



Nutrition: Key to Successful Aging

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How Nutritional Needs Differ for Older Adults



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Physiological Changes

- Body weight tends to decline after age 60
- Increase in fat
 - Due to less exercise, more insulin resistance
- Decrease in skeletal muscle
 - Due to decreased exercise
 - When severe is called sarcopenia. Sarcopenia can lead to functional impairment, falls, poor gait and balance, and fractures
- Decrease in resting metabolic rate due to decreased lean muscle mass



GI Tract changes with aging

- Early satiety due to decreased production of Ghrelin and increased cholecystokinin
- Slower gastric emptying, which leads to increased antral distension and signals of satiety from the small intestine
- GI tract has reduced peristaltic strength and increased non-peristaltic movements, which allows more absorption of nutrients and water; increased water absorption leads to constipation which may indirectly cause a decrease in appetite



More GI Tract Changes with Aging

- Reduction in Gastric sections and rise in gastric pH leads to overgrowth in bacteria
- Impairs absorption of key nutrients
 - Folic acid
 - Calcium
 - Iron
 - Vitamins B₁₂, K

Decrease in smell / taste receptors

- Food may appear tasteless
- Decrease in enjoyment of food may lead to diminished appetite
- Sometimes called “Anorexia of Aging”



Decrease in Kidney Function



- More difficult to concentrate urine
- Less water is returned to circulation
- Some older adults cut back on fluids to prevent incontinence
 - Lack of fluids may amplify other problems such as constipation

Obstacles to Achieving Adequate Nutrition

Physical Disabilities:

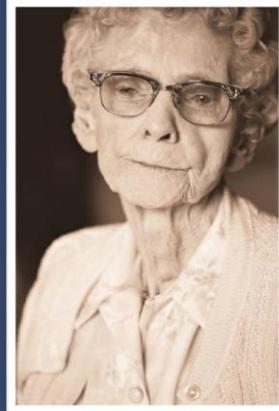


- Shopping and meal preparation may be difficult
- Chewing and digesting food may be painful or uncomfortable

Obstacles to Achieving Adequate Nutrition

Psycho-social considerations:

- Depression
- Cognitive Impairment
- Eating Alone
- Lack of Finances
- Lack of Food Choice
- Medications



Nutritional Shortcomings of Older Adults

- Calcium
 - Efficiency of absorption decreases with aging
 - Lack of vitamin D plays a role
 - Lactose intolerance more prevalent
 - High sodium or protein diet exacerbates difficulties with absorption
 - Supplements cause constipation, so many older adults avoid them
 - Can be hard to swallow
 - Can't take with thyroid medication

Vitamin D

- Recommended daily supplement of 2000 IU in the northwest due to low sun exposure and reduced intake of dairy products
- Prevents osteoporosis
- Improves gait and decreases falls
- May play a role in immune function and other body processes



Vitamin B₆

- Fish (salmon), meat (chicken), vegetables (turnips, broccoli, spinach) and fruit (bananas)
- Reduces homocysteine levels whose excess is correlated with Alzheimer's Disease, endothelial dysfunction and cardiovascular disease



Vitamin B₁₂

- Meat and dairy products (only food source)
- Less absorption due to:
 - Inadequate absorption common
 - Malabsorption accounts for 40% of vitamin B₁₂ deficiency
 - 12-24% of the older population is vitamin B₁₂ deficient
 - Reduced stomach acid production caused by atrophic gastritis or prolonged use of histamine-2 blockers and proton pump inhibitors may make stomach alkalotic and reduces vitamin B₁₂ absorption

Fiber

- Found in plant-based foods low in energy but rich in nutrients
- Oral pain may lead to increased selection of processed food low in fiber



Folate

- Found in green leafy vegetables (spinach, broccoli) and nuts (walnuts, peanuts)



- More difficult to absorb due to GI changes
- Helps reduce homocystine levels
- Added to flour in the US since 2000

What You Can Do

- Conduct a nutritional assessment
 - Mini Nutritional Assessment (MNA)
- Recommend supplements as needed
 - Calcium, Vitamins D, B₁₂
- Provide for an OT, PT referral*
 - OT: Increase manual dexterity for meal preparation
 - PT: Assist with incontinence
- Address psychosocial issues
 - Counseling and/or medication
 - Support Groups and/or increasing social support

* Referrals to dieticians are not covered under Medicare unless the patient has diabetes or renal disease

What You Can Do

- Encourage menu planning/cooking
 - Easy, nutritional recipes
 - Meals-on-Wheels (group or home delivered meals)
- Utilize Counseling – 5As
 - Assess
 - Advise
 - Agree
 - Assist
 - Arrange



Resources

- Try This: Assessing Nutrition in Older Adults
http://consultgerirn.org/uploads/File/trythis/try_this_9.pdf
- Food Pyramid for Older Adults
<http://www.mypyramidtracker.gov/Default.htm>
- McPhee, C. The Anorexia of Aging. Clinics in Geriatric Medicine 2007; 23:735-756.

