

Nutrition in the Elderly

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Objectives

- Review the, basic biology/physiology of aging related to nutrition & malnutrition and its incidence in the older adult
- Review common issues that impact adequate nutrition in the older adult
- Discuss macro and micro nutrients and deficiencies that should be considered and screened for in the older adult to optimize health
- Discuss a simple nutritional screening tool that may facilitate better older adult nutritional screening

Older Adult Physiological/Biological Digestive Changes

Changes in healthy older adults:

- Neurodegeneration of the aging gut nervous system (dysphagia, reflux, constipation)
- Decreased gastric secretions with aging
- Appetite and food consumption declines-less hungry, fuller between meals, eat more slowly, consume smaller meals
- "Anorexia of aging"-net
- body weight loss



Older Adult Physiologic/Biologic Changes With Aging

- Decreased taste and smell
 - 60% of 65-80 year olds have reduced taste and smell
 - 80% of 65-80 year old have reduced taste and smell
- Changes in fluid and electrolyte metabolism



Older Adult Changes in Body Weight/Composition

Changes with healthy elderly:

- With age, loss of up to 3 kg (6.6#) of lean body mass per body mass decade after age 50.
- This leads to an increase body fat (intra-hepatic and intra-abdominal)
- *Net Decline in skeletal mass-sarcopenia



Psychological/Social Issues in Older Adult Nutrition

Psychological

- Delirium
- Dementia
- Depression/anxiety/bereavement
- Alcoholism



Social

- Poverty
- Isolation
- Inability to shop/prepare and cook food



When does an older adult's nutritional status become problematic?

Malnutrition-a state in which a deficiency, excess or imbalance of energy, protein and other nutrients causes adverse effects on body form, function and clinical outcome



Incidence of Malnutrition in Elderly

In Developed countries:



- 15% of community dwelling and home-bound elderly > 65 are malnourished
- 23-62% of hospitalized elderly are malnourished
- Up to 85% of nursing home residents are malnourished
- In assessing nutrition status in older adults note:
 - The challenge in lack of specific RDA studies for older adult
 - The heterogeneity in older adults

Health Challenges with Malnutrition

- Decline in functional status
- Impaired muscle function
- Decreased bone mass
- Anemia
- Immune dysfunction
- Reduced cognitive function
- Poor wound healing/delayed recovery from surgery
- Higher hospital admission rate and mortality



Over-Nutrition in Older Adults

- Overweight Incidence in USA adults > 65 =58%
- Obese incidence in USA adults > 65 = 36%
- Over-nutrition is associated with increased mortality from Diabetes mellitus, hypertension, coronary artery disease
- Other challenges: osteoarthritis, cataracts, sleep apnea, urinary and bladder problems



Common Issues that Impact Older Adult Nutrition

- Hydration-30 ml/kg body weight
- Mobility
- Teeth
- Fiber
- Chronic illnesses and medications for them
- Reduced Income



Protein Needs in Older Adults

- RDA minimum for protein regardless of age is .8 gram protein/kg a day
- RDA of 1.5 protein/kg a day for elder adult is optimal to improve health function (about 3 oz with each meal daily)
- Amount and quality of protein intake decreases with age



Macro and Micro Nutrient Needs in Older Adults



- **Reduced Vitamin D and calcium-**(decreased sun exposure, thinning of skin and reduced skin production)
- Increased calcium needs Post-menopausal women not on estrogen need 1500 mg/calcium daily
- **Vitamin B-12 deficiency** - 12-14% of community dwellers/25% of institutionalized older adults
- **Folate deficiency** –Up to 50% decreased in older adults, higher if institutionalized
- **Vitamin C**-150 mg men and 75 mg women
- Zinc, selenium, copper, chromium and manganese levels/needs are unchanged with healthy aging
- Older people do not clear Vitamin A well-hypervitaminosis

Vitamin Deficiencies in the Elderly

In general, reduced intake and unbalanced diet predisposes people to vitamin and mineral deficiencies.

Drugs affect absorption of vitamins/hepatic metabolism

Smoking interferes with vitamins-especially vit c and folate



VITAMINS
because vegetables are for noobs

Nutritional Assessment in Older Adults

Dietary assessment

- 24 hour recall
- Food records for 7 days
- *unintentional weight loss

Clinical Assessment

- Wasted , thin, skin, hair, nails, wound healing

Screening tools

- MUST-Malnutrition Universal Screening tool
- MNA-SF- Mini-nutritional Assessment short form
- *Nutrition Screening Initiative
- Serum markers-albumin, transferrin, serum cholesterol



Overall

- Overall elderly need more liquids, more fiber and higher quality protein
- LTC patients/residents present unique challenges
- Maintain weight
- Liberalize food intake –rational reason for any restrictions



Malnutrition Universal Screening Tool

- Takes 3-5 minutes
- High predictive value in hospital and community environment
- Get “risk” score of low, medium or high
- Validated
- Developed by the AAFP and American Dietetic Association



The Warning Signs of poor nutritional health are often overlooked. Use this Checklist to find out if you or someone you know is at nutritional risk.

Read the statements below. Circle the number in the "yes" column for those that apply to you or someone you know. For each "yes" answer, score the number in the box. Total your nutritional score.

DETERMINE YOUR NUTRITIONAL HEALTH

	YES
I have an illness or condition that made me change the kind and/or amount of food I eat.	2
I eat fewer than 2 meals per day.	3
I eat few fruits or vegetables or milk products.	2
I have 3 or more drinks of beer, liquor or wine almost every day.	2
I have tooth or mouth problems that make it hard for me to eat.	2
I don't always have enough money to buy the food I need.	4
I eat alone most of the time.	1
I take 3 or more different prescribed or over-the-counter drugs a day.	1
Without wanting to, I have lost or gained 10 pounds in the last 6 months.	2
I am not always physically able to shop, cook and/or feed myself.	2
TOTAL	

Total Your Nutritional Score. If it's –

- 0-2 Good! Recheck your nutritional score in 6 months.
- 3-5 You are at moderate nutritional risk. See what can be done to improve your eating habits and lifestyle. Your office on aging, senior nutrition program, senior citizens center or health department can help. Recheck your nutritional score in 3 months.
- 6 or more You are at high nutritional risk. Bring this Checklist the next time you see your doctor, dietitian or other qualified health or social service professional. Talk with them about any problems you may have. Ask for help to improve your nutritional health.

Remember that Warning Signs suggest risk, but do not represent a diagnosis of any condition. Turn the page to learn more about the Warnings Signs of poor nutritional health.

These materials are developed and distributed by the Nutrition Screening Initiative, a project of:



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The Nutrition Checklist is based on the Warning Signs described below. Use the word DETERMINE to remind you of the Warning Signs.

DISEASE

Any disease, illness or chronic condition which causes you to change the way you eat, or makes it hard for you to eat, puts your nutritional health at risk. Four out of five adults have chronic diseases that are affected by diet. Confusion or memory loss that keeps getting worse is estimated to affect one out of five or more of older adults. This can make it hard to remember what, when or if you've eaten. Feeling sad or depressed, which happens to about one in eight older adults, can cause big changes in appetite, digestion, energy level, weight and well-being.

EATING POORLY

Eating too little and eating too much both lead to poor health. Eating the same foods day after day or not eating fruit, vegetables, and milk products daily will also cause poor nutritional health. One in five adults skip meals daily. Only 13% of adults eat the minimum amount of fruit and vegetables needed. One in four older adults drink too much alcohol. Many health problems become worse if you drink more than one or two alcoholic beverages per day.

TOOTH LOSS/MOUTH PAIN

A healthy mouth, teeth and gums are needed to eat. Missing, loose or rotten teeth or dentures which don't fit well, or cause mouth sores, make it hard to eat.

ECONOMIC HARDSHIP

As many as 40% of older Americans have incomes of less than \$6,000 per year. Having less – or choosing to spend less – than \$25-30 per week for food makes it very hard to get the foods you need to stay healthy.

REDUCED SOCIAL CONTACT

One-third of all older people live alone. Being with people daily has a positive effect on morale, well-being and eating.

MULTIPLE MEDICINES

Many older Americans must take medicines for health problems. Almost half of older Americans take multiple medicines daily. Growing old may change the way we respond to drugs. The more medicines you take, the greater the chance for side effects such as increased or decreased appetite, change in taste, constipation, weakness, drowsiness, diarrhea, nausea, and others. Vitamins or minerals, when taken in large doses, act like drugs and can cause harm. Alert your doctor to everything you take.

INVOLUNTARY WEIGHT LOSS/GAIN

Losing or gaining a lot of weight when you are not trying to do so is an important warning sign that must not be ignored. Being overweight or underweight also increases your chance of poor health.

NEEDS ASSISTANCE IN SELF CARE

Although most older people are able to eat, one of every five have trouble walking, shopping, buying and cooking food, especially as they get older.

ELDER YEARS ABOVE AGE 80

Most older people lead full and productive lives. But as age increases, risk of frailty and health problems increase. Checking your nutritional health regularly makes good sense.



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