



PubH 6904 Nutrition and Aging Summer, 2018

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| Credits: | 2 |
| Meeting Days: | Readings and assignments posted online: every Monday |
| Meeting Time: | NA |
| Meeting Place: | online |
| Instructor: | Lyn M. Steffen, PhD, MPH, RD |
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I. Course Description

This course reviews some major health issues and nutritional needs of older adults from a public health perspective. It is taught in an online format. This is an 8 week course and therefore, with limited time, we are unable to address all health issues and nutritional needs of seniors.

A reasonable expectation is to spend approximately 120 hours on class-related activities for the course.

Acknowledgments

The content of PubH 6904 is updated annually and is based on the text, Nutrition for the Older Adults by Bernstein and Munoz (2nd edition) and selected journal articles.

II. Course Prerequisites

Graduate student or professional school student or instructor consent.

III. Course Goals and Objectives

- Describe adult population demographics and the implications they have for public health nutrition
- Understand the nutritional impact of physiological changes occurring in older adults
- Identify older adult populations at risk for chronic disease
- Learn dietary guidelines and nutrient recommendations for older adults, with or without chronic disease
- Assess the dietary intake and healthy status of an older adult; compare their dietary intake to that of the 2015 Dietary Guidelines for Americans, compare the individual's health status to expected physiological changes in older adults; and
- Identify, access, and describe community programs and related policies serving older adults

IV. Methods of Instruction and Work Expectations

CLASS ACTIVITIES: "LECTURES"

Course material is broken down into a series of "lecture" topics, which are presented as PowerPoint slides. These take the place of class lectures to highlight course material (assigned reading in text and journal articles). Web site addresses are given to link to additional resources.

READING AND APPLYING CRITICAL THINKING SKILLS

Reading materials will include text chapters, journal articles, and website material which can be found under the Readings icon in the respective weekly folder (Moodle) and in the syllabus (below). Assignments are posted with their respective reading material. Students may need to find additional resources when completing some assignments.

ASSIGNMENTS

Written assignments 1 and 3 require students to synthesize course materials and apply to selected scenarios. Assignment 2 is a community exploration project, which is to explore community senior services: visit a senior center, senior nutrition program/dining site, or other program for seniors. Assignment 2 will be posted on Moodle June 25th (week 3) and due Sunday July 15th, end of week 5.

FINAL PROJECT

The final project provides the opportunity to interview an older adult and evaluate their nutritional status. The Final Project will be posted on Moodle July 2nd (week 4) and due Friday, August 3rd (end of week 8).

Assignments and the final project should be emailed to steffen@umn.edu

V. Course Text and Readings

Nutrition for the Older Adult, 2nd edition by Melissa Bernstein and Nancy Munoz. I've used this text for several years and students like it very much. It is a very readable text with numerous tables and figures. The text is available from the publisher Jones and Bartlett (paperback \$164.95 and also in digital format – check pricing); Amazon (new/used for \$62.68+); Barnes and Noble (used for \$56.18; new for \$141.00) and other online book sellers.

Journal articles and website reading material will be posted in Moodle each week.

VI. Course Outline/Weekly Schedule

Due dates for 3 class assignments and the final project are shown in the course outline below as well as on the Course Schedule at a Glance calendar (page 10).

Please consider the following questions while completing your coursework:

1. What physiologic changes occur in older adults compared to when they are younger
2. What are the physiologic, behavioral (such as dietary intake), and social factors associated with maintenance of health and functioning among older adults (or healthy aging)?
3. What is the prevalence of disease and level of functioning and disability in the elderly?
4. What programs and policies target older adults for promoting/maintaining good health?

Assignments and the final project should be emailed to steffen@umn.edu

Week 1 (June 11-17) Demographics and Physiology of Aging

What is 'OLD'? How do we 'Age' physically and physiologically? Do physiologic changes in aging influence nutrient requirements? What are the current and projected demographic characteristics of older adults? How do economics influence aging and health?

1. Reading assignment:

a) Text: Chp 1 (Introduction and Demographics of Aging); and Chp 2 (Physiology of Aging)

b) Academy of Nutrition and Dietetics. Food and Nutrition for Older Adults: Promoting Health and Wellness. *J Acad Nutr Diet* 2012; 112:1255-77.

2. Watch two or more of the following TV programs:

PBS TV/web programs: (about 30 minutes each):

1. 'Economics of Aging, Aging Matters': <https://www.pbs.org/video/economics-aging/>
2. 'Nutrition & Aging': <https://www.pbs.org/video/nutrition-aging-aging-matters-npt-reports-p4bvvgg/>
3. 'Baby Boom to Aging Boom': <https://www.pbs.org/video/wfyi-local-productions-baby-boom-aging-boom/>
4. 'Healthy Aging, Aging Matters': <https://www.pbs.org/video/healthy-aging/>

All of the programs provide perspectives on aging – whether difficulties shopping or selecting healthy foods, having sufficient funds during retirement, boomers to aging boomers, and of course, defining healthy aging.

Week 2 (June 18-24) Dietary Recommendations: food for health

What are the function and requirements of nutrients for older adults? Does inadequate or excessive intake of certain nutrients exacerbate disease? What about water – function and requirement? What are the 2015 U.S. dietary guidelines for older adults? Does dietary intake influence gut health (gut microbiome)?

1. Reading assignment:

a) Text: Chp 3 (Macronutrient and Fluid Requirements), Chp 4 (Vitamin Status and Requirements), and Chp 5 (Mineral Requirements)

b) Peregrin T. The inside tract: what you need to know about the gut microbiome. *J Am Diet Assoc* 113: 1019-1023.

c) Websites to complement text readings and assist with the Final Project

- 2015-2020 U.S. Dietary Guidelines for Americans: <http://health.gov/dietaryguidelines/2015/>
- USDA's MyPlate interactive tool to implement the dietary guidelines: <http://www.choosemyplate.gov/>
- Tufts My Plate for Older Adults <http://hnrca.tufts.edu/myplate/>

2) Assignment 1 is posted: due July 1st

Week 3 (June 25-July 1) Nutrition Assessment and Pharmacology: Food-drug and Drug-drug Interactions

What is nutritional status and how is it assessed in older adults? What foods interact with drugs? What is the prevalence of medication use in older adults? How is food insecurity related to medication use (or not)?

1. Reading Assignment:

a) Text: Chp 7 (Nutritional Assessment) and Chp 17 (Pharmacology, Nutrition and the Older Adult)

b) 2 journal articles:

- Qato DM, Alexander GC, Conti RM, Johnson M, Schuman P, Lindau ST. Use of prescription and over-the-counter medications and dietary supplements among older adults in the United States *JAMA* 2008; 300 (24): 2867-2878.

- Nielsen RB, Garasky S, Chatterjee S. Food insecurity and out-of-pocket medical expenditures: competing basic needs? *Fam Consum Sci Res J.* 2010;39:137–151.

2. Assignment 1 is due: Sunday July 1st by 11:59 pm

3. Assignment 2 is posted: due July 15th (Community Field experience)

Week 4 (July 2-8) Diet, Cardiovascular Disease (CVD), CVD Risk Factors, including Diabetes and Hypertension

Is dietary intake related to the development of CVD and its risk factors? Is dietary intake important in managing these conditions?

1. Reading Assignment:

a) Text: Chp 9 (Cardiovascular and Respiratory Disease), Chp 11 (Endocrine and Metabolic Alterations)

b) 2 journal articles:

- Appel LJ, Brands MW, Daniels SR, Karanja N, Elmer PJ, Sacks FM. Dietary approaches to prevent and treat hypertension. A scientific statement from the American Heart Association. *Hypertension.* 2006; 47: 296-308.

- Swithers SE. Artificial sweeteners produce the counterintuitive effect of inducing metabolic derangements. *Trends in Endocrinology and Metabolism* 2013; 24: 431-441.

2. Final Project is posted: due Friday August 3rd Please allocate time throughout the next several weeks to complete this project: 1) identify an older adult (age 65 or older) to interview and assess dietary intake and nutrition status; 2) compare actual dietary intake to the 2015 US Dietary Guidelines, 3) assess nutritional risk, and 4) interpret findings by comparing to those in the literature (reading assignments).

Enjoy the 4th of July – be safe!

Week 5 (July 9-15) Community Nutrition Services and Program Policies

What is the Older Americans Act (OAA) and what is the U.S. Congress doing to fund these programs? Is it refunded in the current budget year? What programs are included in the OAA? Do older adults utilize these programs?

1. Reading assignment:

a) Text: Chapter 6, pages 116-122 (Health Promotion and Disease Prevention)

b) 2 journal articles:

-American Dietetic Association. Position Paper: Food and Nutrition Programs. *J Am Diet Assoc* 2010; 11: 463-72.

- Nielsen RB, Garasky S, Chatterjee S. Food insecurity and out-of-pocket medical expenditures: competing basic needs? *Fam Consum Sci Res J.* 2010;39:137–51.

c) Website: Older Americans Act <https://www.acl.gov/about-acl/authorizing-statutes/older-americans-act>

2. Assignment 2 is due: Sunday July 15 by 11:59pm (Community field experience)

Week 6 (July 16-22) Nutrition, Skeletal Health and Sarcopenia, and Obesity

What do we know about dietary intake and maintaining bone mass or preventing sarcopenia in older adults? What is sarcopenia? What is sarcopenic obesity? Is sarcopenia related to mobility, risk of falling, disability?

1. Reading assignment:

a) Text: Chp 15 (Skeletal Health) and Chp 16 (Malnutrition and Obesity)

b) 2 journal articles:

-To be announced at a later date: article about sarcopenia.

- Robinson S, Cooper C, Sayer AA. Nutrition and Sarcopenia: A Review of the Evidence and Implications for Preventive Strategies. *J Aging Res* 2012, Article ID 510801, 6 pages

2. Assignment 3 is posted: due July 29^h by 11:59pm

Week 7 (July 23-29) Cognitive Disorders and Oral Health

Is dietary intake important in maintaining cognitive function? Is oral health related to cognitive function?

1) Reading Assignment

a) Text: Chp 12 (Cognitive Disorders) and Chp 13 (Oral Health)

b) 2 journal articles:

- Sofia F, Macchic C, Abbateb R, Gensini GF, Casinia A. Effectiveness of the Mediterranean Diet: Can it help delay or prevent Alzheimer's Disease? *J Alzheimer's Disease* 2010; 20: 795–801.

- Paganini-Hill A, White SC, Atchison KA. Dentition, dental health habits, and dementia: The Leisure World Cohort Study. *J Amer Geriatric Soc* 2012; 60: 1556-1563.

2. Assignment 3 is due: Sunday July 29^h by 11:59pm

Week 8 (July 30-August 3) Nutrition and Health Promotion and Cultural Diversity

What factors are important for health promotion in an older population? Does 'one size' fit all?

1. Reading assignment

a) Text: Chp 6, pages 123-147 (Health Promotion and Disease Prevention)

b) Journal articles

- Picture This: Visual Cues Enhance Health Education Messages for People with Low Literacy Skills. *J Am Diet Assoc.* 2010;110:500-505.

- American Dietetic Association Practice Paper. Addressing Racial and Ethnic Health Disparities. *J Am Diet Assoc.* 2011; 111:446-456.

- FROM WEEK 1: Academy of Nutrition and Dietetics. Food and Nutrition for Older Adults: Promoting Health and Wellness. *J Acad Nutr Diet* 2012; 112:1255-77.

- Optional reading: O.I. Bermudez. Chapter 20 (1st Edition) Diet and Cultural Diversity in Older Adults

1. Final Project is due: Friday August 3rd by 11:59pm

See page 10 for Schedule at a Glance

VII. Evaluation and Grading

The total number of points for the Assignments and the Field Project = 200 points

Assignments: 3 written assignments = 125 points

Written Final Project based on an interview with an older adult (65+ years) = 75 points

For the Final Project (written report), you will interview an older person about their dietary intake using a 24 hour recall or food frequency method and other factors to determine nutritional risk status (use a nutrition assessment/screening questionnaire); then discuss relative to concepts and policies presented in text and journal articles/websites. In other words, synthesize the information obtained during the interview and compare to that in the literature. More details about your Final Project will be posted on Moodle (June 26th).

Assignments are due by 11:59pm on specified date, except for the Final Project (due Friday Aug 3rd).

Late assignments will be docked 10 points.

The University utilizes plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following:

- A 4.000 - Represents achievement that is outstanding relative to the level necessary to meet course requirements **(190-200 points)**
- A- 3.667 **(180-189 points)**
- B+ 3.333 **(174-179 points)**
- B 3.000 - Represents achievement that is significantly above the level necessary to meet course requirements **(168-173 points)**
- B- 2.667 **(160-167 points)**
- C+ 2.333 **(154-159 points)**
- C 2.000 - Represents achievement that meets the course requirements in every respect
- C- 1.667
- D+ 1.333
- D 1.000 - Represents achievement that is worthy of credit even though it fails to meet fully the course requirements
- S Represents achievement that is satisfactory, which is equivalent to a C- or better.

For additional information, please refer to:

<http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html>.

Course Evaluation

The SPH will collect student course evaluations electronically using a software system called CoursEval: www.sph.umn.edu/courseval. The system will send email notifications to students when they can access and complete their course evaluations. Students who complete their course evaluations promptly will be able to access their final grades just as soon as the faculty member renders the grade in SPHGrades: www.sph.umn.edu/grades. All students will have access to their final grades through OneStop two weeks after the last day of the semester regardless of whether they completed their course evaluation or not. Student feedback on course content and faculty teaching skills are an important means for improving our work. Please take the time to complete a course evaluation for each of the courses for which you are registered.

Incomplete Contracts

A grade of incomplete "I" shall be assigned at the discretion of the instructor when, due to extraordinary circumstances (e.g., documented illness or hospitalization, death in family, etc.), the student was prevented from completing the work of the course on time. The assignment of an "I" requires that a contract be initiated and completed by the student before the last official day of class, and signed by both the student and instructor. If an incomplete is deemed appropriate by the instructor, the student in consultation with the instructor, will specify the time and manner in which the student will complete course requirements. Extension for completion of the work will not exceed one year (or earlier if designated by the student's college). For more information and to initiate an incomplete contract, students should go to SPHGrades at: www.sph.umn.edu/grades.

University of Minnesota Uniform Grading and Transcript Policy

A link to the policy can be found at onestop.umn.edu.

VIII. Other Course Information and Policies**Grade Option Change** (if applicable):

For full-semester courses, students may change their grade option, if applicable, through the second week of the semester. Grade option change deadlines for other terms (i.e. summer and half-semester courses) can be found at onestop.umn.edu.

Course Withdrawal:

Students should refer to the Refund and Drop/Add Deadlines for the particular term at onestop.umn.edu for information and deadlines for withdrawing from a course. As a courtesy, students should notify their instructor and, if applicable, advisor of their intent to withdraw.

Students wishing to withdraw from a course after the noted final deadline for a particular term must contact the School of Public Health Office of Admissions and Student Resources at sph-ssc@umn.edu for further information.

Student Conduct Code:

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected adhere to Board of Regents Policy: *Student Conduct Code*. To review the Student Conduct Code, please see:

http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf.

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

Use of Personal Electronic Devices in the Classroom:

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference:

<http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

Scholastic Dishonesty:

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct Code:

http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, he or she may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see: <http://policy.umn.edu/Policies/Education/Education/INSTRUCTORRESP.html>.

The Office for Community Standards has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty <https://communitystandards.umn.edu>. If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

Makeup Work for Legitimate Absences:

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see: <http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html>.

Appropriate Student Use of Class Notes and Course Materials:

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see: <http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

Sexual Harassment:

"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents Policy: <http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf>

Equity, Diversity, Equal Opportunity, and Affirmative Action:

The University will provide equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf.

Disability Accommodations:

The University of Minnesota is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center Student Services is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact DRC at 612-626-1333 or drc@umn.edu to arrange a confidential discussion regarding equitable access and reasonable accommodations.

If you are registered with DS and have a current letter requesting reasonable accommodations, please contact your instructor as early in the semester as possible to discuss how the accommodations will be applied in the course.

For more information, please see the DS website, <https://diversity.umn.edu/disability/>.

Mental Health and Stress Management:

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: <http://www.mentalhealth.umn.edu>.

The Office of Student Affairs at the University of Minnesota:

The Office for Student Affairs provides services, programs, and facilities that advance student success, inspire students to make life-long positive contributions to society, promote an inclusive environment, and enrich the University of Minnesota community.

Units within the Office for Student Affairs include, the Aurora Center for Advocacy & Education, Boynton Health Service, Central Career Initiatives (CCE, CDes, CFANS), Leadership Education and Development – Undergraduate Programs (LEAD-UP), the Office for Fraternity and Sorority Life, the Office for Community Standards, the Office for Student Engagement, the Parent Program, Recreational Sports, Student and Community Relations, the Student Conflict Resolution Center, the Student Parent HELP Center, Student Unions & Activities, University Counseling & Consulting Services, and University Student Legal Service.

For more information, please see the Office of Student Affairs at <https://osa.umn.edu/>.

Academic Freedom and Responsibility: *for courses that do not involve students in research:*

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, (Dr Kristin Anderson, SPH Dean of Student Affairs), or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

** Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".*

Student Academic Success Services (SASS): <http://www.sass.umn.edu>:

Students who wish to improve their academic performance may find assistance from Student Academic Support Services. While tutoring and advising are not offered, SASS provides resources such as individual consultations, workshops, and self-help materials.

Template update 8/2017

Course Schedule at a Glance:

Homework Assignments and Final Project are due on or before the Due Date (by 11:59 pm).

The last day of class is Aug 3rd

Please email assignments and final project to steffen@umn.edu

| Week 1 6/11-17 | Week 2 6/18-24 | Week 3 6/25-7/1 | Week 4 7/2-8 | Week 5 7/9--15 | Week 6 7/16-22 | Week 7 7/23-29 | Week 8 7/30-8/3 |
|---|---------------------------------|--|---|---------------------------------|---------------------------------|---------------------------------|----------------------------------|
| Chp 1,2 | Chp 3,4,5 | Chp 7,17 | Chp 9,11 | Chp 6 | Chp 15,16 | Chp 12,13 | Chp 6 |
| Journal article, PBS TV Websites | Journal articles, Website | Journal articles | Journal articles | Journal articles Websites | Journal articles | Journal articles | Journal articles |
| | Assign 1 posted | Assign2 posted Assign 1 due 7/1 | Final Proj posted Happy 4th ! | Assign 2 due 7/15 | Assign 3 posted | Assign 3 due 7/29 | Final Project due 8/3 |