International Day of Older Persons

“PANDEMICS: DO THEY CHANGE HOW WE ADDRESS AGE AND AGEING”

“PEOPLE WHO HAVE WALKED THE PATH WE HAVE TAKEN, MUCH BEFORE US”
Most developed world countries have accepted the chronological age of 65 years as a definition of ‘elderly’

Geriatric nutrition applies to nutrition principles to delay effects of ageing and disease, to aid in the management of the physical, psychological and psychosocial changes commonly associated with growing old.

GLOBAL INITIATIVES TO LIVE HEALTHIER

To ensure adults live not only longer but healthier lives, a *Global strategy and action plan on ageing and health* was adopted in May 2016 by the World Health Assembly.
FACTORS AFFECTING QUALITY OF LIFE

PHYSIOLOGICAL CHANGES

- **Bone and Joints**: Ligaments and joints become less elastic, leading to Osteoarthritis
- **Muscle and body fat**: Decreased muscle tissue and strength. Body composition changes as fat replaces muscles leading to Sarcopenia
- **Mouth, Nose, Ear**: Diminished taste, smell, hearing loss
- **Eye**: Loss of vision, change in colour perception
- **Skin**: Thin, less elastic and wrinkled
- **Heart and Blood Vessels**: Stiffness of blood vessels, decreased pumping of capacity of the heart
- **Respiratory Changes**: Less oxygen is absorbed in breathed air
- **Brain and nervous system**: Nerve cells in the brain decrease. Nerve cells may lose some of the receptors
- **Immune system**: Causes infections and allergies

PSYCHOLOGICAL CHANGES

- Anxiety, Depression, Dementia, Substance Abuse
- Social & Emotional changes
- Loss of autonomy, grief, fear, loneliness, financial constraints, lack of social network, feeling unworthy and unwanted
- Old age is usually associated with poor nutrition & depression
- Poor appetite, irritability, anger, self neglect, compromised personal hygiene
- Use Validated screening tests for Nutrition status - Mini Nutrition Assessment
- Encourage leisure activity to enhance self worth & establish social connectivity
- Ensure physical activity to improve appetite
- Counseling and medications as required

MACRO NUTRIENT REQUIREMENT

WITH ADVANCING AGE, BODY COMPOSITION CHANGES AFFECTING NUTRITIONAL NEEDS

ENERGY

- Reduced amounts of calories, as total energy requirements and physical activity decrease with ageing.
- ICMR has no specific recommendations for elderly population. Requirements are based on the height, weight, co morbidities and activity levels. 25-30 kcals/kg body weight based on nature of work and activity.

PROTEIN

- Strengthens and protects muscles and improves immune system
- Minimum of 20% of the total energy requirement has to be contributed from proteins

FAT

- Essential for hormone synthesis. Reduce dietary fat, especially saturated fat
- Good fats are cardio protective and good for mental health viz. Omega 3 fatty acids
- Minimum of 25% of the total energy requirement should be contributed from fats

MICRO NUTRIENT REQUIREMENT
ELDERLY NEED MORE CALCIUM, IRON, ZINC, VITAMINS AND ANTIOXIDANTS TO PREVENT AGE-RELATED DEGENERATIVE DISEASES AND FOR HEALTHY AGEING

**CALCIUM : 1000 mg - 1200 mg / Day**

- Essential to compensate age related bone loss, to improve calcium phosphorous balance and prevent fractures
- Low calcium in gut is compensated by the calcium from bones, also low Vitamin D state, affects calcium absorption
- **Foods to be included**: Milk and milk products, Soy, Almonds & Gingelly seeds and Vitamin D fortified foods

**IRON : 28 - 30 mg / Day  
VITAMIN C REQUIREMENT : 40 mg / Day**

- Iron deficiency is seen in elderly due to inadequate iron intake, blood loss due to chronic disease
- Vitamin C deficiency also reduce iron absorption
- **Foods to be included**: Green leafy vegetables, Dried Dates, Dried Raisins, Lemon, Oranges, Goose berries, Mango, Black berries & green leafy vegetables (Drumstick leaves in raw form) for Vitamin C

**ZINC : 10 - 12 mg / Day**

- Essential to build immunity, for wound healing, for senses of smell and taste, also for appetite regulation
- **Foods to be included**: Nuts, whole grams (sprouted) and poultry & sea foods

MEETING MICRONUTRIENT REQUIREMENTS IS A CHALLENGE BUT POSSIBLE WITH RIGHT NUTRITION ADVICE

# Age Related Changes and Nutrition

## Chew Difficulties
- Loosened teeth
- Ill-fitting dentures
- Dry mouth

## Reduced Taste
- Loss of taste buds
- Diminished taste and smell

## Poor Digestion
- Drug and Nutrient Interaction
- Illness
- Poor Emotional Quotient

## Poor Appetite
- Reduced salivary secretion
- Reduced gastric secretion
- Nausea
- Flatulence

## Suggestions

**Soft well cooked**
- Cereal - Rice, Khichdi
- Lentils - Dals and Grams
- Vegetables & Fruits
- Ragi & Wheat porridges
- Well cooked dals & whole grams
- Meat / Fish stews, Soft cooked eggs
- Skimmed Milk, Curd, Paneer, Custard, Puddings, Smoothies

**Addition of flavor by adding**
- Herbs - coriander, mint and curry leaves
- Mild roasted spices
- Aromatics - ginger, garlic & asafoetida
- Salt - for seasoning

**Small, frequent meals**
- Soft cooked and easy to digest
- Nutrient dense snacks
- Include foods from all food groups in one meal
- Adequate intake of water

**Reduce intake of foods fatty meals and excess of caffeine**
- Ensure two hour gap after meals before lying down
- Include light physical activity
- Restrict alcohol intake

*Reference: www.elderly.gov.hk*
<table>
<thead>
<tr>
<th>CONDITION</th>
<th>POSSIBLE REASONS</th>
<th>NUTRITION TIPS</th>
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<tbody>
<tr>
<td>MALNUTRITION</td>
<td>• Insufficient food intake, poor food choices, nutrient losses, poor absorption of nutrients</td>
<td>• Small and frequent meals, balanced diet</td>
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<td>• Guidance to include all the food groups in the right proportion</td>
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<tr>
<td>CONSTIPATION</td>
<td>• Low fibre intake, reduced activity, inadequate water intake, laxative abuse</td>
<td>• Include fibre in the diet</td>
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<td>• Drink adequate water</td>
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<td>ANAEMIA</td>
<td>• Nutritional iron deficiency, renal failure, infections, chronic conditions like heart disease</td>
<td>• Supplement Iron from food</td>
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<td>• Improve iron absorption by adding Vitamin C in the diet</td>
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<td>• Eliminate food items that hinder iron absorption ex. Tea &amp; Coffee</td>
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<td>• Space calcium and iron rich foods / supplements</td>
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<tr>
<td>TYPE 2 DIABETES</td>
<td>• Age related insulin deficiency and insulin resistance</td>
<td>• Appropriate choice of Carbohydrates, such as complex carbohydrates</td>
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| HYPERTENSION & HEART DISEASE | • Blood Pressure and Cardiovascular diseases  
• Excess fat and salt intake due to diminished taste                                                                                               | • Adherence to the regular meal timings                                     |
|                          |                                                                                                                                                                                                                 | • Emphasis on including fibre rich food items to reduce the glycemic index and load |
| OSTEOARTHRITIS & OSTEOPOOROSIS | • Depletion of cartilage tissue that surrounds the bones in a joint due to wear and tear  
• Reduction in bone density causing fractures, especially in elderly women due to low levels of oestrogen                                           | • Weight maintenance                                                        |
|                          |                                                                                                                                                                                                                 | • Include skimmed milk and milk products & spinach                            |
|                          |                                                                                                                                                                                                                 | • Include Fatty fish (mackerel, pomfret, rohu), flax seeds for omega 3 fatty  |
|                          |                                                                                                                                                                                                                 | acids                                                                        |
|                          |                                                                                                                                                                                                                 | • Vitamin D supplementation for calcium absorption or Cooking oil or milk    |
|                          |                                                                                                                                                                                                                 | fortified with Vit D                                                         |

Reference:  
- Malnutrition in the Elderly: A Multifactorial Failure to Thrive; The Perimenopausal Journal 2005 Summer; 9(3): 38-41  
- Osteoporosis in Aging: News in Health; January 2015  
- Diabetes in the Elderly; Prz Menopauzalny. 2017 Jun; 16(2): 38-43  
- Hypertension in the Elderly; World J Cardiol. 2012 May 26; 4(5): 135-147
# MENTAL HEALTH - NUTRITION & EXERCISE

## BOOST MENTAL HEALTH

### INCLUDE

- Pulses and lentils, green leafy vegetables, fish and eggs (Vitamin B9)
- Vitamin E rich foods - Almonds, pistachio, eggs, spinach
- Vitamin B12 rich foods - Eggs, chicken, fish or B12 supplementation if vegetarian

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<thead>
<tr>
<th>TYPE OF EXERCISE</th>
<th>BENEFITS OF EXERCISE</th>
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<tr>
<td>Exercise to maintain equilibrium</td>
<td>Fall Prevention</td>
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<td>Standing on one foot</td>
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<td>Aerobic Exercise - walking, dancing, Swimming</td>
<td>Increased strength</td>
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<tr>
<td>Stretching Exercises - Walking up and down stairs &amp; Yoga</td>
<td>Improves flexibility</td>
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<td>Brain Exercises - Sudoku</td>
<td>Challenge the mind to “Use it or Lose it”, Increases blood flow to the brain, might improve IQ, May reduces risk of Dementia, Alzheimer’s disease</td>
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**RECOMMENDATION : 30 MINUTES WALKING 4-5 DAYS A WEEK**


TAKE HOME MESSAGE

Eat healthy

Ensure a balanced diet

Vitamin D sunlight exposure or supplementation

Be physically active

Take care of physical well-being

Stay connected with social activities

Family members have to involve them in activities, give them time and attention to make them feel loved and wanted

- Seek right nutrition advice from qualified dietitian for optimal nutrition
- Key for good health - Eat right
  Exercise
  Be happy

Compiled & Contributed by Indian Dietetic Association (IDA), Bangalore Chapter
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Issued in Public Interest by:

INDIAN DIETETIC ASSOCIATION (IDA)