Nutrition Issues in Geriatric Care

Melissa Ramel
MS, MPH, RD, LD
Saint Louis University

Disclosure

• I have no relevant financial relationships to disclose.

Objectives

After today’s presentation you will be able to:
• Identify why nutrition is a concern in the elderly.
• Recognize common nutrition issues in the elderly.
• Identify nutrition screening tools.
• Better identify individuals at nutrition risk.
Statistically Speaking...

• >75% noninstitutionalized have 1 or more chronic health problems that could improve with proper nutrition:
  - "50% may have some evidence of malnutrition

• Up to 15% have nutrient deficiencies:
  - Low intakes of kcal, fiber, calcium, magnesium, antioxidants, some B-vitamins
  - Susceptibility
    - Homebound and frail
    - Poor and minority disparities

• Up to half of community dwellers >60yo consume excess sat fat and sodium:
  - Early surveys before 1990s (NHANES I and II) didn’t include >75yo or high risk groups (homebound, elderly)
  - Recent surveys oversample AA, Mexican, and white Americans 60-69, 70-79, and over 80yo

• According to Elder Nutrition Program (ENP) participants:
  - Overweight and underweight are both concerns:
    - 47% of ‘frail’ homebound elders receiving home-delivered meals had BMI<22
  - Conversely
    - 32% of ‘frail’ homebound elders receiving home-delivered meals had BMI>27

Malnutrition Across Settings

![Graph showing malnutrition across different settings such as hospital, nursing home, convalescent, and rehabilitation.](image-url)
Why is nutrition a concern for the elderly?

- Sarcopenia (muscle loss)
  - 8-40% over 60s, 50% over 75s
  - Lower BEE, lower caloric needs, yet many nutrient needs remain unchanged (esp. B-Complex vitamins [vitamin B6, vitamin B12, Folate], Antioxidants, Iron, Zinc) or increased (Ca2+, vitamin D)
  - Risk: frailty, sarcopenia

- Cardiovascular
  - 86% over 65 have at least 1 nutrition-related risk factor for cardiovascular disease
  - AHA 2010 goals: align with DASH diet (more f/v, oily fish, fiber-rich whole grains, decrease sugar-sweetened beverages, sodium)

- Skeletal
  - Osteoporosis:
    - Incidence of fracture increases with age
    - Prevention: weight-bearing exercise, adequate calcium, vitamin D, additional micronutrients can also promote bone health

Why is nutrition a concern for the elderly?

- Respiratory
  - Risk: airway infection, aspiration

- GI
  - Entire length of GI tract affected by aging
  - Risk: heartburn, acid reflux

- Renal
  - GFR, clearing of drug & metabolic wastes

Estimated Calorie Needs

<table>
<thead>
<tr>
<th>Age</th>
<th>Sedentary</th>
<th>Moderately Active</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>66-70</td>
<td>2000</td>
<td>2200</td>
<td>2600</td>
</tr>
<tr>
<td>71-75</td>
<td>2000</td>
<td>2200</td>
<td>2600</td>
</tr>
<tr>
<td>76+</td>
<td>2000</td>
<td>2200</td>
<td>2400</td>
</tr>
</tbody>
</table>

Sedentary = Very light PA + ADLs
Moderately = walking 1.5-3miles/day (3-4mph) + ADLs
Active = walking >3miles/day (3-4mph) + ADLs

Nutritional Requirements

- Based on Average, > 70yo individuals consume 1/3 less kcal/day:
  - Men: 1000-1200 kcal/day
  - Women: 600-800 kcal/day
  - 16-18% of community-dwelling elderly consume less <1000 kcal/day
  - 30% consume less calories than the RDA
  - ↑ consumption of energy-dilute grains, veggies, fruits

Barriers to Adequate Nutrition in the Elderly

Barriers Broken Down

- **Medical, Health Status**
  - Chronic Disease
  - Acute Illness
  - Medications
  - Sensory Changes (taste, smell, thirst)
  - Oral/Dental Health
  - Impaired or loss of vision/hearing
Barriers Broken Down

• Physical, Functional Status
  – Limitations
  – Balance
  – Strength
  – Endurance
  – Physical Activity, continued muscle loss
  – Disability

Barriers Broken Down

• Environmental
  – Living Situation
  – Economics
  – Cultural beliefs
  – Lifestyle
  – Socialization/Isolation
  – Food access
  – Dependence on others

Barriers Broken Down

• Cognition
  – Impaired memory
  – Dementia
  – Depression
  – Cultural, religious beliefs
  – ADLs
Common Concerns

- Malnutrition
- Dehydration
- Anemia
- Anorexia of Aging
- Unintentional Weight Loss
- Underweight

EVERYDAY NUTRITION SCREENING TOOLS

Nutrition Screening Tools

- MNA 5-7
  - Mini Nutritional Assessment
  - Gold standard for ambulatory, community dwelling adults & LTC
  - Quick, noninvasive, cheap (no biochemical measures)
  - 18 item questionnaire, lifestyle, medications, mobility, diet, and self-perception (health)
  - High score = good nutrition status (above 24)

- MNA-SF 8-10
  - Shortened version of the MNA
  - Recent poor intake, wt loss, BMI, mobility, psych. stress/acute distress/neuropsych.
  - Rec’d by ESPEN
  - Positive score, means a full MNA should be completed
Nutrition Screening Tools

• DETERMINE Your Nutritional Health 11
  - Checklist of warning signs of poor nutrition, doesn’t evaluate nutrition status
  - Score > 6, indicates high risk for malnutrition, poor nutrient intake, adverse health conditions, poor perceived health status
  - Disease
  - Eating Poorly
  - Tooth Loss/Severe Pain
  - Economic Hardship
  - Reduced Social Contact
  - Multiple Medications
  - Involuntary Weight Loss / Gain
  - Needs self-care assistance
  - Elder above age 80
    - Level I – distinguish between immediate nutrition needs vs. no nutritional deficits
    - Level II- for individuals who require specialized services (MNT)

• MUST 15,12
  - Malnutrition Universal Screening Tool for use across settings
  - BMI, wt loss, acute disease
  - > 2 high malnutrition risk

• SNAQ 13
  - Simplified Nutritional Appetite Questionnaire
  - Uses four items predictive of weight loss at 6mo in community and LTC residents
  - Appetite, early satiety, food taste, # of meals consumed
  - <14 high risk of at least 5% weight loss within 6mo
  - Good with large populations

• Nutrition Risk Index (NRI) 14
  - Mechanism of Food Intake, prescribed dietary restrictions, conditions that affect intake, significant changes in dietary habits
  - 16 questions, used in various settings
  - Easy to administer
  - Higher score = Greater risk for poor nutrition status, poor health, use of healthcare services
  - Helpful to identify those at risk
Nutrition Screening Tools

• SCALES 15, 16
  – Useful to determine protein energy malnutrition (PEM)
  – Simple screening tool
  – Anthropos, clinical, biochemical, & functional indicators

• Subjective Global Assessment (SGA)17-19
  – Not specific to the elderly, but still reliable
  – Originally used with GI-surgery pts, not elderly
  – Changes in weight, intake, gi condition, functional capacity
  – Physical assessment- subcutaneous fat loss, muscle wasting, edema
  – Classification using the alphabet (A = well nourished, C = severely malnourished)

Spotting those at Risk

• Who can?
  – Anyone
    • Healthcare team member
    • Family member
    • Volunteer, healthcare aid worker

What can be done?

• Connect them with care
  – Physician
  – Dietitian

• Next steps
  – Let them Eat Cake!
  – Liberalize Diet
  – Ensure Food Likes/Dislikes are known
  – Establish Support system
  – Proper Medication Regimen
Programs for Food Insecure

- USDA
  - SNAP
    - Ensure access to healthy foods for older adults
    - 30% of eligible adults participate
      - Stigma
      - Uninformed
      - Application Process
  - SFMNP
    - Ensure access to healthy foods for older adults
    - 30% of eligible adults participate
      - Stigma
      - Uninformed
      - Application Process

- AoA
  - Congregate and home delivered meals

Nutrition Policy

- Healthy People 2020
  - New topics
    - Dementias, including Alzheimer’s Disease
    - Health-related quality of life and well being
    - Healthcare associated infections
    - Older Adults
  - Improve dietary intake of older individuals
    - Lower total & sat fat intake
    - Lower sodium intake
    - Assurance of micronutrient needs
    - Reduce prevalence of obesity
    - Improve access to food/nutrition services (home-delivered meals, congregate feeding)
    - Promote availability of nutrition services (assessment, counseling, education)

MyPlate for Older Adults

Source: © 2011 Tufts University
References


http://www2.burnside.com/food_ecology.html (Malnutrition. Index: ERASESS)


References
