

FDNS 8550 Nutrition and Disease Processes II - Fall 2003

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Prerequisite or corequisite: FDNS 4100/6100 or FDNS 6400 or permission of department.

Course description: Epidemiological, clinical, animal, and cellular studies linking diet and age-related diseases such as diabetes, osteoporosis, other musculoskeletal disorders, and sensory dysfunction. Biochemical and physiological mechanisms by which nutrients prevent disease.

Course Objectives:

1. Identify age-related changes in physiological systems.
2. Understand the influence of age on nutritional requirements for macro and micronutrients.
3. Examine the biochemical and physiological mechanisms by which nutrition is involved in the prevention and management of age-related diseases such as diabetes, osteoporosis, other musculoskeletal disorders, and sensory dysfunction (e.g., taste and smell, auditory function, vision, and cognition).
4. Identify the epidemiological, clinical, animal, and cellular studies that provide the basis for current understanding of the role of nutrition in diabetes, osteoporosis, other musculoskeletal disorders and sensory dysfunction.
5. Develop skills in critically evaluating the scientific literature in nutrition and age-related diseases by discussions during class and giving presentations in class.

Philosophy: Aging will impact all aspects of society in the 21st century. By 2050, 2 billion people will be 60 and older, 30% of the population will be elderly in some countries. This course will explore relationships of nutrition and several age-related diseases, many of which have their roots in infancy and childhood. This exploration will cover the basic and the applied sciences. Note that cancer and heart disease are covered in another course (FDNS 8530, Fall 2004), so this course focuses on other age-related conditions.

Readings: Recommended readings will be noted during class and through email announcements. Readings will be available online and in handouts. Required online readings will be available through UGA resources: www.libs.uga.edu.

Attendance: Everyone is expected to attend every class period. Students will be asked to comment and/or summarize material from the readings.

Guest lectures: Faculty with expertise in specific areas will give guest lecture. Most of these guests are Gerontology Faculty with primary appointments in their specific disciplines, such as in psychology and communication sciences.

Class presentations: Each student must give one presentation for the class.

Exams: Exams are “take home.” Each student should work independently. Exams are due about 1 week after they are distributed. Any resource, except other students or faculty, may be used such as class handouts, books, and online sources. Type your answers and hand in your typed answers at the beginning of the class on the due date.

Grading:

Exams 1, 2, and 3 are each 25%, for a total of 75%

Student presentation 25%

Academic Honesty: All students are expected to follow the University of Georgia “Academic Honesty Policy: A Culture of Honesty” which can be found at http://www.uga.edu/ovpi/academic_honesty/culture_honesty.htm

Syllabus - FDNS 8550 Nutrition and Disease Processes II - Fall 2003

Dates	Topics	Speakers
Tu 8/19	Overview: Aging, disease processes, and healthy aging; & Influence of age-related physiological changes in nutritional requirements for macro and micronutrients; nutritional epidemiological methods.	Dr. Mary Ann Johnson
Th 8/21	B-vitamins, homocysteine, and diseases	Dr. Johnson
Tu 8/26	Vitamin B12 metabolism, requirements, and diseases	Dr. Johnson
Th 8/28	Vitamin D metabolism, requirements, and diseases	Dr. Johnson
Tu 9/2	Antioxidant nutrients, vitamin C, carotenoids, vitamin E: metabolism, requirements and diseases	Dr. Johnson + 1 student presentation
Th 9/4	Antioxidant nutrients, continued	Dr. Johnson + 1 student presentation
Tu 9/9	Antioxidant nutrients, continued	Dr. Johnson + 1 Student presentation
Th 9/11	Chromium metabolism, requirements, and diseases	2 Student presentations
Tu 9/16	Macronutrients, aging, and chronic diseases	Dr. Johnson
Th 9/18	Student presentations	2 Student presentations
Tu 9/23	Exam 1 (due 10/7)	
Th 9/25	Vision and nutrition	Dr. Randy Hammond, Psychology, UGA
Tu 9/30	Vision and nutrition	Student presentations
Th 10/2	Hearing and nutrition	Dr. Al De Chicchis, Communication Sciences and Disorders, UGA
Tu 10/7	Hearing and nutrition	Dr. Johnson + 1 student presentation
Th 10/9	Cognition and nutrition	Dr. Johnson + 1 student presentation
Mo 10/13	Cognition and aging, 4:45-6 pm, at the Gerontology Center,	Dr. Steve Miller, Psychology, UGA
Tu 10/14	Diabetes	Dr. Carolyn Berdanier, FDN, UGA
Th 10/16	Diabetes	Dr. Carolyn Berdanier, FDN, UGA
Tu 10/21	Diabetes and the glycemic index	Dr. Johnson
Th 10/23	Diabetes	2 Student presentations
Tu 10/28	Diabetes	2 Student presentations
	Exam 2 (due 11/6)	
	Th/Fr 10/30-31 Fall Break	
Tu 11/4	Taste and Smell	Dr. Ruthann Swanson, FDN, UGA
Th 11/6	Joint diseases and nutrition	Dr. Johnson
Tu 11/11	Taste and Smell, continued	Dr. Ruthann Swanson, FDN, UGA
Th 11/13	Arthritis and nutrition	Dr. Dea Baxter, Professor, Nutrition and Dietetics, Georgia State University
Tu 11/18	Sarcopenia: muscle and aging	Dr. Johnson + 1 student presentation
Th 11/20	Osteoporosis: overview	Dr. Richard Lewis, FDN, UGA
Tu 11/25	Osteoporosis: soy	Dr. Richard Lewis, FDN, UGA
	Th 12/27 Thanksgiving	
Tu 12/2	Osteoporosis: omega-fatty acids and other factors	2 Student presentations
Th 12/4	Osteoporosis: student presentations	2 Student presentations
	Exam 3 (given 12/4, due 12/16 6:30 pm)	
	Take home exams 1-3, 25% each for final grade, 1 presentation 25% of final grade	
	Exams turned in late: -10% of exam grade for each day	
	Attendance: -3% from total grade for every class missed	

EVALUATION OF PRESENTATION

Name: _____

FDNS 8550**Nutrition and Disease Processes II - Fall 2003 Date:** _____

- (3) 1. Topic and key papers approved at least one month in advance; contributes substantially to the understanding of the nutrition, genetics, physiology, biochemistry, molecular biology, and/or toxicity of a nutrient or nutritional problem.

- (8) 2. A) Overview of the topic; or
 B) Journal article: Present the introduction, hypotheses, methods, results, discussion, weaknesses, implications, and recommendations for further study.

- (5) 3. ONE typed handout covering overview and journal article, with:
 The research question being addressed
 Brief abstract of the presentation (<300 words)- hand in 1 week ahead
 At least five references used for your presentation
 Definitions for less commonly known words
 Three in-depth study questions in essay format
 Copy of 2-4 most important journal articles (instructor only)

- (2) 4. Within time limit (15 minutes)

- (7) 5. Overall quality of presentation (Faculty and Staff fill out this)

	Above average (1)	Average (0.5)	Needs improvement (0)	Comments/suggestions
Professional attitude				
Appeared knowledgeable about the subject				
Spoke clearly with correct grammar and pronunciation				
Visuals in large print with only key points and data				
Made eye contact with audience				
Well-organized				
Answered questions knowledgeably				

Other comments:

FDNS 8550 Nutrition and Disease Processes II - Evaluation of Graduate Student Speakers

Name of speaker: _____ Topic: _____

Overall Rating:

	Excellent	Very good	Good	Average	Needs improve-ment	Not accept-able	Comments/suggestions

Professional attitude							
In-depth discussion of the scientific basis for mechanisms, relationships, recommendations, etc.							
References provided							
Relevance to field of foods, nutrition, and/or dietetics							
Appeared knowledgeable about the subject							
Spoke clearly with correct grammar and pronunciation							
Visuals in large print with only key points and data							
Made eye contact with audience							
Well-organized							
Answered questions knowledgeably							
Summary, conclusions and/or recommendations were clear and based on available scientific evidence							
Handout, if provided, was informative, grammatically correct, and provided references							

List some things that you particularly enjoyed about this presentation (content and/or delivery):

List some things that you think could improve this presentation (content and/or delivery):

General References:

American Dietetic Association (2000) Position of the American Dietetic Association: Nutrition, aging, and the continuum of care. Journal of the American Dietetic Association 100: 580-595, 2000.

Chernoff, R. (1999) Geriatric Nutrition: The Health Professional's Handbook. Second Edition, Aspen Publishers, Inc., Gaithersburg, MD (518 pgs).

Chernoff, R. (2003) Geriatric Nutrition: The Health Professional's Handbook, Second Edition 518 pages, Jones & Bartlett Pub; 2nd edition (March 31, 2003), 518 pages, ISBN: 0763731625. (NOTE-Not sure if this is a new edition or a second printing).

Dychtwald, K. (1999) AgePower: How the 21st Century will be ruled by the new old. Jeremy P. Tarcher, Putnam, New York (ISBN 0-87477-954-5, \$24.95).

Masoro, E. J. (1999) Challenges of Biological Aging. Springer Publishing Company, New York (ISBN 0-8261-1277-3, \$35.95).

Niedert, K.C. (1998) Nutrition Care of the Older Adult. A Handbook for Dietetics Professionals Working Throughout the Continuum of Care. The American Dietetics Association, consultant Dietitians in Health Care Facilities Dietetic Practice Group (ISBN 0-88091-167-0).

Bales, C. W. and Ritchie, C. S. (2003) Handbook of Clinical Nutrition and Aging. Humana Press (ISBN: 1588290557).

Snowdon, D. A. (2001). Aging With Grace : What the Nun Study Teaches Us About Leading Longer, Healthier, and More Meaningful Lives. Bantam Doubleday Dell Pub (Trd); (ISBN: 0553801635).

Online:

Nutrition for Older Adults' Health: <http://www.arches.uga.edu/~noahnet>

Administration on Aging: <http://www.aoa.gov>

National Aging Information Center: <http://www.aoa.dhhs.gov/naic/>

Statistics on Aging: <http://www.agingstats.gov>

National Policy and Resource Center of Nutrition and Aging: <http://www.fiu.edu/~nutreldr>

Gerontological Nutritionists: <http://www.fiu.edu/~gn/>

Meals on Wheels Association of America: <http://www.projectmeal.org>

National Association of Nutrition and Aging Services Programs: <http://nanasp.org>