



Commission on Dietetic Registration
Gerontological Nutrition
Examination Content Outline

Content Domain (<i>and subdomain</i>)	Percentage Of Exam Questions	Number of Scored Questions
I. Nutrition Screening	19%	26
II. Nutrition Data Gathering	9%	12
III. Nutrition Data Synthesis	28%	38
<i>A. Physical</i>	<i>10%</i>	<i>14</i>
<i>B. Clinical Data</i>	<i>14%</i>	<i>19</i>
<i>C. Social And Environmental</i>	<i>4%</i>	<i>5</i>
IV. Nutrition Diagnosis	4%	5
V. Nutrition Care Plan	9%	12
VI. Nutrition Counseling And Education	6%	8
VII. Nutrition Monitoring And Evaluation	8%	11
VIII. Foodservice	10%	14
IX. Professional Practice	7%	9
TOTAL	100%	135

I. NUTRITION SCREENING (19%)

1. Barriers to adequate food and nutrient intake for older adults
2. Clinical signs of poor bone health
3. Clinical signs of poor oral health
4. Common interactions as related to older adults between drugs and herbal medicines, food and drugs, drugs and drugs, food and herbal medicines
5. Ethnic, cultural, and religious factors that alter nutritional intake
6. Nutritional factors that contribute toward healthy aging
7. Markers of adequate hydration in older adults
8. Nutrition and health concerns of older adults
9. Physical changes that occur with aging in older adults
10. Metabolic changes that occur with aging in older adults
11. Physiological changes that occur with aging in older adults
12. Neurological changes that occur in older adults
13. Sensory changes that occur with aging in older adults
14. Continuum of care and of relationship of nutrition in primary, secondary and tertiary disease prevention
15. Risk factors associated with poor nutritional status
16. Risk factors associated with socioeconomic, social, and psychological factors

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17. Standards and guidelines for screening and assessment of older adults
18. Tools for assessing physical and functional activity level
19. Screening tools appropriate for evaluating nutritional risk in programs and facilities designed for and serving older adults
20. Environmental factors affecting accessibility to adequate supply of safe and nutritious food
21. Prevalence of acute and chronic diseases, and conditions of older adults
22. Prevalence of nutrition related conditions
23. Effect of physical activity on nutritional status

II. NUTRITION DATA GATHERING (9%)

1. Methods and tools to assess socioeconomic support
2. Methods and tools to perform an age-related nutrition assessment
3. Methods and tools to assess social support
4. Methods and tools to perform cognitive assessment
5. Impact of acute and chronic diseases and conditions on health and nutrition status
6. Federal regulations associated with nutrition care assessment process in programs and facilities designed for and serving older adults
7. Indicators of involuntary weight loss
8. Methods to assess hydration status for older adults
9. Methods to measure bone mineral content and density
10. Methods to perform a nutrition focused physical examination
11. Standard anthropometric measures for older adults
12. Care planning process and implications for older adults
13. Social and psychological family and caregiver support for home safety
14. Food availability, selection, preparation, safety, and adequacy and accessibility of kitchen facilities
15. Methods to assess biochemical data, medical tests, and procedure results

III. NUTRITION DATA SYNTHESIS (28%)

A. Physical (10%)

1. Methods to synthesize information from screening and assessment tools
2. Effect of aging on ability to regulate fluid balance
3. Effect of oral health on nutrition status
4. Effects of age-related physical changes on nutrition status
5. Effects of age-related metabolic changes on nutrition status
6. Effects of age-related physiological changes on nutrition status
7. Effects of age-related neurological changes on nutrition status
8. Effects of age-related sensory changes on nutrition status
9. Impact of age-related sarcopenia on physical and functional capacity, and quality of life
10. Mandatory reporting requirements regarding elder abuse, neglect and exploitation
11. Recommendations for maximizing independent eating by older adults

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12. Effects of pain on nutrition intake
13. Methods of transitioning individuals from enteral/parenteral feedings to oral nutrition
14. Methods to evaluate nutrition intake

B. Clinical Data (14%)

1. Age-related pharmacodynamic changes
2. Age-related pharmacokinetic changes
3. Biochemical tests and measures associated with nutrition status
4. Methods to synthesize information from screening and assessment tools
5. Effect of aging on ability to regulate fluid balance
6. Relationship between nutritional status and skin integrity
7. Effects of age-related physical changes on nutrition status
8. Effects of age-related metabolic changes on nutrition status
9. Effects of age-related physiological changes on nutrition status
10. Effects of age-related neurological changes on nutrition status
11. Effects of age-related sensory changes on nutrition status
12. Impact of age-related sarcopenia on physical and functional capacity, and quality of life
13. Palliative/end of life care
14. Effects of pain on nutrition intake

C. Social and Environmental (4%)

1. Methods to synthesize information from screening and assessment tools
2. Effect of socioeconomic, social and psychosocial history on nutrition status
3. Impact of age-related sarcopenia on physical and functional capacity, and quality of life
4. Mandatory reporting requirements regarding elder abuse, neglect and exploitation
5. Methods to obtain information regarding home environment

IV. NUTRITION DIAGNOSIS (4%)

1. Clinical signs of undernutrition and overnutrition in older adults
2. The nutrition care process
3. Components of a nutrition diagnosis specific for older adults
4. Standards for developing nutrition diagnosis statements
5. Data sources and tools for nutrition diagnosis
6. Functional, biochemical and anthropometric markers in older adults
7. Attitudes/beliefs, physical environment, access to food or food safety

V. NUTRITION CARE PLAN (9%)

1. Unique nutritional needs of older adults as related to Dietary Reference Intakes, Dietary Guidelines for Americans and modifications necessary for management of acute and chronic diseases and conditions
2. Federal regulations and nutrition program requirements that relate to nutrition care of older adults in facility and community settings
3. Recommendations for maximizing independent eating by older adults

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4. Funding sources for food and nutrition programs and services available to older adults
5. Older adults' demographic characteristics, family dynamics, informal and formal caregiver support, and their impact on nutrition interventions
6. Referral sources for psychiatric and psychological services
7. Characteristics of dietary practices, dietary behaviors and food preferences for different cultures/ethnicities/religions and food preferences of older adults
8. Community programs providing food and nutrition services to older adults
9. Complementary and alternative therapies and medicines that may affect nutrition status
10. Dining issues for the eating-disabled older adults
11. Interaction between drug and herbal medicines, food and drugs, drugs and drugs, drugs and nutrients that affect food and nutrition intake
12. Evidence-based nutrition guidelines
13. Federal regulations associated with discharge planning for clients in skilled nursing and other facilities
14. Federal regulations associated with nutrition care for clients receiving care in the home
15. Intergenerational/cohort influences that affect food and nutrient intake and physical activity for older adults
16. Housing options for older adults
17. Medical Nutrition Therapy (MNT) protocols for chronic diseases and conditions of older adults
18. Menu development to liberalize diets for older adults in various settings and with multiple chronic conditions
19. Food texture modifications, texture-modified products and availability for older adults
20. Theories of behavior change specific for older adults in adopting healthy lifestyles
21. Home and community based nutrition service options (e.g. Medicare, Medicaid Waivers, PACE, adult day service, day health rehabilitation)
22. Evidence based physical activity programs and strategies for older adults

VI. NUTRITION COUNSELING AND EDUCATION (6%)

1. Adult learning theories, standards and guidelines for nutrition counseling and education of older adults
2. Language and literacy issues that affect the delivery of nutrition counseling and education
3. Techniques for providing culturally and religiously appropriate nutrition education, counseling, physical activity and health promotion
4. Facilitation process in goal setting to assist behavior change for older adults
5. Services and programs across socioeconomic levels
6. Community mental health services relevant to older adults
7. Counseling techniques and evidence based behavior change principles appropriate for older adults, caregivers and families
8. Federal programs involving benefits, food assistance and preventive health services for older adults

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9. Health promotion programs related to prevention and management of chronic conditions in older adults (e.g. wellness)
10. Programs and services related to home safety for older adults
11. Programs and services related to stress management and grief counseling for older adults
12. Programs and services providing caregiver and family support
13. Programs and services that address medication management for older adults
14. Home and community based programs and services that address health, social, nutritional, and educational needs of older adults
15. Techniques for communicating with older adults

VII. NUTRITION MONITORING AND EVALUATION (8%)

1. Components of client/program nutrition monitoring and evaluation
2. Tools and methods to measure nutritional outcomes
3. Factors that determine whether to continue care, refer or discharge client/group from nutrition care
4. Methods for evaluating individual and group outcomes related to the nutrition diagnosis and goals established in intervention plan
5. Methods for evaluating program outcomes
6. Standards and guidelines for nutrition and case management
7. Nutrition care model as it relates to ongoing evaluation for older adults
8. Continuum of care and tiers of nutritional services for older adults
9. Palliative/end of life care
10. Effects of pain on nutrition intake

VIII. FOODSERVICE (10%)

1. Dietary Reference Intakes, Dietary Guidelines for Americans, macronutrients, micronutrients, and other bioactive food components for older adults
2. Requirements pertaining to Older Americans Act and other federal nutrition programs
3. Food safety training and education materials designed for and serving older adults
4. Federal/state regulations pertaining to dining environments in programs and facilities serving older adults
5. Federal/state regulations pertaining to dietary service staffing in programs and facilities designed for and serving older adults
6. Federal/state regulations pertaining to foodservice operations in programs and facilities designed for and serving older adults
7. Federal/state regulations pertaining to menus and nutritional adequacy
8. Food safety issues that may affect older adults
9. Standards and guidelines for training of personnel who work with foodservice programs for older adults
10. Standards and guidelines pertaining to foodservice equipment/water/physical facilities
11. Best practices relating to the dining experience/needs of older adults

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12. Effects of time and environmental conditions on food quality and nutrient retention for congregate and home delivered meals
13. Standards for disaster preparedness for facility based and community based care setting

IX. PROFESSIONAL PRACTICE (7%)

1. Federal and national health indicators and disease prevention data
2. Ethical guidelines regarding end of life issues including refusal of treatment
3. Federal regulations associated with the survey process in programs designed for and serving older adults
4. Legal obligations regarding advance directives in long term and end of life care
5. Standards and guidelines for documenting nutrition care
6. Standards of care pertaining to liberalizing nutrition interventions for older adults
7. Legislation and available programs for administering nutrition services programs in home- and community based settings (e.g. Medicare, Medicaid, USDA food assistance programs, Older Americans Act, etc.)
8. Federally-mandated quality assurance/performance improvement programs
9. Programs and services related to transition to and from various care settings
10. Academy of Nutrition and Dietetics Code of Ethics in Dietetics