# Nutrition in Aging

By:

Dr. Marjan Mahdavi-Roshan

**Associate Professor in Nutrition Sciences, Guilan university of medical sciences** 

In aging adults, nutrition care is not limited to disease management or medical nutrition therapy but has broadened to have a stronger focus on healthy lifestyles and disease prevention.

#### **Body Composition**

Body composition changes with aging. Fat mass and visceral fat increase, whereas lean muscle mass decreases.

**Sarcopenia,** the loss of muscle mass, strength, and function, can be age related and can significantly affect an older adult's quality of life by decreasing mobility, increasing risk for falls, and altering metabolic rates.

Many older adults have special nutrient requirements because aging affects absorption, use, and excretion of nutrients.

# Energy

Energy Basal metabolic rate decreases with age because of changes in body composition.

Energy needs decrease ;3% per decade in adults. Encourage nutrient-dense foods in amounts appropriate for caloric needs.

# Protein

After age 65, the minimum protein requirement is 1 g protein/kg of body weight with newer evidence supporting up to 1.2 gm/kg.

In those individuals with impaired renal function or longstanding diabetes, 0.8 g/kg to 1.0 g/kg may be more appropriate.

# Carbohydrates

45%-65% total calories

Men 30 g fiber / Women 21 g fiber

Constipation may be a serious concern for many.

Emphasize complex carbohydrates: legumes, vegetables,

whole grains, fruits to provide fiber, essential vitamins,

# Lipids

20%-35% total calories

#### Vitamin D

Vitamin D 600-800 IU

Risk of deficiency increases as synthesis is less efficient; skin responsiveness as well as exposure to sunlight decline; kidneys are less able to convert D3 to active hormone form.

#### Water

Hydration status can easily be problematic. Dehydration causes decreased fluid intake, decreased kidney function.

increased losses caused by increased urine output from medications (laxatives, diuretics).

<u>Symptoms:</u> electrolyte imbalance, altered drug effects, headache, constipation, blood pressure change, dizziness, confusion, dry mouth and nose.

Encourage fluid intake of at least 1500 ml/day or 1 ml per calorie

# Calcium

Calcium 1200 mg Dietary requirement may increase because of decreased absorption;

## **Obesity**

Obesity is a major cause of preventable disease and premature death. Obesity is linked to increased risk of coronary heart disease; type 2 diabetes; endometrial, colon, postmenopausal breast, and other cancers; asthma and other respiratory problems; osteoarthritis; and disability. Obesity causes a progressive decline in physical function, which may lead to increased frailty.

Weight loss therapy that maintains muscle and bone mass is recommended for obese older adults because it improves physical function and quality of life and reduces the multiple medical complications associated with obesity.

Lifestyle changes that include diet, physical activity, and behavior modification techniques are the most effective. Weight loss of 10% of total body weight over 6 months should be the initial goal. After that, strategies for maintenance should be implemented.

Dietary changes include an energy deficit of 500 to 1000 kcal/day.

Calorie restriction should not be less than 1200 kcal/day.

## **Underweight and Malnutrition**

The actual prevalence of underweight among older adults is low; women older than age 65 are three times as likely as their male counterparts to be underweight