorie foods like sweets are also ~~very~~ restricted because sweets are also ~~increase~~ help to increase calorie content in body.

Too much of sugar may cause fermentation, discomfort due to indigestion & cause toothache & may increase cholesterol level. May lead to obesity.

3/4/11 List the guidelines for planning a balanced diet for the elderly.

Ans. (Dietary Guidelines Pg:- 144).

1) Write down appropriate consistency of geriatric diet.

✓
Ans. Consistency of geriatric diet :-

- 1) Foods must be soft, easily chewable,
- 2) Foods should be easily digestible.
- 3) Small & frequent meals instead of three heavy ones favour more complete digestion & free from distress.
- 4) Empty calorie foods should be taken minimum & calorie dense foods should be avoided.
- 5) Food should be less salty & spicy.
- 6) Fried & concentrated foods be avoided.
- 7) Plenty of fluids & semisolid foods should be taken.
- 8) 2-3 servings of low fat milk should be included in the diet.

b) i) "Elderly people are deprived from nutritious food" — Explain.

✓
Ans. 'Nutrition' is affected in two ways — due to the changes in physiological function with aging having effect on absorption, retention & utilisation of nutrients & on the other hand

Ans 1 "Elderly people are deprived from nutritious food" because:—

- ① lack of affordability.
- ② dependence on others.
- ③ changes in physiological function with aging having effect on absorption & utilisation of nutrients.
- ④ lack of manpower. ~~to acquire~~
- ⑤ lack of psychological motivation to take nutritious food when you are aged.

II) Discuss the importance of fluid in the diet of elderly. How much fluid is required for them daily.

Ans Fluid or water is essential for the older person as it is for the younger individual.

- water is required for functioning of kidney adequately, hence to eliminate the solid waste.
- water stimulates peristalsis & thus aid in ~~com~~ preventing constipation.
- lack of fluid in body can cause dehydration that result in mental confusion, headaches, & instability.

So, elder should be advised to consume some fluid at regular intervals even if they are not thirsty.

1.5 litre/day is adequate for elderly.

c) discuss the modification of caloric requirement in old age.

Ans.) → Decreased physical activity & changes in body composition & decreased BMR affects the micronutrient energy & protein requirement.

✓ → The estimated energy requirements decrease by 0.5 - 1.0% / year & are based on physical activity level, weight, height & age of the individual.

→ With aging loss of muscle mass & strength (sarcopenia) is observed.

→ It has been seen that decrease in physical activity causes these body composition changes. These ~~processes~~ - processes lead to a lower energy requirement.

→ Due to the decrease in lean tissue the B.M.R declines by about 5%. Thus for maintaining of lean body mass, physical activity is most important.

→ It is also important to emphasize the elderly to maintain adequate energy intake to prevent either underweight or overweight.

Q) Plan a day's sample menu for sedentary elderly man. (Book).

d) "VD synthesis rate decreases with increasing age" → write two dietary measures to improve this condition.

Ans. → Protein rich Diet & adequate intake of milk, fatty fishes etc.

→ Exercise combined with adequate exposure to sunlight.

⇒ write down the cause of anaemia during old age. (Book)

⇒ Suggest some dietary modification for improving anaemia of older people. (Book)

⇒ Discuss 3 major changes in organ function with ageing that may influence nutrient requirement.

* What is Sarcopenia?

Ans. 3 major changes in organ function with ageing that may influence nutrient requirements are:-

<u>Organ function</u>	<u>changes.</u>	<u>Effect on nutrition</u>
① Salivary glands.	→ Decrease in salivary secretion. causes feeling of dry mouth xerostomia.	→ Difficulty in chewing & swallowing make them avoid certain foods particularly crunchy, dry & sticky foods.
② Teeth	→ Loss of teeth & wearing dentures.	→ Decreased consumption of food sp. nutritious food, inturn this can lead to inadequate intake of energy, iron & vitamins particularly Vc, folate & β -carotene
③ Skeletal function	→ changes in bone density	→ Increased requirement of Calcium.

* Sarcopenia, an age related loss in skeletal muscle is the result of a decline in muscle strength. Lean body mass (LBM) declines 2-3% per decade.